STONEY STATEMENTS

A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 50 December 2024 NUMBER 12

NEXT MEETING: **Tuesday, December 10, 2024**

TIME: **6:00 p.m.**

LOCATION: Kelley's Country Cooking
1502 W. Main St. (FM 518)
League City, TX 77573

INSIDE THIS ISSUE

December MONTHLY MEETING

We will have our Annual Christmas Dinner.

Please come and join us for a Holiday Celebration. Bring your friends and family (FREE for all attendees).

http://www.clgms.org/

MINUTES OF THE November CLGMS GENERAL MEETING

Our first ever CLGMS Annual Picnic was a big hit, and it will now be an annual event.

Pins will be available during the Christmas Dinner on:

December 10th, 2024 at 6 PM

Kelley's Country Cooking
1502 W. Main St. FM 518
League City, TX 77573
281-338-0300

Your choice of Entree (5 to choose from)
(1)-Chicken Fried Steak, (2)-Chicken Fried Chicken, (3)-Grilled Chicken Breast w/ Pineapple,
(4)-Jumbo Fried Shrimp and Fish Combo, (5)-Fried or Grilled Fish.
Salad and 2 sides of your choice
Drink
Small Dessert

The dinner will be FREE for all attendees – Please come join us to celebrate the holidays.

Six feathers' signs will be ordered for the Show in February 2025.

The November 2024 newsletter was approved.

We need a volunteer to help with refreshments during the meetings.

Spencer Pearson will replace Jeff Mills as a Board of Directors member.

Heather Althoff will help with the Newsletter Editor.

MINUTES OF THE December CLGMS BOARD MEETING.

There was no December Board of Directors meeting.

Field Trips Announcement

Currently, we do not have any field trips scheduled

If you have a good location for our club field trip – please contact:

annabel.brownfield@gmail.com or call/text: 281-486-1866.

Upcoming events - We are looking forward to the following program(s).

Annual Christmas Dinner.

Please check out our Facebook page: **Clear Lake Gem and Mineral Society.**

Our next show will be February 22-23, 2025.

Agate Gemstone of the Big Bend

By Paul Graybeal

West Texas is famous for its wide variety of unique, beautiful agates and jaspers. Some types are highly prized by collectors worldwide. 35 ~ 60 million years ago, volcanic activity in the Big Bend produced the environment for our beautiful gemstones to form. Cryptocrystalline quartz crystallizing as nodules inside gas pockets, (or in cracks to form vein type agate), can have inclusions of iron oxides such as goethite, hematite to form delicate plumes, moss and bouquet patterns of different colors. With no color or patterns, it is chalcedony, solid colors can be jaspers, flint, chert. Agates you can see through a cut slice, translucent or transparent, with bands or inclusions. Agate and chalcedony is widespread throughout this volcanic region, but only a small amount is of lapidary interest. Agate, jaspers have been found south of Sierra Blanca, Van Horn, most of the igneous Big Bend, as well as the agate that was carried down river to form alluvial deposits from Mexico and New Mexico. Texas has no public lands to collect on, so there is still a lot to explore if permission can be obtained. Most areas opened to the public in the past, the surface has been stripped clean. There are several types of agate besides the famous red plume found in the Cottonwood Springs Basalt. (Woodward, Walker Ranches). Black and brown plume with banding being the most common lapidary grade. Often some black/red plumes, surrounded by colored banding. Banded agate is common in West Texas agate, South of Alpine it is usually white, nearly clear, but bands can be shades of red, purple or pink, often surrounding a plume. Yellow plumes can be found here, typically with much euhedral quartz making it difficult to cut. There is orbicular agate found south of Alpine (called peanut agate by Frank Woodward). Pat McMahan refers to pisolites/oolites in his description. Mostly it is a solid orange color inside the orbs, but this agate/jasper can also be formed of independent orbs of different colored bands, plumes in other orbs in the same stone. This type is often difficult to cut in cab, not all the orbs are cemented together, and some orbs may contain small geodes. Nice, rare specimens!

