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## Message from the President

Welcome to April. If I ever have a time machine there will be certain times I will never want to revisit, and March 2022 is one of those. Two hospitalizations kept me out of much work, but our other officers and Board Members kept Club business moving along. Thank you to all of them! So, for April and my time of healing, I am excited for warmer weather and eventual hiking in the high country.

At the March 7<sup>th</sup> meeting, the Bylaws Committee presented the first version of the redrafted Articles of Incorporation for comments. A digital version of the proposed changes will be available on the FCGMC website soon and in paper copy at the Clubhouse. Please take some time to review these.

If you enjoy some of the geologic topics in this newsletter or have others you are interested in, please let me know at [gonzales\\_d@fortlewis.edu](mailto:gonzales_d@fortlewis.edu).

## Gem Show News

If you are interested in joining the Gem Show Committee or volunteering for the 2022 Show please contact Cindy Pugsley at [cindypugsley@sbcglobal.net](mailto:cindypugsley@sbcglobal.net)

The next Gem Show meeting will be Wednesday, April 20<sup>th</sup> at 5:30 pm at the Clubhouse. Rock painting fun will follow! Please join in!

### **FCGMC 75<sup>th</sup> Anniversary Events**

We are planning a Birthday Party to celebrate our 75<sup>th</sup>! This party is for members only with some drinks and light refreshments, and, of course, birthday cake!

**Wednesday, May 18<sup>th</sup> at 6 pm** at the Clubhouse – join us!

We would love to have old club photos on display – please contact Melanie at [director@durangorocks.org](mailto:director@durangorocks.org) if you have photos of club members or activities to share!

### **Upcoming Courses in April**

If you want to know what courses are offered in April and how to sign up for them, please visit the Club's calendar at [www.durangorocks.org/events.html](http://www.durangorocks.org/events.html)

#### **Classes and talks that are scheduled:**

Introduction and Practicing the Lost Wax Casting Process via Metalsmithing

- This is a 2-day class, **April 23-24 from 9am to 3:30 pm**
- Contact Instructor Jaymus Perry for more info or to get registered.
- Email: [jwperry@citlink.net](mailto:jwperry@citlink.net)

Tequila on the “Rocks” – **Monday, April 18<sup>th</sup> at 6pm** at the Clubhouse is a free talk by member Tom Strain about the difference or agate versus jasper. This

will be a “sip and tell” so bring your own examples (and drink).Homemade chili will be provided, first come, first served!

### **Upcoming Field Trips**

There is a field trip scheduled in Payson, Arizona from April 22-24 hosted by the Payson Club. For more details and to register for the trip use the link:

<http://www.durangorocks.org/fieldtrips.html>

### **Four Corners Focus**

The April Four Corners Focus is provided by member and artist Suzy Williams. She explains her love of geology that has influenced her work and how the Four Corners Gem and Mineral Club played a roll in expanding her skills!

Be sure to check it out at: <http://www.durangorocks.org/four-corners-focus.html>

### **Open Shop Hours**

Tuesday 1-4 pm

Tuesday 6:30-9 pm

Wednesday 9am-noon

Wednesday 1-4 pm

Thursday 1-4 pm

Thursday 6:30-9 pm

First & Third Saturdays 10am-2pm

### **Rock On: An Edible Eight (minerals, that is)**

“Civilization exists by geological consent, subject to change without notice.”

Attributed to Will Durant (U.S. Historian 1885-1981)

I have always been intrigued by the interactions of humans and minerals,

whether for the creation of tools or other applications. In this segment I focus on eight minerals that are edible. This information is a contrast to another write up and display I created at Sitter Family Hall on the Fort Lewis College Campus. Next to a display case is a write up of the “Dirty Dozen,” which discusses twelve perceived harmful minerals – examples are displayed in the case. If you have time, please come view it! It is on the ground level floor close to the “Wall of Time” at the northeast entrance.

1. Ice: Yes, ice is a mineral as long as nature makes it. Dihydrogen oxide is safe to humans and is really an elixir of life.

2. Salt: Humans have long lusted after salt (halite and sylvite) for its culinary aspects, food preservation, and medicinal applications. Once a rare and prized mineral, salt is now a common resource in our lives. Much of the salts we purchase at the store are refined, and natural salts are much healthier for consumption, but how many people have natural salt deposits near them? Although salt is consumable, too much is not healthy. And, though the application of salts in food is an enormous market, tons of salt are used as a deicer on roads.

3. Gold: You probably do not think about gold as a consumable mineral, but gold foil is used in some liquors and as decorative application on desserts and other foods. Because gold is inert to the chemistry of the human body, it is not generally dissolved and is not considered harmful in small quantities.

4. Clays: Many clay minerals can be eaten and have a long history of medicinal applications for removing certain toxins from the human body. But I do not recommend you go out into nature and just start feasting on clays because there are other harmful aspects in nature to contend with, such as

bacteria. Food grade clays, however, can be purchased.

5. Calcite: Calcite and dolomite are very safe to consume and are used in medicinal products such as TUMS. In such products the carbonate minerals neutralize acids and provide relief. Carbonate minerals are also an important source of calcium and magnesium in vitamins.

6. Potassium and Sodium Alum: Potassium alum is also known as potash alum or tawas. It is aluminum potassium sulfate ( $KAl(SO_4)_2 \cdot 12H_2O$ ). This is the type of alum used for pickling and in baking powder. Soda alum has the formula  $NaAl(SO_4)_2 \cdot 12H_2O$ . It is used in baking powder and as an acidulant in food.

