

Cuyuna Rock, Gem and Mineral Society

The Agate Explorer

October 2018

November Elections

The November meeting will include elections. Positions open are vicepresident, treasurer, and three board members at large. You must be a Club member for one year to run.

f you are interested, please contact Sandi Hilsgen at 320-249-3778 or Lisa Hughes at 218-546-2728



Silent Auction There will be a silent auction held in conjunction with the November meeting on the 17th. Please bring only rock related items to sell. Seller keeps all profits.

Rock Wrappers

Starting at 10 a.m. on meeting Saturdays there will be an open gathering for wire wrappers. Hang out with other wrappers, and work on your projects. (Bring all supplies needed.) Learn tricks to make wrapping easier, a new design, or perhaps a new place to find supplies. All skill levels welcome!

Franklin Arts Craft Sale is being held on Saturday, November 10.

If you are interested in a FREE 8x8 space in the cafeteria, contact Joanie Hanson at jkh2upnorth@msn.com 218-831-2665 (Text or leave message if no answer.)



Kids' Program

Do you know all the rocks that can be found in Minnesota? You can find out at the October 13th meeting!

Club Calendar



October 13—Board Mtg. at 11:30; General Mtg. at 2:00.
Speaker Club Member Ron Weinhold on the glacial periods in Minnesota
November 10 - Franklin Arts Building Craft Sale, 9 to 3.

November 17 - Board Mtg. at 11:30; General Mtg., ELECTIONS, at 2:00. Silent Auction. NOTE CHANGE OF DATE.

December 8 - Christmas Party

Information subject to change.



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 Purpose:

To foster an interest (& encourage young & old) to study earth science, enjoy the art of lapidary, hunting for rocks, and semiprecious 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.



October Birthdays

Ed Opatz	10/20
Marcia Opatz	10/23
Mark Keil	10/25

The World of Jaspers Dalmation Jasper

Dalmatian Jasper, also known as Dalmatian Stone or Dalmatine, is a stone that's produced in Chihuahua, Mexico.

In case you're wondering why it's called that way, it's because it looks just like the Dalmatian dog!

It's often white or cream in color, and it's speckled with black spots much like the ones you can see on the Dalmatian breed of dogs.

New Dinosaur Species Fossil Discovered in China

Chinese scientists have found the fossil of a new dinosaur species in southwest China's Yunnan Province. The findings were recently published by the journal Scientific Reports.



Researchers have named the new species Yizhousaurus sunae, known in Chinese as Sunshi Yizhou dinosaur, after Chinese scientist Sun Ailing for her great contribution to vertebrate paleontology.

Measuring seven meters in length, the fossil was discovered and unearthed in Lufeng

County in 2002 and could date back to around 180 million years ago, said Zhang Qiannan, the paper's first author and doctoral candidate with the Institute of Vertebrate Paleontology and Paleoanthropology under the Chinese Academy of Sciences.

known semi-precious stone that's most

chons, spheres, and beads.

dalmatian-jasper/

often cut as tumbled stones, carvings, cabo-

https://meanings.crystalsandjewelry.com/

It's a stone

that's very

easily pol-

ished and

achieve a

high luster.

can

It's a

Phylogenetic analysis indicated the dinosaur was a Sauropodiformes, meaning a lizard-footed dinosaur.

Zhang said that the discovery enriches the diversity of Sauropodiforms and is significant to the studies on origin and evolution of dinosaurs.

The dinosaur fossil is displayed at the museum in Lufeng Dinosaur Valley.

Lufeng is known for its abundant fossils of prehistoric creatures. Eighty years ago, a dinosaur fossil dating back to around 190 million years ago was found there.

http://www.xinhuanet.com/english/2018-09/13/c_137465580.htm



September speaker was Bemidji State professor Miriam Ross-Sanchez on how crystal colors occur. Approximately 35 people enjoyed her presentation.

Jewelry Making Tip By Brad Smith www.BradSmithJewelry.com

Spot Sanding Brush

Sometimes you have a little discoloration or debris to clean from the bottom of a pocket, from an area of coarse textured surface, or from a small space between two sol-



dered objects. Finding something to get into those close areas is always an effort in creativity.

One tool I have for these special occasions is a glass fiber spot sanding brush. It's great for cleaning a small area and doesn't leave deep scratches, only a faint satin finish.

There are probably several manufacturers of these pens, but one is the PrepPen Adjustable Sanding Pen selling for US\$ 11.50 from Amazon. You can see it at http://www.amazon.com/Prep-Pen-PrepPen -Adjustable-Sanding/.../



Precious or Semi-Precious Gemstones

Alexandrite or Chrysoberyl is a gemstone made of beryllium aluminate. Its chemical formula is BeAl2O4. Chrysoberyl belongs to the orthorhombic crystal system and has a Mohs hardness of 8.5. Alexandrite is a strongly pleochromic form of the gem that can appear green, red, or orange-yellow, depending on how it is viewed in polarized light.

https://www.thoughtco.com/alphabeticallist-of-precious-and-semipreciousgemstones-4134639

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.

Mineral Encyclopedia

Arsenopyrite

Arsenopyrite is an iron arsenic sulfite



chemical composition of FeAsS. It is the most abundant arsenic mineral and the primary ore of arsenic metal. In addition to being found in deposits

that are large enough to be minable, arsenopyrite is widely distributed. However, it usually occurs in such small amounts and in such small particle sizes that it is easily overlooked. It is associated with other sulfide minerals in organic-rich sedimentary rocks, metamorphic rocks, and igneous rocks in many parts of the world.