Most of the lapidary grade agate found South of Alpine is found in biscuit shaped nodules with a dark red skin. Think of gas bubble in lava. Most are pea size to typical biscuit, potato or football size becoming extremely rare. All types of agate found in this lava flow can be found in these biscuits. About 10% of the biscuits will have a gemstone quality to them, or only 10% of the stone will have something worth cutting. It is a rare stone that is full red/black plume, gem grade orbicular, colored bands, combinations within the same space, collector/museum quality. Many of the biscuits did not fill the entire gas pocket and had space to crystallize in a shape with bubbles, or botryoidal crystal habit (most agate with this type has plume under the bubbles here). Most biscuit agates here have some euhedral quartz (sugar) inside them, and some open up to become true geodes. Flower garden agate is formed in cracks in the host rock, making it a vein type formation. Usually orange and red, made up of small dense microscopic plumes is found on the Walker/Woodward border, (agate hill). I think this type should be considered a jasper as you cannot see through it, and I have seen other locations such as in Mexico and Arizona that have similar deposits of the orange and red flower garden patterns. East of Alpine is the Pruitt formation, Elephant Mt., Mt. Ord, Frog Mt. Richie Ranch, Carver agate field (Rock & Gem Augest-2017 #47) A snake like crack in the Mts. East of Alpine are exposing some unique agate. Crosses HWY 90 to go near Ft. Davis. Private property. I bought a lifetime collection from long time rancher; I promised not to say where. Some nice large moss agate nodules yet to be cut, rare metallic sagenite pseudomorphs, lots of banded agate (iris), mixes not yet described, or named. Much large colorful nodules of moss agate like found around San Carlos, Mexico. Marfa agate was made famous by

Andy Burgard in the 1940s, an article in lapidary journal describing pastel colors in "bouquet" patterns now most sought after by savvy agate collectors. Marfa is host to huge agate fields, found in the lava around the Chiniti Mts are large solid white or cloud like clear agates, (chalcedony). This is the Peatan Basalt formation. Few agate beds seem to contain much of the colored material known as "bouquet" or other types of cutting material. Found in isolated pockets are the gem grade agates. Most common in lapidary grade is a black plume or black and yellow plume agate, and white or blue fortification. Often times calcite is included. The bouquet pattern is usually on the bottom but can form on the entire surface and point towards the center in small clusters. Some secondary crystallization appears as water lines or onyx (layered agate used for cameos) inside banded hollows. A lot of this agate is still eggshell, a thin coating of agate lining the gas pocket, hollow. Tube type agate looking like stalactites inside some of the hollow or eggshell nodules can be found, as well as angelwing, rare crystal forms. Another famous location of agate in Big Bend is Needle Peak, south of Terlingua. Beautiful pseudomorphs after aragonite have been found here. Famous for yellow sagenite crystals in a green moss agate called pompom or thistle agate. Again, there are many grades of agate, and some nice agate replacement in wood and bone in the area. Balmorhea is famous for their blue banded agate, often with black plumes. The skin is usually black with a white patina on the surface. Some % will be iris. Onyx or water marks can be found. It appears to be fairly widespread in northwest of the Davis Mountains, most seem to be naturally tumbled. The Davis mountains have little agate I'm aware of but do have a lot of chalcedony roses. There are many theories about agate formation. Some suggest a silicone gel, or silicon dissolved as a colloidal solution which saturates the host rock. Quartz is water soluble at high temperatures, so as it cools It forms inside veins, gas pockets, or can replace other minerals as pseudomorphs, fossils such as wood, bone and coral. No one theory explains all types of agate.

More on Agate

From Wikipedia

Agate (/ˈægɪt/ AG-it) is the banded variety of chalcedony, which comes in a wide variety of colors. Agates are primarily formed within volcanic and metamorphic rocks. The ornamental use of agate was common in Ancient Greece, in assorted jewelry and in the seal stones of Greek warriors, while bead necklaces with pierced and polished agate date back to the 3rd millennium BCE in the Indus Valley civilization.

The stone was given its name by Theophrastus, a Greek philosopher and naturalist, who discovered the stone along the shoreline of the Dirillo River or Achates (Ancient Greek: Ἀχάτης) in Sicily, sometime between the 4th and 3rd centuries BCE.

Formation and properties

Agate minerals have the tendency to form on or within pre-existing rocks, creating difficulties in accurately determining their time of formation. Their host rocks have been dated to have formed as early as the Archean Eon. Agates are most commonly found as nodules within the cavities of volcanic rocks. These cavities are formed from the gases trapped within the liquid volcanic material forming vesicles. Cavities are then filled in with silica-rich fluids from the volcanic material, layers are deposited on the walls of the cavity slowly working their way inwards. The first layer deposited on the cavity walls is commonly known as the priming layer. Variations in the character of the solution or in the conditions of deposition may cause a corresponding variation in the successive layers. These variations in layers result in bands of chalcedony, often alternating with layers of crystalline quartz forming banded agate. Hollow agates can also form due to the deposition of liquid-rich silica not penetrating deep enough to fill the cavity completely. Agate will form crystals within the reduced cavity, and the apex of each crystal may point towards the center of the cavity. The priming layer is often dark green, but can be modified by iron oxide resulting in a rust like appearance. Agate is very durable, and is often found detached from its host matrix, which has eroded away. Once removed, the outer surface is usually pitted and rough from filling

the cavity of its former matrix. Agates have also been found in sedimentary rocks, normally in limestone or dolomite; these sedimentary rocks acquire cavities often from decomposed branches or other buried organic material. If silica-rich fluids are able to penetrate into these cavities agates can be formed.

