



Judy Gordy. Editor  
Official Newsletter of the  
Western Dakota Gem & Mineral  
Society PO Box 3620,  
Rapid City, SD, 57709-3620

Affiliated with RMFMS & AFMS

TO:

August 2016 Edition  
Picnic: August 12<sup>th</sup>. Dinner at 6pm

It's agate hunting time again!

The purpose of our club is to promote interest and education in geology, mineralogy, paleontology, archeology and lapidary, to sponsor and promote means of coordination of the work efforts of groups and individual.



# THE AMMONITE



Newsletter of the Western Dakota Gem & Mineral Society August 2016

## WESTERN DAKOTA GEM AND MINERAL SOCIETY 2015-16 OFFICERS AND CHAIRMEN

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- Vice President:** John Dickinson -- PO Box 775, Lead, SD 57784 ..... 605-580-5579
- Secretary:** Judy Gordy -- 407 E Minnesota St Apt 209, Rapid City, SD 57701 ..... 402-208-6079
- Treasurer:** Kelli Wold -- 4511 Ridgewood, Rapid City, SD 57702 ..... 605-381-6418
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- RMFS SD Dir.:** Sony Hemsher -- PO Box 376, Piedmont, SD 57769 ..... 605-431-2755
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- Historian:**
- Webmaster:** Barbara Goddard -- 3280 Bumblebee Dr, Prescott Valley, AZ 86314 ..... 928-237-9261
- Calling Committee:** Jan Goheen 605-431-6161      Letha Wynia 605-721-0550      Patricia Dickinson 605-580-5579

**Club Information:** Western Dakota Gem and Mineral Society, PO Box 3620, Rapid City, SD 57709-3620

**CLUB WEBSITE** is: [www.WDGMS.org](http://www.WDGMS.org) **OTHER CLUB SITES:** Facebook -Western Dakota Gem and Mineral Society/groups.

**Meetings:** Second Thursday of each month (except August) at 7:00 PM

**At:** Minneluzahan Senior Citizens Center, 315 N 4<sup>th</sup> St, Rapid City, SD 57701

**ANY SUBMISSIONS FOR THE NEWSLETTER SHOULD BE IN BY THE 25<sup>TH</sup> OF EACH MONTH**

If you change your home address, or your email address, or [have a problem receiving a bulletin, please contact the editor at 402-208-6079 or by email at ammonitenewsletter@gmail.com](#) and it will get corrected.

**CLUB DUES:** \$15.00 per person - \$20.00 per family with children under 18 yrs – Includes 11 newsletters by E-mail.

If you chose to receive the newsletter by mail, there is an additional \$10.00 cost to cover the mailing.

Dues cover the RMFMS insurance and the newsletter.

**Send dues to the Treasurer:** Kelli Wold, 4511 Ridgewood, Rapid City, SD 57702

**PICNIC: Friday August 12<sup>th</sup>. Dinner at 6pm**  
**Pot Luck. At Old Storybook Island Shelter**

## MESSAGE FROM PRESIDENT TRUMAN GODDARD

Hello all.

Haven't heard yet on the show, but I think it went well.

## MINUTES OF THE JULY 14, 2016 MEETING

The meeting was called to order by President Truman Goddard at 7:07 pm.

There was no program scheduled for this meeting.

Guests: Alan Carner introduced himself.

Dave Ramberg, moved and Mimi Lancsak seconded the motion that the minutes should be approved as printed in the July Ammonite. The motion passed.

The Treasurer's report was read by Kelli Wold. Dave Ramberg moved and Leslie Lysenko seconded the motion to accept the Treasurer's report as read. The motion passed.

Tabitha Wood reported on the silent auction. She has the contracts and bid sheets for anyone needing them.

Annette Rathert discussed the scholarships and read a thank you letter from Stephanie Loose.

Julie Rice Mullins has requested help identifying the rock collection she inherited. And their value so she can sell them.

Annette Rathert showed the program for the show. And checked info for any last minute adjustments before taking it to the printer.

Jan Goheen had a demonstrator willing to demonstrate wire wrapping at the show, but wants her to be able to have a table to sell her items free for demonstrating. Jan says this was always the practice in the past. After some contentious discussion, Jan decided to drop the subject.

Truman showed the tickets for the door prizes and the pencil sharpener that he had purchased for the show. Leslie Lysenko moved and John Dickinson seconded a motion to reimburse Truman for the expense. The motion passed.

