

Cuyuna Rock, Gem and Mineral Society

The Agate Explorer

May 2018

Show Volunteer List

If you have not signed up to work at the show, May 5 & 6, & can work, call Ed Opatz at 320-250-1363.

Show Set up: Vern Iverson, Ed Walton, Butch and Cindy Goldenstein, Bev Williams, Lori DuBois, Joan Guerra, Barb Schmidt, Becky Sovde

Baked Goods—Packaged in single servings to be sold for \$1 each.

Kids' Corner

Sat. 9-1 Judy Frampton, Lisa Hughes
Sat. 1-5 Sandi Hilsen, Lisa Hughes
Sun. 10-1 Sheryl Yassim, Lisa Hughes
Sun. 1-4 Sheryl Yassim, Lisa Hughes

Club Table

Sat. 9-1 Joanie Hanson
Lily Peterson
Sat. 1-5 Sherry Busse
Jim Magnuson
Sun. 10-1 Joanie Hanson
Judy Dick
Sun. 1-4 Joanie Hanson
Ron Dick

Set up Display Cases Friday afternoon:

Karen & Chuck Knierim, Becky Sovde

Rock Saws/Geode Cracker

Sat. Ed & Cody Walton, John Krebs
Sunday Strassburg Family

Wizard of Rocks

Sat. 9-noon Ron Weinhold
Sat. noon-3 Matt Metzler
Sat. 3-5 Lyndon Johnson
Sun. 10-1 Ron Weinhold
Sun. 1-4 Lyndon Johnson

Silent Auction

Sat. 9-noon Don & Diane Trieglaff
Sat. noon-3 Don & Diane Trieglaff
Sat. 3-5 JoAnn Moe
Sun. 10-1 Kathy Peterson
Sun. 1-4 Jane & John Kimball

Concessions

Sat. 9-1 Russ & Christine Reisz, Mary Hanson
Sat. 1-5 Caleb and Aubrey Johnson
Sun. 10-1 Linda Andolshek
Sun. 1-4 Vic Rinke

Door Admission

Sat. 9-noon Richard Salzwedel, Kathy Krebs, Meredith Sternaman, Mary Hanson
Sat. noon-3 Barb Schmidt, Vern Iverson
Sat. 3-5 Linda Schuety, Larry Jenson
Sun. 10-1 Judy Frampton, Becky Sovde
Sun. 1-4 Richard Salzwedel
Meredith Sternaman

Security

Sat., 6:30-9 Lyndon Johnson-back gate
Sat. 9-noon Bucky Lindstrom-back gate
Caleb and Aubrey Johnson
Sat. noon-3 Jerry Shield- back gate
Mark & Kathy Kiel
Sat. 3-5 Gerry & Tucker Schuety,
Don Christiansen
Sun. 10-1 Jerry Shields-back gate
Pat Higgins
Sun. 1-4 Gerry Schuety
Kristine Peterson

Door Prizes/Vendor Survey

Keith Lorenson

Spinning Wheel

Sat. 9-noon Lori DuBois
Sat. noon 3 Lori DuBois
Sat. 3-5 Lori DuBois
Sun. 10-1 Saliah Kako
Sun. 1-4 Linda Schuety

Show Tear Down

Ed Walton, Bev Williams, Gerry, Linda & Tucker Schuety, Erich Ess, Joan Guerra, Joanie Hanson, Lily Peterson

Monday AM Clean Up

Dolores & Tony Sibet



Franklin Art Center

Club Information

Meeting Place

Lower level
Franklin Arts Center
1001 Kingwood St, Brainerd, MN 56401

Directions

.4 mile east of Business Hwy. 371
& Hwy. 210 intersection.
(Castle turret water tower.)

Date/Time

the 2nd Saturday of each month
at 2 p.m. unless otherwise noted.

Club Dues

\$20/ family

Free /unaccompanied juniors

Membership runs

from Jan. 1-Dec. 31st.

Club Calendar

May 5 & 6—Rock Show

May 12—Board meeting at 12:30; General meeting at 2:00

June 8 and 9—Kids' Day Camp

June 9—Meeting

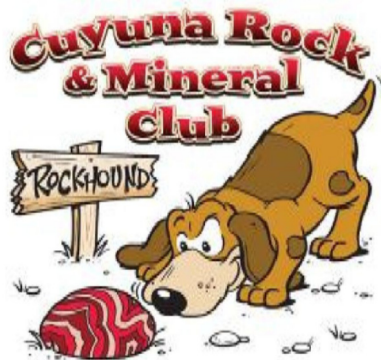
Later summer—potluck picnic

Information subject to change.

Club Purpose: To foster an interest (& encourage young & old) to study earth science, enjoy the art of lapidary, hunting for rocks, and semi-precious stones. We also strive to use what we know and acquire to further educate everyone who has an interest in our hobby.

We are a not-for-profit organization.

Pebble Pups Day Camp



Rox Box

A place to advertise rock items to sell and to inquire about items to purchase.



The Cuyuna Rock, Gem & Society accepts no responsibility for any dissatisfaction that may occur by either party, seller or buyer. The Society does not profit in any way by sales transactions.

Friday, June 8: 8:30 to 4
Franklin Arts Center, lower level
1001 Kingwood St., Brainerd
&

Saturday, June 9, 9-12
Lake Superior agate pick
Brainerd area location

\$25/non-member; \$10 2nd/3rd sibling;
\$15 member

Ages groups:
6-9 and 10-12.

