

ROCKHOUNDS HERALD

920 Yorktown Road, Dothan, AL 36301-4372

www.wiregrassrockhounds.com

June 2017

Streak: White

Alexandrite

Mohs: 8.5

Words from...

The President

On behalf of the club, Arnie and JoAn Lambert loaned some of their specimens for a window display at the Ann Rudd Art Center in Ozark in conjunction with the center's nature-inspired art show entitled "Back to the Garden". Arnie, Bruce Fizzell and I set up the window on May 23rd and Bruce, Joan Blackwell and I attended the show's opening reception on the evening of June 3rd. We made sure to have a stack of club trifolds and business cards on hand. The gallery folks were very happy with the display and took time to point it out to people attending the reception. It was nice to see people admiring the specimens. The show runs through July 8th. If you get a chance, stop by to see both the club's display and the artwork.

Just a reminder, we will **not** be having our usual summer socials in June, July or August. Instead, we will host working meetings at our regular time and place where club officers and any interested members will brainstorm ideas for membership drives, club publicity, educational exhibits, show duties and classes.

Hope to see you on June 25th for some lively discussion and light snacks.

Pat

Announcement

Upcoming Digs – Hogg Mine near LaGrange, GA, will be hosting digs on June 24th & July 8th & 22nd.

AFMS Raffle Tickets – Tickets will be on sale until early October. If you are interested, see Pat at the next regular meeting in September or send her an email over the summer. They are \$5 each, or 5 for \$20.

Upcoming Shows

June 22 – 25	All Rockhounds Pow Wow Club of America	Madras, OR
June 23 – 25	Treasures of the Earth Gem & Jewelry Show	Fishersville, VA
July 1 – 2	AGMC Jubilee Show	Grapevine, TX
July 8 – 9	Tulsa Rock and Mineral Society	Tulsa, OK
July 8 – 9	Oxford County Mineral & Gem Association	Bethel, ME
July 8 – 9	Culver City Rock and Mineral Club	Culver City, CA
July 8 – 9	Natrona County Rockhounds	Casper, WY
July 14 – 15	Lakeland Gem Club	Minocqua, WI
July 15 – 16	Gem & Mineral Society of Syracuse	Syracuse, NY
July 15 – 16	Carlton County Gem and Mineral Club,	Moose Lake, MN
July 22 – 23	Western Dakota Gem & Mineral Society	Rapid City, SD

Meeting Minutes – May 2017 – by Secretary

CALL TO ORDER AND OPEN: The meeting was called to order at 2:07 PM on 5/28/2017 by Vice President Garry Shirah, with assists from Secretary Bruce Fizzell. President LeDuc was absent from today's meeting due to being on a road trip to the "land of the delta blues". There were 12 members and no guests in attendance, unless we count John and Ellen Webber's dog. Happy birthdays were wished.

INTRODUCTORY REMARKS: Jeff DeRoche, Show Chair, was injured in a motorcycle accident about 3 weeks ago. He is slowly recovering from broken ribs and a broken shoulder blade.

Arnie Lambert gave a brief recap of a presentation he, Pat and I did at Cottonwood Schools for 65 sixth graders. Pat and I were on hand to fill in for Jeff, who is Arnie's regular presentation partner.

Arnie told the members about the setup of a specimen display Pat and I helped with at the Ann Rudd Art Center in Ozark. The club was invited to decorate a large window bay with a sampling of gems and minerals from Arnie's collection, in conjunction with the center's "Back to the Garden" art show. We also supplied the gallery with trifold club handouts and business cards to be made available to visitors.

CORRESPONDENCE: AFMS Newsletter. Invite card for Rudd Gallery opening where the club has a display window.

MINUTES & TREASURER'S REPORT: Minutes from last meeting approved and seconded. Diane Rodenhizer presented the Treasurer's Report, also approved.

SHOW BUSINESS: None.

FIELD TRIP REPORT: No members attended the last dig at the Hogg Mine. The next club dig at Hogg Mine is possible in August, when there will be a machine dig. A dig at Graves Mountain is possible for October. There was also some talk of planning another trip to the Alabama Gold Camp.

