Snoopy Gems

Volume 41 Number 4 April 2015

Mississippi Gulf Coast Gem & Mineral Society Inc.

MGCGMS Established in 1974

mgcgms@bellsouth.net

Presidents Message

It's been a disappointing month for me. My new faceting machine is still in the box. For those of you that don't know, I pulled a ligament in my left arm and fractured my left wrist. Fortunately the damage to the ligament was the part that attaches to the muscle which only required me to limit my use and not to lift anything heavy (like my new faceting machine). If the damage had been to the part that attaches to the bone, I would have needed surgery. I had to wear a special glove for support on my hand for awhile. I don't need that anymore, but my wrist is still weak. Can't cock my 40mm pistol or hold things as well as before, but hopefully my wrist will get better. My arm has improved and I have been busy trying to organize things in my "hobby room" which is on the back of the house. It's sort of like a treasure hunt as it has been years since I have seen some of "stuff". I got my fingers crossed that the doctor will give me the OK at my next visit.

Our society is probably one of the best kept secrets in the area. Often when I talk to people they are absolutely amazed that our members are able to make jewelry items. I know it's time consuming, but we really need to start advertising the society and the meetings we have each month. If we expended some of the same effort in publicizing the, art, craft, education and science activities of our society that we do for our annual show, I think we could double or triple our membership and I'm not talking about the commercial ads. Every now and then I see jewelry items featured by a "rock hound" on Facebook. An article like one of those actually gained us two new members just recently. The Internet is not the only venue for letting the public know about our society. The TV stations and news papers love to cover art and craft activities of local people. In the past we had members that appeared on the "Good Morning South Mississippi" a WLOX program with some of their art work. We have not had coverage on the TV channel out of Pascagoula other than for our show, but I was told that they would like to have us appear on their local events type program. Think about the items that you have made that you like really well and share it with everybody. Let's let the public know we are here, what we do and how we do it.

John Wright

Workshop

Project for April

Wire Wrapped Ring

Vicki Reynolds will be teaching this wire wrapped ring. Materials needed are 15mm round cabochon, approximately12" of 21 gauge round wire and the same in 1/2 round. Round nose pliers, flush cutters and flat nose pliers. If you have a ring mandrel and small jewelers hammer. Vicki has 2 of each to use.

Beautiful Workshop Results from March:

http://www.mgcgms.org

March Meeting Minutes 2015

The meeting started at 3:30 PM with President John Wright presiding. There were 14 members present. Barbi Beatty mentioned a former member Kay Beaugez passed away. The minutes of the February meeting printed in Snoopy Gems were accepted with the correction of ALAA added instead of ALA.

The Treasurer's report by Barbi Beatty was read. Barbi stated the dues to SFMS have been increased from $1.75 to $1.90. A motion to accept the report was made and seconded.

An audit was done on last year's Treasury transactions by Liz Platt and Lisa Fitch. Liz reported that no problems were encountered and the bank account was correct.

Show report was given by Bill LaRue. Bill stated that the show is almost full with only five tables left. Contracts will be going out shortly. Bill stated he had obtained gift cards for the last three outgoing presidents. Only John Guglik was present and a gift card to Harbor Freight was presented.

The drawing for the 2015 Scholarship was conducted by John Guglik Secretary. A list of dues paying members was used for the drawing with those members who did not want to be included in the drawing excluded. The first name drawn was Jane Cook. The second name drawn was Bill Smith. Four alternate names were drawn as replacements should the first two not go. The alternate names drawn in order were Elmyra LaRue, Barbara Saavedra, David Cook, and Jim Kirchner. Each participant will also receive a stipend of $100.00 to help cover travel expenses.

An inventory of equipment will be conducted by Jim Kirchner in April. Please bring all club materials to the next meeting for accounting.

Any information for Snoopy Gems should be submitted to editor Barbi Beatty for next month.

A 50-50 was conducted by Jerry Meador. John Wright was the winner.