Snacks provided.

Bring own lunch & beverage;
refrigeration available.

For Sale: Thumler
Model B Tumbler
15 lb. capacity; hex
steel barrel, rubber
liner. 2 units available.
\$150 each. Contact
Harry Wagoner—
218-927-9983 or
hpwagy@centurylink.net

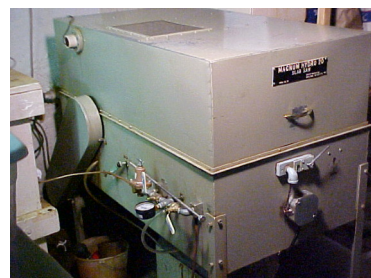
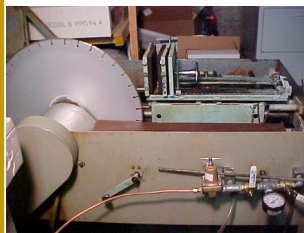


Wanted: Rough specimens of
orbicular granite especially from Peru.
Also orbicular diorite or other plutonic
rocks. Harry A. Wagoner 218-927-9983.

For Sale: Knapped Replica Points;
Many to
choose from -
most priced at
\$5 per inch or
less. Many
made by
Cherokee
native in
Oklahoma.
Contact Harry Wagoner at 218-927-9983
or hpwagy@centurylink.net.



For Sale: 20" Magnum Hydro slab saw
by Magnum Engineering. 3 feed system,
brand new blade, hydraulic feed is brand
new, settling tank coolant system, and
much more.
Asking
\$1700. Call
Butch
Goldenstein at
for details
320-252-
3335.



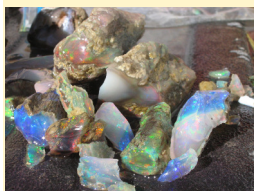
Do you love rocks? Come find out what rocks are in Minnesota.
Learn how to pan. Wire wrap your own necklace.
And there's more!

*Do you have a mystery rock?
Bring it for the Wizard of Rocks to identify!*

For more information or to register:
www.cuyunarockclub.org, 320-250-8120,
or 218-831-2665.

Sponsored by the Cuyuna Rock, Gem, and Mineral Society

Top Spots For Gem Hunting In The US *Bonanza Opal Mine, Nevada*



If you're gem hunting for fire opals, visit the Bonanza Opal Mine in Denio, Nevada. The mine is open from May to September.

Bonanza Opal Mine is open for the whole family. Kids love Bonanza, where they are free to roam the tailings and dig for fiery, precious opals. Bring the kids for a day of digging.

The staff will take care of you. They'll show you what to look for and how to see it. If you don't have a small rake, you can rent one. Unlike other mines in the valley with hard clay, the tailings are dry, rocky soil from the mining operations. The digging is easy—and fun.

All mining is 'weather permitting' • \$70 per day for tailings • Discounts for larger parties and rockhounds with club membership. Dry and wet opals available for sale at the mine.

www.bonanzaopals.com or call 775-375-5955.

2018 Pebble Pups Day Camp

Sponsored by the Cuyuna Rock, Gem, and Mineral Society
Franklin Arts Center lower level, 1001 Kingwood St., Brainerd
www.cuyunarockclub.org

Friday, June 8 8:30 a.m. to 4:00 p.m.

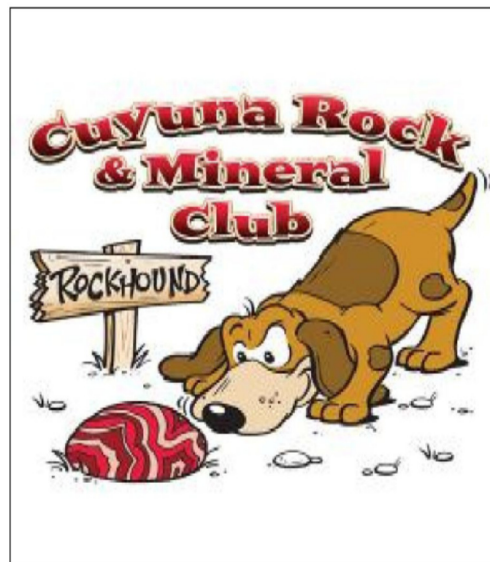
Saturday, June 9 at 9:00 a.m. to approximately noon

Saturday is field trip to look for Lake Superior agates at Brainerd area location. (In case of inclement weather or unavailability of location an indoor activity will be held at the Franklin Arts Center.)

Information given out Friday afternoon.

Bring a rock for the Wizard to identify!

Cut and save top portion.



Ages group: 6-9 and 10-12.

Bring lunch & beverage. Refrigeration available. Snacks provided.

\$15 for Club members \$25 for non-Club members \$10 for sibling (2nd child)

Make checks payable to Cuyuna Rock, Gem, & Mineral Society.

Registration not complete until payment is made.

Rocks are dirty! Please wear appropriate clothing.

Registration Form

Name _____ Age (as of 6/8/2018) _____

Parent/Guardian Name(s) _____

Phone Number(s) _____

Please list the first name of the parent/guardian that corresponds with each phone #.)