NEW BUSINESS: Meredith Capshaw asked for clarification as to whether the summer socials had been cancelled this year. In response, the discussion from the last meeting was recapped for her benefit. Due to low attendance last year, the group had voted to replace socials with business meetings where club officers and interested members could discuss pressing club issues, such as increasing club membership, planning for digs and classes, arranging meeting speakers, etc. Meetings will continue as usual to be held at the same place and time as usual. The topic for June will be Getting New Members.

Elliott Whitton shared with us that having speakers and guests had been successful in attracting new members for the Columbia Historical Society. Ken Wilson thought it might be useful to speak to old members who had not renewed their membership to get their reasons for not continuing with the club.

PROGRAM & SHOW AND TELL: JoAn brought some jewelry pieces and lapis, Ken had some new cabs, and I brought in two small pieces.

The meeting wrapped up with food and the presentation of this month's door prize, which went to Arnie.

-- Respectfully submitted by B. Fizzell

Mnemonic for Geologic Time Periods

***Camels often sit down carefully. Perhaps their joints creak.
Early oiling might prevent permanent rheumatism.***

If you can remember this interesting scenario, then you can remember the geologic time periods from oldest to youngest; Cambrian, Ordovician, Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic, Cretaceous, Eocene, Oligocene, Miocene, Pliocene, Pleistocene, Recent.

Source: Alabama Mineral & Lapidary Society's "Rockhound Roundup – May 2017" Volume 57 Issue 5 reprinted from "Breccia" 2/1999 via "Rock Buster News".

10 Gemstones Much Rarer Than Diamond

by Robbie Gonzalez

Many people know that diamond is actually pretty common when it comes to gemstones (you can find millions of them in your typical candle flame), but who among us can actually name any that are rarer? Here, we present to you a collection of ten of the rarest gemstones on Earth.

10. Painite

In 2005, *The Guinness Book of World Records* called painite the world's rarest gemstone mineral. First discovered in Myanmar by British mineralogist Arthur C. D. Pain in the 1950s, for decades there were only two known crystals of the hexagonal mineral on Earth; by 2005, there were still fewer than 25 known specimens.

Today, painite isn't as rare as it used to be. According to Caltech's division of geological and planetary sciences, the identification of a new painite repository in Myanmar, "the recent discovery of the actual source of the original stones," and "the subsequent discovery of two major new localities in the Mogok area" have all led to the recovery of several thousand crystals and fragments, but painite nevertheless ranks among the rarest minerals on Earth.



[Photo Credit: Rob Lavinsky | CC BY-SA 3.0]

9. Alexandrite



[Photo Credit: David Weinberg | CC BY-SA 3.0]

Alexandrite is renowned for its strange optical properties – it can actually undergo dramatic shifts in color depending on what kind of light it's in. To be clear: this color change is independent of your viewing angle; a gemstone that shifts colors when you rotate it in your hand is said to be pleochroic, and while alexandrite *is* strongly pleochroic, it can also change colors independently of viewing angle when viewed under an artificial light

source. (In natural sunlight, the gem appears greenish blue; in soft incandescent light, the gem appears reddish purple, instead.) A variety of Chrysoberyl, alexandrite belongs to the same family of gemstones as emerald. Its color-changing properties (and its scarcity relative to diamond) is due to an exceedingly rare combination of minerals that includes titanium, iron and chromium.

8. Tanzanite

The catchphrase you hear tossed around about tanzanite is that it's 1000 times rarer than diamond, which it very well may be, considering that it's found almost exclusively in the foothills of Mount Kilimanjaro, and in limited supplies. Like alexandrite, tanzanite exhibits dramatic color shifts that are dependent upon both crystal orientation and lighting conditions. In this figure you can see how the tanzanite changes color when viewed in vertically polarized light, unpolarized light, and horizontally polarized light, moving from left to right. According to Caltech's geology division, these color variations are largely due to the presence of vanadium ions.



[Figure via Caltech]

7. Benitoite

This striking blue stone has only been found, as its name suggests, near the head waters of the San Benito River in San Benito County, California (some sources say it has also been unearthed in limited quantities in Japan and Arkansas, but that these specimens are not "gemstone quality"), and is also the state's official gem.