The ink stamps for the front door we're shown. Red star for Saturday and blue hand for Sunday.

**SILENT AUCTION:** Tabitha Wood has about ten people signed up to help with the silent auction. She could use some more people for Saturday afternoon.

**DISPLAY CASES:** Dave Ramberg reported that 20 CASES have been reserved. There are 10 more available.

Truman Goddard reported that there is a display case for the book and tape donated by Pete Larson, and the other book for the silent auction.

Deb Radomski reported that Mickey Snook has been in and out of the doctors offices. He is having trouble with a heart valve.

SILENT AUCTION: Right now the contracts have spaces for 10 items but that will be increased by adding more lines on the back of the page.

Judy Gordy asked about the age limit for children. Is it 12 and under or 11 and under. 11 and under was put on the business cards for the show because she couldn't remember. The consensus was that the age for children is 12 and under. Even though the business cards show 11 and under it can be changed at the door without any problems.

Rebecca Wood showed the signs She has made and requested what other signs are needed: Demonstrators, Programs, Best of Show Can, Fluorscent Display, Admission.

Truman Goddard said that he had ordered a Best of Show plaque for the Best of Show in the display cases. The Best of Show prize is bought by the club. It is picked by the people attending the show. The Grand Prize is donated by a vendor and is drawn from all the door prize tickets.

A discussion was begun about presenting two scholarship winners with a plaque from the club. It was also discussed whether we should purchase a plaque for Dr Sawyer. Kelli Wold moved that we purchase 3 plaques. The motion passed.

Truman Goddard reminded everyone that show set up starts at 8 am Friday July 22<sup>nd</sup>.

The picnic is Friday August 12<sup>th</sup> with dinner at 6 pm. Remember, the picnic is on Friday, not Thursday. At the picnic shelter at Old Storybook Island.

Deb Radmoski moved and Rebecca Wood seconded that the meeting be adjourned at 8:05 pm.

22 members in attendance

Judy Gordy. Secretary

#### ANNOUNCEMENTS

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WE NEED DOOR PRIZES FOR THE SEPTEMBER, OCTOBER, AND NOVEMBER MEETINGS.

WE NEED A PROGRAM FOR THE NOVEMBER MEETING

AUGUST POT LUCK PICNIC ON FRIDAY AUGUST 12<sup>TH</sup> AT THE OLD STORY BOOK ISLAND PICNIC SHELTER.  
DINNER AT 6 PM.

## FUTURE SHOWS

**SEPTEMBER 7-18 -- DENVER, COLORADO – Denver Gem & Mineral Showcase; 10 gem, mineral, fossil and jewelry show locations; 850 vendors -- BEAD RENAISSANCE SHOW DENVER – Denver Mart/Plaza – September 15-18 – COLORADO INDEPENDENT WAREHOUSE SHOW – The Rock Warehouse – September 7-18 – COLORADO MINERAL & FOSSIL SHOW – Ramada Plaza Hotel – September 11-18 – DENVER COLISEUM MINERAL, FOSSIL & GEM SHOW – Denver Coliseum – September 10-18 – DENVER EXPO GEM SHOW – National Western Complex/ Expo Hall – September 9-16 – DENVER FINE MINERAL SHOW – Marriott Denver West – September 14-17 – DENVER GEM & MINERAL SHOW – Denver Mart/Expo Hall – September 16-18 – INTERNATIONAL GEM & JEWELRY SHOW DENVER – Denver Mart/Pavillion Building – September 15-18 -- JG&M EXPO DENVER – Quality Inn Central – September 14-28 -- MINER'S CO-OP MINERAL SHOW – Denver COLISEUM (parking lot) -- September 10-18**

**OCTOBER 7-9 -- MOAB, UTAH – Annual show; MOAB Points and Pebbles Club, Old Spanish Trail Arena; 3641 S Highway 191; Fri. 10-6, Sat. 10-6, Sun. 10-4; Free Admission; Rock, gem, mineral and lapidary arts vendors. Equipment, supplies displays, demos. Spin wheel, Door Prizes. Food concession on premise.; contact Jerry Hansen, PO Box 1459, Moab, Ut 84532; email: moabrockclub@live.com**

