



Quartz

By Stan Strike, Cody 59ers Rock Club

Quartz is the most common mineral on Earth and is found in all 50 United States in igneous, sedimentary, and metamorphic rocks. Quartz occurs in more variety, names, colors, crystal forms and environments than any other mineral. Quartz is chemically composed of silicon dioxide (SiO_2) or silica.

Physical properties:

Color—commonly white, purple, brown, colorless. May be banded.

Streak—white

Hardness—Mohs scale 7 (will scratch glass)

Fracture—conchoidal (breaks in curved pieces)

Crystal form—hexagonal or microcrystalline

Luster—usually vitreous (shiny), but some varieties reflect light like resin or wax or appear dull and nonreflective

Crystal habit—macrocrystalline: 6 sided, terminated, drusy (small surface crystals). Microcrystalline: grainy, globular, or nodular

Scientific Classification:

Crystalline Quartz (macrocrystalline—occurs as visible crystals), vitreous luster

Chalcedony Quartz (microcrystalline—crystals not visible), not shiny unless polished

Chalcedony Pseudomorph—original organic/inorganic material replaced by chalcedony quartz

Agates (microcrystalline)—banded/patterned/multicolored layers

—continued on Page 4—

Club News

Cody 59ers — Cody

The Cody 59ers Rock Club's Fall meetings were well attended due to several exceptional programs: Oregon Basin-Past, Present, and Future (Falinda Hall/Marathon Oil), The Varieties of Quartz (Stan Strike), and Agates of Wyoming and Beyond (Jim Ulmer). We ended the year with 36 members, many of whom attended our Potluck Christmas Party.

The elected officers for 2011 are: President-Stan Strike, Vice President-Bob Sommer, Treasurer-Brad Miller, Secretary-Valerie Flanagan, Historians-Mike/Sydnie NeVille, Jade State News-Joanie Haynes, Sunshine Lady-Jackie Platt.

Shoshone Rock Club — Powell

The planned program for November was nominations for 2011 SRC officers and board with a silent auction. Guests were Andy Clark, Ned Kelley and Bob Engelbach and all became members. Nominations for the new officers were: President – Mary Ann Northrup, Vice President - Jane Neale, Secretary – Linna Beebe, Treasurer – Art Schatz. A letter from Northwest College stated Zach Daugherty was the recipient of our scholarship award for the 2010-2011 year. The silent auction was a lot of fun and brought in more guests and members than usual.

Shoshone Rock Club is beginning plans to celebrate their sixtieth anniversary in April.

— Jane Neale, Reporter

Rex Young Rock Club — Torrington

Greetings from our club to yours! We had a great Christmas party at the Western History Center. There was a good turnout with over twenty people attending. Ham and turkey was served along with salads and desserts. It was a nice evening of eating and visiting and keeping warm by the wood stove.

At most meetings we have ten or twelve members present. At the January 12th meeting the main thing we discussed was starting to get prepared for our state rock show for summer 2012. We have the Rendezvous Center at the Torrington fairgrounds reserved already. We are anxious and ready to get rolling with plans for that event. Ron Harroun presented a small display of bottle neck necklaces to be given as one of the door prizes every month.

—Joyce Trowbridge, Reporter



2012 WY State Mineral & Gem Show
Torrington, Wyoming!



More Club News...

Cheyenne Mineral and Gem Society

The Cheyenne club gives an annual grant to a deserving geology student. This year's recipient of our \$1000 grant was Lauren Harrison. She is a senior geology student at the University of Wyoming and a graduate of Laramie High School. She is in the Honors Program.

Over the past five years, Bob King has been in touch with the WYDOT (Wyoming Department of Transportation) regarding construction work in Sybille Canyon. Highway 34 goes through this canyon located to the southwest of Wheatland, Wyoming and the section between mile markers 23 and 28 is going to be straightened. To straighten this road, they will blast out rock which may contain labradorite. If you are interested in collecting some of this rock, contact Bob King at 307-632-2702 or BobHeidi@bresnan.net

Bob King was reelected President and Carroll Schell was reelected Treasurer.

On January 15, the club chartered a bus to the Denver Museum of Nature and Science. The museum provided four volunteers to guide club members throughout the museum. Club members were taken behind the scenes to see and touch minerals that very few people get to see. It was a very rewarding outing and the bus was back in Cheyenne by 6pm. — Bob King reporting

**12th Annual
Cheyenne Mineral, Fossil,
Gem & Rock Show
May 14-15, 2011
AMERICAN LEGION Post #6
2001 E. Lincolnway, Cheyenne, WY**

Quartz continued from Page 1

Varieties of crystalline quartz—may be found in geodes, vugs, or faults/fractures/joints in rocks.

