

February 2022

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Skagit Gems

Official Publication of the Skagit Rock and Gem Club
Serving Skagit County WA Since 1961

Letter from the Editor,

I can hardly believe its been almost two years since we've held a meeting at the senior center. I hope you all are as anxious as I am to return to normal. While we haven't made any decisions about meetings yet, I am feeling hopeful when I see that the Gem Shows are happening again! Check out the info below for the Oak Harbor Show.

I have been sending out occasional emails with rock-sale info etc. If you're not receiving them and would like to, give me a call or send an email. Find contact info on pg 7.



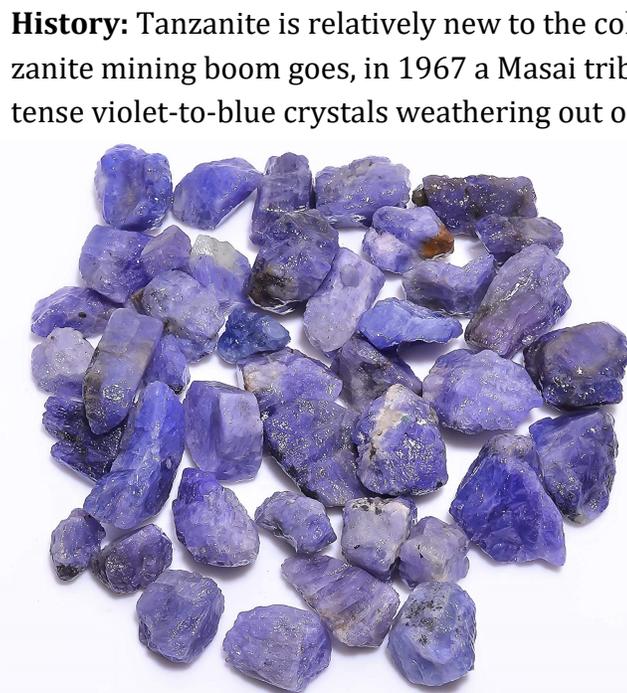
February 12-13—OAK HARBOR, WASHINGTON: Annual show; Whidbey Island Gem Club; The Center in Oak Harbor, 51 Jerome St, ; Sat. 9-5, Sun. 9-4; free;

We are hosting area dealers with spectacular earth-made gems and precious mineral specimens as well as pre-cut slabs to make your masterpieces. There is a spinning wheel for the kids. Watch live demonstrations. Visitors receive a free raffle ticket for door prizes; contact Harriett Vick, (360) 720-9199; Email: hmrvick33@gmail.com

TANZANITE is the blue and violet variety of the mineral zoisite (a calcium aluminium hydroxyl sorosilicate), caused by small amounts of vanadium. Tanzanite belongs to the epidote mineral group. It is only found in Tanzania, in a very small mining area (approximately 4.3 miles long and 1.2 miles wide) near the Merelani Hills. When blue-to-violet crystals were first discovered in Tanzania in the 1960s, no one was quite sure what the new crystals were. Careful gemological study determined that they were a transparent variety of zoisite, and the gem came to be known as tanzanite. Tiffany & Company recognized its potential as an international seller and made a deal to become its main distributor. They gave the gemstone the name “tanzanite” after Tanzania, the country in which it was discovered. The scientific name of “blue-violet zoisite” was not thought to be sufficiently consumer friendly by Tiffany’s marketing department, who introduced it to the market in 1968. In 2002, the American Gem Trade Association chose tanzanite as a December birthstone, the first change to their birthstone list since 1912.



Geology: Tanzanite was formed around 585 million years ago during the mid-Ediacaran Period by massive plate tectonic activity and intense heat in the area that would later become Mount Kilimanjaro. The mineral is located in a relatively complex geological environment. Deposits are typically found in the “hinge” of isoclinal folds.



History: Tanzanite is relatively new to the colored stone galaxy. As the most common story of the tanzanite mining boom goes, in 1967 a Masai tribesman stumbled upon a cluster of highly transparent, intense violet-to-blue crystals weathering out of the earth in Merelani, an area of northern Tanzania. He alerted a local fortune hunter named Manuel d’Souza, who quickly registered four mining claims. D’Souza hoped that he’d been shown a new sapphire deposit. Instead, the deposit contained one of the newest of the world’s gems. Although it’s a newcomer to the gemstone industry, tanzanite has quickly become one of the most popular colored gemstones. Within a short time, 90 more claims appeared in the same 20-square-mile area. No one was quite sure what the beautiful crystals were, but everyone wanted to lay claim to the profits they were certain to produce. The new gem would eventually, at times, rival the Big 3 in popularity. From 1967, an estimated two million carats of tanza-

nite were mined in Tanzania before the mines were nationalized by the Tanzanian government in 1971.