One of the most distinctive features of benitoite is how positively *awesome* it looks under a UV light, where it fluoresces a brilliant color reminiscent of glowing blue chalk. What's strange is that, even though it was first described at the turn of the twentieth century, and we've known its chemical composition for decades, the origin of its color and its fluorescent properties still aren't well understood.



[Photo Credit: Parent Géry]

6. Poudretteite



The first traces of poudrette were discovered in the mid 1960s in the Poudrette quarry of Mont Saint Hilaire, Quebec, but it wasn't officially recognized as a new species of mineral until 1987, and wasn't thoroughly described until as recently as 2003.

According to some sources, it's likely that few people will ever encounter a poudretteite specimen in person, and many will likely never even hear of it.

[Photo Credit: Scott Davies, courtesy of The Gemology Project | CC BY-NC-SA 2.5]

5. Grandidierite

This bluish-green mineral is found almost exclusively in Madagascar, though the first (and, presumably, only) clean faceted specimen (described here) was recovered from Sri Lanka. Like alexandrite and tanzinite, grandidierite is pleochroic, and can transmit blue, green, and white light.



[Photo Credit: Don Guennie | CC BY-SA 3.0]

4. Red Diamonds

Technically speaking, red diamonds *are* diamonds, but they serve to highlight the fact that diamonds actually come in a range of colors. They are, in order of rarity: yellow, brown, colorless, blue, green, black, pink, orange, purple and red. In other words, the clear diamonds you're liable to encounter at your local jeweler aren't even rare as far as *diamonds* go.

As a point of reference, the largest red diamond on Earth — The Moussaieff Red, pictured here — weighs just 5.11 carats (about 1 gram).

The largest traditional diamonds — such as those cut from the 3,106.75-carat Cullinan diamond — weigh in at well over 500 carats.



[Photo Credit: The Gemological Institute of America]

3. Musgravite



This mineral was first discovered in 1967 at the Musgrave Range in South Australia, but has shown up in limited quantities in Greenland, Madagascar, and Antarctica. The very first specimen that was actually large and pure enough to be cut to shape (like the one pictured here, courtesy of the Gemological Institute of America) wasn't reported until 1993, and, as of 2005, only eight such specimens are believed to exist.

[Photo Credit: De Agostini/Getty Images]

2. Jeremejevite

First discovered in Siberia at the end of the 19th century, gem-quality crystals of jeremejevite (i.e. minerals large and clear enough to be cut to shape) have since been recovered in limited supplies in Namibia. Pictured here is jeremejevite that has formed in a rare, clear-crystal form the largest faceted jeremejevite on Earth.



[Photo Credit: [Fred Kruijen](#) | CC BY-SA 3.0]

1. Red Beryl

Red beryl (aka bixbite, "red emerald," or "scarlet emerald") was first described in 1904, and while it is closely related on a chemical level to both emerald and aquamarine, it is considerably rarer than both. (The mineral's red color is due to the presence of Mn^{3+} ions.)

The mineral's known distribution is limited to parts of Utah and New Mexico, and has proven exceptionally difficult to mine in an economically feasible fashion. As a result, some published estimates say rubies of similar quality (rubies being a rare gem, themselves), are roughly 8000 times as plentiful as any given red beryl specimen. Consequently, prices on red beryl have been known to reach as much as 10 grand per carat for cut stones.



[Photo Credit: Rob Lavinsky | CC BY-SA 3.0]

Author's Note: *University of Arizona mineralogy and crystallography; the RRUFF Project; Caltech GPS's Mineral Spectroscopy Server; The Smithsonian Department of Mineral Sciences A version of this article previously appeared in 2012*

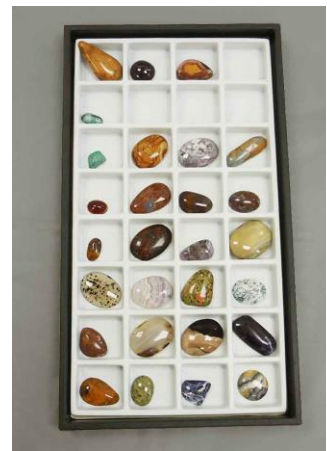
Source: <http://io9.gizmodo.com/5902212/ten-gemstones-that-are-rarer-than-diamond>

Club Meeting – May 2017

Photos by Bruce



Very small group with the meeting falling on Memorial Day Weekend...but we did have one cute and furry visitor join us.