**OCTOBER 21-23 – WEST JORDAN, UTAH – Annual show; Rockhounds Outreach for Community Knowledge (R.O.C.K.), Viridian Library and Event Center; 8030 South 1825 West; Fri. 10-7, Sat. 10-7, Sun. 10-5; Admission \$2, Children under 12 free; There will be fossils, minerals, gems and jewelry on display and for sale. Hands on activities for everyone. Come build your own rock collection. Door Prizes and a Silent Auction will be going on daily.; contact Angela McMahon, (801)-634-5167; email: [utahninni@aol.com](mailto:utahninni@aol.com); Web site: <http://www.rockhoundssock.com/>**

**November 4-5 -- HURRICANE, UTAH – Annual show; 3<sup>rd</sup> Annual Southern Utah Rock and Gem Show, Washington County Regional Park; 5500 West 700 South; Fri. 10-7, Sat. 10-7; Free Admission; Come and enjoy this event and see what our vendors have for you. Rocks, fossils, minerals, opals, Septarian nodules, petrified wood, jewelry, slabs, equipment, demonstrations, black light room, cabs, and so much more. Something for everyone from kids on up. Silent Auction to raise money for the Children of Hope Academy.; contact Eric Funk, Ut, (435)-609-0136; email: [eric\\_funk@yahoo.co](mailto:eric_funk@yahoo.co)**

## 36<sup>TH</sup> ANNUAL GEM & MINERAL SHOW

Well I think the show went pretty well. We had a nice crowd especially Saturday. We had a couple is sketchy people that we are going to have to figure out how to deal with. Any suggestions are always appreciated. Putting two of our male members to shadow the sketchy persons seemed to discourage them, although I did hear that a fairburn went missing. Kelli Wold won the Best of Show award for her display case and Stacy Currie won the Grand Prize.

## WHAT IS THE HARDEST MINERAL IN THE WORLD

The hardest natural mineral is Lonsdaleite. Lonsdaleite is a very rare mineral that is formed when a graphite- containing meteorite comes in contact with the earth. Its rarity makes it difficult to gather samples to experiment with. Lonsdaleite is made of carbon atoms and can withstand 58% more stress than diamonds according to a report by Jessica Griggs of New Scientist Magazine. The chemical composition is similar to diamonds but the atoms are arranged differently. Therefore it is

called an allotrope of carbon with a hexagonal lattice or a hexagonal diamond. Despite its hardness, Lonsdaleite may not be as useful as wurtzite baron nitride. The second hardest mineral, it withstands 18 times more stress and is more stable at higher temperatures than lonsdaleite.

FROM: [reference.com/Ammonite+Fossils+Facts](http://reference.com/Ammonite+Fossils+Facts) and Wikipedia.

#### ALABAMA STATE MINERAL --- HHEMITITE

Hemitite is an oxide of iron (Fe<sub>2</sub>O<sub>3</sub>) and is also known as “red iron ore”. It was designated as the state mineral in 1967. Hemitite was mined in the valley and ridge area of central and northeastern Alabama for many years.

FROM: [www.archives.state.al.us>st\\_miner](http://www.archives.state.al.us>st_miner)

#### ALABAMA STATE ROCK ---MARBLEE

Marble was designated as the state rock in 1969. The major source of marble in Alabama comes from an area known as the “Sylacauga Marble Belt” in Talladega County. This marble has been called the whitest in the world. It is known for its high-grade crystalline texture and beauty. It has been used in buildings and monuments for over 160 years. It was used in the Lincoln Memorial, the Washington Monument, the US Capital, as well as several other well known buildings in Washington DC. It has also been used for churches, banks, and government buildings in numerous states.

From: [www.statesymbolsusa.org](http://www.statesymbolsusa.org)

#### ALABAMA STATE GEM --- BLUE STARQUARTZZ

Whether its called 'blue star quartz' or 'star blue quartz', this commonly found variety of quartz was named as the state's official gemstone in 1990. It is one of the most beautiful of the common gemstones and one of the cheapest because of its prolific supply.

Quartz is a result of volcanic activity which melts silica. It is then carried by water into crevices , where it crystalizes. Quartz is silicon dioxide, and often contains traces of other minerals, picked up by the water traveling underground. The star blue quartz in Alabama contains microscopic inclusions of amphibole minerals and occasionally exhibit asterism. Star blue quartz appears more white than blue when cut and polished. It comes in both 4 and 6 star versions.

