

CRACK 'N CAB



Gem & Mineral Society of Syracuse, PO Box 2801, Syracuse, NY
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209 Oswego St (Ponderosa Plaza), Unit 15, Liverpool, NY

2020 GMSS Rockhound of the Year!



Congratulations, and Thank You, Linda!

“Discover The Fun Of Backyard Geology” (Part Three) – Page 5

November Meeting Photos - Page 10 & 11

**MEMORIES OF CHRISTMAS PARTIES PAST –
PAGES 7 - 10**

President's Message

Dick Lyons



Many of you recently heard from our editor, by e-mail, that there are no scheduled meetings of our club for the month of December.

If you are a rock and mineral collector, like me, you should go through your collection and make sure that you have labels for each item. The labels should identify the mineral or rock, where and when it was collected or purchased. Please do this task before you forget that information.

The same is true for the jewelry makers. This added information will be appreciated by your customers at our show or elsewhere.

Several years ago, John Davis told me that he started making labels for his collection in 1962. He started collecting around 1929. He realized that he should have started in 1929.

Over the years, our club has received many collections from former members and their families with much of the material not labeled. Recently, Rick Moore and I have spent several hours trying to identify and then determine where the minerals came from.

Happy Holidays from the Grinch.

Secretary's Report

Cathy Patterson

Executive Board Meeting Minutes

The GMSS Board (usually) meets the first Tuesday of the month at the clubhouse in Ponderosa Plaza 7:00 PM. GMSS members are welcome to attend.

(No Board Meeting in December)

Membership Renewal

Just a friendly reminder that if you have not renewed your membership, now is the time. You can mail it to our post office box.

Not sure if you are current? You can email Cheryl at gmsrocks@gmail.com and she will let you know. Thank you! Your support is very important!

Individual Membership \$10.00

Youth \$5.00

Family Membership \$15.00

Life membership \$5.00

Geo Lexis (Puzzle) By Anne Fitzgerald

“Karst!”

I learned a new word! “Karst!” sounds to me like Irish slang, but with less of an edge than “Pow!!!” The US Geological Survey says it best:

“Despite sounding like a Batman punch, karst actually refers to a type of landscape where the underlying rock formations are partially eroded by water. Usually, these areas are made up of limestone or marble. The most famous aspect of karst landscapes is caves, which predominantly form when groundwater dissolves limestone and erodes open spaces in the rock.”

Karst landscapes are a problem because they can lead to unstable ground, sinkholes, and faulty bedrock. There are karst landscapes in our area so yes, just another thing to fear. But then again, thanks to science, there is light at the end of the tunnel, or in this case, in the cave.

There are ways to find karst landscapes and ways to mitigate them. Plans can be made to redirect development and construction. We just need scientists and planners and developers to work
(continued on next page)

together to find some common ground. Ground yourself and unscramble the following to learn about characteristics and components of karst landscapes. The solution is on Page 7 of this newsletter.

mupgys

savec

bleram

stonemile

stonelodo

netabraco

vaporitee

Upcoming Events

January 18, 2021 GMSS meeting - 7:30 pm the "Rock Doc," Dave Millis.

January 25, 2021 – 1st NYS Fair Show Committee meeting – 7 pm at the Club House.

February 15, 2021 GMSS meeting - 7:30 pm - TBA.

March 27-28—WYSOX, PENNSYLVANIA: Annual show; Che-Hanna Rock & Mineral Club, Inc.; Wysox Volunteer Fire Hall, 111 Lake St.; Sat. 9-5, Sun. 10-4; Adults \$3, students \$1, and free admission for children age 8 and under; Special exhibits, fluorescent programs, dealers selling minerals, fossils, gems, jewelry, geode cutting, and activities for children; contact Bob McGuire, PA; Email: uvbob1942@gmail.com; Website: chehannarocks.com

April 10-11—JOHNSON CITY, NEW YORK: Annual show; New York Southern Tier Geology Club; Johnson City Senior Center, 30 Brocton St. ; Sat. 9-5, Sun. 10-4; Adults \$4, free admission for children under 12 when accompanied by a paying adult; Dealers selling various minerals and fossils, jewelry and gemstones, beads and supplies; demonstrations and displays, and show will be held in adherence with regulations related to COVID-19 restrictions - masks must be worn and access may be limited; contact Thomas Ogden, 96 West Main St., Bainbridge, NY 13733, (607) 967-8552; Email: stonecutterton@yahoo.com; Website: <http://www.facebook.com/pages/category/Nonprofit-Organization/New-York-Southern-Tier-Geology-Club-571826199572927/>

Wednesday Workshop

Steve Shorey has opened the **lapidary workshop** again on **Wednesday afternoons from 1 to 4.** If you have taken John Sweeney's Lapidary class, you can use the club equipment. The cost is \$5.00.