Types

Lace agate is a variety that exhibits a lace-like pattern with forms such as eyes, swirls, bands or zigzags. Blue lace agate is found in Africa and is especially hard. Crazy lace agate, typically found in Mexico, is often brightly colored with a complex pattern, demonstrating randomized distribution of contour lines and circular droplets, scattered throughout the rock. The stone is typically coloured red and white but is also seen to exhibit yellow and grey combinations as well.

Moss agate, as the name suggests, exhibits a moss-like pattern and is of a greenish colour. The coloration is not created by any vegetative growth, but rather through the

mixture of chalcedony and oxidized iron hornblende. Dendritic agate also displays vegetative features, including fern-like patterns formed due to the presence of manganese and iron oxides. Turritella agate (Elimia tenera) is formed from the shells of fossilized freshwater Turritella gastropods with elongated spiral shells. Similarly, coral, petrified wood, porous rocks and other organic remains can also form agate.

Coldwater agates, such as the Lake Michigan cloud agate, did not form under volcanic processes, but instead formed within the limestone and dolomite strata of marine origin. Like volcanic-origin agates, Coldwater agates formed from silica gels that lined pockets and seams within the bedrock. These agates are typically less colorful, with banded lines of grey and white chalcedony.

Greek agate is a name given to pale white to tan colored agate found in the former Greek colony of Sicily as early as 400 BCE. The Greeks used it for making jewelry and beads.

Brazilian agate is found as sizable geodes of layered nodules. These occur in brownish tones inter-layered with white and gray. It is often dyed in various colors for ornamental purposes. Polyhedroid agate forms in a flat-sided shape similar to a polyhedron. When sliced, it often shows a characteristic layering of concentric polygons. It has been suggested that growth is not crystallographically controlled but is due to the filling-in of spaces between pre-existing crystals which have since dissolved.

Iris agate is a finely-banded and usually colorless agate, that when thinly sliced, exhibits spectral decomposition of white light into its constituent colors, requiring 400 to up to 30,000 bands per inch.

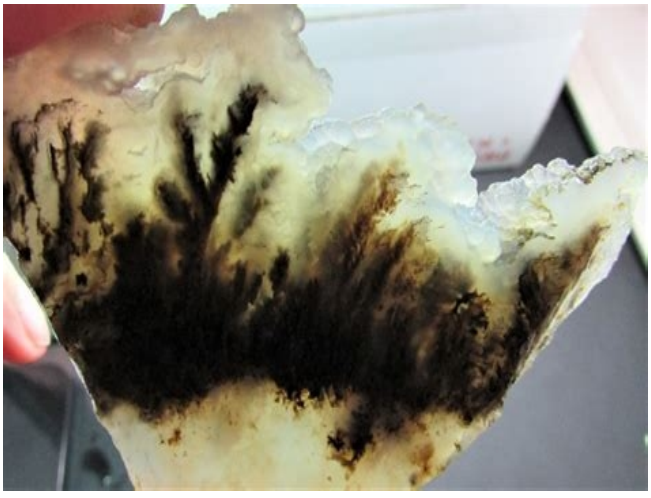
Other forms of agate include Holley blue agate (also spelled "Holly blue agate"), a rare dark blue ribbon agate found only near Holley, Oregon; Lake Superior agate; Carnelian agate (has reddish hues); Botswana agate; plume agate; condor agate; tube agate containing visible flow channels or pinhole-sized "tubes"; fortification agate with contrasting concentric banding reminiscent of defensive ditches and walls around ancient forts; Binghamite, a variety found only on the Cuyuna iron range (near Crosby) in Crow Wing County, Minnesota; fire agate showing an iridescent, internal flash or "fire", the result of a layer of clear agate over a layer of hydrothermally deposited hematite; Patuxent River stone, a red and yellow form of agate only found in Maryland; and enhydro agate, which contains tiny inclusions of water, sometimes with air bubbles.