Much of the arsenopyrite that has been mined formed as a high-temperature mineral in hydrothermal veins. It is often mined, together with other metallic minerals, from veins that might contain gold, silver, lead, tungsten, or tin. In these deposits arsenopyrite usually occurs in a granular massive form. It is often intergrown with other sulfide minerals such as chalcopyrite, galena, pyrrhotite, pyrite, and sphalerite; precious metals such as gold and silver; or other minerals such as scheelite, cassiterite, and quartz.

Arsenopyrite has also been mined from sulfide deposits formed by contact metamorphism. It is occasionally found in pegmatites. Well-formed crystals of arsenopyrite are most often found in pegmatites and in carbonate rocks that have been altered by contact metamorphism. Significant amounts of arsenopyrite have been produced from deposits in Germany, England, Bolivia, Japan, Greece, Spain,

For Sale: 10" trim saw with rock



clamp vise and slab cutter adjustment. Blade with life left. \$340. Also, have a number of

tumblers of various sizes, ranging from 3-12 pound capacity. Call Ed Opatz at 320-250-1363.

Wanted: Wet grinder/polisher. Prefer 4". Call Ed Opatz at 320-250-1363.

Sweden, Mexico, and Japan. In North America deposits are located in Ontario, Canada, and in South Dakota, New Jersey, and New Hampshire in the United States.

In some deposits, cobalt will substitute for some of the iron in the arsenopyrite crystal structure. This produces a solid solution series between arsenopyrite (FeAsS) and glaucodot ((Co,Fe)AsS).

Arsenopyrite is unstable in most environments of Earth's surface. It easily alters from its silver-white or steel-gray color to yield a bronze to brown tarnish. If a geologist strikes the mineral with a hammer to view a fresh surface or does a streak test, an odor of garlic might be detected. This is a characteristic of many arsenic minerals and a clue that arsenopyrite might be present. Arsenopyrite often oxidizes to form scorodite, a hydrated iron arsenate mineral with a chemical composition of FeAsO4.2H2O. Scorodite often weathers to limonite, an amorphous, hydrated iron oxide of variable composition. In areas where mining has exposed large amounts of sulfide ores, arsenopyrite can be a contributor to acid mine drainage problems.

Arsenopyrite sometimes contains gold that is so small that it cannot be detected with a hand lens. This "invisible gold" can sometimes be recovered in economic quantities by crushing the ore, concentrating the heavy fraction, and treating the heavy fraction with cyanide to dissolve the gold.

The "invisible gold" occurs in two forms: 1) tiny particles of elemental gold; and, 2) gold that is chemically bound within the arsenopyrite. Elemental gold exposed by crushing can be removed with the cyanide. The chemically bound gold is more difficult to remove without smelting.

The name "arsenopyrite" is a contraction of "arsenical pyrites," an archaic name used for the mineral. "Mispickel" is another

For Sale: 2 showcases, stained & varnished. Slanted glass front with piano hinge opens wide for easy access from behind. One is 51"x26"x12," 2nd is 48"x26"x12". Very nice condition. \$65 each/\$100 for both. Can deliver to next



name for arsenopyrite.

Arsenopyrite is the primary ore of arsenic metal, which is used to produce alloys. It was historically used to harden lead in ammunition, but this use has declined in the past few decades.

Much arsenic is recovered by smelting in the form of arsenious oxide. This is used to produce a variety of insecticides, herbicides, pesticides, and chemical weapons. Arsenic compounds are also used in medicines, as pigments in paints, and to produce color in fireworks and glass.

https://geology.com/minerals/

Physical Properties of Arsenopyrite

Chemical Classification Sulfide **Color** Silvery-white to steel gray Streak Black Luster Metallic Diaphaneity Opaque Cleavage Poor Mohs Hardness 5.5 to 6 **Specific Gravity** 5.9 to 6.2 Diagnostic Properties High specific gravity. A slight odor of garlic might be noticed when arsenopyrite is crushed, broken or scraped across a streak plate. A garlic odor is also released when arsenopyrite is heated to a temperature that causes alteration. The fumes produced by heating can be toxic. Chemical Composition Iron arsenic

sulfide, FeAsS

Crystal System Monoclinic Uses The primary ore of arsenic metal. Arsenic is toxic to many organisms, and that is its role in insecticides, herbicides, pesticides, chemical weapons and other poisons. Arsenic metal is used to produce specialty alloys. Oxides of arsenic are used to make pigments. Modern organic compounds are displacing arsenic from many of its traditional uses.

October Rock Shows

3-7—JOSHUA TREE, CA: Sportsman's Club of Joshua Tree; 6225 Sunburst Street; Daily 9-6; Free; Website: jtsportsmansclub.com

5-7—ALBUQUERQUE, NM: Expo NM St. Fairgrounds, Daily 9 -5; Free: Website: http://abqfallshow.wix.com/abq-fall-show 5-7-SARASOTA, FL: Frank Cox Productions; Sarasota Municipal Auditorium; Daily 10-5; \$5; Website: frankcoxproductions.com

5-7-ORLANDO, FL: Mineral, Bead & Fossil Show; Central Florida Mineral & Gem Society; National Guard Armory, Fri. 1-6, Sat. 10-6, Sun. 10-5; \$5, students \$2, Scouts/children free; Website: www.cfmgs. org

5-7—SACRAMENTO, CA: Gem Faire Inc.; Scottish Rite Center; Fri. 12-6, Sat. 10- 12-14—TRONA, CA: Searles Lake Gem & 6, Sun. 10-5; \$7, under 12 free; Website: www.gem- faire.com

