



Snoopy Gems

Volume 43 Number 1 January 2017

Mississippi Gulf Coast Gem & Mineral
Society Inc.



MGCGMS Established in 1974

Email: mgcgms@bellsouth.net

Presidents Message

*Happy
New year*

Dear Members,

I, speaking for the entire Board, pledge that we will do the very best we can in 2017 to promote the club and serve the members well. The work that is done by board and committee chairs reflects how we feel about the positive benefits of the lapidary arts in our community. If you are a new member or a long time member, please join with us to make the club even more of a benefit to all. Consider volunteering for a committee or to lead one of our monthly workshops. Consider learning a new skill or using a new technique or material. Send me your ideas and thoughts.

Thank you all for your work on our 2016 Gem, Mineral and Jewelry Show in November. This will allow us to send one or more members to a federation workshop, purchase or maintain equipment, and continue to promote earth science education. Be sure to check the classes and dates offered by SFMS. Schedule is posted at <http://www.sfmsworkshops.com/schedule2016.html>

Happy New Year and Many Blessings to You All!

Liz Platt, President

Workshop:

For the new members, I will give instruction on basic techniques and wrap a cabochon pendant. Materials and wire will be available. If you have extra tools, bring them for the new members to use. Don't forget to mark your tools.

For the veterans, you will do a Pharaoh's ring using a small cabochon. You can search the internet to see examples. I suggest you provide your own cab. and wire if you want to use anything other than copper. The minimum amount of wire you will needed is 36 in. 21 ga square dead soft wire and 6 in. of 20 or 18 ga half round half hard wire. If you want to wrap the shank of the ring you will need an additional 36 in of HR. I suggest a cabochon of about 20 mm x 12 mm but smaller or larger ones will also work. Instructions will be available.

Here are two websites that will help with the basics of ring construction.

<http://www.wirejewelrybootcamp.com/members/Jewelry-Class-The-Pharaoh-Ring-for-Cabs-or-Cabochons.cfm>

<http://www.wirejewelrybootcamp.com/public/How-to-Shape-a-Pharaohs-Ring-Video.cfm>

I need each of you make and bring a pair of earrings to the workshop. From these we will select one or more designs to make in the February workshop. These can be beaded, wire, or both.

**Dave Cook
Workshop Chairman**

December Meeting Minutes: Ms. Gulf Coast Gem & Mineral Society December 10, 2016

Meeting Called to Order: 12:50 p.m.
Members in Attendance: 21

Meeting:

Swearing in of 2017 Board Elect:

Vice President – Bill LaRue, Secretary – Lisa Fitch, Treasurer – Barbi Beatty, and Members at Large – Buddy Shotts and Bill White. Ceremony performed by Buddy Shotts. President Liz Platt not present due to illness.



Communication:

No general meeting. We had our Christmas Party and played “Dirty Santa”. Everyone had a good time, the food was wonderful, and members received door prizes. We had enough door prizes to do it twice.

Membership Fees Due January 14, 2017

New Business:

New Members:

Joseph Carrier
Brad Simons & Gloria Lancaster
Dale & Helen Hutchinson
Bradley & Jennifer Cannon
Gary & Diana Allen
Mark Daynes
Tres Lennep & Kathy Stevens
Terry Ceasar

Welcome to our New Members!

Adjournment: 2:00 pm all festivities were over.

FSMS

January 2017 SFMS 1st Quarterly Meeting Information

Hosted by Pinellas Geological Society, Largo, Florida
The Pinellas Geological Society invites all Officers and members of the Southeast Federation of Mineralogical Societies, Inc., to join us for our 41st Annual Gem and Mineral Show held at the Largo Cultural Center, 105 Central Park Dr., Largo, January 13-15, 2017.

We have reserve a meeting room as well as a block of hotel rooms at the Holiday Inn Express, 210 Seminole Blvd., Largo Florida, 33770. The hotel is only a few blocks from the Show.

King and Queen rooms are available at \$89/night. Call the hotel at 727-581-3900 to make reservations, asking for the Pinellas Geological Society block. Complimentary hot breakfast is provided, and Microwaves and Mini fridges are in all rooms. There is a heated swimming pool.