From: [www.cncsacon.coming](http://www.cncsacon.coming)

## GEMS AND MINERALS FOUND IN ALABAMA

**AMOHIBOLES** – Any of a class of rock-forming silicate or aluminosilicate minerals typically occurring as fibrous or columnar crystals.

**AMETHYST** – A precious stone consisting of a violet or purple variety of quartz.

**ANDALUSITE** – A gray, green, brown, or pink aluminosilicate mineral occurring mainly in metamorphic rocks as elongated rhombus prisms, sometimes of gem quality.

**BERYL (EMERALD)** – In geology, beryl is a mineral composed of beryllium aluminum cyclosilicate with the chemical formula  $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$ . The hexagonal crystals of beryl may be small or range to several meters in size. Terminated crystals are relatively rare. **CRYSTAL SYSTEM:** Hexagonal. **COLOR:** Green (emerald), Blue (aquamarine), Yellow, Colorless, Pink (morganite), and others. **ROCK TYPE**” Igneous, metamorphic.

**APATITE:** A widely occurring pale green to purple mineral consisting of calcium phosphate with some fluorine, chlorine, and other elements. It is used in the manufacture of fertilizers.

**CALCITE:** Is a carbonate mineral and the most stable polymorph of calcium carbonate. The other polymorphs are the minerals aragonite and vaterite. Aragonite will change to calcite at 380 to 470 ° C and vaterite is even less stable.

**FLUORITE:** A mineral consisting of calcium fluoride, that typically occurs as cubic crystals, colorless when pure but often colored by impurities.

**MONAZITE:** A brown crystalline mineral consisting of a phosphate of cerium, lanthanum, other rare earth elements, and thorium.

**NITER** – Or nitre is the mineral form of potassium nitrate,  $\text{KNO}_3$ , also known as saltpeter or saltpetre. Historically, the term “Niger” was not well differentiated from natron. Both of which have been very vaguely defined but generally refer to compounds of sodium or potassium joined with carbonate of nitrate ions.

**ONYX** – Is a banded variety of the oxide mineral chalcedony. Agate and onyx are both varieties of layered chalcedony that differ only in the form of the bands: agate has curved bands and onyx has parallel bands. The color of its bands range from white to almost every color (save some shades, such as purple or blue). Commonly, specimens of onyx contain bands of black and/or white.

**OPAL** – Is a hydrated amorphous form of silica ( $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ ); its water content may range from 3 to 21% by weight, but is usually between 6 and 10%. Because of its amorphous character, it is classed as a mineraloid, unlike crystalline forms of silica, which are classed as minerals.

**QUARTZ (Agate)** – Is the second most abundant mineral in the earth’s crust, after feldspar. Its crystal structure is a continuous framework of  $\text{SiO}_4$  silicon-oxygen tetrahedra, with each oxygen being shared between two tetrahedra, giving an overall chemical formula of  $\text{SiO}_2$ . There are many different varieties of quartz, several of which are semi-precious gemstones.

**RUTILE** – A black or reddish brown mineral consisting of titanium dioxide, typically occurring as needlelike crystals.

**STAUROLITE** – Is a red brown to black, mostly opaque, nesosilicate mineral with a white streak. It crystallized in the monoclinic crystal system.. Staurolite is also known as fairy stones, fairy crosses, fairy tears and cross stones.

**TOURMALINE** – A typically black or blackish mineral that occurs as prismatic crystals in granitic and other rocks. It consists of a boron aluminosilicate and has pyroelectric and piezoelectric properties. Tourmaline's colors have many different causes. Its generally agreed that traces of iron, and possibly titanium, induce green and blue colors, manganese produces reds

and pinks and possibly yellows. Some. Pink and yellow tourmaline might owe their hues to color centers caused by radiation, which can be natural or laboratory-induced.

**TURQUOISE** – A semi-precious stone, typically opaque and of a greenish-blue or sky-blue color, consisting of a hydrated hydroxyl phosphate of copper and aluminum.

**WAVELLITE** – Is a classic radiating mineral, forming spectacular pinwheel aggregates emanating from a central core in spherulitic balls. When the balls are complete, the radial structure is internal and not usually visible.