5-7-DALLAS, NC: Gaston Gem, Mineral & Faceters Club; Gaston County Park, Fri. & Sat. 9-6, Sun. 9-4; Free; Website: www.gastongem- club.weebly.com 6—IDAHO FALLS, ID: Idaho Falls Gem & Mineral Society; Pinecrest Event Center, Sat. 9-5; \$3, under 13 free; Email: tbar@srv.net

6-MACUNGIE, PA: Pennsylvania Earth Sciences Association (PESA); Macungie Memorial Park, Sat. 8:30-3; \$2, children free; Website: https://www.facebook.com/ Pennsylvania-Earth-Sciences-Association-PESA-mineralfest-and-clubs-

1555170821375067/

6-7—JEFFERSON, WI: Rock River Valley Geological Society: Jefferson County Fair Grounds; Sat. 10-5, Sun. 10-4; Free; Website: www.StevensRockShop.com 6-7-MARYSVILLE, WA: Marysville Rock & Gem Club; Marysville Totem Middle School; Daily 10-5;Free; Website: http://www.marysvillerockclub.com/ 6-7-GRASS VALLEY, CA: Nevada County Gem & Mineral Society; Nevada County Fairgrounds; Sat. 10-5; \$2, children free; Email: 4vanclan5@att.net 6-7—OMAHA . NE: Nebraska Mineral & Gem Club; Westside Middle School, Sat. 9-6, Sun. 10-5; \$5, Srs/Students \$3, under 12 free; Website: nerockgem.org 6-7-HONOLULU, HI: Rock & Mineral Society of Hawaii; Outrigger Waikiki Beach Resort, Daily 10-5; Free; Website: http://hawaiimineralsociety.pohakugalore. net/17th-annual-hawaii-rock-and-mineralshow-in-waikiki-2018/ 6-7-VISTA, CA: Vista Gem & Minerial Society: Vista Antique Gas & Steam Engine

Museum; Sat. 9-5, Sun. 9-4; Free; Email:

kellyahickman@hotmail.com Chamber of Commerce; Montgomery County Fairgrounds, Fri. 7-4, Sat. 8-4; \$1; Website: mountidachamber.com 12-14—CANBY, OR: Portland Regional Gem & Mineral Association; Clackamas County Fairgrounds, Fri. & Sat. 10-6, Sun. 10-5; \$5, under 13 free; Website: www. PortlandRegionalGemandMineral.com 12-14—VIRGINIA BEACH, VA: Treasures of the Earth, Inc.; Virginia Beach Convention Center, Fri. 12-6, Sat. 10-5; \$5, under 17 free; Website: www.TreasuresOfTheEarth.com & Mineral Club; Buckeye Arena, Fri. & Sat.

9-5, Sun. 9-2; \$3, children free; Website: http://www.westvalleyrockandmineral club.com/

Mineral Society; Show and Lapidary Building; Fri. 1:30-6:30, Sat. 7:30-5, Sun. 7:30-4; free; Website: www1.iwvisp.com/ tronagemclub/

12-14—WARREN, MI: Michigan Mineralogical Society; Macomb Community College Expo Center; Fri. 9-6, Sat. 10-7, Sun. 11-5; 8, srs \$5, children \$4; Website: www.michmin.org

12-14—HUNTSVILLE, AL: Huntsville Gem & Mineral Society; Jaycee Center, Fri. & Sat. 10-6, Sun. 12-5; \$3, srs. \$2, students \$1, under 5 free; Website:

www.Huntsvillegms.org 12-14-MOAB, UTAH: Moab Points & Pebbles Rock Club; Old Spanish Trail Arena; Fri. & Sat. 10-6, Sun. 10-4; free; Email: moabrockclub- @live.com 12-14— SALT LAKE CITY, UT: Mineral Collectors of Utah; Trolley Square Shopping Mall; Fri. 12-9, Sat. 10-9, Sun. 10-5; free; Website: http://m-c-u.org/ 12-14—COSTA MESA, CA: Gem Faire Inc.; OC Fair & Event Center, Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, under 12 free; Website: www.gemfaire.com 13-14—SIERRA VISTA, AZ: Huachuca Mineral & Gem Club; Cochise College, Sat. 9-5, Sun. 10-4; Free; Website: huachu-

camineralandgemclub.info 13-14—WALNUT CREEK, CA: Pacific Crystal Fair; Civic Park Community Center, Sat. 10-6, Sun. 10-4; \$12, under 12 free; Website: www.crystalfair.com

13-14—TOPEKA, , KS: Topeka Gem & Mineral Society; KS Expocentre; Sat. 10-6, Sun. 10-5; \$5, 13-18, \$1, under 13 free; Website: www.topekagms.org

13-14-LOS ALTOS, CA: Peninsula Gem & Geology Society; Los Altos Youth Center; Daily 10-5; \$5, under 12 free; Website: pggs.org

13-14—AMARILLO, TX: Golden Spread 12-13-MOUNT IDA, AR: Mount Ida Area Gem, Mineral & Treasure Society; Amarillo Civic Center Complex; Sat. 10-6, Sun. 10-5; \$3, children free; Website: amarillotreasure.com

> 13-14—TEMPLE, TX: Tri-City Gem & Mineral Society; Mayborn Civic & Convention Center; Sat. 9-6, Sun. 10-5; \$5, students \$3, children free; Email: lrolston@ hot.rr.com

14—FALLBROOK, CA: Fallbrook Gem & Mineral Society ; Fallbrook Gem & Mineral Museum, Sun. 9-4; Free; Website: www.fgms.org