Agate is a versatile gemstone that is often used in jewelry making. Agate is favored for its durability, with a Mohs scale hardness rating of 6.5–7. It is known for its colorful, banded patterns and wide range of hues. Agate is found in a wide range of colors, including shades of red, orange, yellow, green, blue, purple, and pink, as well as black and white. Agate is generally more affordable than other gemstones.

Uses

Agate is one of the most common materials used in the art of hardstone carving and has been recovered at a number of ancient sites, indicating its widespread use in the ancient world; for example, archaeological recovery at the Knossos site on Crete illustrates its role in Bronze Age Minoan culture It has also been used for centuries for leather burnishing tools. The decorative arts use it to make ornaments such as pins, brooches or other types of jewellery, paper knives, inkstands, marbles and seals. Agate is also still used today for decorative displays, cabochons, beads, carvings and Intarsia art as well as face-polished and tumble-polished specimens of varying size and origin. Idar-Oberstein was one of the centers which made use of agate on an industrial scale. Where in the beginning locally found agates were used to make all types of objects for the European market, this became a globalized business around the turn of the 20th century: Idar-Oberstein imported large quantities of agate from Brazil, as ship's ballast. Making use of a variety of proprietary chemical processes, they produced colored beads that were sold around the globe. Agates have long been used in arts and crafts. The sanctuary of a Presbyterian church in Yachats, Oregon, has six windows with panes made of agates collected from the local beaches.

Industrial uses of agate exploit its hardness, ability to retain a highly polished surface finish and resistance to chemical attack. It has traditionally been used to make knife-edge bearings for laboratory balances and precision pendulums, and sometimes to make mortars and pestles to crush and mix chemicals.



SCFMS and MEMBER CLUB GEM SHOWS

Houston Gem, Mineral, Jewelry & Fossil Show November 8-10 2024 Humble Civic Center http://www.hgms.org	**Dallas Gem and Mineral Show; 11/ 23-24 /2024 10:00 AM - 6:00 PM Mesquite Conv Center; 1700 Rodeo Dr, Mesa, TX; Adult - $8; Kids up to 12 - $4; Family of 4 - $20. https:// www.dallasgemandmineral.org/**	**51st Annual Gem & Mineral Show. – Hosted by the Gem and Mineral Society of Louisiana. December 21- 23, 2024 Alario Center 2000 Segnette Blvd. Westwego, LA 70094. www.gmsofla.org**	**44th Annual Mid-Winter Rock Swap. Lincoln Gem and Mineral Club. Sunday, January 19, 2025 11 am – 5 pm Lincoln Firefighters Reception Hall. 241 Victory Lane Lincoln, NE 68505**
50th Annual Clear Lake Gem and Mineral Show. February 22 – 23, 2025 Sat-10-6, Sun 10-5 Pasadena Convention Center. 7902 Fairmont Pkwy, Pasadena, TX 77507			

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Clear Lake Gem and Mineral Society, Inc

PO BOX 891533
Houston, Texas 77289

Meeting 3rd Tuesday of the Month
7:00 P.M.
League City Library
100 W Walker St, League City, Tx 77573

Member of

Next Annual Show
February 22-23, 2025
Pasadena Convention Center

CLGMS is on the Web:
http://www.clgms.org

FACEBOOK: CLEAR LAKE GEM AND MINERAL SOCIETY.

American Federation of Mineral Societies

South Central Federation of Mineral Societies

Clear Lake Gem and Mineral Society, Inc

MEMBER: American Federation of Mineralogical Societies and South Central Federation of Mineral Societies

PURPOSE: To promote education and popular interest in the various earth sciences; in particular in those hobbies dealing with the art of lapidaries and the earth sciences of minerals, fossils and their associated fields.

2024 OFFICERS:	President	Cynthia McGowan	281-546-2662
	Vice President	David Tjiok	832-423-4802
	Secretary	Christina Rankin	281-723-5408
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Annual Show 2024 …….. Sandra Christiansen
Constitution & Bylaws……..Jim Hawkins
Community Benefits……. Vacant
Historian……David Tjiok
Publicity……..…… Annabel Brownfield
Facebook……Cynthia McGowan

Membership……Mike Flannigan
WWW System Admin.. …….Mike Flannigan
Refreshments……..Vacant.
Education/Field Trips…….Annabel Brownfield
Casey Renner

Membership Dues Jan. to Dec. 2024: Adult $15:00, Family Dues $20.00 (4+) at same address. Send Dues to CLGMS, PO BOX 891533, Houston, TX, 77289