From: Google Definitions -- Wikipedia – GIA, Gemological Institute of America

#### **GEM AND MINERAL SOCIETIES OF ALABAMA**

**Alabama Mineral & Lapidary Society, Burlington & Springville, Alabama.**

**Huntsville Gem & Mineral Society, Decatur & Huntsville, Alabama**

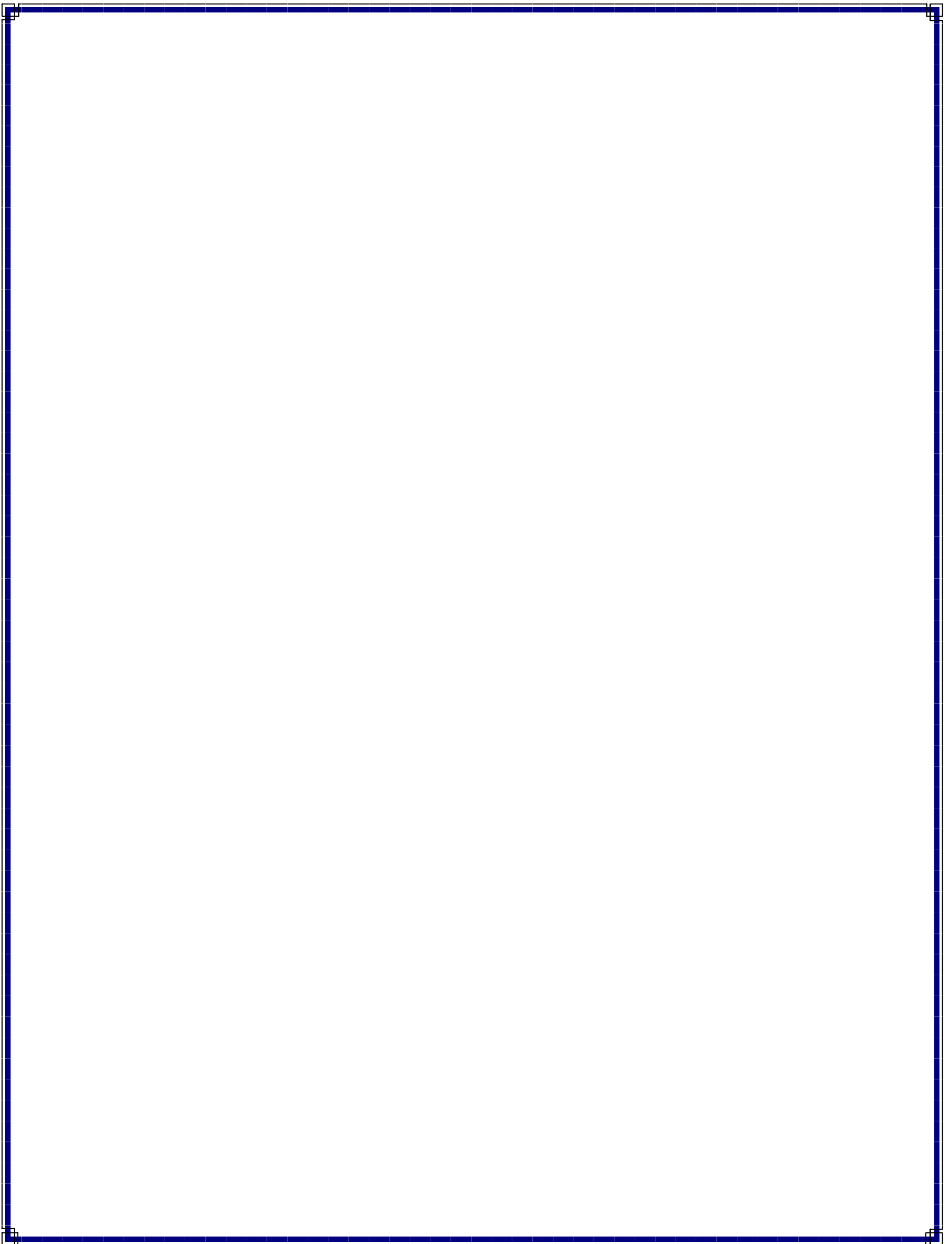
**Dothan Gem & Mineral Club, Dothan, Alabama**

**Mobile Rock & Gem Society, Mobile, Alabama**

**Montgomery Gem & Mineral Society, Montgomery, Alabama**

**East Alabama Gem & Mineral Society, Opelika, Alabama**





**FAIRBURN AGATES**

**STATE GEM OF SOUTH DAKOTA**

**WHAT IS A GEMSTONE:** A mineral or rock, that has been cut and polished, is pretty and hard enough to be worn as jewelry. Only 70 of the 3800 known minerals are considered gemstones and only 20 of those 70 are commonly found. All gemstones have one common quality, that they are beautiful. But beauty is in the eye of the beholder and varies from person to person and culture to culture. Beauty in a mineral may mean color, luster, transparency, or brilliance resulting from skillfull cutting and polishing.