Rudd Art Center Display – June 2017 Photos by Bruce



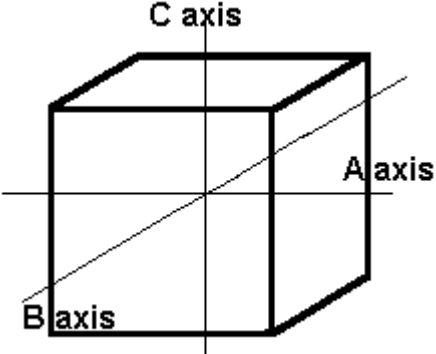
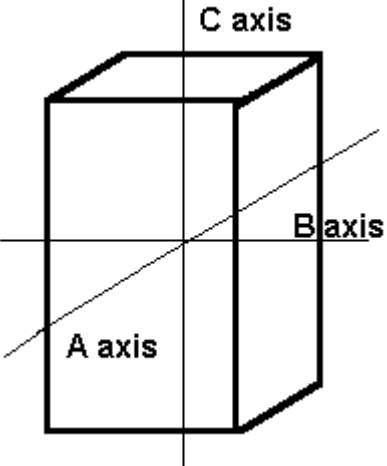
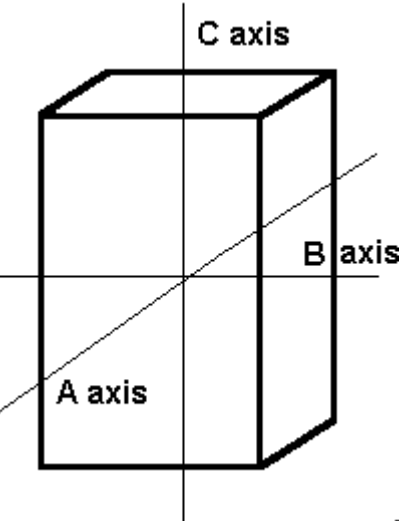
Prep, load-in and admiring their handiwork, past and current club presidents, Arnie Lambert and Pat LeDuc are shown with a selection of Lambert's rocks and minerals on display at the Ann Rudd Art Center's "Back to the Garden" show featuring nature-inspired works of art.





Know Your Crystal Systems?

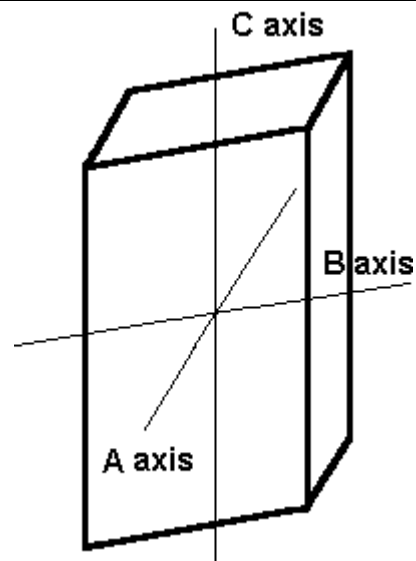
Read the description for each of the six crystal systems and write your answer in blank. (Hint: See the last page of the newsletter for the names of the six crystal systems. See the next six issues for more information about each crystal system, along with pictures of their basic shapes.)