A Show and tell was presented by John Wright and Barbi Beatty showing aquamarines as this month's feature. Barbi Beatty also showed off an aquamarine she faceted.

The workshop was conducted by David Cook and beautiful pendants were made. David requested anyone having ideas for future workshops should give him the ideas.

Thirteen members participated in the workshop.

Door prizes were awarded to Jim Kirchner and Lisa Fitch.

The next workshop and meeting will be at the library at the regular time 9:30 AM to 4 PM on 4/11/15 with a meeting beginning at one PM.

Minutes presented by:

John Guglik Secretary

April 2015 Birthdays

Jane Cook

Jim Kirchner

History of diamond

Diamond is the most familiar gemstone and it has a rich and interesting history. Diamonds are known for their prismatic beauty and hardness, and they are highly valued for these and other qualities. At one time, it was even thought that if you took a diamond into bed with you, it would cure your illness!

Science of diamond

Diamond is a form of carbon with a tightly bound crystalline structure. It originates deep inside the Earth under intense pressure and high temperatures. Diamonds are brought up to the surface by very deep-seated volcanic activity. Diamond-bearing volcanoes are called kimberlies, and they erupted millions of years ago. Interestingly, both graphite (used in pencils) and diamond are forms of carbon, but they have very different structures and properties: graphite is opaque and soft, while diamond is transparent and the hardest mineral on Earth. These differences occur because diamond crystallizes in the isometric system while graphite crystallizes in the hexagonal system.

DIAMONDS
April's Birthstone
By John Wright, RPG

Diamond in the rough

Birthstone: April

Family: Native Carbon (?), **" C "** Note: Graphite is the same with a different type bonding.

Crystal System: Isometric (octahedral or cubic form)

Birefringence: 0.044 (Highest for colorless minerals)

Refractive Indices: n2.417 – n2.42

Density: 3.62 g/cm3

Hardness: 10

Cleavage: Easy – parallel to octahedral faces.

Color: Usually pale yellow or colorless, but can be brown, blue, green, orange, red, and black

April's birthstone is the diamond and its name comes from the Greek "**adamas**" meaning "**invincible**" alluding to its exceptional hardness and resistance to abrasion. Diamond is the "King of Gems" and sets the standard by which all gemstones are rated. It symbolizes purity, strength, and longevity, is the token of everlasting love, the undisputed worldwide gemstone preference for engagements, and the symbol of the 75th wedding anniversary.

Diamond, composed of carbon, is the hardest natural substance in the world. It is the only **"10"** on the **MOHs'** scale (Mineral Order of Hardness scale) and depending on the methods of measurement used, is anywhere from 10 to 150 times harder than corundum which is the only mineral with a hardness of rating of 9 on the MOHs' scale.

Scientist believe that diamonds may be up to **3 billion** years old having formed more than **300 miles (200 km)** below the surface in the bowls of the earth under extreme (probably more appropriately **- unimaginable**) heat and pressure. Here the diamond crystals remain until some unique geologic event or set of circumstances occur, which allows the special host-matrix, usually **kimberlite** and less often **lamproite**, containing these very desirable little gemstones, find passageways to the surface normally in the form of volcanic pipes. This is where (with a lot of luck) we get our greedy little hands on diamonds and the work/fun begins.