Address _____

Street/box # City Zip

Any medical issues/allergies? _____

Who can pick up student? _____

Who cannot pick up student? _____

Member price \$15.00. _____ Non-member price \$25.00. _____ Sibling price \$10.00 _____

Refunded only if cancelled before 6/1. Registration taken until filled.

Please make checks payable to: Cuyuna Rock, Gem, & Mineral Society

Mail registration form to: Cuyuna Rock, Gem, & Mineral Society, 1001 Kingwood St., Suite B-40, Brainerd, MN 56401.

Mineral Encyclopedia



Realgar/Orpiment

Realgar and orpiment are very similar minerals. They are both arsenic sulfides and members of the monoclinic crystal system. They form in the same geological environments and can be closely associated in the same deposits. They have similar physical properties and similar histories of use by man. Because of these similarities, we decided to describe realgar and orpiment in a single article.

Realgar and orpiment are both toxic minerals, and contact with them should be avoided. They are not suitable for classroom specimens.

What is Realgar?

Realgar is a monoclinic arsenic sulfide mineral with a brilliant red color & a chemical composition of As_4S_4 . Well-formed realgar crystals can look so much like red gemstones that the mineral was often called "ruby sulfur" and "ruby arsenic."

However, realgar is not used as a gemstone because it is very soft, with a Mohs hardness of just 1-1/2 to 2. It is easily ground into a fine, bright red powder. Those properties caused it to become a favorite pigment in many parts of the ancient world. It was traded over great distances to make paints, inks, and dyes - until people realized that it was toxic.

The arsenic in realgar was the source of its toxicity. After its toxicity was realized in the Middle Ages, the mineral was used as a poison to kill rodents, insects, and weeds. Realgar was also used in leather processing to remove the hair from hides. Today it is rarely used for any of these purposes because more effective and less toxic substitutes have been developed. However, some use of realgar in ritualistic cosmetics and "medicines" continues in a few parts of the world. Today the main use of realgar is as an ore of arsenic metal.

The chemical formula of realgar is often written as As_4S_4 instead of the simpler AsS . This is done because As_4S_4 represents a structural unit of the mineral. A compound of As^{+3} and S^{2-} would be out of electrical balance. In realgar, three of the arsenics are joined in a chain by covalent bonds. This gives the arsenics an effective electrical charge of +8. That combines with four S^{2-} ions to produce an electrically neutral molecule. This is why realgar's chemical composition is often presented as As_4S_4 instead of AsS .

What is Orpiment?

Orpiment is a monoclinic arsenic sulfide with a yellow-orange color and a chemical composition of As_2S_3 . It has a Mohs hardness of 1-1/2 to 2 and is easily ground into a yellow to yellow-orange powder. Like realgar, its earliest widespread use was as a pigment for paints, inks, and dyes, and it was traded over great distances.

After its toxicity was discovered, its use as a pigment declined. People took advantage of its toxicity to use it as a poison for insects & rodents. Some people continued to use it as a ritualistic cosmetic & "medicine" even after its toxicity was known, and that practice continues today in some parts of the world.

Today the primary use of orpiment is as an ore of arsenic. It is also used in manufacturing oil cloth, semiconductors, and photoconductors.

Geologic Occurrence

Realgar and orpiment are mainly found associated with hydrothermal & volcanic activities. They are sublimation products at volcanic vents & crystallization products at hot springs. These are among the earliest deposits exploited in the middle ages. Underground deposits of realgar & orpiment are in veins & fractures. There they are associated with lead, silver, gold, & other arsenic minerals.

<http://geology.com/minerals/>



Physical Properties of Realgar/Orpiment

Chemical Classification Sulfide/ Sulfide

Color Red to orange, gray/Yellow, golden, yellow-brown

Streak Red-orange to red/Light yellow

Luster Resinous to pearly on cleavage/

Resinous to pearly on cleavage

Diaphaneity Translucent to transparent/

Translucent to transparent

Cleavage Good/Perfect

Mohs Hardness 1.5 to 2/1.5 to 2

Specific Gravity 3.56/ 3.49

Diagnostic Properties Color, streak, resinous luster. Association with orpiment./

Color, streak, luster, foliated appearance.

Association with realgar.

Chemical Composition $\text{As}_4\text{S}_4/\text{As}_2\text{S}_3$

Crystal System Monoclinic/Monoclinic

Uses An ore of arsenic. Historically used as a pigment, depilatory, poison, ingredient in explosives and fireworks, ritualistic "medicine," cosmetic./ An ore of arsenic. Used in the production of oil cloth, semiconductors, photoconductors. Historically used as a pigment, poison, ingredient in fireworks and explosives.

Jewelry Making Tip

By Brad Smith

www.BradSmithJewelry.com

Testing for Silver

Often you need to identify some of those unknown "silvery" pieces in the bottom of the toolbox or some piece of old jewelry. Is it silver or something else?

Of course, if you need to know exactly what you have, it's best to send your metals off for refining. But inexpensive silver testing solutions can be used to help distinguish higher silver content alloys from alloys that have the same appearance but with little to no silver content, like German silver or nickel.

I purchased a half-ounce bottle of JSP Silver Testing Solution #GT41. It's not a rigorous analytic test, but it lets you know if you're on the right track. And it's inexpensive. Mine was only \$3.