19-21—FORT WAYNE, IN: Three Rivers 12-14—BUCKEYE, AZ: West Valley Rock Gem & Mineral Society; Allen County Fairgrounds; Fri. 10-6, Sun. 10-5; \$5, Srs \$3, Students \$1, under 13 free; Email: rotarvracer@comcast.net

19-21-AUSTIN, TX: Austin Gem & Mineral Society; Palmer Events Center, Fri. & Sat. 9-6, Sun. 10-5; \$8, srs \$7, 13-18 \$2, under 13 free; Website: www.agms-tx.org 19-21—DEL MAR, CA: Gem Faire Inc.; Del Mar Fairgrounds; Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, under 12 free; Website: www.gemfaire.com

19-21-WEST JORDAN, UT: Rockhounders Outreach for Community Knowledge (R.O.C.K.); Viridian Library & Event Center; Fri. & Sat. 10-6, Sun. 10-4; \$2, Children free; Website: http:// www.rockhoundersock.com 19-21-KNOXVILLE, TN: Knoxville Gem & Mineral Society; Rothchild Conference Center; Fri. & Sat. 10-6, Sun. 11-5; \$6, under 12 free; Website: knoxrocks.org 19-21—MASON, MI: Central Michigan lapidary & Mineral Society; Ingham County Fairgrounds; Fri. 6-9, Sat. 10-6, Sun. 11-5; \$3, Teens \$1, under 12; Website: Mich-

rocks.org

19-21-WESTWEGO, LA: Gem & Mineral Society of Louisiana, Inc.; The Alario Center; Fri. & Sat. 10-6, Sun. 10-4; \$6, Students \$3, under 12 free; Website: facebook.com/GemAndMineralSocietyOf Louisiana

20-WEST HILLS, CA: Woodland Hills Rock Chippers, Inc.; First United Methodist Church; Sat. 10-5; FREE; Website:www.rockchippers.org 20-21—BRISTOL, CT: Bristol Gem & Mineral Club: Beals Community Center: Sat. 9:30-5, Sun. 10-4; \$5, srs \$4, children free; Website: www.bristolgem.org 20-21-DES MOINES, IA: Des Moines Lapidary Society; Iowa State Fairgrounds

Sat. 9-5, Sun. 10-4; \$5, under 13 free; Website: www.DMLapidary.org/OurShow 20-21-SPRINGFIELD, MO: Ozark Mountain Gem & Mineral Society; Springfield Expo Center; Sat. 10-5, Cont. next page.

Sun. 10-4:30; \$6, students \$3, children \$1; Website: www.omgms.rocks/show.html 20-21-SOUTH CHARLESTON, WV: Kanawha Rock & Gem Club; South Charleston Community Center; Sat. 10-6, Sun. 10-5; \$3.50; Email: mysticalcrystals1@hotmail.com 20-21—COTTAGE GROVE,

MN: Minnesota Mineral Club: National Guard Training & Community Center; Sat. 10-5, Sun. 10-4; 2, children \$1; Website: www.MinnesotaMineralClub.org 20-21—LEWISTON, ID: Hells Canyon Gem Club; Nez Perce County Fair Building; Sat. 10-6, Sun. 10-5; \$3, under 13 free; Website: www.hellscanyongemclub.com 20-21-SANTA ROSA, CA: Santa Rosa Mineral & Gem Society; Santa Rosa's Veteran's Building; Sat. 10-6, Sun. 10-5; \$6; Website: www.SRMGS.org 20-21—SEDONA, AZ: Sedona Gem & Mineral Club; Sedona Red Rock HS; Sat. 10-5, Sun. 10-4; \$3, Children free; Website: www.sedonagemandmineral.org 20-21-CHICAGO HEIGHTS, IL: South Suburban Earth Science Club Prairie State College; Daily 10-5; free; Website: http://

How to Use a Vibrating Lap



Well, basically it is an aluminum pan, or tray, attached to a motor, which has a spinning weight on it, creating a fast circular, or is used to grind.

sand, sand and polish flats, such as slabs, or thunder egg halves. The principal is that the pan is vibrating so fast, that it moves underneath the slabs that are being worked.

The pan usually has grooves, this helps to distribute the grit, and act as an anchor for the grit particles as the slab is moving across it. In most cases, with rocks with a Mohs of 6-7 (agate), I use the following grits, I'm sure if you have similar grits, it will work fine. You do want to use GRAD-ED grits. Graded grits will just have one number, i.e. 80-grit. {Un-graded will have 2 numbers, i.e. 60/90. The 60 represents the roughest the grit will be, and 90 represents what the finest the grit will be.) You get a more efficient grind with graded grit. The Grits I use are: 80-Grit, Rough Grind. 220-Grit, Course Sand. 600-Grit, Fine Sand, And then Polish Stage.

Depending on roughness of the surface to

www.prairiestate.edu

20-21-WHITTIER, CA: Whittier Gem & Mineral Society; Whittier Community Center; Sat. 10-5, Sun. 10-5; free; Website: wgmsca.com

26-28—HARRISONBURG, VA: Treasures Of The Earth Gem & Jewelry Shows; Rockingham County Fairgrounds; Fri. 10-6, Sat. 10-6, Sun. 11-5; \$5, under 16 free; Website: www.toteshows.com 26-28—SANTA ROSA, CA: Gem Faire Inc.; Sonoma County Fairgrounds; Fri. 12-6, Sat. 10-6, Sun. 10-5; \$7, under 12 free; Website: www.gemfaire.com

26-28-GLEN ROSE, TX: Dallas Paleontological Society; Somervell County Expo Center; Fri.& Sat. 9-6, Sun. 9-5; free; Website: dallaspaleo.org

26-28-CLOVERDALE, CA: Karmic Beads & Gems; Cloverdale History Center; Daily 10-6; free; Website:

www.karmicbeadsandgems.rocks 27-28—CANBY, OR: Clackamette Mineral & Gem Society; Clackamas County Fairgrounds; Sat. 9-6, Sun. 10-5; free; Email: heesacker@coho.net

27-28—BELLEVUE, WA: Bellevue Rock

be ground, you may be able to skip the roughest grade grit, if it is a very smooth surface, start with 220-Grit, and check progress; if needed go to 80-Grit.

