



# Snoopy Gems

Volume 50 Number 7 July 2024  
Mississippi Gulf Coast Gem &  
Mineral Society Inc.



Email: [mgcgms@bellsouth.net](mailto:mgcgms@bellsouth.net)

MGC GMS Established in 1974

## President's Message

Dear Members,

Hope you are having a great summer with lots of fun events and with great family times. We are here to help fill your summer with some additional creative activities and rocking learnings.

Check out the next meeting workshops and Wednesday activities. Grab one of our library magazines and try something new.

**Calendar:** Put the Magnolia State gem mineral and jewelry show on your calendar now so you can be a part of it. Save the 2nd week in November (week after Peter Anderson festival) - November 9 and 10. We need you both days if at all possible.

See you on Saturday!

Liz Platt

MGC GMS President

<http://www.mgcgms.org>

## July Workshops:

Our Wednesday classes from 11-4:00 in our room at the Mary C. All members are welcome!

### Saturday Workshop: July 13th 10am

Barbi Beatty will be teaching a wire Beaded necklace with chain. Kits will be available for \$10.

#### Materials:

- 10" beading wire
- 8" worth of beads (your choice)
- 15" of chain
- 2 crimp beads with covers
- 1 clasp of your choosing
- 2 jump rings



#### Tools:

- Two pairs of pliers to close
- Jump rings, crimping pliers,
- Flush cutters, & ruler



**Wednesday workshop 7/17/24:** Harvey Marcum & Barbi Beatty will be teaching how to cut a cabochon. The class will be \$35 plus a \$5 kit fee. It is open to the public @ The Mary C. O'Keefe. (everything provided.)



John Guglik will be available to test stones and metals.

**Machines:** Members of our tool committee will be available to help with cutting and capping gemstones. As always, we will have the club machines available for metal & gemstone testing, gemstone cutting, and capping. There is a \$3 tool maintenance fee to use the machines.

PO Box 857 Ocean Spring, MS 39566



# Meeting Minutes

## GULF COAST GEM & MINERAL SOCIETY

June 2024

**Meeting called to order:** 1:00 pm by Liz Platt, President.

**Meeting Minutes:** Minutes as published in Snoopy Gems. Barbi Beatty made a motion to approve, second by Connie Boyd. Minutes approved.

**Treasurer:** Barbi Beatty, Treasurer provided account balances for show, checking, and savings. A motion was made to purchase an eleven-month CD. Barbi Beatty made a motion to approve, second by Connie Boyd. Motion passed. Rosalind Daniels made a motion to accept the treasurer's report, Vicki Reynolds made a second, motion carried.

### Committee Reports

**Sunshine:** No report.

**Membership:** No report.

**Library, Closet, Inventory:** Peter M. donated a book on rocks and fossils to the library.

**Equipment:** No report.

**Communication:** No report.

**Newsletter:** Please submit articles for the newsletter to Barbi.

**Facebook:** No report.

**Show:** Discussed the purchase of bags for the November show that will advertise our 50<sup>th</sup> anniversary. Barbi's daughter is working on a design for the logo on the bags.

**Scholarship:** Nothing to report.

**Workshops:** July Wednesday class will be cabbing with a wire wrap of the cab at the August Wednesday class. There is still a need for additional Saturday teachers for the fall.

**New Business:** Our case has been secured at the Mary C. and is ready to be cleaned and stocked. Stephanie Hatcher will be in charge of maintaining the case. Please let her know of any items you would like to display.

**Old Business:** None discussed

**Gem of the Month:** Pearls are the birth stone for June. Write-up in the newsletter on this and also discussed alexandrite and bloodstone.