With a fresh solution you have an instant reaction after applying it to the metal being tested. The procedure is simple - as you apply a small drop, look for a color change. Note that the acid will leave a slight mark, so choose a spot that is out of the way or will be easy to polish.

If you suspect the object is silver plated, you should file a little notch somewhere inconspicuous to expose what metal is below the surface. Otherwise, all you test will be the surface plating.

Here's the reaction I got when testing various materials:

Fine silver Red/Orange

Sterling silver Brick Red

80% silver 20% copper

Dark red changing to gray

Brass Yellow changing to blue

Nickel Gray-green

Copper Yellow changing to blue

Steel Black

Stainless Steel No color change

Caution - If you do any of this testing, know that you are handling a reasonably strong acid. The GT41 label says it includes nitric acid and potassium dichromate.

Wear safety glasses.

Do not get any testing solution on your skin. Use a solution of baking soda and water to neutralize acid.

Wash and clean up well when you're done.

Cuyuna Rock, Gem, and Mineral Society Board Meeting Minutes April 14, 2018

Meeting came to order at 12:30 pm.

Present were: Ed Opatz- President, Joanie Hanson-Secretary, Kevin Martini-Treasurer, Board-Members-at-Large: Sharon Smith, Vern Iverson, Keith Lorensen.

Treasurer's Report- Kevin reviewed all expenditures for the rock show to date. These will be posted at the rock club.

The new t-shirts are finished and the board voted on pricing. As follows:
Club members may purchase a new style t-shirt(gray) for \$10.00
General public pricing: S-XL \$12.00,

XXL-XXXL \$14.00.
Old style t-shirts(white): \$5.00 per t-shirt for members.
For general public: old style t-shirts must be bought with a mug for \$10.00.

The dates for the 2019 rock show will be May 11,12 2019. We will be promoting Mother's Day as our theme.

The date for the show appreciation dinner will be decided at the May meeting.

The large vibrating tumbler makes a lot of noise so Ed has worked out a schedule with the building manager for when it can't run.

Late summer/ fall trip dates to Utah will be decided at the May meeting. People interested in going may start to sign up then.

The 4H girls would like to sell water at the

show- they will carry it around in a cooler in a wagon.

Sharon is working on getting the Pequot Lakes Boy Scouts to help at the show.

The 2019 show cards are ready and will be given out starting at this years' show.

The club business cards are ready and can be picked up at the clubhouse.
Tabled: Shop days/classes, Minnesota Mineral Club welcome letter.

The 2019 show contract has been signed. For more info talk to Ed or Sharon.

The show advertising report is with the treasurer's report.

Respectfully submitted,
Joanie Hanson, Secretary

Cuyuna Rock, Gem, and Mineral Society General Meeting Minutes April 14, 2018

President Ed Opatz started the meeting at 2:05 pm

41 members and guests present.

Summer picnic- Where and When?

Day camp flyers went out with school packets.

Reviewed trip to Utah. For more info call Ed Opatz. More decisions about it will be made at the May meeting.
We can always use more volunteers for the show. Please find a time that works for you. Thanks.

Still working on how and when we will do shop days. Hopefully will start in August.

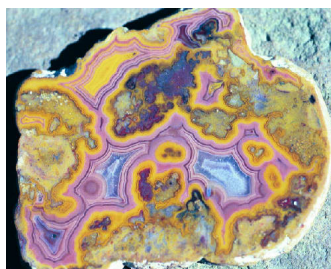
There were several interesting show and tell items today: quartz crystal plate- Kathy P., sandstone boulder-Marcia O., gold included mineral- Lyndon, agate cab- Wayne N., Copper agate- Joanie H.

Speaker: Mike Braun on Polyhedral Agates.

Door prize winners: Erich Ess, Sally Borst, Vern Iverson

Respectfully submitted,
Joanie Hanson

Agates From Around The World Kentucky Agate



Kentucky is known for its agate & quartz concretions which appeared to be originally crinoid heads,

brachiopods & other fossils in the limestone that had been expanded by evaporate minerals. The evaporate minerals were dissolved leaving behind the voids for any minerals such as chalcedony to fill in later.

The agates are found by searching the creeks that come down from Borbon limestone beds which may be the source of the agates. Since Kentucky Agates is an state

gem of Kentucky, it can be hard to obtain a complete pair because they tend to slab the agates up to make jewelry.

Most Kentucky agates are expected to contain fractures; the typical colors are yellow, black, white and bluish-gray while the agates with brighter colors like red, pink purple, green show up from time to time. The black and red color combo is considered a desirable classic but also the most expensive. The unfortunate news for novice and low-budget collectors is that the black and red agate apparently found only in the nodules that are larger than a fist. It seems that the larger agates are easier to find than small ones because they have to enter the creeks in order to find them and it's not easy to see to through the water.

<http://www.sailorenergy.net/Agates/AgatesKentuckyKentuckyAgates01.html>



May Birthdays

Michelle Crandell	5/4
Kristin Klemmer	5/20
Ron Dick	5/29

May Anniversaries

Kristin & Gary Klemmer	5/3
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We're on Facebook!