SFMS Events: Friday 7 PM – “Cracker Barrel” at Holiday Inn Express
Saturday 8AM – Registration,
9AM Executive Meeting at Holiday Inn Express

Pinellas Geological Events: Friday and Saturday 10 AM – 5 PM, Show at Largo Cultural Center
Saturday, 6 PM – Club Dinner at a local restaurant TBA (Usually Golden Corral)

Sunday 12 – 5PM, Show at Largo Cultural Center

Event Registration:

<http://www.amfed.org/sfms/pdf/2017%20Largo%20S.F.M.S.pdf>

AFMS

The 2017 CFMS-AFMS Show

Please mark your calendar for June 9-11, 2017 for the nationwide CFMS-AFMS Show and Convention. The VGMS (Ventura Gem & Mineral Society) is a member of the CFMS (California Federation of Mineralogical Societies), which in turn is one of 7 regions of the AFMS (American Federation of Mineralogical Societies). Each year the CFMS holds a Show and Convention somewhere in California, and likewise, each year the AFMS joins with one of the 7 regions for its annual show. Hence, every 7 years it lands in California. It's a special event to host the CFMS show, and even more special to host for the joint CFMS-AFMS show.

There will be lots of things to do throughout the three days. (Exhibits and dealer hours are Fri. & Sat., 10-5; Sun., 10-4. Check schedule page for additional activities before and after those hours.) Immerse yourself in all things rock and mineral related:

Event Page link:

<http://2017cfms-afmsshow.com/>

Happy Birthday!



Lisa Fitch Eddie Tate Roger Teague Angie Troutman Lettie White Brad Simons

Garnet



The word garnet comes from the 14th century Middle English word gernet, meaning 'dark red'. It is derived from the Latin granatus, from granum ('grain, seed').

Category	Nesosilicate
Formula (repeating unit)	The general formula $X_3Y_2(SiO_4)_3$
Crystal system	Isometric
Color	virtually all colors, blue very rare
Crystal habit	Rhombic dodecahedron or cubic
Cleavage	Indistinct
Fracture	conchoidal to uneven
Mohs scale hardness	6.5–7.5
Luster	vitreous to resinous
Streak	White
Specific gravity	3.1–4.3
Polish luster	vitreous to subadamantine
Optical properties	Single refractive, often anomalous double refractive
Refractive index	1.72–1.94
Birefringence	None
Pleochroism	None
Ultraviolet fluorescence	variable
Other characteristics	variable magnetic attraction

All About Garnets by Chris Ralph

Just about every experienced prospector has found garnets along with gold in his pan at one time or another. So just why is garnet commonly found with placer gold? What can garnets tell us about mineral deposits? Can they be a tool for exploration? Are they valuable in and of themselves?



A nice specimen of grossularite garnet comes from the MGL tungsten mine in Nevada. The garnet and tungsten ore was formed as a part of a skarn deposit at a contact with an intrusive body.

I get a lot of questions from prospectors about garnets, their value and what they tell us about the geology of some types of mineral deposits. So I thought it would be a good idea to take a closer look at the lowly garnet and learn a bit more about it. Some types of mineral deposits commonly contain significant amounts of garnet associated with the ore minerals, so it's a topic that is worthwhile for prospectors.

The first thing to learn is that garnet is a family of minerals—not just one mineral species. There are actually six different fairly common minerals that are called garnet and a number of rare ones that also belong to the garnet family. All the members of the garnet family have a related chemical makeup and crystal structure. They are silicates with metals that contribute either two or three electrons to their molecular structure. Metals that can contribute two electrons include calcium, magnesium, manganese and iron. Metals that contribute three electrons in garnet structures include aluminum, iron and chromium. The six best known garnet minerals are almandite, grossular, pyrope, spessartite, andradite and uvarovite. These minerals are only the pure end members of the garnet family, and most garnets found in the field are more complex and certainly not pure. Almost all garnets are mixtures, mostly of the six end members mentioned above. A typical garnet that one might see in one's gold pan could be 70% almandine, 20% grossular and 10% pyrope. Common garnet is a mixture of the grossularite, almandite and andradite molecules and occurs in many metamorphosed igneous rocks, schist and some slates.

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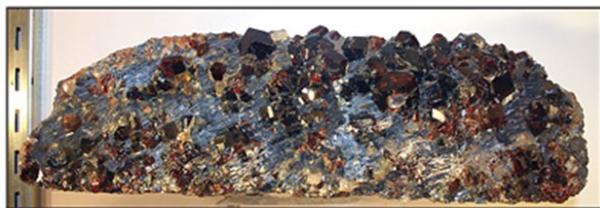
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The exact chemical mixture ratios of each garnet can only be determined by chemical analysis. Though garnets differ in composition, all of the kinds crystallize in the same system, and their mineral properties such as hardness, cleavage and density are all very similar. The typical garnet crystals of the common twelve-sided form are known as dodecahedrons.