Pleochroism in Tanzanite: Tanzanite's appearance is influenced greatly by its pleochroism, which is the ability of a gemstone to show different colors when viewed in different crystal directions. Tanzanite's pleochroism was documented in scientific papers not long after its discovery. In 1969, American Mineralogist described the gem's pleochroic colors as "red-violet, deep blue, and yellow green." In its rough state tanzanite is colored a reddish brown to clear, and it requires heat treatment to remove the brownish "veil" and bring out the blue violet of the stone. Today, most gems are heat treated maximizing the blue and violet. Top-quality tanzanite can be violetish blue — similar to a fine sapphire color — or a unique, predominately violet hue all its own.



Some stones might also appear more purplish depending on how the cutter chooses to orient the fashioned gem. Both the violet and blue pleochroic colors are readily visible in a fashioned stone when it is gently rocked and tilted. This means that every tanzanite is a blend of these pleochroic colors. The exact face-up color depends on the inherent color of the original rough, its size, the pleochroic colors the cutter favors when they orient the fashioned stone, and the light the finished gem is viewed under. Cool lighting — like daylight equivalent fluorescent — will emphasize tanzanite's blue, while warm lighting — like incandescent — will make it appear more violet-to-purple. Just like other colored gemstones, vivid strongly colored tanzanites are highly sought after. Lighter toned pastel hues are more plentiful and affordable than vivid colors and have a subtle appeal of their own. The instant popularity of this transparent blue-to-violet gem was tied to its vivid color, high clarity, and potential for large cut stones.

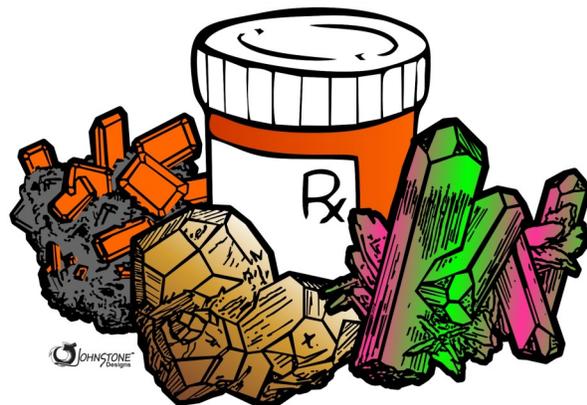
Imitation and Cobalt-Coated Tanzanite: As of 2020, tanzanite has never been successfully synthesized in a laboratory, so all genuine tanzanite is naturally occurring. However, because of its rarity and market demand, tanzanite has been imitated in several ways. Among the materials used for this are cubic zirconia, synthetic spinel, yttrium aluminium garnet, and colored glass. A test of the stone with a dichroscope can easily distinguish these from genuine tanzanite, as only tanzanite will appear doubly refractive: the two viewing windows of the dichroscope will display different colors (one window blue, the other violet) when viewing genuine tanzanite, while the imitation stones are all singly refractive and will cause both windows to appear the same color (violet). Synthetic forsterite (Mg_2SiO_4 , the magnesium-rich end-member of olivine) has also been sold as tanzanite, and presents a similar appearance. It can be distinguished from tanzanite in a couple of ways. The first is by using a refractometer: forsterite will show a refractive index of between 1.63 and 1.67, while tanzanite will show a higher index of 1.685 to 1.707. The second way is by using a Hanneman filter: through it, genuine tanzanite will appear orange-pink, while forsterite will appear green. Lower grades of tanzanite are occasionally enhanced using a layer of cobalt, as cobalt imparts a deeper shade of blue. The cobalt layer does not adhere well to these stones, and tends to rub off over time, resulting in a much less intensely colored stone. Though still tanzanite, the practice of cobalt coating is considered deceptive unless well-advertised.

DATE & TIME	CLUB	SHOW	LOCATION
February 2022 12th 9am—5pm 13th 9am—4pm	Whidbey Island Gem Club	Annual Gem Show	The Center in Oak Harbor 51 Jerome St. Oak Harbor WA
March 2022 5th 10am - 6pm 6th 10am - 5pm	Owyhee Gem & Mineral Society	68th Annual Rock and Gem Show	O'Conner Field House 2207 Blaine Caldwell, ID
March 2022 11th 10am—5pm 12th 10am—5pm 13th 10am—5pm	Tualatin Valley Gem Club	62nd Annual Rock and Mineral Show \$1 Adults, 12 & under free	Forest Grove National Guard Amory 2950 Taylor Way Forest Grove OR
March 2022 12th 9am - 6pm 13th 10am - 5pm	Northwest Montana Rock Chucks	Gold, Gem, and Mineral Show	Flathead County FairgroundsExpo Building (next to grandstands) 265 North Meridian RoadKalispell MT
March 2022 12th 9am - 4pm 13th 9am - 4pm	Magic Valley Gem Club	Annual Show	Twin Falls County Fairgrounds 215 Fair Ave. east of Filer on US Hwy. 30
March 2022 11th 8:30am - 6pm 12th 9am - 5pm	Panorama Gem and Mineral Club	Annual Show	Stevens County Fairground Ag and Trade Center 317 West Astor Colville, WA
March 2022 26th 10am - 6pm 27th 10am - 5pm	Mt. Baker Rock & Gem Club	Annual Rock and Gem Show	Pioneer Pavilion 2007 Cherry Street Ferndale, WA
March 2022 26th 10am—5pm 27th 10am - 5pm	SE Idaho Gems & Mineral Society (SEIGMS)	Annual Rock and Gem Show \$3, 12 & under free/adult	Bannock County Fairgrounds 10588 Fairground Dr. Pocatello ID 83201

