



Snoopy Gems

Volume 51 Number 6 June 2025
Mississippi Gulf Coast Gem &
Mineral Society Inc.



Email: mgcgms@bellsouth.net

MGCGMS Established in 1974

President's Message

Dear Members,

Topics of the month- safety and friendship and I guess they kind of go together.

When doing lapidary work it's important to maintain good posture, tie hair back and wear safety glasses. If I watch myself, I have gotten pretty sloppy about these things. I don't need any more health issues. I promise to sit upright and do better with eye protection. Remind me when needed.

Friendship is what I have ultimately gained from our Gem and Mineral Club. The members of our club are the ones I that I enjoy being with and trust most. I also love my pottery people and my painting people. At the gem workshops, we share skills, food, and special insights on life. I appreciate all of you.

See you at the next meeting/workshop.

Liz Platt

MGCGMS President

Workshops:

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

Saturday Workshop: June 14th @10am Belinda Marcum will be teaching wire wrapped earrings. Kits available @ \$5

Materials:

wire and any beads

Tools:

flush cutters, needle nose, flat nose, round nose pliers



Wednesday workshop open to the public

6/18/25: Barbi Beatty will be teaching hand tied pearls. All materials will be provided. Kit fee will be \$25 to \$75.



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.

<http://www.mgcgms.org>

PO Box 857 Ocean Spring, MS 39566



Meeting Minutes

GULF COAST GEM & MINERAL SOCIETY

May 2025 Minutes



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

Meeting Minutes: Minutes from the March meeting were distributed and reviewed. Motion to accept the minutes made by Vicki Reynolds, second by Barbi Beatty. Minutes were approved.

Treasurer: Barbi gave the treasurer's report with totals for accounts. Motion to accept by Belinda Marcum, second by Rachel. Report was approved.

Committee Reports

Sunshine: No report.

Membership: No report.

Library, Closet, Inventory: No report.

Equipment: No report.

Communication: No report.

Newsletter: The newsletter was distributed at the meeting.

Facebook: No report.

Show: The annual show will permanently move to the fourth weekend in September at the Ocean Springs Civic Center. Our usual raffle is for prizes donated by club members. This year Allan suggested he could make a workbench as a grand prize. Discussed whether we should have one big raffle item or many and cost of raffle ticket. It was suggested to have one large prize and possibly a limited number of smaller but very nice prizes. The motion was made by Barbi with a second by Rachel to continue to take donations for the raffle prizes with a value of \$40 and up with only one raffle. It was also discussed whether we should increase the price of the raffle ticket to \$2. The motion was amended by Barbi to include the ticket price (\$1 per ticket or 6 tickets for \$5). Becky seconded the amendment. The motions were passed, which will basically leave it the same as in the past.

Scholarship: Peter will be attending the William Holland workshop on this year's scholarship.

Workshops: Every third Wednesday will be a class open to the public. The remaining Wednesdays of the month will be working meetings for members. We were still needing volunteers for teachers for Saturday workshops. August will be working on the show.

New Business: Harrison County gem show is coming up the next weekend. Entry is \$6, with a \$1 discount with the postcard. Discussed how our club could be more visible on social media. Election of officers will remain for our November meeting as is stated in the bylaws.

Old Business: None discussed

Gem of the Month: Information on Emeralds included in Snoopy Gems and examples were passed around.

Motion to Adjourn: 2:10 pm motion made to adjourn by Vicki Reynolds, second by Peter, motion carried.

Door Prizes: Drawings held for door prizes.

Reported by: Secretary Stephanie Hatcher



Happy

March

Birthday

Allan Elliott Bruce Giamalva John Guglik Ned Harvey



The History and Science Behind Akoya Pearl Production

Akoya pearls are prized for their stunning luster, near-perfect roundness, and elegant white or cream tones. Cultured primarily in Japan and China, Akoya pearls have become a staple in fine jewelry. Their production bridges ancient techniques and modern science, representing a remarkable chapter in both human ingenuity and marine biology.