**Cuyuna Rock, Gem
& Mineral Society**

*This is a closed group,
so you must ask to join.
After being approved*

*you can follow the members' posts and
add your own information.*

*You know you are a rockhound if you color coordinate
your clothes and shoes to match your gemstone pendants.*

The World of Jaspers Owyhee



Owyhee Picture Jasper (pronounced Oh-WAH-hee), comes from the rugged Owyhee mountain area situated on the Idaho-Oregon border, just south of Homedale, Idaho. Owyhee Jasper is another one of the very popular picture jaspers, known for their depictions of mountain or desert scenery, with or without the "blue sky"! There are now about 6 different varieties that fall under the Owyhee Jasper name. This area is prolific for colorful jaspers. Close to the Owyhee Jasper area is the Wild Horse and the Rocky Butte areas.

It is said that this material was found in the 1967 by Bruce Markus and Ralph Fulson while they were following wild Mustangs in their V.W. They saw the pretty rock and collected a few hundred pounds. Later they came back and claimed the area. The mine very isolated and overlooks the Owyhee River.

<https://www.oakrocks.net/owyhee-jasper/>

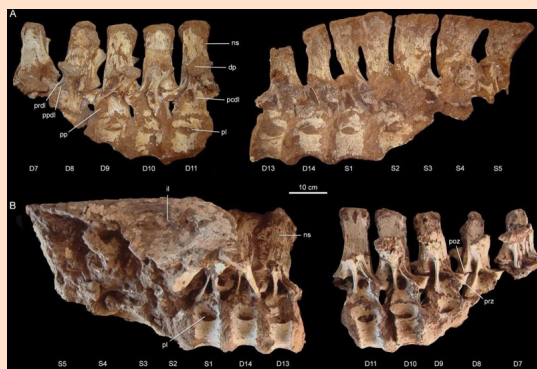
**Cuyuna Rock, Gem, &
Mineral Society on the Web**
www.cuyunarockclub.org

New Dino Unearthed in Argentina

Parts of the fossilized skeleton of a large, meat-eating dinosaur with razor-like claws and sharp, jagged teeth, which once roamed the plains of South America and Australia millions of years ago, have been unearthed in Argentina, according to researchers.

The newly discovered *Tratayenia roselesi* was part of the megaraptoran theropod family of dinosaurs and was a menacing apex predator that lived during the late Cretaceous period, about 85 million years ago, according to a study published in the journal *Cretaceous Research* earlier this month.

It grew to more than 30 feet long with powerful and well-muscled forelimbs tipped by gigantic talons, like meat-hooks, on the innermost two fingers of each hand.



Study co-leader Matt Lamanna with Pittsburgh's Carnegie Museum of Natural History said in a statement released Thursday that the dinosaur used its claws to subdue its prey.

"Megaraptorid claws are the stuff of nightmares – razor-sharp meat hooks more than a foot long. Wolverine from the X-Men has nothing on these guys," Lamanna said.

Scientists discovered the remains of the mysterious dinosaur in Argentina's Patagonian region.

"Not many megaraptorid specimens are known, so we thought the new fossil would provide important information on these enigmatic predators," said study co-author Domenica dos Santos of the Museum of

Sunshine Requests

If you know someone who could use a little sunshine—birth, illness, surgery, family death—please contact Christi Higgins at 320-224-6650.



Oldest Earth Crust

*Submitted by Harry Wagoner
from Live Science*

The Mediterranean Sea is home to what could be the world's oldest oceanic crust, an undisturbed section of Earth's outermost shell that scientists say is about 340 million years old.

Most oceanic crust is less than 200 million years old, because it is typically recycled back into the Earth's mantle at subduction zones (where two tectonic plates collide). But a new study shows that part of the eastern Mediterranean Sea may contain the oldest known oceanic crust.

Much of this region's tectonic characteristics are uncertain because of its thick sedimentary cover and lack of magnetic data. In the new study, researchers used magnetic sensing equipment to profile areas of the eastern Mediterranean.

"Changes in the magnetic field's orientation over time are recorded in the ocean floors,

**The Franklin Arts Center is
having a 10th anniversary
celebration in August. Stay tuned
for more information about the
Club's role in this event.**

creating a unique bar code that provides a time stamp for crust formation," study author Roi Granot, a geologist at Ben-Gurion University of the Negev in Israel, said in a statement. "The results shed new light on the tectonic architecture and evolution of this region and have important implications on various geodynamic processes."

In an analysis of these "bar codes," Granot found that rocks in the so-called Herodotus Basin, located in the eastern Mediterranean, had magnetic stripes associated with oceanic crust formed at a mid-ocean ridge. The cooling of magma at a mid-ocean ridge magnetizes the minerals in newly forming rocks, which align with the direction of Earth's magnetic field, according to the study. Granot said the ancient crust in this part of the eastern Mediterranean could be remnants of one of Earth's early oceans, Tethys, which existed long before the Atlantic and Indian oceans. If that idea is correct, these findings show that the ancient Tethys Ocean formed much earlier than scientists previously thought.

Natural Sciences at the National University of Comahue in Argentina.

The new megaraptoid is also thought to be one of the youngest and most deadly dinosaurs that survived until the end of the Age of Dinosaurs.

"It was one of the last megaraptorids that lived on our planet and one of the largest in size for its time," lead study lead researcher Juan Porfiri, coordinator at the Museum of Natural Sciences at the National University of Comahue, told Live Science.