Are you ready to get out of the house? You can also bring a non-lapidary project in to the Wednesday workshop from 1 to 4 as well. No charge. Just bring all your own tools and supplies.

Birthstone of the Month

The History of Birthstones

The first century A.D. Jewish historian Josephus believed there was a connection between the 12 gemstones in the breastplate of Aaron, the first High Priest (Exodus 28:15 – 21) that represented the 12 tribes of Israel, the 12 months of the year and the 12 signs of the zodiac. There is also a list of 12 Foundation Stones of the New Jerusalem in Revelation 21:19 – 20.

Over the centuries, and in different cultures, the list of birthstones changes.

December: Turquoise, Zircon & Tanzanite

December is another month that has three birthstones! And no, none of them were gifts of the Three Kings.

(continued on next page)



Turquoise nugget, Arizona
© www.johnbetts-fineminerals.com.



Turquoise from Afghanistan
GemSelect

Turquoise The word “turquoise” dates back to the 13th century from the French *Pierre tourques* meaning “Turkish stone” in reference to its source in Turkey, brought there from the ancient mines in Persia (Iran). The earliest evidence of the gemstone goes back 6,000 years to Egyptian tombs, including King Tut’s. They mined it from the Sinai Peninsula. It was popular in China during the Shang Dynasty in the 2nd millennium B.C. Other cultural uses include the Aztecs, and the Pueblo, Navajo and Apache tribes of Native Americans.

The gemstone has been used as an amulet to protect the wearer from evil. Native Americans believed it could provide accurate aim to an archer.

Turquoise is a hydrated copper-and-aluminum phosphate mineral. It is commonly found in desert climates, forming veins in broken igneous and sedimentary rocks. Turquoise has a hardness of 5 - 6 on the Mohs Hardness Scale.

Sources of the mineral include Afghanistan, Argentina, Australia, Brazil, China, Israel and Mexico. In the United States turquoise can be found in Arizona, California, Colorado, Nevada and New Mexico.

Turquoise jewelry is relatively inexpensive. It is often set into sterling silver, and is used as rings, bracelets, earrings and necklaces. The stone can be sensitive to direct sunlight and solvents like cosmetics, perfume, sunscreen and skin oils. Hydrochloric acid causes turquoise to dissolve. Don’t use steam cleaning or ultrasonic cleaners; warm, soapy water is best.



Yellow-brown zircon, Myanmar
© www.johnbetts-fineminerals.com.



Yellow-orange zircon, Cambodia
GemSelect

Zircon The word “zircon” is derived from the Persian word *zargun* meaning “gold colored, as well as the Arabic word *zarkun* meaning “vermillion” or “cinnabar.” This birthstone has a wide array of color possibilities.

During the Middle Ages, people believed the gemstone could ward off evil, give relief from pain, aid in sound sleep, bring prosperity and promote wisdom.

The mineral zircon belongs to the nesosilicates group and is a source of the metal zirconium. Zircon is common in earth’s crust. It is the oldest mineral on earth, dating back more than 4.4 billion years. It is an accessory mineral in igneous rocks, it’s in certain metamorphic rocks and is common in most sand and sedimentary and alluvial deposits. Zircon’s hardness is 6 - 7.5 on the Mohs Hardness Scale.

Zircon contains the radioactive elements uranium and thorium, which change the gemstone’s chemical structure and color over time, giving zircon a crucial role in radiometric dating by geologists.

Australia is a leading source of zircon mining. Other sources include Cambodia, Canada, Sri Lanka, Tanzania, Thailand and Vietnam. In the United States it can be found in New Jersey (Sparta), New York (Natural Bridge), North Carolina (Henderson County) and Pennsylvania (Princetown).

Although zircon is the hardest of the three December birthstones, it can be brittle, so be careful not to hit hard surfaces or it could fracture. It is best to avoid wearing it doing physical work. Clean it with a soft brush and mild soap in warm water.



Columnar tanzanite, Tanzania
© www.johnbetts-fineminerals.com.

Tanzanite from Tanzania
GemSelect

Tanzanite This is a relatively new gemstone, having been identified as blue-violet zoisite in 1962. The primary source was located in 1967. And the word “tanzanite” is derived from the only location where it is found – a few square miles in Tanzania, near Mt. Kilimanjaro. Tiffany & Company gave it its current name in 1968, and it was added as a modern birthstone in 2002.