**Motion to Adjourn:** 1:45 pm motion made to adjourn by Barbi Beatty, second by Harvey Marcum, motion carried.

**Door Prizes:** Drawings held for door prizes.

**Report by Secretary:** Stephanie Hatcher



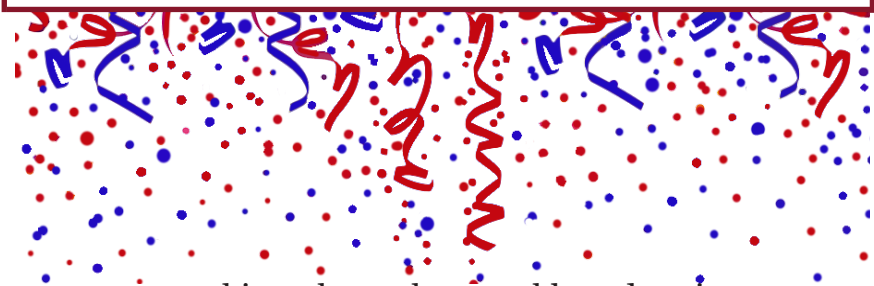


# Happy

# July

# Birthday

Lawrence McGown  
Jessie Schaefer



## The Science of Rubies: Nature's Red Gemstone

Rubies, celebrated for their captivating red hues, have been cherished throughout history as symbols of passion, protection, and prosperity. Their allure is not merely aesthetic; it is deeply rooted in the unique geological and chemical processes that form these extraordinary gemstones. This article delves into the science behind rubies, exploring their formation, composition, and the factors that contribute to their value and significance.

### Formation and Composition

Rubies are a variety of the mineral corundum ( $Al_2O_3$ ), which is composed of aluminum oxide. The presence of trace elements, primarily chromium, gives rubies their distinctive red color. Corundum is a naturally occurring mineral that can also produce sapphires when other trace elements, such as iron and titanium, are present.

The formation of rubies begins deep within the Earth's crust, under high pressure and temperature conditions. These gemstones typically form in

metamorphic rocks, such as marble and gneiss, as well as in igneous rocks like basalt. The geological processes involved include:

1. **Metamorphism:** Rubies often form in marble through a process known as contact metamorphism. This occurs when limestone is subjected to high temperatures and pressures, causing it to recrystallize and form new minerals, including corundum. The presence of chromium during this process results in the formation of rubies.
2. **Magmatic Processes:** Rubies can also form in igneous rocks like basalt, where they crystallize from molten magma. As the magma cools, aluminum and oxygen atoms bond to form corundum crystals. If chromium is present, these crystals develop into rubies.





## Color and Quality

The vivid red color of rubies, often described as "pigeon's blood," is the result of chromium ions replacing some of the aluminum ions in the corundum crystal structure. The intensity of the red color depends on the concentration of chromium and the presence of other trace elements, such as iron. Higher chromium content typically produces more intense red hues, while the presence of iron can create a darker, more brownish-red color.



The quality of a ruby is assessed based on several criteria:

1. **Color:** The most prized rubies exhibit a pure, vibrant red color with no overtones of orange or purple. The term "pigeon's blood" is often used to describe the finest specimens.
2. **Clarity:** Like all gemstones, rubies can have inclusions, which are natural imperfections. While some inclusions are expected and can even enhance the stone's authenticity, the finest rubies have minimal visible inclusions. Inclusions that do not affect transparency or brilliance are generally acceptable.
3. **Cut:** The cut of a ruby influences its overall appearance and brilliance. Skilled gem cutters aim to maximize the stone's color and clarity while minimizing weight loss. Common cuts for rubies include oval, cushion, and round shapes.
4. **Carat Weight:** Larger rubies are rarer and more valuable. However, the overall quality of the stone is more important than size alone. A smaller, high-quality ruby can be more valuable than a larger, lower-quality one.



## Synthetic Rubies and Treatments

Advancements in technology have made it possible to create synthetic rubies in laboratories. These lab-grown rubies have the same chemical composition and physical properties as natural rubies but are produced under controlled conditions. Synthetic rubies are often used in industrial applications, such as watchmaking and laser technology, as well as in jewelry.