Garnet exhibits many varieties of color and composition. The color most folks think of in connection with garnet is dark red, but it would be a mistake to suppose this is the only color in which garnet is found. I've seen garnet in green, colorless, pink, yellow, orange, purple and brown. Black and near black are also common opaque varieties. The rarest color is blue—only a very few specimens exist. These colors are all, more or less, connected with differences in the chemical composition of the different garnet species as it is the elements that form a garnet that determine its color.

Prospectors find garnets when they are processing gold gravels because garnet is a very common rock forming mineral that is hard and has the power to resist weathering and decay. These properties enable it to endure in gravels long after the other ingredients of the rocks which formed around it have been weathered and worn away. It concentrates with other heavy minerals like magnetite and hematite (black sand) because it is quite dense in comparison with quartz, calcite, feldspar and other rock forming minerals. Garnet that has weathered from various rock types and survived alluvial transport downstream frequently occurs as rounded grains in stream and ocean beach sands. It concentrates with heavy minerals because most garnet is about 3.5 times as heavy as water.

Garnets, when found in crystals, are easily distinguished from other similar appearing minerals by their characteristic round isometric crystals, their hardness, and color. Massive forms of garnet may resemble idocrase, sphene, zircon or tourmaline. It is distinguished from zircon by the fact that it is easier to fuse; and idocrase by its more difficult fusibility; from tourmaline by its higher specific gravity; and from sphene by that mineral's high titanium content. They vary in the hardness from 6.5 to 7.5 and range in specific gravity from about 3.15 to about 4.3. With a luster that ranges from glassy to resinous, garnets can be found in forms that range from transparent to almost opaque. Sometimes the crystals attain considerable size, and I have seen multi-pound single garnet crystals from numerous places, including Colorado in the US and from India. Some of these large crystals can be spectacular and valuable mineral specimens. The rounded, isometric, 12-sided crystal form is one of the things that prospectors quickly notice. In your gold pan, garnets will often appear as small, rounded, glassy looking balls of a red to orange color (though I have seen them in my pan with a much wider range of colors).



This fine specimen of well crystallized almandite garnet on schist comes from Alaska. It is quite valuable, though it is not of gem quality.

The members of the garnet group occur in many types of rocks and formations and are widely spread in nature. They most commonly occur in schists, slates and other regionally metamorphosed rocks. However, they can also occur in granite, rhyolite and other igneous rocks, and as the product of contact metamorphic forces in limestones. In igneous rocks they are formed by separating from the melt upon slow cooling of the magma. In other igneous rocks they are the products of pneumatolitic hot vapor processes. They are found occasionally in

some quartz veins, in pegmatite formations, and associated with other silicates in some types of ore veins. Garnet's most common and characteristic occurrence is in mica-schists, a rock very commonly associated with gold deposits. This is the source rock type for the garnets most commonly found by prospectors in their search for gold.

I have mentioned the six most common garnet species, so let's take a look at each of the individual garnet minerals.
Garnet Varieties

Grossularite. It is also sometimes known as essonite or cinnamon stone. Grossularite is a calcium aluminum garnet but often contains ferrous iron replacing some of the calcium and ferric iron replacing part of the aluminum. When pure, the mineral is colorless or white but it is also found as green, yellow, cinnamon-brown, pale red, orange and other tones. The lighter-colored varieties are often transparent or nearly so. Those that are transparent and nicely colored are used as gems. The name is derived from the botanical name for gooseberry, in allusion to the light green color and round shape of the original grossularite. It occurs principally in crystalline schists and in metamorphosed limestones, where it is associated with other calcium silicates. It is also found in some quartz veins. Grossularite occurs as the result of contact metamorphic conditions where limestones are touching granitic rocks.

These deposits are known as skarn or tactite and often consist largely of grossularite, epidote, magnetite and pyroxene minerals. In these skarn deposits, grossular garnet is closely associated with tungsten ores and the mineral scheelite. Skarn deposits can also be valuable for copper, iron and gold. The most valuable of the grossularite garnets is a green gem variety known as tsavorite, which is mined in Tanzania, Africa. Good crystals of grossularite occur at Phippsburg, Raymond and Rumford, in Maine, and at many other places in this country, especially around some of the old tungsten mine properties in the West. Colorless and light green varieties have been found in California, and bright yellow varieties are reported from Canyon City, Colorado. Attractive gem and specimen grossularites in a peach-orange color are recovered from the Jeffery asbestos mine in Quebec, Canada.