Tanzanite is a sorosilicate belonging to the epidote mineral group. It has a hardness of 6.5 on the Mohs Hardness Scale.

The gemstone is affordable and easily cut into a variety of shapes. It is best suited for earrings and necklace pendants. Its surface can be affected by hydrochloric and hydrofluoric acids, and it should not be subjected to very high temperatures. It can safely be cleaned with warm, soapy water, but not ultrasonic or steam cleaners.

Discover The Fun Of Backyard Geology

Hermann Samano

Hermann Samano is part of the marketing team at Porch.com.

He enjoys writing content that helps homeowners succeed in their projects.

(Part Three)

What Did You Find?

Use the shovel to dig for minerals or stones. Start collecting loose stones and soil samples to sift for smaller rocks. As you go along,

examine each stone and record information about each stone, including location and depth it was found, the exact color, and its overall appearance. Is it smooth, jagged, rough, etc.? Clear the dirt from the stone and wash it with the water to get a better idea of its color. Once you've clearly identified the stone, you can add more specific details later, like its weight and precise measurements.

Use your magnifying glass for close examination. Each rock can be a mix of lots of minerals, so its outer appearance may not tell the whole picture. The next thing you'll do is what's called a strike test. Scrape the stone across your piece of tile, glass, or coffee mug to reveal the true color. If you observe a scratch on your tile or mug, you know that the mineral is harder than the tile or mug, so make a note of that. Take photos to document.

Now it's time to bring some more science into play by assessing just how hard the stone is. You'll do this by using techniques from the Mohs Hardness Scale. The fingerprint test comes first: scratch the stone with your fingernail. If you leave behind a mark on the stone, it's a soft rock measured at about 2.5 Mohs. Now, it's time to break out more of your tools. Scratch the stone with the penny, glass, and porcelain. The harder the substance, the higher its Mohs number will be. You can find lots of information about the Mohs Hardness Scale and testing by visiting the [Mohs Hardness Scale](#).

The harder a substance is, the more commercial value it has. The hardest substance, at 10 Mohs, is a diamond. There are also [gems](#) and other stones out there but you probably won't find those in your backyard, however.

You're ready for another test on your stone. Pour a bit of vinegar on the stone (be careful not to do it on the grass or vegetation, as vinegar kills living plants). Try to pour the vinegar on the spot you already scratched. This checks for effervescence.

After that, you can use your strong magnet to test whether there's an iron mineral in it. This could indicate hematite or magnetite or even a rare meteorite.

As you test, keep careful notes. You can take photos or make sketches as you progress. Write down interesting features of the stone. Are there sparkly pieces in it, like crystals?

If you're on location, after you've done field tests, you can bag your stone or place it in a container with its identification to bring home. If the stones are from a park, ask a ranger or park attendant before taking it.

As you're in the field, take notes about details like the date, weather conditions, nearby landmarks, soil features, even any wildlife you see. Was the stone buried or open to the elements like sun, wind, rain, or snow?

Use the internet to research your rock or minerals – explore subjects like when was it discovered, where is it most often found, and what man has used that rock or mineral for over the years. You can share these facts about rocks with others.

The more you explore and learn about rocks and minerals, the more you'll uncover. Think about keeping a small, travel-friendly geology kit in your car trunk for those times you want to explore and collect when you're someplace new or intriguing.

Three Types of Rocks

There are three different types of rocks, all naturally made from minerals. The rocks you collect will be igneous, sedimentary, or metamorphic rocks.

Igneous Rocks

Igneous rocks are the result of molten magma material that solidifies as it cools, forming into igneous rock. You can find these mostly in the northwest parts of the United States. Granite, pumice (like lava rock), basalt, and obsidian are examples of this kind of rock.

Sedimentary Rocks

If you find rocks with fossils, these are probably sedimentary rocks. This type was formed from sediment deposited over time from remains of plants or animals and eroded pieces of other rocks. These rocks formed in layers in places like lakes and oceans. You may find these in locations that once were underwater. Chalk, sandstone, mudstone, and flint are examples

of sedimentary rocks. These are some examples of [fossils](#).

Metamorphic Rocks

Heat, strong pressure and fluids can, over time, transform sedimentary or igneous rocks into metamorphic rocks. You'll find lots of these rocks in mountainous geography. Examples of these rocks include marble, slate, quartzite, granuline, and schist.

Make a Display for your Collection

Store and label your collected rocks in plastic, see-through containers. Affix labels with facts like the kind of rock or mineral, location, and date found. You can even number the rocks to correspond with your numbered notes.