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Vibrating Laps can be very finicky machines, but once you get the hang of them, they are an easy way to polish several slabs at once. They can give excellent results with a bit of knowledge and practice. vibrating motion. It A lot of people give up on them because they get too messy, (I'll talk about that in a bit), or they won't polish the whole slab. First preparing your slab for the Vibrating Lap, make sure that the side you want to work is free of saw burrs, and if possible grind the slab down as flat as you can. It saves the pan and time down the road.

> When all of your slabs are ready, what now? You could just put them in as is, and it would work, but it will take longer, and you run the risk of chipping the edges of the slab. I make weights and guards. To do this you will need the following: OLD cast iron saucepan, or similar. Scrap Plexi-glass, doesn't matter if it is scratched or not. Lead, either fishing weights, or Tire stores will sell used tire weights cheap. Tin Snips. Small Cat Food Cans, or similar. 2-sided sticky tape 2-part, waterproof, epoxy.

First get a camp stove, wear gloves and goggles, and go outside on a day with a breeze, and always stand upwind, always! Club; Vasa Park; Sat. 10-6, Sun. 10-5; free; Website: www.bellevuerockclub.org/ 27-28-CUYAHOGA FALLS, OH: Summit Lapidary & Akron Mineral Society; Emidio & Sons Expo Center; Sat. 10-6, Sun. 11-5; \$5, Srs/Students \$4, Children \$1; Website: gemboree.org 27-28-OKLAHOMA CITY, OK: Oklaho-

ma City Mineral & Gem Society; Oklahoma State Fair Park; Sat. 9-6, Sun. 10-5; \$6, under 12 free; Website: OMGSminerals.org

27-28—SACRAMENTO, CA: Sacramento Mineral Society; Scottish Rite Temple, Sat. 10-5, Sun. 10-4; \$6, srs \$5, under 12 free; Website: www.sacgemshow.com 27-28—EVANSVILLE, IN: Evansville Lapidary Society; C K Newsome Community Center; Sat. 10-5, Sun. 10-4; \$1, under 13 free: Website: https://

www.facebook.com/groups/Lapidary/ 27-28—PORT MOODY, BC: Port Moody Rock & Gem Club; Kyle Centre, Daily 10-5; Admission by donation; Website: http:// www.portmoody.rocks

DO NOT BREATHE LEAD FUMES! LEAD CAN BE DANGEROUS! BE SAFE! AT YOU OWN RISK! Place the cast iron pan on the stove and add some lead. Depending on your stove it could take 10 minutes to start melting. It will turn liquid and silvery when melting. The metal parts of the tire weights will float to the top, and you can skim them off with a spoon. Once you have melted the lead you will need, CAREFULLY pour one-quarter inch to one-half inch of melted lead into a cat food can, let cool completely. When totally cool, use the tin snips to remove the tin can. You now have a lead "wafer".

You will want to make a selection of "wafers" for different projects. Paint the wafer with paint to minimize lead chips from breaking off, and maintain the paint job. I use thick clear paint, but any good paint will work. Now get the Plexi-glass, and cut out sections of the Plexi-glass that are about one-half inch larger all the way around than the lead wafers.

Make several sizes to work with different sized slabs. You can make different sized weights also. You will always want the Plexiglas to be larger than the slab you are trying to polish. Make sure corners are rounded, if they aren't they will hang up on the vibrating process. Now, take the Plexiglass that is a bit larger

than the wafer, center Cont. next page.

everything, and then epoxy the two together, Now, add grit as per manufacture's instrucwith waterproof epoxy. Let dry very thoroughly.

Now that the epoxy is dry, you are just about ready to get busy grinding with the vibrating lap.

You will need to find the center of gravity for both the slab and the weight set. To do this, balance the slab on you finger, the point at which it balances is the center of gravity, mark it, on the side not to be ground, with a pencil. Now do the same thing with the weight set up. Mark that on the Plexiglas side, you now have the center of gravity for both the slab and the weight set up.

Join the slab and the weight set up, with the center of gravities together, using 2- sided sticky tape. I use pieces about the size of a pea, about every inch along the slab. Pieces this size make removal easier. Now your slab should be totally protected from bumping by the Plexiglas guard, and the weight will speed things up.

NOTE: You do not want to use large amounts of weight, because that will cause premature wearing of the pan. This is also true of slabs that have burrs left on them when grinding. You want to start with smooth slabs. Try to use slabs of similar thickness, this way the Plexiglas guards bump into each other rather than sliding above or below. Be sure the Plexiglas guards are bigger than the slab you are working.