Historical Background & Natural Origins

Before the 20th century, pearls were extremely rare and found only by chance in wild oysters. These natural pearls formed when an irritant, such as a parasite or grain of sand, entered an oyster, prompting it to coat the invader with layers of nacre—a combination of aragonite (a form of calcium carbonate) and conchiolin (a protein).

The Birth of Cultured Pearls

The turning point came in the early 1900s in Japan. Three Japanese innovators—Kokichi Mikimoto, Tokichi Nishikawa, and Tatsuhei Mise—independently developed methods for culturing pearls. Mikimoto is most famously associated with the commercial success of Akoya cultured pearls, having patented and perfected the grafting techniques that remain foundational today.

In 1916, Nishikawa and Mise introduced a method using a piece of mantle tissue from a donor oyster to nucleate another oyster, which Mikimoto soon adopted. By the 1920s, Akoya pearl farming was thriving, transforming the industry and democratizing pearl jewelry.

AKOYA PEARLS



white



cream



grey



blue

Scientific Principles of Culturing Akoya Pearls

Host Oyster: *Pinctada fucata*

Akoya pearls are produced by the saltwater oyster *Pinctada fucata*, a species found primarily in Japan, Vietnam, and China. These oysters are relatively small, contributing to the size limitation of Akoya pearls (typically 2 mm to 10 mm).



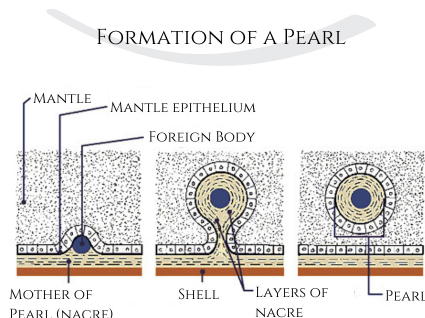
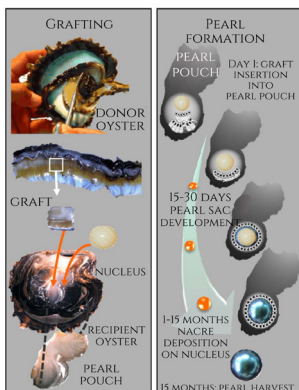
Nucleation Process

Cultured pearls are formed through a human-assisted process:

1. **Surgery:** A trained technician (called a grafter) makes a small incision in the oyster's gonad.
2. **Nucleus Insertion:** A round bead (usually made from Mississippi freshwater mussel shell) is inserted, along with a small piece of mantle tissue from a donor oyster.
3. **Secretion of Nacre:** The oyster's natural response is to secrete nacre around the foreign object, gradually building up layers over 8–24 months.

Nacre Formation

Nacre (mother-of-pearl) is composed of hexagonal platelets of aragonite held together by a matrix of proteins and polysaccharides. These alternating organic and inorganic layers are what give Akoya pearls their famous iridescent luster.



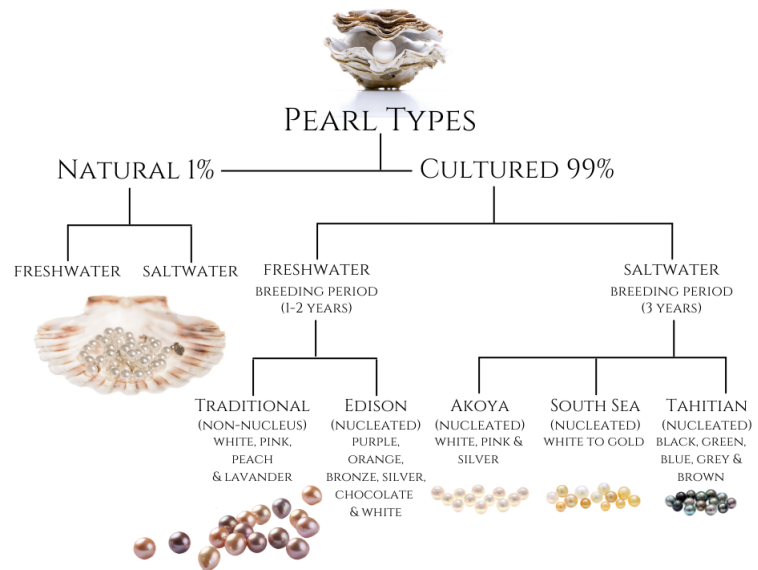
Environmental and Biological Control

Pearl farms meticulously manage:

- Water quality and temperature
- Oyster health and feeding
- Predator control and disease prevention

These factors are crucial to achieving round, smooth, high-luster pearls with thick nacre.

Production Today



- Japan is still the global leader in high-quality Akoya pearl production, especially in regions like Mie and Ehime Prefectures.
- China has entered the market as a mass producer of smaller Akoya pearls at a lower cost.
- After harvest, pearls are cleaned, sorted, and processed—sometimes treated by bleaching or pink dyeing to enhance appearance.

Akoya pearls represent a marriage of tradition and technology. What was once a symbol of unattainable luxury has, through scientific understanding and careful aquaculture, become a globally accessible gem. Today's Akoya pearls continue to embody timeless beauty while showcasing human mastery over the ocean's natural processes.

Article by: Barbi Beatty



Alexandrite: Discovery, Historical Importance, and Modern Sources



Discovery and Historical Importance

Alexandrite was discovered in the Ural Mountains of Russia in 1830, reportedly on the birthday of the future Tsar Alexander II, for whom it was named. The story goes that miners initially mistook the stone for emerald due to its green color. However, under candlelight, the stone revealed a striking transformation to a reddish hue — a phenomenon now famously described as color change, shifting from green in daylight to red in incandescent light.

This unusual color shift, due to chromium impurities in the crystal structure, was previously unknown in gemology and caused a sensation in Imperial Russia. Because the colors mirrored the national military colors of Imperial Russia — red and green — alexandrite became associated with Russian pride, nobility, and mysticism. It was soon set into the jewelry of the Russian aristocracy and prized as a rare and noble gem.

Gemological Characteristics

- Mineral family: Chrysoberyl
- Hardness: 8.5 on the Mohs scale
- Color change: Green to red or purplish-red
- Chemical formula: BeAlO_4 (with chromium causing the color change)
- Optical effect: Strong pleochroism and trichroism
- Rarity: One of the rarest gemstones, especially in fine qualities



Modern Sources of Alexandrite

After the depletion of Russian deposits in the late 19th century, alexandrite remained extremely rare until new deposits were found in other parts of the world:

1. Brazil

- Locations: Hematita (Minas Gerais), Malacacheta
- Importance: In the 1980s, Brazil became a major



source of alexandrite with color change, although the shift is often not as dramatic as in the finest Russian stones.

- Modern status: Still produces stones, but quality is variable.

2. Sri Lanka (Ceylon)

- Characteristics: Generally larger stones but often with a less dramatic color change.

- Value: Still prized, especially for size and clarity.



3. India

- Location: Andhra Pradesh

- Notes: Produces some gem-quality stones, usually smaller and more affordable.

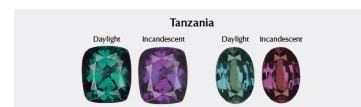


4. Tanzania

- Discovery: In the 1990s

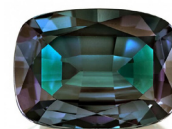
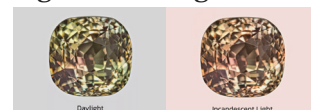
- Locality: Tunduru region

- Quality: Some stones show strong color change and are highly regarded.



5. Madagascar

- Emerging source: Produces stones with vibrant color change, increasingly important in the market.



Synthetic Alexandrite

Due to its rarity and value, synthetic alexandrite is common. These lab-created gems exhibit color change and are often used in jewelry. However, they can be distinguished from natural stones by gemological testing, especially under magnification and with spectroscopy.