You can even display your rock collection, either alone or as a group. Some rocks, like geodes, reveal extraordinary, sparkling quartz crystals inside when broken apart. (Breaking rocks must be done carefully with a hammer, with eye protection, and under adult supervision.) Some people like to split geodes and other strikingly colorful rocks, polish, and use them as bookends or conversation pieces. Displaying your rocks is also a great way to introduce others to your hobby

You can find numerous online tutorials that show how to custom-make hanging or tabletop displays. You could start with a shadow box from an arts and crafts store, or [repurpose items](#) found in thrift stores or second-hand marketplaces.

Print out the identification of each rock to glue onto the display, or carefully paint the information on with different-colored paint pens. You can display your cool rocks individually with their own pedestals or polish colorful stones and place them in a mason jar to display on a sunny windowsill.

Welcome to a Lifelong Hobby

Now that you've had a taste of the intriguing world of geology, you may discover that wherever you travel, you automatically start scanning the ground and displacing dirt here or there, looking for an interesting rock. With your new-found knowledge, you'll be able to identify your new treasures.

(The End...for now)

Answers to Geo Lexis

- | | |
|-----------|------------|
| mupgys | gypsum |
| savec | caves |
| bleram | marble |
| stonemile | limestone |
| stonelodo | dolostone |
| netabraco | carbonate |
| vaporite | evaoporite |

Sources:

Quote courtesy of the U.S. Geological Survey, <https://usgs.gov>

Info and Further Reading: Kappel, W.M., Reddy, J.E., and Root, J.C., 2020, Statewide assessment of karst aquifers in New York with an inventory of closed-depression and focused-recharge features: U.S. Geological Survey Scientific Investigations Report 2020-5030, 74 p., <https://doi.org/10.3133/sir20205030>.

“Pow!!!” courtesy of Batman



2016



A LOOK BACK AT CHRISTMAS PARTIES PAST

Photos by Judy Cook

2015





2017



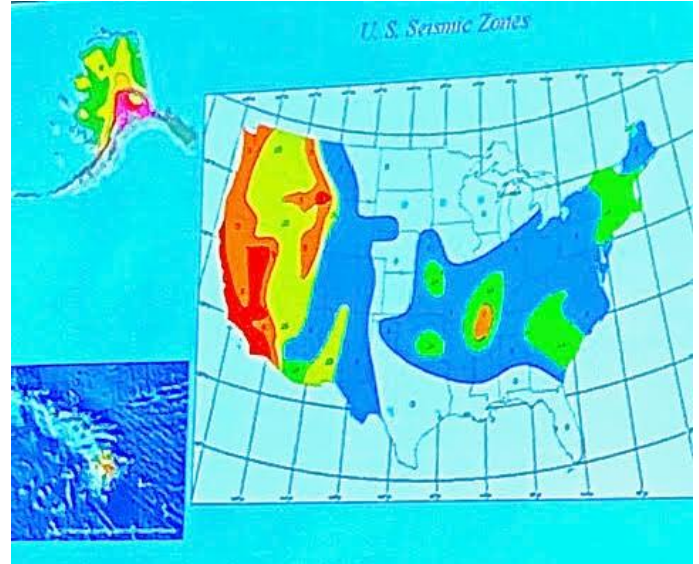
2018





2019





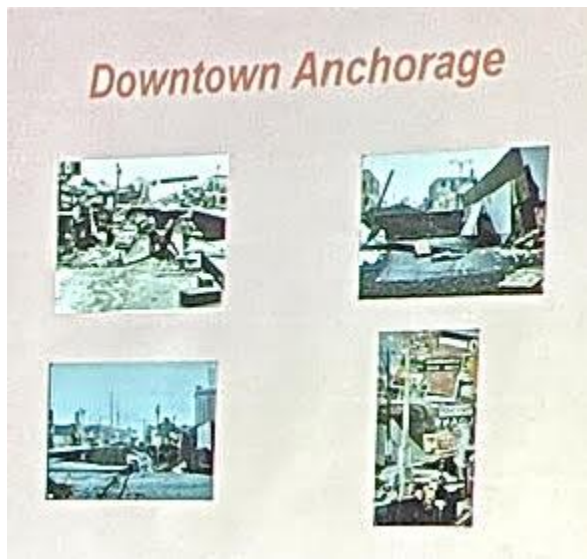
November 16, 2020 – Len Sharp presented “Historical Earthquakes in the U.S.: 1811 to Present”

Len Sharp discussed only some of the many earthshaking events in his interesting presentation, starting with the 1811-12 New Madrid, MO quake that registered 8.5 on the Richter Scale.



Photos by Judy Cook





And, In The News...