Scientists at the Carnegie Museum of Natural history said they still know very little about the new megaraptoid and that there is a lot to learn about this poorly understood dinosaur.

<https://www.ajc.com/news/national/new-dinosaur-with-razor-sharp-claws-and-jagged-teeth-unearthed-argentina/OoerPy749VvYM7ZWipuwwK/>

May Rock Shows

4-6—KALAMAZOO, MI: Annual show; Kalamazoo Geological & Mineral Society, Kalamazoo County Expo Center; Fri. 4-8, Sat. 10-6, Sun. 10-5; \$4, Under 13 free; Website: www.KalamazooRockClub.org
 4-6—SACRAMENTO, CA: Gem Faire Inc, Scottish Rite Center; Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, Under 12 free; Website: <http://www.gemfaire.com>
 4-6—MCPHERSON, KS: McPherson Gem & Mineral Club, 4-H Fairgrounds; Fri. & Sat. 9-6, Sun. 10:30-3; Free; contact Alan Hedrich, KS, (620)-747-2265
 4-6—YUCAIPA, CA: Yucaipa Gem & Mineral Society, Yucaipa Blvd & Adams St; Fri. 6pm -10pm, Sat. 12-10, Sun. 12-7; Free; Website: <http://www.yvgms.org/wiki/>
 5—WATERLOO, ONTARIO, CANADA: KW Gem & Mineral Club, Waterloo Community Arts Centre; Sat. 10-4; Free; Website: www.calaverite.com/kwgmcc/
 5-6—BOULDER CITY, NV: Southern Nevada Gem & Mineral Society, Boulder City Parks & Rec Building; Sat. 9-5, Sun. 9-4; Free; Website: www.SNVGMS.org
 5-6—MARSHFIELD, WI: Heart of Wisconsin Gem & Mineral Society, Marshfield High School field house; Sat. 10-5, Sun. 10-4; Website: www.heartofwisconsinrocks.com
 5-6—ROSEBURG, OREGON: Umpqua Gem & Mineral Club, Douglas County Fairgrounds; Sat. 9-5, Sun. 10-4; Free Admission; Web site: www.facebook.com/Umpquagem
 5-6—LUBBOCK, TX: Lubbock Gem & Mineral Society, Lubbock Memorial Civic Center; Sat. 10-6, Sun. 10-5; \$4, Srs \$3, Students \$2, Children Free; Website: www.lubbockgemandmineral.org
 5-6—EVERETT, WA: Everett Rock & Gem Club, Everett Community College; Sat. 10-6, Sun. 10-5; Free; Website: everettrockclub.com
 5-6—KINGMAN, AZ: Mohave County Gemstoners, Kingman Academy of Learning, Sat. 9-5, Sun. 9-4; Free; Website: www.gemstoners.org
 5-6—ANAHEIM, CA: Searchers Gem & Mineral Society, Brookhurst Community Center; Sat. 10-5, Sun. 10-4:30; Free; Website: www.searchersrocks.org
 5-6—BRAINERD, MN: Cuyuna Rock, Gem, & Mineral Society, Crow Wing County Fairgrounds; Sat. 9-5, Sun. 10-4; \$1, Children \$1/ Free on Sunday; Website: www.cuyunarockclub.org
 5-6—TOPSFIELD, MA: North Shore rock & Mineral Club, Topsfield Fairgrounds; Sat. 9-5, Sun. 10-4; \$6, Srs \$4, Under 12

free; Website: www.northshorerock.org
 10-12—LOGAN, UT: Cache Rock & Gem Club, Bridgerland Technical College, West Campus; Thu. & Fri. 10-8, Sat. 9-6; Free; Website: cacherockgemclub.weebly.com
 10-13—FRANKLIN, NC: Bellpoint Promotions, Echo Valley Showplace; Thu.—Sat. 9-6, Sun. 9-5; Website: bellpointpromotions.com
 11-13—SANTA BARBARA, CA: Gem Faire Inc, Earl Warren Showgrounds; Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, Under 12 free; Website: <http://www.gemfaire.com>
 11-13—COLUMBIA, MI: Central Missouri Rock & Lapidary Club, Knights of Columbus Hall; Fri. 12-7, Sat. 9-5, Sun. 10-4; \$6, Srs \$3, 12-18, \$3, Under 12 free; Website: cmrlc.org
 11-13—FRANKLIN, NC: The Gem & Mineral Society of Franklin, NC, Fri. & Sat. 10-5, Sun. 10-4; Free; e-mail: norm-holbert@comcast.net
 11-13—MARIETTA, GA: Georgia Mineral Society, Cobb Civic Center; Fri. & Sat. 10-6, Sun. 12-5; Free; Website: www.gamineral.org
 12—BIGLERVILLE, PA: Central Penn & Franklin County Rock & Mineral Clubs, South Mountain Fairgrounds; Sat. 8-3; Adults/Srs \$1, Students/Children free; e-mail: tsmith1012@comcast.net
 12—FAIRLESS HILLS, PA: The Rock & Mineral Club of Lower Bucks County, Inc., Christ United Methodist Church; Sat. 9-3; \$2, Children free; Website: rockandmineralclub.wix.com/lowerbuckscountypa
 12-13—GRAND JUNCTION, CO: The Grand Junction Gem & Mineral Club, Two Rivers Convention Center; Sat. 9-6, Sun. 9-5; \$5, Srs \$4, Children free; Website: grandjunctionrockclub.org
 12-13—BOZEMAN, MT: Bozeman Gem & Mineral Club, Gallatin County Fairgrounds; Sat. 10-6, Sun. 10-4; \$3, Under 12 free; e-mail: bgmcm@gmail.com
 12-13—HERMISTON, OR: Hatrockhounds Gem & Mineral Club, Eastern Oregon Trade & Event Center; Sat. 10-5, Sun. 10-5; \$3; e-mail: stonemorlin1@netscape.net
 18-20—SANTA ANA, CA: LLD Productions, Inc., Holiday Inn-Orange County Airport; Fri. & Sat. 10-6, Sun. 10-5; Free; Website: <http://www.MineralShowsLLL.com>
 18-20—COSTA MESA, CA: Gem Faire Inc, OC Fair & Event Center; Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, Under 12 free; Website: <http://www.gemfaire.com>
 18-20—JOPLIN, MO: Tri-State Gem & Mineral, Joplin Museum; Fri. & Sat. 9-5, Sun. 9-3; Free; e-mail: jmc-cwiseman@sbcglobal.net