In addition to synthetic rubies, natural rubies may undergo various treatments to enhance their appearance. Common treatments include:

1. **Heat Treatment:** Heating rubies at high temperatures can improve their color and clarity by dissolving inclusions and enhancing the red hue. This is a widely accepted practice in the gemstone industry.
2. **Fracture Filling:** In some cases, fractures or cavities in rubies are filled with a glass-like substance to improve their clarity. This treatment is less desirable and must be disclosed to buyers.

Rubies, with their rich red hues and storied past, continue to captivate gem enthusiasts and collectors worldwide. The science behind their formation and composition adds to their mystique, revealing a complex interplay of geological processes and chemical elements. Whether natural or synthetic, treated or untreated, rubies remain one of nature's most fascinating and cherished gemstones.

Article by Barbi Beatty



## Onyx: A Comprehensive Scientific Review

Onyx, a type of chalcedony quartz, is renowned for its striking bands and variety of colors. This review provides an in-depth examination of the mineral's geological formation, physical and chemical properties, historical significance, and modern applications. We also explore ongoing research and potential future developments in the use of onyx in various industries.



Onyx is a cryptocrystalline form of quartz, characterized by its parallel bands of contrasting colors. These bands are often black and white but can also be found in various other colors. Onyx has been valued for centuries for its aesthetic appeal and has been used in jewelry, carvings, and building materials. This review aims to consolidate current scientific knowledge about onyx and highlight areas for future research.

### Geological Formation

Onyx forms through the deposition of silica in gas cavities in lava, which creates its characteristic banded structure. The bands in onyx result from the layering of silicon dioxide ( $\text{SiO}_2$ ) with varying impurities. The formation process involves the slow deposition of silica from groundwater or hydrothermal solutions, which precipitates in concentric layers.

### Types of Onyx

1. **Black Onyx:** Predominantly black with white bands, this variety is the most sought-after.
2. **Sardonyx:** Features bands in reddish-brown and white colors.
3. **Green Onyx:** Colored by impurities like iron or nickel.



## Physical and Chemical Properties

Onyx is composed primarily of silicon dioxide and has a Mohs hardness of 6.5-7, making it relatively durable. It has a trigonal crystal system and typically exhibits a waxy to vitreous luster. The specific gravity of onyx ranges from 2.55 to 2.70.



### Historical Significance

Historically, onyx has been used in various cultures for amulets, seals, and jewelry. In ancient Egypt, it was often used in carvings and inlays. The Romans used it for cameos and intaglios. Onyx was also believed to have protective properties and was used in various rituals and talismans.

### Modern Applications



Today, onyx is utilized in a wide range of applications, from high-end jewelry to decorative items and architectural elements. Its unique appearance makes it a popular choice for counter tops, tiles, and other building materials. In addition, onyx is used in art and design for its aesthetic appeal and versatility.

### Jewelry and Ornamentation



Onyx is a staple in the jewelry industry, often set in rings, necklaces, and bracelets. Its ability to be polished to a high gloss and its striking color contrasts make it a favored material among artisans and designers.



## Architectural and Decorative Use

In architecture, onyx is valued for its translucency and unique veining patterns. It is often used in back lit applications, where light can pass through the stone to highlight its natural beauty. Onyx tiles and panels are commonly used in luxury interiors.



Onyx remains a highly valued and versatile material with a rich history and a wide range of modern applications. Continued research and technological advancements promise to expand its uses and improve its properties, ensuring that onyx will remain a significant material in both art and industry for years to come.



### References

- Deer, W.A., Howie, R.A., & Zussman, J. (1992). An Introduction to the Rock-Forming Minerals. Longman.
- Kerr, P.F. (1977). Optical Mineralogy. McGraw-Hill.
- Schumann, W. (2009). Gemstones of the World. Sterling Publishing.

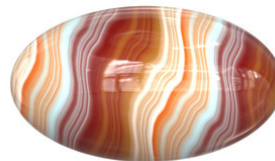
Article by Barbi Beatty

## Research and Future Directions

Recent research has focused on the synthetic production of onyx and the development of treatments to enhance its properties. Advances in technology have allowed for the creation of composite materials that mimic the appearance of natural onyx while offering improved durability and reduced cost.