	<p>This crystal system has three axes of the same length that intersect at 90° angles. Minerals that form in this system include all garnets, diamond, fluorite, gold, lapis lazuli, pyrite, silver, sodalite, sphalerite, and spinel.</p> <p>Minerals in this crystal system appear as cubes, octahedrons or dodecahedrons.</p> <p>Answer _____</p>
	<p>This crystal system also has three axes. Axis C is longer than axes A and B, which are the same length. Minerals that form in this system include apophyllite, idocrase, rutile, scapolite, wulfenite, and zircon.</p> <p>Minerals in this crystal system appear as tetragonal prisms, dipyramids, and pyramids with prisms.</p> <p>Answer _____</p>
	<p>This crystal system has three axes, each of which is a different length. These axes intersect at 90° angles. Minerals that form in this system include andalusite, celestite, chrysoberyl (including alexandrite), cordierite, iolite, danburite, zoisite, tanzanite, thulite, enstatite, hemimorphite, fibrolite/sillimanite, hypersthene, olivine, peridot, sulfur, and topaz.</p> <p>Minerals in this crystal system appear as dipyramids and two types of prisms.</p> <p>Answer _____</p>

The axes in this crystal system are all different lengths. The A and C axes intersect at 90° , but axis B does not. Minerals that form in this system include azurite, brazilianite, crocoite, datolite, diopside, jadeite, lazulite, malachite, orthoclase feldspars (including albite moonstone), staurolite, sphene, and spodumene (including hiddenite and kunzite).

Gems that form in this crystal system appear as clinopinacoids and two types of prisms.

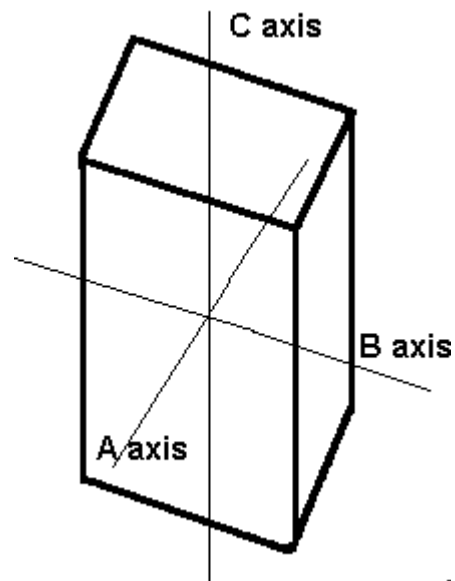
Answer _____



In this crystal system, all the axes are different lengths. None of them meet at 90° . Minerals that form in this system include amblygonite, axinite, kyanite, microcline feldspar (including amazonite and aventurine), plagioclase feldspars (including labradorite), rhodonite, and turquoise.

Gems that form in this crystal system appear as dipyrramids and two types of prisms.

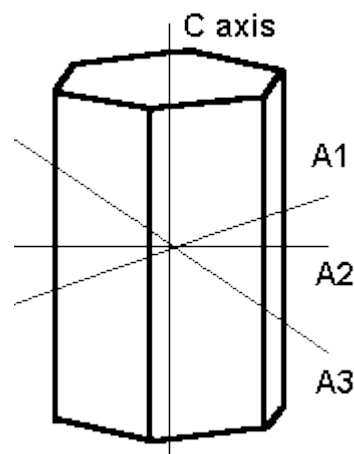
Answer _____



The crystal systems previously discussed represent every variation of four-sided figures with three axes. In this system, we have an additional axis, which gives the crystals six sides. Three of these are equal in length and meet at 60° to each other. The C or vertical axis is at 90° to the shorter axes. Minerals that form in this system include apatite, beryl (including aquamarine, emerald, heliodor, and morganite), taaffeite, and zirconite.

Gems that form in this crystal system appear as hexagonal prisms and hexagonal dipyrramids.

Answer _____



Who What Where When Why How

June Birthdays

JUN 4 Christina Roberts
JUN 6 Roger Draughon
JUN 6 Freddie Reed
JUN 19 Abbey Pollan
JUN 25 Ben Childress

Random Rock Facts

Mineral habit is an important means used for positively identifying mineral specimens. While there are several dozen terms associated with describing mineral habit, most are straightforward and easy to grasp. Among them are: *acicular*, or needlelike; *cruciform*, or cross-shaped; *amygdaloidal*, or almond-shaped; *dendritic*, or like tree branches; *botryoidal*, or grape-like; *equant*, or having equal dimensions; *lamellar*, or composed of thin layers; as are terms such as *banded*, *bladed*, *blocky*, *radiating*, etc.