18-20—SARASOTA, FL: Frank Cox Productions, Sarasota Municipal Auditorium; Daily 10-5; \$5, under 16 free; Website: frankcoxproductions.com
 19-20—SAINT JOSEPH, MI: Blossomland Gem & Mineral Society, Lake Michigan Catholic Elementary School; Sat. 9-6, Sun. 12-6; Free; e-mail: blossomland-rockclub@gmail.com
 19-20—HAMILTON, MT: Bitterroot Gem & Mineral Society, Ravalli County Fairground; Sat. 10-6, Sun. 10-4; \$2, Under 12 free; e-mail: mtpiiper@gci.net
 19-20—BENNINGTON, VT: Southwestern Vermont Mineral & Gem Club, Inc., Grace Christian School; Sat. 10-5, Sun. 10-3; \$5, Children free; e-mail: cotrofelfauto@comcast.net
 19-20—NORTH OLMSTED, OH: Parma Lapidary Club, Soccer Sportsplex; 31515 Lorain Ave.; Sat. 9-6, Sun. 10-5; \$6; Website: parmalapidary.org
 19-20—LEESPORT, PA: Berks Mineralogical Society, Leesport Farmer's Market; Sat. 10-5, Sun. 10-4; \$3; Website: <http://www.berksmineralsociety.com>
 19-20—PATCHOGUE, NY: Celinka/Suffolk Gem Club, Our Lady of Mt Carmel Auditorium; Sat. & Sun. 10-5, \$5, under 12 free; Website: suffolkgem.com
 25-27—SALEM, VA: Treasures Of The Earth Gem & Jewelry Shows, Salem Civic Center; Fri. & Sat. 10-6, Sun. 11-5; \$5 Web site: www.toteshow.com
 26-27—FORT WORTH, TX: Fort Worth Gem & Mineral Club, Will Rogers Memorial Center; Sat. 10-6, Sun. 10-5; \$5, Srs/Students \$4, Under 17 free; Website: www.fortworthgemandmineralclub.org
 26-27—ST. CHARLES, IL: Chicagoland Gems & Minerals Association, Kane County Fairgrounds; Sat. 10-6, Sun. 10-5; \$5, Students/Srs \$3, under 13 free; Website: www.cgma.rocks
 26-27—NEWPORT, OR: Oregon Coast Agate Club, National Guard Armory; Sat. 10-5:30, Sun. 10-4; \$2, Children free; Website: www.coastagates.org

We need someone who can call the people that do not have email. Usually that is for last minute agate pick information, deadlines for events, etc. There are 12-15 people on the list.

Please call Ed Opatz at 320-250-1363.

3rd Annual Pierz Agate Show and Swap

June 2nd and 3rd 10am—5pm at 603 Park Ave. SE Pierz MN



Scott Wolter Agate Display and Book Signing.

For more info contact
TJ's Coin and Currency +
Collectibles at
218-831-8706

Buying and Selling
Lake Superior
Agates and
mineral
specimens.

Food
Beverages
KIDS ACTIVITIES
DOOR PRIZES
Free agates for children.
Swimming
Camping
Family fun 

Help Fill the Egg Cartons!

The kids' day camp will have a station on the rocks of Minnesota. In that class kids will learn about local rocks and fill their own egg carton with samples. We need about 50 small specimens (think bottle cap to egg size) of the following:

Mary Ellen Jasper	Binghamite
Ely Greenstone	Hematite
Jasper	Taconite
Basalt	Limestone
Silkstone	Iron Ore
Morton gneiss	



Please bring the specimens to the May meeting. If you have questions, call Ed Opatz at 320-250-1363.



Rock Room

Here is an inventory of what is available for Club members to purchase. Stop in when you come to the Clubhouse!

Grit and Polish
Montana Moss & Blue Agate
Montana Petrified Wood
Oregon Geodes
Chalcedony
Desert Rose
Plume Agate
Yellow Jasper
Bruno Jasper
Owyhee Picture Jasper
Brazilian Agates
Amethyst
Tee Pee Canyon Agate
Hauser Bed Agate—not priced yet
Slabs of all sizes and types
Condor Agate
Septarian Nodules
79 Bed Geodes—Oregon
Moroccan White Agate



Kids' Corner

Minnesota's Rocky Roots

How much do you know about Minnesota?