Amethyst—purple variety of quartz

Amethyst Quartz—Mixture of amethyst and milky quartz (Cedar Mtn, Cody, WY)

Aventurine—translucent to opaque, massive quartz containing small foreign mineral inclusions creating a glistening effect. Color usually green but may be orange, brown, or yellow

Blue Quartz—dark blue, opaque, massive

Chrysocolla—quartz with bluish-green chrysocolla inclusions

Citrine—yellow, orange-brown, or reddish brown

Ferruginous Quartz—transparent with brown to red inclusions

Iris/Rainbow Quartz—transparent crystals with foreign inclusions that create iridescent effect

Milky Quartz—white, translucent to opaque

Rock Crystal—colorless, transparent with well developed crystals

Herkimer Diamonds—lustrous transparent doubly terminated Rock Crystals

Rose Quartz—pink color, massive (Custer, SD, Black Hills)

Rutilated Quartz—transparent quartz with golden yellow needle-like Rutile inclusions

Smoky Quartz—black or dark brown (smoky) quartz

Tourmalinated Quartz—transparent quartz with black or dark green tourmaline inclusions

Varieties of Chalcedony

Agate—banded/patterned/multi-colored layers. A *geode* is a hollow rock with agate around quartz or chalcedony

Common Chalcedony—waxy luster, nodular or massive form, white or lightly colored

Flint—opaque, massive, granular, uniformly colored

Jasper—opaque, massive, granular, uniformly colored, red to yellowish brown, green, blue

Chert—opaque, massive, granular, uniformly colored, dull tannish brown to white or gray

Bloodstone—dark green dotted with small red blood-like spots

Carnelian/Cornelian—transparent to translucent, reddish (softer, lighter color than sard)

Chrysoprase—apple green in color

Prase—translucent, light green to light grayish green color

Sard—brownish and brownish red, transparent to translucent

Quartz continued ...

Varieties of Chalcedony Pseudomorph

Petrified Wood—formed by chalcedony dissolved in groundwater that replaces or duplicates original patterns of wood

Petrified Bone—formed by chalcedony dissolved in groundwater that replaces or duplicates original patterns of bone

Wood-cast Agate—formed as chalcedony fills and takes on the external form of cavities created by the decay of buried plant roots, limbs and stems (Wiggins Formation in Absaroka Mtns and Eden Valley, Sweetwater County, WY)

Opal—chalcedony combines with water found in the cavities left by decayed organic materials
May exhibit brilliant, iridescent internal colors

Tiger Eye—chalcedony replaces fibrous asbestos

Varieties of Agates

Crazy Lace Agate—agate with twisting and turning bands of various colors

Dendritic Agate—Chalcedony with darker tree-like or fern-like inclusions

Eye Agate—agate with banded concentric circular rings

Fortification Agate—agate with block-like lines that look like building (fort) outlines

Fossil Agate—chalcedony that fills, replaces or copies original organic material

Iris/ Rainbow Agate—transparent quartz crystals with inclusions that can produce iridescent colors

Jasp-Agate—banded mixture of reddish or yellowish jasper with white or colorless chalcedony

Landscape/Scenic/Picture Agate—dendritic chalcedony with darker designs resembling scenery

Moss Agate—dendritic chalcedony with green hornblende inclusions

Onyx Agate—agate which has banding lines that are straight, parallel and consistent width

Plume Agate—chalcedony with inclusions that have feather-like shapes

Sardonyx Agate—agate with straight parallel bands that are brownish to red, alternating with white or black bands

Thunder Egg Agate—chalcedony nodule filled with agate in the center

Quartz continued...

Regional Agate

Dry Head Agate—red and white banded agate found in the Phosphoria Formation south of the Pryor Mtns and in Dryhead Creek and the Big Horn River NE of Lovell

Goniobasis Agate—dark brown chalcedony with shells of the fossil snail Goniobasis found capping the buttes south of Interstate 80 between Granger and Green River

Spence Brecciated Agate—pieces of tannish brown chalcedony cemented with other minerals. Found SE of Lovell

Sweetwater Agate—gray-blue chalcedony with clusters of black dendrites of manganese oxide. Found in Sage Hen Creek NE of Jeffrey City, the White River Formation near Beaver Rim, and Highway 287 as it parallels the Sweetwater River

White Moss Agate—transparent moss agate with jasper. Found in the Casper Formation near Marshall in Albany County, gravels SW of Marshall, and Bridger Formation N of Wamsutter

Youngite Agate—mixture of drusy quartz and banded agate in pink breccia, found in Mississippian limestone caves near Guernsey and Glendo reservoirs

Bear Canyon Agate—black and white fortification agate in 1”-2” nodules. The outer coating is rough charcoal gray to tan, and only 5% of the nodules contain agate. Found in a thin section of upper limestone layers or on talus slopes of Bear Canyon in the Pryor Mtns.

Trailer For Sale



WSMGS wishes to sell the trailer pictured. It has good tires, a spare tire, etc. We are asking \$750 and will consider any offers.

If you would like more information, please contact:

Lynn Neale at 307-754-3285

Historian's Report

Hello Rockologists,

Report time and I have been busy filing some of the 5 boxes of material that I received when I became Historian. I am now down to 2 boxes and hope to finish soon, seeing as how Winter is the time for such things. We are only half-way through Winter and already I have cabin fever. It doesn't help things when I have fellow rock friends who are making the Rock Show and trips in Quartzite, Arizona. Envious? - you bet.