### Synthetic Onyx

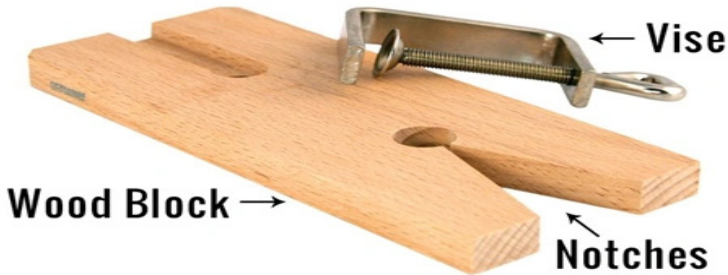
Synthetic onyx is produced by combining ground natural onyx with resins and other binding agents. This process allows for the creation of large, uniform slabs that are less prone to cracking and other defects. Synthetic onyx is increasingly used in applications where natural onyx may not be practical.



# BENCH TIPS

Jewelry making is full of tools and gadgets, but there's one that's fundamental – your bench pin. You'll come back to it time and time again. It's a primary work surface. One of the main functions of a bench pin is to support your jewelry sheet metal sawing and piercing.

## Anatomy of a Bench Pin



The image above shows a common variation on the basic bench pin. Almost all bench pins you encounter will be made of wood with a triangular notch in the center. This cutout allows space for your saw to move while cutting. This bench pin example comes with a vise. That's a great option because it means you can attach it to a variety of table tops and work surfaces – you can even take it on the go!

## Common Uses

There is a plethora of ways you can use your bench pin. Sawing, filing, polishing, and drilling are the most common.

## Filing

The grooves and openings in your bench pin are well-suited to brace your work against when filing. You can place it flat on top to file straight edges or wedge it into a small notch when filing smooth curves. You always want to support your work against something while filing. Support makes sure that each cut the file does is working to its fullest.

## Polishing

Bench pins are also great for supporting your work while polishing. The bench pin is just a super versatile work surface. It's situated above your drawer, so any metal and bench sweeps during polishing will be accumulated.

## Drilling

Bench pins are great when drilling into your pieces. A) You probably already have a bench pin and B) they're a lot cheaper than a drill press. Having wood support your piece while drilling means you won't punch through with force and risk hitting your piece with the flex shaft chuck. That can cause damage that is a lot of work to remove. 7

## Sawing

Sawing is one of the most common uses of a bench pin. The flat surface is perfect for fully supporting your piece and the opening at the center allows for your blade to move freely. Sawing and piercing (cutting a small piece out of a larger whole) are some of the most basic and earliest jewelry skills you learn. You will use them constantly throughout your practice, from piercing intricate designs out of silver sheet to cutting jewelry wire to the right length for making a ring.



## Top Tips for Sawing

Wear protective eye wear. Blades break frequently and can shoot off into space. Use pliers to grab a blade from the center of the pack. This is so much easier than attempting to unravel the tiny wire that holds them all together. Your bench pin should be chest height. If you're sitting too much higher than this, you'll be more likely to angle your saw frame and break blades. Have a sturdy bench pin. Support is key. With a supportive bench pin your piece is less likely to wiggle around and break a blade. When loading a saw blade into a jewelers saw, angle the teeth down. Always load your blade with the teeth facing down with tension the blade. A well-tensioned blade makes a high-pitched 'ting' when you flick it. A loose blade will bend while sawing. It's more difficult to cut and more likely to break. Saw straight up and down. Hold you saw perpendicular to the material for better cuts and less breakage. Use lubrication. Use cut lube, beeswax, or soap, all work great to lubricate your saw blade for smoother sawing. Use the whole blade. You'll have more effective and efficient sawing if you use the whole length of the blade, not just a tiny section in the middle. Keep your fingers away. Never have your fingers in front of the blade. Always keep them on the sides or back. These blades are meant to cut metal, so they cut skin really easily. Keep a loose grip on the saw handle to prevent muscles from cramping unnecessarily. Don't push, let the saw do the work. You don't need to push the blade into the metal; you're more likely to break a blade this way. Turn the metal, not the blade. When you're cutting out curved lines you always want to move the metal. Your saw stays pointing straight ahead. This keeps it perfectly lined up in the opening of your bench pin. Listen to the sound the blade is making. It can let you know if you are pushing too hard or need to lubricate your blade. Practice! You'll break a lot of blades when you're starting out... and after that too! Don't sweat it. Load a new blade in and keep on sawing!

