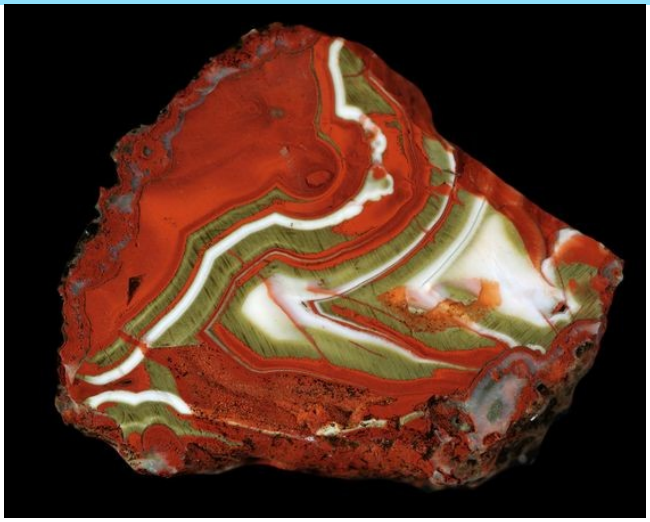
ROCK TRAILS



Christmas agate. Photo by Captain Tenneal on Flickr. Found at a gravel pit in Rockland, MI

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2022 Officers and Directors

President: Edmund Jarzembski, 419 237-2000
Vice President: Charlene Hacker, 517 270-8061
Secretary:
Treasurer: Doris Brzezicki, 269 267-1123
Past President: Glenda Gafner, 517 403-6310
First Year Director: Kurt Miller
Second Year Director: Sherman Kardatzke
Third Year Director: Jan Hauter
Show Chairman: Sherman Kardatzke, 517 673-5487
Co-Show Chair:
Publicity: Edmund Jarzembski, 419 237-2000
Sunshine and Membership: Judy Snyder, Kathy Boyers
Library: Curt and Linda Miller
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Meetings are held the first Sunday of each month at 2:00 PM, at
201 W. Main St. Morenci, MI 49256

President's Letter

A New Year's Resolution

Happy New Year to Stateline members everywhere and their families.

Our club is number one when it comes to community outreach and involvement. Our treasury shows that our efforts at festivals, fairs, shows and parades is appreciated and pays off. For all the thousands of people we meet, you would think more people would want to join our club. And they will when we have a different approach for increasing our membership. We can start by inviting more people to our monthly meetings. The problem is that club meetings are the least interesting club function. People generally don't join clubs to go to meetings. This can change. We have the ability to make our meetings much more enjoyable to the public. What if the presentation was longer than the business part of the meeting? Suddenly our monthly meeting would be a learning experience, something to look forward to. They will tell their friends how much they learned. And that's how our club could grow. Soon, new members will discover a network of sister clubs and federation clubs making it possible for all interests to be covered. As soon as someone joins our club, he suddenly has access to all the different clubs having different specialties. Everybody wins when we increase our club membership. Let's make that our new year's resolution.

For the best year ever
Best regards,
Eddie

Secretary's Report

The December 4, 2022 meeting of the State Line Gem and Mineral Society was held at the Clubhouse with eight members present. The meeting opened at 2:10 with Richard Brzezicki leading the invocation and pledge of allegiance. The secretary report was approved as written in "Rock Trails." The treasurer's report presented by Doris Brzezicki was also approved.

It was announced that Judy Snyder no longer wants the job of mailing "Rock Trails" to members requesting a hard copy. There are about 10 members who enjoy the service. Thank you Judy and Richard for your many hours of service to the club.

Charlene Hacker made arrangements for the club's Christmas Dinner at Aubree's Pizzaria and Grill on December 17 at 5:00. 1329 S Main Adrian. Everyone was welcome. The club paid the tab.
Fiesta Ranchero, beside Wal-Mart, 1675 US 223 in Adrian is still scheduled for the first meeting of the year at 1 PM January 8, 2023.

Bill Schultz purchased 20 tables at auction for our club as approved at the November 6 meeting. The club reimbursed him $600 for the purchase. Thank you Bill.

Henry Porter made a suggestion concerning cabochon cutting at the Jackson Show. While demonstrating, the show attendees cannot see his techniques because of the exhibitor's layout. Some club members said they would take the matter up with the show chairman of the Jackson Club.

The meeting ended about 3:15. Richard Brzezicki won the door prize. Charlene Hacker gave a presentation on feldspars and their light reflective properties. Congratulations Richard and thank you Charlene.

A Christmas cookie exchange followed. The next meeting will be January 8, 2023 at Fiesta Rachero, Adrian.

Respectfully submitted,
Edmund Jarzembski
Secretary Pro tem

Treasurer's Statement

2023 Dues for membership in the State Line Gem & Mineral Society are now due. The Dues are: Family Membership (Husband and Wife and Children under 18 years of age, all living under one roof)- $15.00, Individual Adult Membership (All individuals over 18 years of age) - $10.00. The above memberships are defined in Article II, Section 2 of the Constitution.