Crabby Road 2-27-09

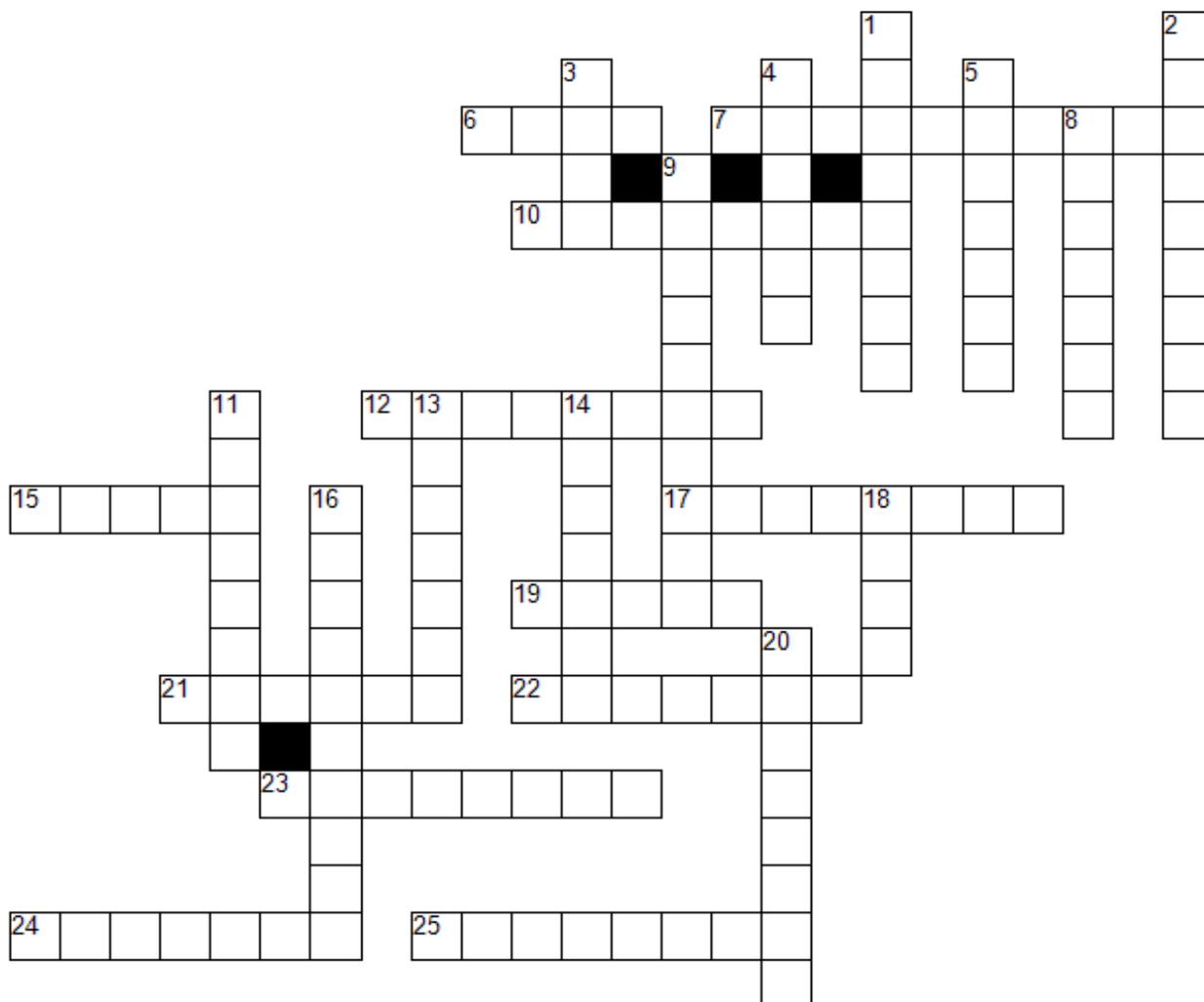


**I'm not self medicating with rocks.
I have a prescription from the
Doctor at the clinic.**



Okay, so the clinic is technically a rock shop.
But the guy behind the counter had his doctorate in Geology
Well, fine, they called it a receipt.
Whatever.