New England earthquake rumblings felt on East End

By Vera Chinese

vera.chinese@newsday.com

Updated November 8, 2020 8:22 PM

Long Islanders felt the slight rumblings of an earthquake that struck southern New England on Sunday morning, but there were no immediate reports of damage. The earthquake with a preliminary magnitude of 4.0 centered a few miles off the coast of New Bedford, Massachusetts, in Buzzards Bay, struck just after 9 a.m., according to Randy Baldwin, a geophysicist with the U.S. Geological Survey's National Earthquake Information Center.

The earthquake struck at a depth of a little more than 9.3 miles and was felt across southeastern Massachusetts and Rhode Island.

Nevada hit by 5.5 magnitude earthquake

by Tyler Van Dyke, Breaking News Reporter | November 13, 2020
07:38 AM Washington Examiner

The U.S. Geological Survey reported a magnitude 5.5 hit western Nevada on Friday morning, followed by a series of smaller earthquakes and aftershocks.

The epicenter of the earthquake was in Esmeralda County, near Mina, which is roughly 158 miles southeast of Reno.

Nevada's earthquake comes just six months after the state experienced a magnitude 6.5 quake in a remote area roughly 225 miles northwest of Nevada, according to CNN. The earthquake was the state's strongest recorded earthquake and could be felt in California and Utah.

"I feel the earth move under my feet..."

Meteor traveling 22 miles above the earth exploded near Syracuse, NASA says.

by CNYCentral Friday, December 4th 2020

SYRACUSE, N.Y. — Did you hear the big boom that rocked Central New York on Wednesday afternoon? NASA says it came from a meteor that disintegrated somewhere near Syracuse.

The meteor was traveling at 56,000 miles per hour about 22 miles above the earth.

Another big boom: Second flurry of meteor reports in one week in NY

by CNY Central Monday, December 7th 2020

OSWEGO, N.Y. - Less than a week after a middle of the day boom led to hundreds of people commenting on social media, we've got new reports of potential meteor sounds and sightings in Central New York.

Monday night, people in Oswego reported hearing a big booming noise. Some people caught a flash of light and the boom on doorbell surveillance cameras at their homes.

"Do you hear what I hear?" Practicing for New Year's Eve?

Asteroids aren't completely random? Mass extinctions of Earth's land animals follow a cycle, study finds

Doyle Rice USA TODAY

Published 11:40 am ET Dec. 11, 2020 Updated 3:39 pm ET Dec. 11, 2020

Mass extinctions of life on Earth appear to follow a regular pattern, a new study suggests. In fact, widespread die-offs of land-dwelling animals – which include amphibians, reptiles, mammals and birds – follow a cycle of about 27 million years, the study reports.

The study also said these mass extinctions coincide with major asteroid impacts and devastating volcanic outpourings of lava.

Paleontologists had previously discovered that similar mass extinctions of marine life, in which up to 90% of species disappeared, were not random events, but seemed to come in a 26-million-year cycle.

Milky Way galaxy map unveiled as astronomers reveal Earth is heading toward a black hole

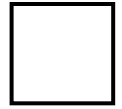
By Charlotte Edwards, The Sun Dec. 4, 2020 | 4:33pm | Updated

And that just about sums up this year!



Gem and Mineral Society of Syracuse
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 First Class Mail

Time Dated Material



www.amfed.org www.amfed.org/efmls [Future Rockhounds](#)

Eight people organized the Gem and Mineral Society of Syracuse in 1951. Since that time it has grown in membership to include adults, families, and young folk. The Society was incorporated in 1969 under the same name.

The objectives of the Society are to stimulate interest in mineralogy, paleontology, and the lapidary arts. Member interests include collecting, identification, and display of minerals, gems, fossils. Members share and develop their artistic skills in jewelry design and creation.

Our monthly meetings provide social and educational experiences. Field trips give collectors chances to find specimens and enjoy the out of doors, exercise and time with old and new friends.

Meetings - 3rd Monday of the month
Future Rockhounds @ 6:30 - General Meeting @ 7:30
(NO Meetings Jul, Aug, Dec)

209 Oswego St (Ponderosa Plaza) Unit 14 & 15, Liverpool, NY
Visitors are ALWAYS welcome!

See online Newsletter <http://gmss.us/resources/newsletter>

You can also visit our facebook and flickr pages

Annual member dues

Adult \$10 • Family/Couple \$15 • Junior \$5 • Life \$5

If you would like to join or renew membership download the application form (PDF), see <http://gmss.us/about/membershipform.pdf> You can get a form at a meeting or send requests to **GMSS, PO Box 2801, Syracuse, NY 13220** We will mail an application/renewal form to you.

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