After the regular February meeting, all members whose dues remain unpaid shall receive a statement from the Treasurer. A Delinquent Member shall be that member whose dues are not paid by March 15th of the current year. Thereupon, voting privileges shall be revoked and publications discontinued. Full privileges shall be restored immediately upon payment of delinquent dues.

So, simply stated, what all the above information says is: Please pay your dues by February 05, 2023 so I don't have to remind you to pay them, and if you don't pay them by March 15, you will be delinquent and won't receive the newsletter or be allowed to vote until you do pay dues. Please pay your dues by checks made payable to State Line Gem & Mineral Society and mailed to Doris Brzezicki, 419 N Broad St, Adrian, MI 49221

Doris Brzezicki, Treasurer

Note from the Editor

I hope you all have a wonderful Christmas holiday.
There will be no newsletter next month as I will be on my annual rock hunting trip to Arizona. Stay warm and healthy everyone.

New Member

A big welcome to
Steven Nichols
10480 Wesch Rd
Brooklyn, MI 49230
steven.nichols@yahoo.com
Please add him to your membership list

What Is Grape Agate?

Grape Agate gemstone is a relatively new find. Although the trade name is Grape Agate, these are actually Botryoidal Purple Chalcedony. Botryoidal means that round tiny sphere shaped crystals that have naturally formed together. Grape agate is a tranquil and gentle stone.

Chalcedony is not scientifically its own mineral species, but rather a form of Quartz in microcrystalline form. Chalcedony is a crypto-crystalline form of silica, composed of very fine intergrowths of quartz and moganite. Chalcedony has a waxy luster, and may be semitransparent or translucent. It can assume a wide range of colors, but those most commonly

seen are white to gray, grayish-blue or a shade of brown ranging from pale to nearly black.

Chalcedony is quite varied in its formation habits. It sometimes occurs in geodes, lining the cavity with mammilary blobs. Its Agate variety is also found in geodes, commonly lining the outer layer underneath the larger Quartz crystals. Chalcedony also forms pseudomorphs after organic material. A well-known example is petrified wood, in which the wood has been completely transformed into Chalcedony. In the Petrified Forest National Monument in Arizona, an entire forest was transformed into petrified wood. Remains of this ancient forest can be seen in the huge silicafied logs that are found in the area.

For most of time, chalcedony was thought to be a 'fibrous' variety of crypto-crystalline quartz, but more recently, it was actually discovered to be a combination of quartz and another silicate mineral; moganite (a polymorph of quartz). Both quartz and moganite share the same silicon dioxide chemical composition, but they have varying crystal structures. Moganite is monoclinic, while traditional quartz belongs to the trigonal crystal system. Chalcedony forms with a hexagonal crystal structure. The fraction, by mass, of moganite within a typical chalcedony sample may vary from less than 5% to over 20%. As the defining mineral for 7 on the Mohs scale, chalcedony quartz is known to set the standard when it comes to gemstone hardness for jewelry gemstones. The actual name 'chalcedony' originated from the latin word 'Chalcedonius', which is thought to be derived from 'Chalcedon', an ancient seaport of Asia Minor, now Kadikoy, Turkey.

Chalcedony is compact silica most often found in sedimentary and volcanic environments. Formation occurs over a long period of time, as minerals are slowly deposited into a pocket of another type of rock, such as granite. Areas that host volcanic activity frequently harbor the most abundant chalcedonic deposits. In many cases, silicon dioxide forms in sometimes readily visible and parallel bands, as seen in banded agate. However, with most materials, the separate deposits appear blended or cloudy to the eye, as with carnelian, moss agate and 'actual chalcedony'.

Chalcedony occurs in a wide range of varieties. Many semi-precious gemstones are in fact forms of chalcedony. The more notable varieties of chalcedony are: Agate, Iris Agate, Binghamite, Bloodstone, Carnelian, Chrome-Chalcedony, Chrysocolla Chalcedony, Chrysoprase, Jasper, Dallasite, Orbicular Jasper, Plasma, Onyx, Sardonyx, Petrified Wood, Pietersite, and Sard.

One Way to Preserve Fossils

Charles “Wooly” Wooldridge, Board Member, Lincoln Gem & Mineral Club (NE), From the May, 2022 Pick & Shovel

Lynn Borysenko from Ainsworth, Nebraska recommended a product for preserving fossils. A MINWAX water-based protective finish, Polycrylic, provides a crystal clear finish, is fast-drying, and is easily cleaned with soap and water. Use the clear satin finish for a natural appearance. Besides the obvious advantages, it provides a rock-hard (excuse the pun) finish and is dissolved by acetone.

Polycrylic is normally used on interior wood surfaces and furniture. My wife used it to seal the knotty pine walls in our cabin and I used it to restore a coffee table. It is important to use products such as finishes and glues that can be dissolved, usually by acetone, in case you make a mistake.