# We always welcome new members!



Date \_\_\_\_\_ Mississippi Gulf Coast Gem and Mineral Society

<a href="http://www.mgcgms.org">http://www.mgcgms.org</a>		<b>Application for Membership</b>	
Individual: \$20.00		Individual +1 relative Same Address: \$30.00	
		Junior Under 18: \$6.00	
Name: _____		Cell: _____	
Name: _____		Cell: _____	
Address: _____		Home Phone: _____	
City: _____			
State: _____		Email 1: _____	
Zip: _____		Email 2: _____	
<b>Members Birthdays</b>			
Adult: _____		Birthday M/D: _____	
Adult: _____		Birthday M/D: _____	
Junior: _____		Birthday M/D/Y: _____	
Junior: _____		Birthday M/D/Y: _____	
<b>Please Check All Applicable Interests</b>			
<input type="checkbox"/> Beading	<input type="checkbox"/> Cabbing		<input type="checkbox"/> Jewelry Making
<input type="checkbox"/> Chain Mail	<input type="checkbox"/> PMC		<input type="checkbox"/> Lapidary
<input type="checkbox"/> Field Trips	<input type="checkbox"/> Faceting		<input type="checkbox"/> Minerals
<input type="checkbox"/> Fossils	<input type="checkbox"/> Wire Wrapping		<input type="checkbox"/> Silver Smithing
<input type="checkbox"/> Others: _____			
<b>How did you hear of us?</b> _____			
<b>Please check the following:</b>			
<input type="checkbox"/>	I understand that my picture or likeness may be used in Society promotions.		
<input type="checkbox"/>	I authorize MGCgms to include my contact information be included in Society listings for members to contact each other only.		
Signature: _____			
Signature: _____			

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**Snoopy Gems**  
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**AFFILIATIONS**

The Southeast Federation of Mineralogical Societies, Inc.  
 The American Federation of Mineralogical Societies, Inc.  
 S.C.R.I.B.E. (Special Congress Representing Involved Bulletin Editors)

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 & Past Asst Treasurer & Insurance  
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 Planning, Past President, Past State  
 Director

Annual dues are:  
 \$20 Individual  
 \$30 (2) Members in same house hold  
 \$6 Junior

**2024 Workshop/Meeting  
 Dates**

January 13 Mary C. 9:30-4:00  
 February 10 Mary C. 9:30-4:00  
 March 9 Mary C. 9:30-4:00  
 April 13 Mary C. 9:30-4:00  
 May 11 Mary C. 9:30-4:00  
 June 8 Mary C. 9:30-4:00  
**July 13 Mary C. 9:30-4:00**  
 August 10 Mary C. 9:30-4:00  
 September 14 Mary C. 9:30-4:00  
 October 12 Mary C. 9:30-4:00  
 November 8 After Vendor Dinner 5ish  
 December 14 Christmas Party Mary C.  
 11:00am-3:30pm

**Dates subject to change.**  
**Be sure to check each month!**  
 The November meeting is the Friday evening of the gem show after the dinner for the dealers at the Jackson County Fairgrounds Civic Center Building.  
 December will be our Christmas Party and Installation of Officers

**July 2024**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# Snoopy Gems

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<http://www.mgCGMS.org>



The Mississippi Gulf Coast Gem & Mineral Society is a Non-profit Organization Dedicated to Education, Science, and the Lapidary Arts and Crafts

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