- Long ago geologists believe northern Minnesota was
 - part of South America.
 - a chain of volcanic islands.
 - the bottom of a shallow sea.
 - a rugged mountain range.
- Minnesota's iron ore was formed
 - from animal and plant remains.
 - 100 years ago.
 - on dry plains.
 - from volcanic sediments at the bottom of the sea.
- Six hundred million years ago the climate of Minnesota was
 - hot.
 - cold.
 - both hot and cold.
 - much like it is today.
- Some Minnesota lakes were
 - formed by glaciers.
 - formed by volcanoes.
 - formed by earthquakes.
 - formed by continental drift.
- The oldest rock in Minnesota is
 - sedimentary.
 - metamorphic.
 - agates.
 - sandstone.

Answers on page 10.



The display case inside the main entrance to the Franklin Arts Center is advertising our Club for the month of May. Stop in to see it. Thanks to Joanie Hanson for the beautiful display.

Open Shop Days

Do you want to use the machines in the Clubhouse?

Contact a board member (see the back page for phone numbers and email addresses) to set up a time.

16th Annual

2018 Cuyuna Agate & Mineral Show

Saturday, May 5, 9-5

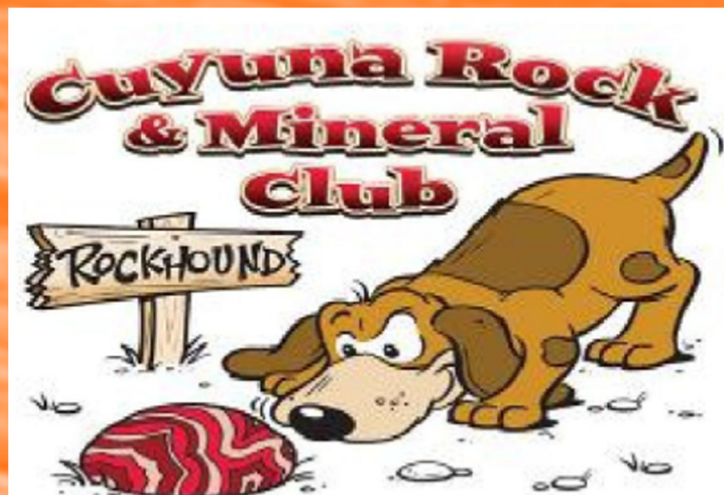
Sunday, May 6, 10-4

Rain or Shine

Crow Wing County Fairgrounds

2000 S.E. 13th St.

Brainerd, Minnesota



**Featuring vendor
Krystle Dorris
from the TV Show
*The Prospectors.***

**Over 60 Vendors
Inside & Outdoors**

**Handcrafted Jewelry ♦ Crafts
Unique Décor Items ♦ Art
Door Prizes ♦ Specimens
Displays ♦ Kids' Corner
Silent Auctions
Minerals ♦ Crystals
Rock Cutting ♦ Geode Cracking
Ask the Wizard of Rocks
Rough Rock ♦ Flint Knapping**

Admission \$1 Donation Kids free on Sunday!
Free polished stone to first 1000 on Sunday!

***For more information or to reserve space:
call Sharon Smith at 218-343-7037
or email: Sharon@agatesrock.com***



**Member
MW Federation of Mineralogical & Geological Societies
American Federation of Mineralogical Societies**



ATM on site

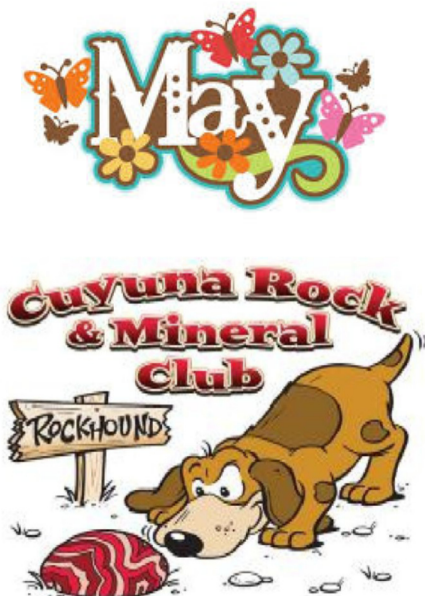
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www.cuyunarockclub.org

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May 2018

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Members of AFMS & MWF



Answers for Kids' Corner: 1. B 2. D 3. A 4. A 5. B

Notes from the President

We are in the final push to the show. We should all pray to the sun gods for some warm, drying weather. The fairgrounds could be wet, so be prepared. I want all of you to enjoy the show and have a chance to shop, but I want everyone to have that opportunity. If you can help, even for a few minutes to give someone a bathroom break, please do so.

We are desperately looking for a place to pick agates close to Brainerd for the day camp. Please help us find somewhere for Saturday, June 9. We don't want to disappoint the kids. We also need places for the Club to pick, but that doesn't need to be that close to Brainerd.

Do you have any rock contacts in Utah? I have started to plan our fall trip, and would appreciate any locations or people you know that I can research.

We are looking for somewhere to have our annual potluck picnic. It is usually in late July. If you would like to offer your place, please contact me.

Ed Opatz

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