Silica is a mineral that in some forms is considered a gemstone. All varieties of silica have essentially the same chemical composition and crystal structure. The differences depend on the method of formation, the grain size, and the impurities in the mineral which causes the varying colors and color patterns. Silica is a relative hard material. It is generally transparent to translucent. It has a glass-like appearance with a shiny luster, and a conchoidal fracture pattern (when broken the surface has the shape of a half clamshell). Silica is divided into two groups: coarsely crystalline varieties ( often called quartz) and fine- grained cryptocrystalline varieties (which are grouped under the name chalcedony). Rose quartz is the type of silica that forms under igneous conditions while chalcedony forms under sedimentary conditions, sometimes lining geodes.

Agate consist of alternating layers of fibrous chalcedony in circular to semicircular layers, patterns, or bands , like rings of a target. These layers are composed of different thicknesses and colors. The layers are usually concentric and parallel to the walls of the rock cavity in which they were deposited. This is how fairburn agates are formed.

Fairburn agates are noted for their strickingly contrasted thin bands of natural colors. The color patterns are generally yellowish-brown with narrow opaque white bands or dark red with white bands. But may also show salmon-pink, black, yellow, grayish-blue, or milk pink bands.

Article written by Sarah Chadima, South Dakota Geological Survey, USD Vermilion 1995

**AGATE DEFINITION**

Is a translucent variety of microcrvstalline quartz. It is used as a semiprecious stone when it is of desirable quality and color.

## WHERE ARE AGATES FOUND?

Hot pink, blue, or green colors in agates are always dyed. Agate deposits exist in Brazil, Argentina, Uruguay, Mexico, Poland, Botswana, India, Australia, and in the United States (Oregon, Arizona, Montana, Wyoming, South Dakota, and Michigan). The banding habit of agate can distinguish it from most gemstones.

From Agate in Wikipedia

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Most agates occur as nodules in volcanic rocks or ancient lavas. The cavities are then filled wholly or partially with siliceous matter in regular layers. Agates have also been known to fill veins or cracks in volcanic or altered rocks. These agates when cut transversely exhibit a succession of parallel lines giving it a banded appearance. These stones are known as banded agate, riband agate, or striped agate.

In the formation of ordinary agate, water containing silica in solution may percolate through the rock depositing layers of siliceous coatings on the interiors of the vesicles. Variations in the character of the solutions of the deposition may cause the variations in the successive layers. As an example, you may get bands of chalcedony alternating with layers of crystalline quartz. Several of these vapor-vesicles may combine together while the rocks are still viscous to form an agate of exceptional size as in the Brazilian Geode lined with amethyst and weighing 35 tons that was displayed at the Dusseldorf Exhibition of 1902.

## ROSE QUARTZ

### STATE MINERAL OF SOUTH DAKOTA

Rose quartz is one of the many forms of quartz used a gem material. Its pink color ranges from very light (almost white) to medium dark. Most rose quartz is found in massive forms so you don't find regular flat crystal faces. Its typically found in pegmatites, but can also be found in hydrothermal veins.

When rose quartz contains numerous small inclusions it can show a cat's eye or the common star effect.

Rose quartz is a macrocrystalline variety of the mineral quartz. Quartz is the most abundant single material on earth and makes up about 12% of the earth's crust. It occurs in a wide variety of igneous, metamorphic, and sedimentary rocks.

Rose quartz is found in Madagascar, India, Germany, and several localities in the United States. Much of the supply of rose quartz was extracted from a site near Custer, South Dakota, but now most of the world's supply of good carvable rose quartz comes from Brazil.

MINERAL: Quartz.

**COLOR:** Very light pink to medium-dark pink.

**REFRACTIVE INDEX:** 1.544 to 1.553

**SPECIFIC GRAVITY:** 2.66 (+0.03/-0.02)

**MOHS HARDNESS:** 7

**From:** GIA 2002 – 2016. Gemological Institute of America

**From:** Rose Quartz Facts and Information. At [MINERALMINERS.COM](http://MINERALMINERS.COM).

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