Cultural and Market Importance Today

- Birthstone: Alexandrite is the modern birthstone for June (alongside pearl and moonstone).
- Symbolism: Represents luck, intuition, and balance.
- Collectors' Gem: Natural alexandrite with strong color change and good clarity commands very high prices. It often exceeding those of diamonds or emeralds.

Article by: Barbi Beatty



Rainbow Moonstone: A Scientific Exploration of a Spectral Feldspar

Rainbow moonstone is a visually captivating and scientifically intriguing gemstone, celebrated for its iridescent play of color known as adularescence or, more precisely, labradorescence. Despite its commercial name, rainbow moonstone is not a true moonstone (orthoclase feldspar) but a plagioclase feldspar variety—specifically a transparent form of labradorite. This article explores the mineralogical classification, crystallographic structure, optical properties, formation, and key sources of rainbow moonstone.



1. Mineralogical Classification

Rainbow moonstone belongs to the feldspar group, which constitutes over 50% of the Earth's crust. Feldspars are divided into two major branches:

- Alkali feldspars (e.g., orthoclase, microcline)
- Plagioclase feldspars (e.g., albite–anorthite series)

Rainbow moonstone is a sodium–calcium plagioclase feldspar, typically in the labradorite range of the series (50–70% anorthite). Though often mistaken for orthoclase moonstone, its chemical and crystallographic differences are significant.

Chemical Formula (Labradorite):



2. Crystal Structure and Physical Properties

- Crystal System: Triclinic
- Hardness: 6.0–6.5 on Mohs scale
- Specific Gravity: 2.68–2.72
- Cleavage: Perfect in two directions at nearly 90°
- Transparency: Translucent to semi-transparent
- Fracture: Uneven to conchoidal

Its triclinic lattice is prone to exsolution lamellae, where sodium and calcium layers separate during cooling. These fine intergrowths within the crystal are responsible for its spectral optical effects.



3. Optical Phenomenon: Labradorescence vs. Adularescence

The defining visual feature of rainbow moonstone is a multi-colored shimmer caused by labradorescence, which differs from the blue–white adularescence found in true moonstones (orthoclase). Labradorescence results from:

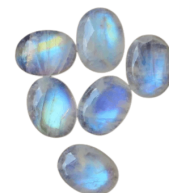
- Light diffraction and interference at microscopic layers of differing refractive indices within the feldspar.
- The iridescence often includes blues, violets, greens, and even oranges and reds—hence the name “rainbow.”

This effect is orientation-dependent and best observed in cabochon-cut stones, where the phenomenon appears to float just beneath the surface.

4. Geological Formation and Occurrence

Rainbow moonstone forms in igneous and metamorphic rocks, often associated with:

- Anorthosite bodies
- Granitic pegmatites
- Metamorphic schists and gneisses



The cooling history of the host rock is critical, as the lamellar intergrowths that cause labradorescence require slow, regulated cooling rates.



5. Localities and Mining

Major sources of rainbow moonstone include:

- India – especially in Tamil Nadu and Odisha
- Sri Lanka – known for fine quality feldspar
- Madagascar – produces larger transparent crystals
- Myanmar (Burma) – another historic source
- Australia and United States (Virginia, Oregon) – lesser known but viable deposits

Mining is primarily done through open-pit methods, and rough material is typically polished into cabochons to enhance optical phenomena.

6. Uses and Synthetic Analogs

Rainbow moonstone is used widely in:

- Jewelry (rings, pendants, earrings)
- Metaphysical and spiritual practices
- Collector specimens



Though synthetic feldspar exists, rainbow moonstone is rarely synthesized due to the difficulty in replicating natural labradorescence. Most treatments involve simple polishing; it is not commonly dyed or heat-treated.

Rainbow moonstone exemplifies the beauty and complexity of feldspar minerals. Though misnamed in the gem trade, it holds unique value both scientifically and aesthetically. Its remarkable labradorescence, rooted in crystallographic precision, makes it a gemstone of enduring fascination for mineralogists, gemologists, and jewelry lovers alike.