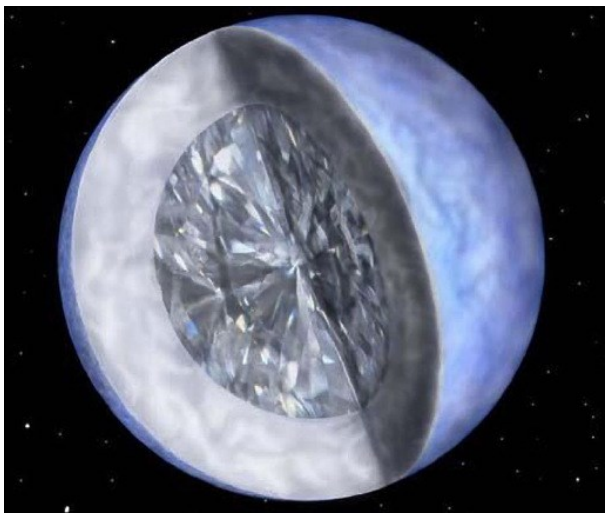
Another unique property of diamonds is its extremely high thermal conductivity, higher than any other known mineral. It is four times greater than copper, its closest competitor. I understand they have survived intact with absolutely no damage being heated to over two thousand degrees and then very quickly submerged in liquid nitrogen. It could very well be true, but I just don't believe that I want to try that method of testing one and I certainly don't encourage anyone else to try it.

Diamond are also highly resistant to the corrosiveness of acids and alkalines. This coupled with their hardness and thermal conductivity give them the chemical and physical properties required for superior cutting ability that is required by our modern day industry.

It may surprise you to learn that the majority of the worlds production of natural diamonds, about 75 – 80 % are used for industrial purposes. Only about 15% end up being used for jewelry. The other 5 – 10 % are used in research, for displays, the medical profession for precision surgical blades and drill bits (dental mostly), and by craftsmen for cutting diamonds and other gem stones. I guess that waste would also fall in this category. Diamonds were first mined in India. Today they are mined on every continent except Europe. They have been found in all but six of the states in the U.S. Mississippi is one of the six. Maybe we should start panning the Mississippi river since it drains such a large area of the country. Currently, the most productive mines are found in Australia, Canada, Russia, Angola, South Africa, and Brazil

SPACE TODAY ONLINE — COVERING SPACE FROM EARTH TO THE EDGE OF THE UNIVERSE

Lucy in the Sky is a Diamond



A diamond weighing 10 billion trillion trillion carats is at the heart of a dead white dwarf star nicknamed Lucy in this conception by an attist at the Harvard-Smithsonian Center for Astrophysics.

The largest diamond ever found is not on Earth, but faraway across the galaxy.

It's the burned out corpse of a star named BPM 37093 only about 50 light years away from Earth in the region of the sky we refer to as the constellation Centaurus.

The white dwarf star is a chunk of crystallized carbon that weighs 5 million trillion trillion pounds. That would equal a diamond of 10 billion trillion trillion carats.

Lucy. After it was discovered in 2004, astronomers nicknamed the space diamond Lucy after the Beatles song *Lucy In The Sky With Diamonds*. BEATLES IN WIKIPEDIA »

Lucy, also known as BPM 37093 and V*886 Cen, is the 886th variable star in the constellation Centaurus.

Star of Africa. By comparison, the largest such precious stones on Earth are Star of Africa.

The Golden Jubilee Diamond was found in 1985 and is in Thailand's Royal Palace as part of the crown jewels. The Great Star of Africa was found in 1905 and is in the Tower of London as part of the Crown Jewels of England.

White dwarf: A white dwarf is the hot cinder left behind when a star uses up its nuclear fuel and dies. It is made mostly of carbon and oxygen. and surrounded by a thin layer of hydrogen and helium gases.

The Sun's diameter is 870,000 miles (1.4 million km). Lucy is tiny at a mere 2,500 miles (4,000 km) diameter.

The Sun is 109 times the diameter of Earth. Lucy is only about 2/3rds the size of Earth. That's tiny for a star. However, Lucy's mass is about the same as our Sun. That's a lot of weight in a tiny ball.

While Lucy is a dead star now, it used to shine like our Sun. Lucy is very dim now, shining with only 1/2000th of the Sun's visual brightness. the 545-caret Golden Jubilee Diamond and the 530-carat Great

What is Lucy? Lucy is the most massive pulsating white dwarf currently known. Like other white mostly of carbon and oxygen created by the past thermonuclear fusion of helium nuclei.