Rocks and minerals Crossword Puzzle



Across

6. a fracture in rock containing a deposit of minerals or ore
7. flammable gas, consisting largely of methane and other hydrocarbons
10. a low-grade iron ore consisting largely of chert
12. the process of scraping or wearing away
15. a component of soil formed by the decomposition of leaves and other plant material
17. extracting a metal from ore by BLANK
19. a soft finely stratified sedimentary rock that formed from consolidated mud or clay
21. a metamorphic rock that may be foliated or nonfoliated
22. a silvery-white metal in the actinide series of the periodic table
23. A mineral usually made up of colorless or pale-colored crystals
24. a mixture of hydrous aluminum oxides, aluminum hydroxides, clay minerals, and insoluble materials
25. a reddish-black mineral consisting of ferric oxide

Down

1. unrefined petroleum
2. also known as common mica, isinglass, or potash mica
3. India is the largest producer of this mineral
4. Made up of sodium chloride and colorless cubic crystals
5. a carbonate mineral and the most stable polymorph of calcium carbonate
8. a machine that collects oil
9. A fossil formed when sediment fills the inside or covers the outside of a dead organism
11. a hard, dark, glasslike volcanic rock formed by the rapid solidification of lava without crystallization
13. a name used for a large group of black mica minerals that are commonly found in igneous and metamorphic rocks
14. This chemical element has the symbol S and atomic number of 16
16. a group of dark-colored amphibole minerals found in many types of igneous and metamorphic rocks
18. a clay mineral composed of hydrated magnesium silicate
20. The word from Sweden directly translates to heavy stone

VISITORS ARE ALWAYS WELCOME!

Meetings still on hold til further notice



Meetings are on the FIRST Saturday of the month (except for Jan, July and Dec) at 10:00 am at the Mount Vernon Community (Senior) Center 1401 Cleveland St. Mount Vernon WA 98273

- The purpose of this non-profit earth society shall be to stimulate interest in the study of geology, lapidary, and the collection of geological specimens
- We are a member of the Northwest Federation of Mineralogical Societies and the Washington State Mineral Council. We are affiliated with the American Federation of Mineralogical Societies.
- Dues are \$15.00 per year for adults and \$7.50 for those under age 16
- Visit our website: skagitrockandgem.com
- Email: skagitrockandgem@gmail.com
- Mailing address: PO BOX 244 Mt. Vernon 98273

2022 Officers

- President · Wes Frank 360-757-6276
- Vice President · Greg Hochmuht 360-223-5453
- Treasurer · David Britten 360-755-0741
- Secretary · Linda Keltz 360-424-6525
- Fed. Director · Virgil Keltz 360-424-6525
- Bulletin Editor · Debbie Frank 360-853-6883
- Past President · Eric Self 360-840-8342

Committees

- Annual Show Chair-Eric Self
- Facilities/Field Trips- Dave Britten
- Greeter-Linda Keltz
- Scholarship-Linda Keltz
- Publicity-Frank Isca
- Stamps-Virgil Keltz
- Swap-Vandenburgs

Membership Dues

We are not holding meetings yet, so we are not collecting dues right now. Everyone will still receive the newsletter as usual.

The club's year runs from September to August.

Payment can be sent to Dave Britten or

PO BOX 244 Mt. Vernon 98273

Dues are: \$15.00/ yr for adults \$7.50/yr age 16 and younger



Skagit Rock and Gem Club
Debbie Frank, Editor
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Burlington WA 98233

A one-of-a-kind black diamond dubbed the “Enigma” will go up for auction next month and is expected to sell for more around \$7 million USD. The diamond was unveiled Tuesday by Sotheby’s Dubai, who says the massive black gem may have come from outer space.

The diamond is thought to have been formed when an asteroid or a meteorite hit the Earth more than 2.6 billion years ago, according to Sotheby’s auction house jewellery specialist Sophie Stevens.

The Enigma, which has been cut to weigh exactly 555.55 carats and has 55 facets, is believed to be the largest cut black diamond in the world.

Previous carbonado diamonds have been found in either Brazil or the Central African Republic, though exactly how and where these diamonds form is still a mystery. Some black diamonds do have cosmic origins, but those gems created by meteorite impacts are usually much smaller than the Enigma.

Black diamonds get their spooky hue from high levels of minerals like graphite that cloud the stone. The Enigma is likely a specific type of black diamond known as a carbonado diamond that appears much darker than other black diamonds because of its light-absorbing structure.