How To Expose Hidden Crystals With Vinegar (and other acid types)

Below is a condensed instructional guide on how to dissolve your own rocks in vinegar in order to expose crystals that might be hidden.

1. Prepare Your Acid Solution

Vinegar once again makes things simple in this case: just dump it in the bucket until it covers the rocks. I’ve never seen any need to dilute vinegar for any but the most sensitive tasks, and when we’re dissolving matrix off of crystals we want it as strong as possible.

The first step when we’re working with chemicals is always to don our PPE. I can tell you, from experience, that even vinegar can get surprisingly nasty if enough of it gets in the air. Any other acid can do serious damage before you realize what’s going on.

In the case of any other acid, we have a simple protocol that must *always* be followed.

Acid goes into the water, never vice versa.

When you pour water over an acid it creates a thermogenic reaction as it dissolves, increasing the heat of the solution. In small amounts, this can cause a bit of bubbling.

In larger amounts, this will cause a series of unfortunate events. The water will boil, flinging droplets of low pH acids, and can cause a burst of steam. Steam can scald you, and this steam will be carrying acid along with it to make your day just a bit worse.

Never, ever pour water into or over an acid.

Write it down if you have to, this is one of the axiomatic rules of chemical safety. Muriatic acid is the strongest thing I would use without dilution. Fill the bucket just to a level over the stones to be cleaned.

2. Soak stones in acid

Next up you'll want to carefully place your stones in the bucket if you haven't done so already. Vinegar and other weak acids can take a few weeks to show serious results. Stronger acids will often take a few days to a week.

Be careful about allowing stones to sit too long in strong acids. Some can be etched or damaged by a very long exposure, although the majority will be fine.

In any case, either seal the bucket or put something over the top that's resistant to acid. Plywood is a decent bet with the acids listed above. The important thing is to have it closed and placed somewhere that it won't be knocked over.

When you check the stones **Put on your respirator.** Often you'll have fumes built up inside the sealed bucket which release when it's opened. This can be uncomfortable, especially if you're working with muriatic acid.

Check on the stones periodically. If you're not sure if they're done you can remove a specimen, dip it in baking soda saturated water, and then take a look. Often a wire brush will take off the rest of the host without any issues after a few days.

Keep it going until you're happy with what you see.

3. Neutralize Acid

Create a bucket with baking soda water. I usually saturate mine but it's not necessarily required, we just want to force the acid to react. **Remember to add the baking soda water to the acid and not the other way around.**

Do this slowly. Often the reaction can be mildly exothermic and you don't want things to heat up too much.

When acidic and basic substances react, the result is a movement towards a neutral pH of 7.

You want to reach at least a 5 pH before you go any further. This is usually easy enough: the solution will quit reacting when you add more baking soda when the acid is neutralized. You can also use pH test strips to handle this.

Depending on the acid, the next step may be more or less difficult.

4. Dispose of Waste Responsibly

The acids I listed at the beginning of this article are all safe to dispose of without requiring you to head to the local dump's HAZMAT area.

There are some pretty handy guidelines to follow.

It basically boils down to what ended up in the acid. Remember the beginning where I insisted that you know what your stones are? That's now important.

If all you removed was a calcium carbonate compound like calcite or aragonite then you can dump the neutralized acid down the toilet or tub. If you opt for the latter then run cold water with it to prevent any unintended exothermic reactions.

On the other hand, if you have metallic oxides or other salts in the mix you'll have to visit the local HAZMAT facility. Most places will take it with a minor charge.

Once the acid is disposed of, you'll be able to manually remove any remaining muck on the stones and enjoy your shiny, newly liberated crystals!

Excerpt from Rockseeker Newsletter

Bench Tips

Smart Solutions for Your Jewelry Making Problems

Amazon.com/author/bradfordsmith

CUTTING A BOLT

Whenever you have to cut a threaded bolt shorter, it's often difficult to get the nut to thread back onto it. And the smaller the bolt, the more difficult it is to restore any distorted threads. The problem is easily solved with the use of a nut. Here's how I do it.

First, screw a nut onto the bolt before cutting it. Grip the bolt by the threaded section that is to be sawed off. Then saw the bolt to the desired length, taper the end with sandpaper or file, and unscrew the nut from the bolt.

Unscrewing the nut over the freshly cut end of the bolt will straighten out any damage that sawing and filing did to the threads. Gripping the bolt by the piece to be sawed off localizes any crushing damage to the piece that will be thrown away.

DEPTH GAUGE FOR DRILLING

Sometimes you need to drill a number of holes all to the same depth. One quick and easy way to do this is to wind some tape around the drill bit so that the tape just touches the part surface when the hole is deep enough.

You can set the depth either by measuring from the tip of the drill to the tape or by drilling to the correct depth, leaving the bit in the hole, and wrapping tape around the bit at the surface level.

Note that a little extra tape left free on the end will blow away debris from the drilling.

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