The Shoshone Rock Club has made a yearly report. Many kudos to Linna Beebe for that report— it is excellent. It is not too late to report, so get them to me or Gene Case, Jade State News Editor

I have also been working on a book for the state organization. This book is to help any club who is planning to put on a State Rock Show in the future. This book is intended to provide helpful information only. It will give ideas on how to start, what is needed, how to take care of security and insurance, and how to gather material needed for the show and more. If anyone has not done a show and is planning on doing so in the future, this will help.

March 31st is the deadline for submitting Rockhound of the Year nominations. Any member of a state rock club can nominate any other member of a state rock club. Believe me, there are plenty of candidates out there, so get a nomination sheet, fill it out, and get it sent in. Time is closing in. Nomination sheets can be had from your club president.

—Richard Heumier, WSMGS State Historian

Rock Shops

Stan Strike would like to publish a listing of rock shops available in or near Wyoming. Would someone from your club please contact Stan with information on any rock shops in your area. He will want to know name, address, telephone number and hours open. You can contact Stan at 307-587-6448 or strikes@bresnan.net.

Miscellaneous —

A Message from Letty —

Greetings to all the members of the six rock clubs in the state.

The 2010 State Rock Show in Powell was very special for me as most of you know by now. What an honor and surprise that was.

I wish to thank the person who submitted my name, Wayne Sutherland (the person who selected me from all those very qualified names that were sent in), and Jane Neale for the beautiful hand-crafted medallion I am so proudly wearing.

Rockhounding is a great hobby and we have a chance to meet and make new friends, walk the hills and collect beautiful specimens.

See you at the next State Show in Cody.

— *Letty Heumier*

Rockhound of the Year — 2010

P.S. My family and I love to show the specimens we've collected. Call us.

Rock Club History

The State organization started in Lander, WY on April 20, 1937, with 47 people attending from Lander, Riverton, Hudson, and Wind River. The first officers elected were: N. H. Brown (honorary president); Lloyd B. Curtis, president; Henry Conant, vice president; L. V. Abbott, secretary/treasurer.

They were incorporated as "The Wyoming Geological Society" on May 18th, 1937. The Carbon County Mineral Society joined on December 13, 1939.

After November 7, 1942, the state organization was postponed due to World War II rationing of gas, oil, and rubber. The state organization resumed on June 5, 1953 at Cheyenne. Annual meetings have been held ever since. Anyone interested in further details of the past state organization, please contact me.

—Richard Heumier, Historian



Judging Rules —

Display Case Judging Rules for 2011 WSMGS State Rock Show

Cody, WY July 9-10, 2011



1. Each Rock Club affiliated with WSMGS will be eligible to enter only one display case to be judged by the public in attendance at the WY State Rock Show on Saturday, July 9th. The winner will receive the Peoples Choice Award per WSMGS by-laws.
2. All competitive display cases will be assigned to a single judging category with a number and may not have any identifying name(s) displayed until after judging is complete.
3. Competitive display cases, other than club cases entered for the Peoples Choice Award, will be judged by individuals not affiliated with the current Rock Show Host Club.
4. Individuals and rock clubs are encouraged to compete in the following Judging Categories:
 - A. Club (Peoples Choice Award)
 - B. Rocks and/or Minerals
 - C. Fossils/Pseudomorphs
 - D. WY Jade
 - E. Educational
 - F. Lapidary Products
 - G. Dealers
5. Ribbons/awards/trophies will be awarded Sunday morning, July 10th
6. For questions contact Stan Strike, Show Chairperson, 307-587-6448 (home), 307-250-1244 (cell), or email strikes@bresnan.net.

Editor's Note --

As always, thanks to all who contributed to this issue. As you know, Jade State News is dependent on you for material. Stan Strike is my savior this month with his article on Quartz. Stan says the article should be considered a document in progress, subject to additions and corrections by other rock-hounds. Send your suggestions to Stan or call him at the above numbers.

Emailing the JSN works well for those who have high speed Internet service, less well for those with dial-up service due to the size of the newsletter. I will try to keep the size down to less than 500Kb, but that means less pictures and color. -- Gene Case

**WYOMING STATE MINERAL & GEM
SOCIETY**

President—Connie Case

Vice President—Jim McGarvey

Secretary—Mary Ann Northrup

Treasurer—Jane Neale

Historian—Richard Heumier

RMFMS State Director—Jim McGarvey

Jade State News Editor—Gene Case

807 Rose Marie Drive
Riverton, WY 82501

Phone: 307-857-6173

Email: thecases@bresnan.net
wymineralandgemsociety.com

The purpose of the Wyoming State Mineral and Gem Society is to help provide a social framework to promote popular interest in education in the various earth sciences such as geology, mineralogy, paleontology, and related subjects. Members of the Society are dues-paying rock clubs within the boundaries of the State of Wyoming.

wymineralandgemsociety.com

Corrected  Address!!