Source: <http://geology.about.com/>

Meeting Information

Time: 2:00 PM
Date: Fourth Sunday of each month (except June, July and August)
Place: Fellowship Hall – Tabernacle United Methodist Church
4205 S. Brannon Stand Road
Dothan, AL

Officers

President – Pat LeDuc
334-806-5626

Vice President – Garry Shirah
334-671-4192

Secretary – Bruce Fizzell
334-577-4353

Treasurer – Diane Rodenhizer
334-447-3610

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Membership Chair – Diane Rodenhizer
334-447-3610

Show Chair – Jeff DeRoche
334-673-3554

Field Trips Chair – Garry Shirah
334-671-4192

Hospitality Chair – Vacant

Club Hostess – Vacant

Club Liaison – Garry Shirah
334-671-4192

Website: www.wiregrassrockhounds.com

Objectives

To stimulate interest in lapidary, earth science and, when necessary, other related fields.

To sponsor an educational program within the membership to increase the knowledge of its members in the properties, identifications and evaluations of rocks, minerals, fossils and other related subjects.

To cooperate and aid in the solution of its members' problems encountered in the Club's objectives.

To cooperate with other mineralogical and geological clubs and societies.

To arrange and conduct field trips to facilitate the collection of minerals.

To provide opportunity for exchange and exhibition of specimens and materials.

To conduct its affairs without profit and to refrain from using its assets for pecuniary benefit of any individual or group.

Classified Ads

Looking for an item to round out your rock collection?

Got a specimen, tool or handicraft for sale or trade?

Submit the pertinent details to me by the 10th of each month and your inclinations will be made known to the membership in the next bulletin.

N. J. Blackwell
28 Lakeview Trail, Apt. C
Daleville, AL 36322
Phone: 334-503-0308
Email: Tfavorite7@aol.com

Annual Dues

Single \$15
Family \$20

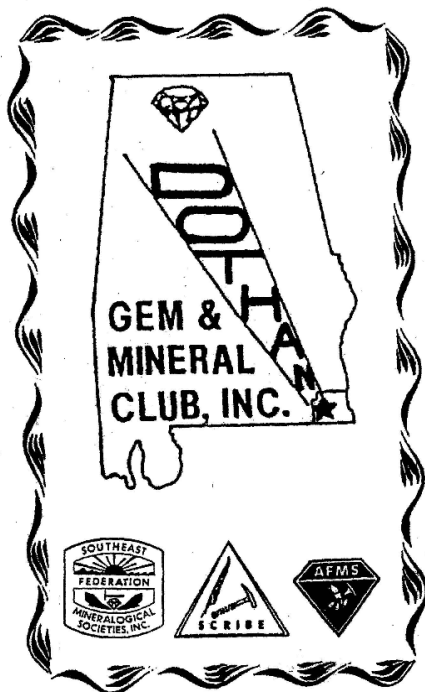
Refreshments

JUN 25 – Potluck refreshments

ROCKHOUNDS HERALD

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Where you might hear...

There are six crystal systems: isometric, tetragonal, orthorhombic, monoclinic, triclinic and hexagonal. (Note: Mineralogists sometimes divide the hexagonal system into two crystal systems, the hexagonal and the trigonal, based on their external appearance, e.g., corundum is sometimes described as trigonal.)

All minerals form crystals in one of these six systems. (Note: amorphous materials used as gems are not minerals, e.g., opal, amber, obsidian, etc.) Although you may have seen more than six shapes of crystals, they're all variations of one of these six habits. Each system is defined by a combination of three factors:

- How many axes it has.
- The lengths of the axes.
- The angles at which the axes meet.

An axis is a direction between the sides. The shortest one is A. The longest is C. There is a B axis, as well, and sometimes a D axis.

Source: https://www.gemsociety.org/article/mineral-habits/#The_Isometric_System
What are Crystal Systems and Mineral Habits? by Donald Clark, CSM IMG
Used with permission from Michael Martinez.

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