Pyrope is a magnesium aluminum garnet. Calcium and iron are also normally present in smaller amounts—the pure form of magnesium garnet is unknown. In some specimens chromium replaces part of the aluminum. These types are associated with kimberlite rocks and diamond deposits. Gem grade pyrope associated with the diamond-bearing rocks of South Africa was long sold in the gem trade as "Cape ruby." The color is normally deep red to nearly black. They are often transparent and those of good red color are used as gems, but this garnet tends to be smaller in size. It occurs principally in basic igneous rocks where it forms on slow cooling of the magma. The name is derived from Greek, meaning "fire like." Rhodolite is the gem industry trade name given to a pale rose-red to purple garnet mixture that corresponds in composition to two parts of pyrope and one of almandite.

Almandite. Perhaps the most common garnet in the gold fields overall is almandite. It is an iron aluminum garnet, though it is normally impure, and ferric iron often replaces part of the aluminum and magnesium replaces some ferrous iron. The name derived from Alabanda, where in ancient times garnets were cut and polished. Almandite is deep red, brownish red or black, and ranges from fully transparent to opaque. It is one of the commonest of all garnets, supplying nearly all the material manufactured into abrasives. Transparent varieties with a fine deep red color are also used as gems, and it is the most common of the gem garnets seen in jewelry stores. It is found in granites and andesites and also in some types of ore veins. Though it is very widespread, almandite is best known in the US from occurrences in North America at Yonkers and at

Continued on page 5:

various points in the Adirondacks, NY, at Avondale, PA, and on the Stickeen River in Alaska. The almandite of Alaska is used mostly as decorative mineral specimens and is not usually cut into gems as it is too dark and opaque.

Fine crystals, including some beautiful four ray star garnets are mined at Emerald Creek in northern Idaho. Almandite is also found in India, Brazil, Australia, and several localities in the Alps. Stones from all of these regions are suitable for cutting gems as long as they are of sufficient size and transparency with good color—which includes being not too dark.



This beautiful orange spessartite garnet crystal comes from Brazilian pegmatites. The tag showing \$35,000 was the sale price of this fine specimen.

the best specimens come from pegmatites. Spessartite's best known occurrences in the United States are in granite pegmatites, at Haddam, Connecticut, Ramona, California, and at Amelia Court House, Virginia. They are also found in the lithophyse voids of some rhyolites, such as near Nathrop, in Colorado, near Hayden in Arizona and at Ely, Nevada. Beautiful gem and specimen crystals of spessartite are mined in the pegmatites of Brazil.

Andradite is a calcium iron garnet and one of the more common garnet species, very widely spread across the globe. Aluminium replaces part of the ferric iron and ferrous iron; manganese and magnesium sometimes replace part of the calcium. It occurs in various shades of yellow, green, brown, and brownish red to black. Some rare specimens from Mexico and Nevada have an iridescent sheen on the surface. The purest varieties are topaz-yellow or light green and transparent. The rare but beautiful green variety of andradite is prized as the gem demantoid. These stones have a rich green color, and make beautiful gems when clear and flawless. The name demantoid refers to the diamond-like high light dispersion they possess. The black variety, melanite, nearly always contains titanium. It occurs in alkaline igneous rocks, serpentine, crystalline schists and iron ores. It is named after the Portuguese mineralogist, d'Andrada. The mineral occurs at Franklin, New Jersey, in metamorphosed limestones; near Franconia, New Hampshire, in quartz veins; and at many other places. A black titanium-rich variety occurs in a metamorphosed limestone in southwestern California and near Magnet Cove, in Arkansas.

Uvarovite is the calcium chromium garnet. The color is always some shade of emerald-green. It makes nice mineral specimens and sees some limited use in the gem trade as drusy, where surfaces covered with small bright green crystals are used directly in jewelry. It is the rarest of the six common and well known garnets, occurring only with chromite deposits, mostly in serpentine. Uvarovite was named after Count Uvarov of Russia. It is found at Bissersk and Kyshtim in the Ural Mountains of Russia; in chromite mines in Texas and Pennsylvania; and in chromium deposits of California as at New Idria.



A specimen of dark green uvarovite garnet, the chromium garnet. It is the rarest of the six common garnets and does not normally occur in large sizes like most other garnets.