Next, take you're weighted slabs, and place them in the pan. You do not want to cram the pan full; I would say 80% is about right. When the slurry is right and the pan running, your slabs should "dance" freely. If there are too many slabs, they will catch and bind. If you have too few slabs, they will not rotate around the pan. They should be able to move freely, and should be moving when lap is on.

tions. I will use a 12" lap as an example; you will have to adjust yours accordingly. I add about 3-4 tablespoons of 80-Grit. Then I put 1 small drop of liquid dishwashing soap. This breaks surface tension, and allows the grit to stick to the slab better. Now add water to get a thin pancake batter consistency. I use a spray bottle; this gives better control over amount of water. Let it run for 5-10 minutes, then check the consistency of the grit slurry again, and adjust as needed.

Now for the messy problem. If you have the slurry too thin, you will know it, because grit will start splashing out. Right at the point that the splashing stops, is the point you want to be at. You can put a shower cap over the lap to minimize any splash that may happen, one cap per grit. The lap will run for a couple of hours without having to add water, but check it fairly often, and add water as needed to keep the slurry at the desired level. Use a spray bottle. This allows for fine adjustment.

The first grind time will depend on the roughness of the slab at starting time, but on an average it will take around 10-16 hours of vibrating to get through the first stage. You should add about 1-3 tablespoons of fresh grit every 3-4 hours.

The way that you test the slab to see if it ready, is to get a pencil and mark a zigzag so one-quarter inch of slurry in front of them, that it covers most of the slab. Place the slab back in, and after 2 minutes, check it, if the pencil line is COMPLETELY gone, you are ready to move to the next grit. If ANY of the pencil line is still there, keep on that grit, and recheck every few hours, until it passes.

Now, when moving to the next grit, you want to wash the slabs, and weights, very, very, thoroughly, DO NOT LEAVE ONE GRAIN OF GRIT ON THE SLAB. Clean, clean, clean. Now clean the pan out, not leaving any trace of the previous grit, anywhere. Clean bumpers, pan, slabs, and work area. Now that everything is clean, let's

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.

Cuyuna Rock, Gem, & **Mineral Society on the Web**

www.cuyunarockclub.org



move on.

Place slabs back into pan, add 3-4 tablespoons of 220-Grit, and add a drop of soap, then add the water to make the slurry as you did earlier. If it is splashing, the slurry is too thin, so add a bit more grit. Again check it after 5-10 minutes, and adjust as needed. Recheck slurry thickness every hour or two. You will need an additional 1-3 tablespoons of fresh grit, every 3-4 hours.

When it again passes the pencil test COM-PLETELY, it ready for the next grit. (About 10-16 hours) When the slabs are ready we will move to the final grit stage. OK, again clean the slabs, and EVERYTHING else COMPLETELY. When clean, add the slabs, drop of soap, and 3-4 tablespoons of 600-Grit. Sand on 600-Grit, adding1-3 Tablespoons of fresh grit only once after 3-4 hours. We won't add more fresh grit after this, because the grit will break down and act as finer grit than 600 for the last stages of sanding. Keep on 600-Grit until it passes pencil test completely. When it does, wash and clean EVERYTHING AGAIN. Clean, clean, clean. Now you are ready for polishing.

Place the polishing pad in the pan, add the bumper, and then add the CLEANED slabs. Add about 2 tablespoons of polish, and add water until you see the slabs pushing about again if it is splashing there is too much water. Check water every hour or two, and polish until done, usually 10-20 hours.

You will find and develop your own way of working these laps. This is just what worked for me after much trial and error. I am hoping to save people the frustration I had, I almost gave up several times. I want to show that the vibrating lap can be a fun and good lapidary tool when used correctly.

http://mcrocks.com/images/ VibeLapInstr.pdf



Protective Gem Settings for Rings



Bezel Setting Perhaps the most well-known protective setting, bezel settings wrap the gemstone in metal. In contrast, popular prong settings leave the sides of the stone exposed. Only the top surface

of a bezel-set stone remains exposed.

A bezel setting will hold a gem very securely. You're less likely to snag a bezel-set gemstone ring, especially if combined with a smooth band. Since a bezel setting covers most of a gem, it's well-protected from damage. You'll also find bezel-set gems easy to clean, since they have fewer places to trap dirt.

Bezel settings are also versatile stylistically. Some people may like them because they prefer a clean, modern design. However, bezel settings are one of the oldest known ring styles, perfect for a vintage or ancient look.

Jewelers can also adapt bezel settings to the cut of the stone, not only rounds but also, for example, asscher, marquise, and emerald cuts.

Bezel settings do have one main drawback. They obscure the sides of the stone, thus reducing the amount of light that strikes or bounces out of the stone. This diminishes the stone's brilliance.

A half-bezel setting offers a compromise between excellent protection and brilliance.

Tension Setting

Tension settings consist of two metal bands holding a faceted center stone. This creates a stunning, gravitydefying look,



as the gem appears suspended between the bands. Although it looks precariously perched, the stone is actually very snugly secured by grooves lasered into the metal. The stone's girdle slides into the grooves, and the tension of the metal bands holds it in place.

Jewelers can use tension settings on stones of all shapes. Unlike bezel settings, most of the gem remains uncovered. However, jewelers can also extend the bands over the top and bottom of the stone for additional protection. This still allows more brilliance than bezel settings. Tension settings also require less maintenance than prong-set rings. (Jewelers must periodically check prongs for signs of wear or weakness).

Tension-set rings may present some problems. Resizing one is difficult and, therefore, expensive. Covering the girdle of a gem on each side may also make the stone appear smaller, especially if the metal bands are thick. If the ring is struck with great force, the stone could still fall out.