Lucy has a very thin atmosphere of hydrogen and helium. The atmosphere of our Sun is mostly hydrogen and helium.

Astronomers say that, similarly, our Sun will deplete its nuclear fuel and die in another five billion years, and then become a white dwarf like Lucy. Then, about two billion years after that, the cinder Sun will be a similar diamond. OTHER DYING STARS »

How do they know? Astronomers had suspected since the 1960s that the interiors of white dwarfs would be crystallized and Lucy seems to confirm that.

In its death throws, the core of a star like Lucy or our own Sun becomes exposed and slowly cools down over time. Such a star begins to pulsate when the core surface temperature drops to about 12,000 degrees.

By comparison, the Sun's core temperature now is about 27,000,000°F (15,000,000°C). Its surface temperature is about 11,000°F (6,000°C).

Lucy pulsates like a giant gong. Its internal pulsations are something like seismic waves inside Earth. Astronomers measured the pulsations to figure out Lucy's carbon interior was solidified (crystallized).

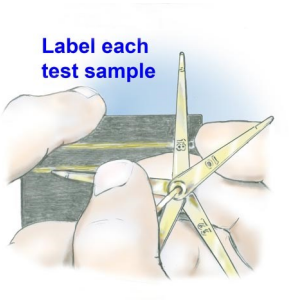
Astronomers measured the pulsations hidden in Lucy's interior in the same way geologists use seismographs to measure earthquakes inside Earth. **Where to look.** Lucy is not visible from Earth with the unaided eye. It must be viewed with a telescope and is best seen from Earth's Southern Hemisphere during March-June. dwarfs, Lucy probably is composed

Bench Tips: Gold Testing

There are a few scientific methods for precisely determining karat gold purity, some destructive (fire assay) and others nondestructive (X-ray florescence). Both methods require costly equipment, special procedures and a well-lit and ventilated area. A simpler method for determining gold purity in jewelry is the "touchstone" testing process, an age-old technique that is relatively nondestructive to jewelry and offers quick results.

Use with care: Touchstone testing incorporates the use of acids, so pay close attention to safety. Careful procedures are a must.

Touchstone testing is based on the fact that 24k gold resists all but the strongest acids. The purer the gold, the stronger the acid required to dissolve it. Measured strengths of nitric acid are used to test for 14k and lower. Aqua regia, a mixture of one part nitric acid and three parts hydrochloric acid, is used to test higher karat purity through the process of comparison and elimination.



To conduct touchstone testing, you'll need an acid testing kit (available through jewelry tool suppliers), a well-ventilated area, two glass beakers, water, baking soda, protective gloves, 320-grit abrasive paper, safety goggles, and paper towels.

Your testing kit includes a set of testing needles. Each needle has a karat gold sample on its tip and the karat value stamped on the side. Use yellow gold needles for testing yellow gold, and white gold needles for testing white gold.

Each known test sample is labeled on the needle. Rub the known samples onto the stone and label each on the testing stone.
Begin by checking the gold jewelry piece for other stampings (e.g., quality marks or manufacturer's marks) and make note of characteristics such as heft, color and reflectivity. If you suspect the item may not be gold, use an engraving tool and make a small notch in an unobtrusive place on the jewelry to expose fresh metal. Next, put on protective gloves and place a drop of acid from the 18k gold testing bottle over the small notch. A highly effervescent green reaction indicates base metal, and no further testing is required.

If there is little or no reaction, the piece is likely karat gold, and the next test is for purity. Follow these steps:

- Rub the jewelry of unknown karat purity gently back and forth on the testing stone to leave a thin, but clearly visible, metal sample. Use care to take this sample from a place not clearly visible on the jewelry and away from solder joints.
- With a testing needle, draw a question mark on the touchstone that represents the unknown metal.
- Start with the 14k testing needle and rub a layer next to the unknown. Label it "14."
- Repeat this process, making a layer and then labeling with the 18k, 22k, and 10k testing needles. Now choose the bottle labeled for testing 10k and lightly swipe the applicator across all the samples.
- After approximately 20 to 40 seconds, place the touchstone in a mixture of baking soda and water to neutralize the acid in one beaker, then rinse in water in the other beaker.
- Blot the touchstone with paper towels and observe. The 10k sample has dissolved, but the unknown metal is still visible. This confirms the unknown metal is finer than 10k.