Uses and Production

The main uses for garnet are as gems, mineral specimens and abrasives. For abrasives, massive garnet deposits of material are crushed and used largely in the manufacture of garnet sand paper. The use of garnet for gem purposes dates back to the earliest times of civilized human history. Among the ornaments adorning the oldest Egyptian mummies are beautiful necklaces containing garnet. The Romans prized the stone highly, and under the name of "carbuncle" it is mentioned in ancient literature all across the world, being noted usually for the brilliant, fiery light which it gives forth. It is still a very popular gemstone today, although its greater abundance in modern times has led to the more common red varieties being less highly prized than centuries ago. Its hardness and durability together with the richness and permanency of its colors give it qualities that are very desirable for a precious stone. The most valuable garnet gems are those that are green in color such as tsavorite and demantoid. Also highly valuable are some garnets from Tanzania, which change color in different types of light in a manner similar to the gem alexandrite. After this, the next most valuable garnets are those that are bright and colorful including malaya (a mixed garnet with an orange color range) and rhodolite (a mixed garnet with a purple-red color range). Nice, light-colored sepiessartite garnets are dearly prized. Some of the lighter colored yellow to peach grossularite gems are also quite valuable. The darker red stones, including gems of almandite or pyrope, are more common and normally sell for a lesser price.

One of the things that many prospectors overlook is the value of mineral specimens. Garnet has a high tendency to form well crystallized and attractive mineral specimens. The bright colors contrasted with other minerals or rocks can make for a beautiful and valuable item. I have seen specimens of garnet from Alaska sell for more than \$2,000. Other attractive garnet crystal specimens, while not quite as expensive, can be very valuable in their own right.

Prospectors who are searching skarn deposits for gold, copper or tungsten should keep an eye out for well-formed garnet specimens as these may be quite valuable in their own right and worth selling to people who market materials to mineral collectors. I wrote an extensive article about marketing mineral specimens in our May 2012 issue of the ICMJ's Prospecting and Mining Journal, ("Tucson Show Marketing").

I often get asked about the value of the garnets prospectors may find. Just about all garnet specimens that are well crystallized and attractive have some value as a mineral specimen. Specimens with cracked, chipped and broken crystals would not have mineral specimen value. To be valuable as a gem, a garnet must have decent size and transparency. This means garnet stones should be at least one quarter inch in diameter and just as transparent as window glass. If the stone has cracks or inclusions of other minerals, it is not valuable as a gemstone. The value of the stone depends on its size and exact color. I would recommend that if you come upon the deposit of gem quality garnet, that you consult with someone who is an expert in raw gemstones to assist you.

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Snoopy Gems

Official Publication of

The Mississippi Gulf Coast Gem and Mineral Society, Inc.

Member of

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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Annual dues are:

\$16 Individual

\$20 (2) Members in same house hold

\$6 Junior

2017 Workshop/Meeting Dates

January 14 OS Library 9:30-4:45

February 11 OS Library 1:30-4:45

March 11 OS Library 1:30-4:45

***April 8 Club Picnic TBA**

May 13 OS Library 9:30-4:45

June 10 OS Library 9:30-4:45

July 8 OS Library 9:30-4:45

August 12 OS Library 9:30-4:45

September 9 OS Library 9:30-4:45

October 7 OS Library 9:30-4:45

November 9 After Vendor Dinner 7ish

December 9 Christmas Party OS Library 11:00am -4:00pm

***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 ****

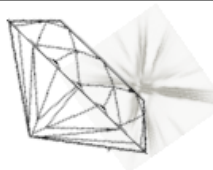

January 2017

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	31				

We always welcome new members! Tell a friend!

Date: **Mississippi 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			
<input type="checkbox"/> Beading <input type="checkbox"/> Chain Mail <input type="checkbox"/> Field Trips <input type="checkbox"/> Fossils <input type="checkbox"/> Others: _____	<input type="checkbox"/> Cabbing <input type="checkbox"/> PMC <input type="checkbox"/> Faceting <input type="checkbox"/> Wire Wrapping		<input type="checkbox"/> Jewelry Making <input type="checkbox"/> Lapidary <input type="checkbox"/> Minerals <input type="checkbox"/> Silver Smithing
How did you hear of us? _____			
Please check the following: <input type="checkbox"/> I understand that my picture or likeness may be used in Society promotions. <input type="checkbox"/> I authorize MGCMS to include my contact information be included in Society listings for members to contact each other only.			
Signature: _____			
Signature: _____			

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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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