Tension-Style Setting



ally works more like a bezel setting. The stone looks as if it were suspended by metal bands, but a bezel setting at the bottom of the stone actually secures it. This makes tension-style rings easier and less expensive to create than tension-set

The pros and cons of this setting are what you might expect from a compromise between bezel and tension settings. Although more secure than a tension setting, it's less secure than a bezel setting. (Some tensionstyle rings may use prong settings to secure the stone instead of bezels. These will require more maintenance). The brilliance of a tension-style set gem will also fall somewhere between that of a bezel and tensionset gem.

Channel Setting

rings.

Channel settings are great for getting small gems into a ring band, especially wedding bands. Jewelers set the stones closely together, fitting them into the grooves of a channel, making them flush with the band. A ring can have channel settings at the top or sides of the band, or both. This setting is also a popular way to accent center stones. Like bezels, channel settings make great protective gem settings. The metal securely holds the stones in place and shields them from scratches and impacts. Of course, channel-set gems won't have great brilliance, although this matters less with smaller stones. They'll sparkle enough for accents. Channel-set stones won't snag on materials.



Channel settings may even work well with larger gemstones.

Unlike bezel-set jewelry, channel-set jewelry is harder to clean. Dirt can become trapped in the channels. Resizing will also prove difficult and expensive. Should a jeweler accidentally bend the channels, the stones may come loose.

https://www.gemsociety.org/article/ protective-gem-settings/



Find this fun t-shirt (both men's and women's style) and mugs at www.teespring.com. Search for rockhound.

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.

Agates From Around The World Sheep Bridge Agate

Also known as Purple Sagenite Agates Sheep Bridge (over Verde River, north of Horseshoe Dam & Carefree), Yavapai Co., Arizona



The Sheep Bridge refers to the fact that the bridge was built in 1920s with scrap materials over the Horseshoe river for the sheep shepherds to herd their sheeps over the river to the north.

At first glance, the agates are white as a result of so many years of bleaching by sunlight, and hidden within the agates are red, orange, yellow, lavender and especially characteristic purple color. The agates are generally hollow with calcite & zeolite inclusions which tend to be weathered away leaving behind incomplete specimens.

The interesting thing is that the agates are completely sagenite type meaning that they consist of needle-like structures. It seems that the cavities in the basalt beds have been lined with natrolite/mesolite and usually capped with calcite before they have been replaced and preserved by agate and quartz. It is rare to find solid agates especially those with regular banded agate centers.

http://www.sailorenergy.net/Agates/ AgatesArizonaSheepBridge01PurpleSagenite.html

Cuyuna Rock, Gem and Mineral Society **General Meeting Minutes** Saturday September 8, 2018

The meeting was called to order by President Ed Opatz at 2:15 pm.

Harry Wagoner's rock and mineral collection was available for sale during the meeting. The club will share proceeds with Harry.

Reviewed ideas for next years' show. We always welcome the member's input.

2019 rock club dates have been set and we will post them on the website once the calendar gets set up.

Looking for member vendors for the Franklin Arts Holiday Craft Sale Nov. 10th. Let Ed or

Cuyuna Rock, Gem and Mineral Society The geode cracker wrench was lost/has **Board Meeting Minutes** Saturday September 8, 2018

The meeting was called to order at 12:05 p.m. by President Ed Opatz.

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

The Board discussed the May rock show and went over ideas for how to make it better next year (agate I.D. area, sluice for panning). Reviewed floor layout, silent auction possibilities for next year, focused celebrities (Mike Woodward?) for the show, show dates and how to advertise for them because next year the show is on Mother's Day weekend and fishing opener weekend. Discussions will continue at subsequent meetings. Input from members is always welcome.

The schedule for the cafeteria use by our club has been, for the most part, set for 2019. Some changes may come up and we still need to set dates for next year's Kid's Camp.

We will again be taking part in the Franklin Arts Center Holiday Craft Show and Sale Saturday November 10 so the rock club meeting for that month, which also includes elections of board members, will be pushed to Saturday November 17. Vice-President and Treasurer as well as the three Board-Member- at- Large positions will be up for elections. The nominating committee has been picked (Lisa Hughes and Sandi Hilsgen). Let them know if you wish to run for office.

The Christmas party/potluck will be Saturday December 8th.

been misplaced after the May show, so a motion was passed by the board to purchase a new one. Cost is about \$65.00.

Lori DuBois has been tasked with managing the spinning wheel and all that entails. A motion was passed by the board to give her a key to the rock club so she can better prepare for all of the shows that the club does throughout the year.

Treasurer's Report - Kevin Martini will post at the rock club.

The club purchased a laptop computer and printer/scanner/copier. We are in the process of setting it up so the club will have its own email address. Also we will be able to get club files into one area and off people's personal computers. As soon as it is set up we will send out a notification with all the pertinent information for club members.

Donated to the club or purchased by the club:

Many thanks to all of these people! Harry Wagoner's mineral collection (some we purchased and some we will sell through silent auction, direct sales to members, or online auction (motion passed to have Keith Bartel sell online through his Beaver Bay Rock Shop). We will share the proceeds with Harry.

Collections were donated by Wayne Phipps and Les Netley.

Jeweler's bench and tools donated by Wayne Nelson.

Tools and wire (for wire wrapping etc.) purchased at a large discount for use by the club from JoAnn Moe.

Respectfully submitted, Joanie Hanson, Secretary

Joanie know if you want a space.

The November meeting/elections will be Nov. 17th, due to craft sale on the regular meeting date.

Joanie will be available from the "Wire Wrappers Club" at 10 am on Saturdays prior to the meetings. If you are interested in wire wrapping and want to share ideas and techniques or just want to work on a project, bring your tools and a rock you want to wrap to the "club".