- Next, choose the bottle labeled for testing 14k and swipe it across the samples just below the first test.
- Allow enough time for the acid to react and neutralize, then rinse and blot the touchstone and observe. The acid has dissolved both the 10k and 14k samples. The unknown metal is therefore 14-karat or slightly higher.

Analyze the test results to determine the karatage.

Always prepare the touchstone for its next use by cleaning it thoroughly. Remove the metal from the stone's surface by placing it facedown on a piece of 320-grit abrasive paper on a flat surface. Apply moderate pressure and sand it in a circular motion until sample layers are no longer visible. Neutralize, rinse and blot dry before replacing in the kit. Always follow the manufacturer's directions for the proper care, storage and handling of acids

Source: http://www.gia.edu/gia-news-research-bench-tips-09

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S.C.R.I.B.E. (Special Congress Representing Involved Bulletin Editors

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Membership	Barbi Beatty (228) 238-9900
Show Chairman	Bill LaRue (228) 229-8781
Silent Auction	Open

ALAA	John Wright	Director
SFMS	John Wright	Past President
SFMS	Buddy Shotts	Long-range Planning &Past President

Annual dues are:

$16 Individual

$20 (2) Members in same house hold

$6 Junior

2015 Workshop/Meeting Dates

February 14, 2015 St Paul's Church 9:00-4:00

March 14, 2015 OS Library 1:30-4:30 (1/2 Day)

April 11, 2015 OS Library 9:30-4:30

May 9, 2015 OS Library 9:30-4:30

June 6, 2015 OS Library 9:30-4:30

July 18, 2015 OS Library 9:30-4:30

August 8, 2015 OS Library 9:30-4:30

September 12, 2015 OS Library 9:30-4:30

October 10, 2015 OS Library 9:30-4:30

November At Show

December TBA

*Be sure to check Dates each month! *

**The November meeting is the Thursday 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 **

April 2015

Su	M	Tu	W	Th	Fri	Sa
			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		

We always welcome new members!

Tell a friend!

Misssissippi Gulf Coast Gem and Mineral Society

http://www.mgcgms.org **Application for Membership**

Individual: $16.00 Individual +1 relative Same Address: $20.00 Junior Under 18: $6.00

Name: _____ Home Phone: _____

Address: _____ Cell 1. _____

City: _____ Cell 2. _____

State: _____ Email 1: _____

Zip: _____ Email 2: _____

Members in the Same Household

Adult: _____ Birthday M/D: _____

Adult: _____ Birthday M/D: _____

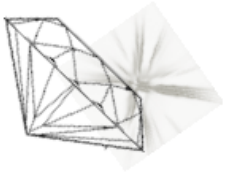
Junior: _____ Birthday M/D/Y: _____

Junior: _____ Birthday M/D/Y: _____

Junior: _____ Birthday M/D/Y: _____

Please Check All Applicable Interests

- ○ Beading
- ○ Chain Mail
- ○ Field Trips
- ○ Fossils
- ○ Others: _____
- ○ Cabbing
- ○ PMC
- ○ Faceting
- ○ Wire Wrapping



- ○ Jewelry Making
- ○ Lapidary
- ○ Minerals
- ○ Silver Smithing

How did you hear of us? _____

Please check the following:

○ I understand that my picture or likeness may be used in Society promotions.
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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The Mississippi Gulf Coast Gem & Mineral Society is a Non-profit Organization Dedicated to Education, Science, and the Lapidary Arts and Crafts