Article by: Barbi Beatty References:

- Deer, W.A., Howie, R.A., & Zussman, J. (1992). An Introduction to the Rock-Forming Minerals.
- Klein, C., & Dutrow, B. (2007). Manual of Mineral Science.
- Nassau, K. (1984). Gemstone Enhancement: History, Science and State of the Art.

Bench Tips

Helpful Tips and Tricks

One of the most versatile little tools is a wooden clothes pin. Using a large ball bur, the inside of the clothes pin can be hollowed out to hold a pearl for drilling. This will keep the pearl secure during drilling. After determining the pearl diameter, one can use a permanent marker to mark one-half of the pearl's diameter on a drill bit. Drilling to the mark will guarantee that the pearl is not drilled all the way through, and the pearl will not be damaged. It is best to hold the pearl in place by squeezing the clothes pin from the front with the pearl inserted.

Use low speed and lubrication when drilling. A sharp drill bit is recommended to avoid heating the pearl in the drilling process. When a pearl keeps coming loose from a post in spite of several gluing attempts, this little trick may be helpful. Using a 6/0 saw blade, split the top of the post and insert a small wedge. Apply glue and push the pearl back onto the post. The wedge will spread the post out inside the pearl, and the pearl will be secure. Be sure and measure this exactly before attempting.



Need a flat sanding wheel for your polishing motor? Discarded DVDs or CDs can have a second life. Glue them to a sheet of sand paper, cut them out and use them on the motor. If one disc is not stable enough, multiple discs can be glued together. They can be used with polishing paper, sandpaper, leather charged with tin-oxide for polishing stones, etc.





When working at a bench, precious metals represent, next to stones, the most expensive one has to deal with. As many jewelers are working with tools in the filing drawer, quite a bit of filing can be lost every time one picks up a tool. If just one-quarter gram of gold filing sticks to a pair of pliers or a file and gets thrown on the ground, at the end of the year over two ounces of gold are lost. Ideally, there should be no tools in the file drawers but, unfortunately, that's not always the case. This small trick solves some of this issue. Have a window screen made that fits the inner dimensions of the filing drawer. Now the filing falls through the mesh and the tools are not sitting in the filing but on the screen.

Tips by: Jurgen J.Maerz , Jewelry Industry Consultant LLC

We always welcome new members!



Date _____ Mississippi Gulf Coast Gem and Mineral Society

http://www.mgcgms.org		Application for Membership	
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: _____	
Members Birthdays			
Adult: _____		Birthday M/D: _____	
Adult: _____		Birthday M/D: _____	
Junior: _____		Birthday M/D/Y: _____	
Junior: _____		Birthday M/D/Y: _____	
Please Check All Applicable Interests			
<input type="radio"/> Beading <input type="radio"/> Chain Mail <input type="radio"/> Field Trips <input type="radio"/> Fossils <input type="radio"/> Others: _____	<input type="radio"/> Cabbing <input type="radio"/> PMC <input type="radio"/> Faceting <input type="radio"/> Wire Wrapping		<input type="radio"/> Jewelry Making <input type="radio"/> Lapidary <input type="radio"/> Minerals <input type="radio"/> Silver Smithing
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Annual dues are:
\$20 Individual
\$30 (2) Members in same house hold
\$6 Junior

2025 Workshop/Meeting Dates

January 11 Mary C. 9:30-4:00
February 8 Mary C. 9:30-4:00
March 8 Mary C. 9:30-4:00
April 12 Mary C. 9:30-4:00
May 10 Mary C. 9:30-4:00
June 14 Mary C. 9:30-4:00
July 12 Mary C. 9:30-4:00
August 9 Mary C. 9:30-4:00
September 26 After Vendor Dinner
October 11 Mary C. 9:30-4:00
November 8 Mary C. 9:30-4:00
December 14 Christmas Party Mary C.
11:00am-3:30pm

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

June 2025

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					

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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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