The nominating committee for elections are Lisa Hughes and Sandi Hilsgen. Let them know if you are interested in running for a board position (vice-president, treasurer, 3 board members). Elections will be at the meeting Nov 17th.

We are always looking for speakers for the meet-

..... ings. Suggestions made were flint knapping, meteorites, silversmithing, gold mining/panning.

Many thanks go out to Bev, Lori, Ed Walton and all of the people that volunteered at the shows and festivals this year.

Door Prizes to: JoAnn Moe, Eric Ess, Gary S., Aiden Reisz.

Speaker: Miriam Rios-Sanchez, Professor of Geology at Bemidji State on Optical Minerology - how light travels through crystal structures.

Our next meeting is October 13th, 2:00pm

Respectfully submitted, Joanie Hanson, Secretary



Why Collecting Is Good For Kids

Your child's rock collection may just look like a pile of stones to you. But it's doing more than gathering dust. "When a child collects things, it teaches the child important skills that they use throughout their life, including how to organize and interact with others," says Desmond Kelly, a developmental-behavioral pediatrician at All Kinds of Minds in Chapel Hill, North Carolina. The institute, affiliated with the University of North Carolina, is dedicated to studying how people learn.

When it comes to a child's prized collection, you're likely to see some impressive "care and feeding." Kids often become interested in collecting around age 5, with many becoming completely intrigued with a particular collectible — be it rocks or stickers — between ages 6 and 8. It's pretty common for kids to spend hours arranging their collection and reading about the items, as well as talking about them with friends and family.

That heap of stuffed animal puppies or kittens sitting atop your child's bed got there because somewhere along the way he decided: Okay, I'm putting all the dogs and cats

more information: 763-717-1641

on the bed. That stuffed iguana that Grandma gave him? It might end up on a desk all by itself because, well, it doesn't quite fit in with the other animals. So not only is the child organizing, they are categorizing.

Whether your child is collecting baseball cards or rocks, it's a pretty good bet that they know the exact number in their collection. They spend a lot of time grouping them into various categories: years and teams or sizes and shapes. This requires counting, tabulating, and sorting.

A child with a passion for collecting rocks will also want to know when and how a rock got created, and whether Amethyst is in the same group of rocks as quartz. And that means trips to the library and an active interest in studying and learning.

While your child is negotiating a baseball card trade or informing a classmate about the new addition to his rock collection, they are inspired to interact with other children. A collection can be a great way to boost self -esteem, as well as serve as a smooth entry into friendships. If your child is new to a school or neighborhood, discussing their rock collection can be a great ice-breaker. Meeting kids who share a similar interest could mean he's also found new buddies.

"Collectibles are a great way for kids to learn how to manage money," says Janet Bodnar, executive editor of Kiplinger's Personal Finance magazine and author of Dollars & Sense for Kids. "If children are expected to pay for some or all of their collectibles out of their allowance, they have to make decisions about how much they're going to spend — they're learning how to budget their money."

Collecting is also all about fun and play. It's a good idea to let your child figure out on his own how he's going to "play" the collecting game — of course, parents should still make a point to show they care. Casually asking about his organizing scheme with a question such as, "I see you've divided up all your rocks into different groups". How did you decide which rocks go in which group?" By describing his reasoning, he reinforces the learning he's done all by himself.

Children who collect rocks will want to go out hiking and looking for rocks which is, of course, not only a health activity for the child but is fun for mom and dad too, planning your next hike, helping to find that next pretty rock and the fun of discovering a really cool rock together. There are local rock and mineral clubs all over the country that have regular events to go rock hounding, there are pay to dig mines where you can plan a trip and find valuable specimens and many families have fun together tumbling and polishing rocks and making jewelry and other decorative things from rocks and minerals.

https://www.kidzrocks.com/blogs/kidz-rocks -articles/why-rock-collecting-is-good-forkids

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 Thundereggs Slabs of all sizes and types Condor Agate Septarian Nodules 79 Bed Geodes—Oregon Moroccan White Agate Various slabs of many sizes Obsidian -not priced yet Mineral specimens-some are priced

MINNESOTA MINERAL CLUB'S 2018 Agate, Mineral, Gem & Fossil Show Saturday, October 20 10:00 am to 5:00 pm Sunday, October 21 10:00 am to 4:00 pm

National Guard Training & Community Center 8180 Belden Blvd. Cottage Grove, MN 55016 (from US Hwy. 61 take the 80th St. / Grange Blvd. exit)

www.minnesotamineralclub.org

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Members of AFMS & MWF

Notes from the President

Marcia and I have been out in Utah search for rocks and doing some reconnaissance in anticipation of our Club members coming out. It should be a lot of fun!

The Franklin Arts Center is holding their annual craft sale on the second Saturday in November. (Because of that event we will move our November meeting to the third Saturday.) Our Club will be able to offer free 8x8' spaces to Club members in the cafeteria. Each member may have one space maximum. Please contact Joanie Hanson. Her information is just to the right of my letter.

Elections are coming up in November. Chuck Durnan, current vice-president, will not be running again. Other positions up for election are treasurer and all (three) board members at large. If you are considering running for a position you need to have been a member for one year. Please contact Sandi Hilsgen or Lisa Hughes. Their phone numbers are on page one.

Also during the November meeting we will have our annual silent auction. Bring the treasures you would like to sell. You will profit from the entire sale price of each item. I might have a few things from Utah.

Don't forget our neighboring Club, the Minnesota Mineral Club is holding their annual show in Cottage Grove on October 20 & 21. Maybe we'll see you there.



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Ed Opatz