7. Nahcolite: Nahcolite ( $NaHCO_3$ ) is the natural mineral most familiar to us as sodium bicarbonate, sodium hydrogen carbonate or, simply, Baking Soda. Nahcolite as sodium hydrogen carbonate is used as a buffering agent, since in the presence of an acid it decomposes ultimately releasing carbon dioxide. Nahcolite, as ordinary baking soda, is used to make cookies, cakes, biscuits, and similar pastries "rise" during baking. In the presence of an acid, it easily decomposes into carbon dioxide and a sodium salt of that acid; the trapped bubbles provide the textures we enjoy in those foods. Note that "baking powder" is a simple mixture of baking soda and a dry acid such as cream of tartar, often with a starch added to provide bulk.

8. Zeolites: Zeolites are tectosilicate minerals that typically contain sodium, potassium, and calcium. The unique aspect about the zeolite family is that the open atomic structure is capable of absorbing and trapping various elements. Zeolites are common products for water purification or for transforming hard water to soft water via ion exchange. Zeolite is likewise helpful for humans when ingested and helps to detoxify the body of harmful

toxins like mercury and lead, and also are antimicrobial agents. The type of zeolite used specifically as a dietary supplement is called "clinoptilolite" zeolite and can be taken as a powder or as a liquid solution.

**\*\*Please note that none of this information is offered as a suggestion for use. This is all for educational purposes and we recommend you conduct your own research before pursuing the consumption of any minerals.**

### **April Birthstone**

**Diamond** is the official birthstone for April that applies to Taurus (April 20 to May 20) though several other gemstones, including sapphire, are recognized as a modern April birthstone. The name Diamond is derived from the Greek word "adamas" which means "invincible" or "unbreakable." Of course, this is a fallacy. Diamond has a hardness of 10 making it the hardest mineral in the gem world to scratch. However, diamond has cleavage and can be broken and it can be ignited in a hot flame such as a torch because it is made of carbon. So, the song "Diamonds are Forever" is a bit misleading.

According to the GIA website, "An anonymous second-century poet maintained that this birthstone for April warded off the evil eye, a malevolent look believed to cause sickness, poverty and even death. The April birthstone was even believed to have healing powers. Over the centuries, the diamond birthstone was thought to be an antidote to poison and provide protection against the plague. Some claim that it is a boon for longevity, strength, beauty and happiness." [April Birthstones | Diamond Birthstone Meaning & History | GIA](#)

Gem-quality diamonds come in a variety of colors and when cut and polished by an experienced jeweler, this mineral can offer a brilliant and beautiful display of light and color. Of course, most diamonds are not gemstones but are used

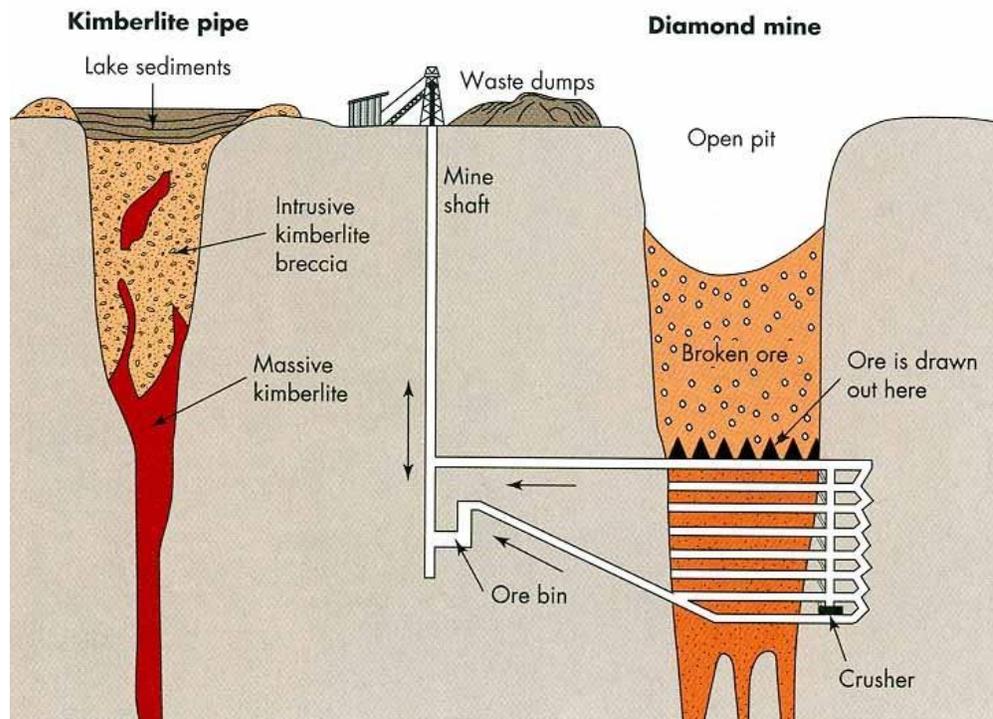
in the abrasive industry such as diamond blades to cut rocks and tile.



In a previous newsletter, I wrote about Ship Rock and that it is a volcanic feature known as a diatreme pipe. Diamonds also form in diatreme pipes but originate at depths greater than 200 kilometers below the earth's surface in the mantle where carbon compounds are converted to diamonds. These diamond-bearing pipes are called kimberlite pipes which can also contain pyroxene, garnet and other high-pressure minerals. Rapid ascent of diamonds in these pipes is critical to their preservation and scientists suggest that from the source to the site of deposition takes only a few hours. That is right, over 200 kilometers in a very short span of time. Diamond pipes are found at a number of locations but South Africa and Canada are two leading producers.

Lastly, research on the chemistry and atmospheric conditions of Neptune lend

evidence for the formation of tiny diamonds. Amazing for sure. [Diamonds Really Do Rain on Neptune, Experiments Conclude - Eos](#)



A simple illustration showing a diamond mine.



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