



July 2022 issue

WE WILL BE HOLDING OUR MAY MEETING ON WEDNESDAY, JULY 20 AT 6:45 P.M., AT THE CHERRYLAND VFW POST AT 3400 VETERANS DRIVE, IN TRAVERSE CITY. IF COVID CONDITIONS CHANGE, YOU WILL BE CONTACTED VIA EMAIL.

We will be holding the meeting in the same room where we had our Rock and Mineral Show in September. There will be no community snacks and drinks provided due to concerns about food sharing.



The short program will be Pierre LaFolle with a Mineral Quiz. The main program by Steven Veatch is summarized below:

The first gold strike in Park County, Colorado was on the eastern slope of the Mosquito Range in the northwest part of the county at Buckskin Gulch in 1859—the same year the “Piles Peak or Bust” gold rush started. This remote area of mountains, streams, and forests was still part of Kansas Territory when several mining camps were established. The Greater Alma Mining District included the Alma Placers, Montgomery, Buckskin, Horseshoe, Mosquito, and the Pennsylvania subdistricts. The extremes of the landscape presented harsh conditions to those who came to mine gold, silver, and other valuable mineral deposits. People came and established frontier mining districts, built towns, and created roads and rail routes. All this activity, combined with other mining camps in the region, accelerated the settlement of the West and made major contributions to the economic growth of Colorado. Steven Veatch will tell this story with rare historical photos, stunning photography, and incredible mineral photos. Do not miss this presentation.



The Greater Alma Mining District:

A Colorado Mining Legend

June Highlights

Our June 15 program was our annual silent auction. Club members brought many items to donate. We had a very interesting mix of rocks, baked goods, jewelry, equipment and other fun items. Thanks to everyone that brought or purchased items.

A motion was passed to purchase a lap top computer for use at meetings.

Pierre LaFolle talked about a Tucson, AZ trip opportunity.

Facebook Page

Visit the club's Facebook page at this web address. There is also a link on our club website.

<https://www.facebook.com/TCRockhounds>

Upcoming Field Trip Planning

Gary Bull is the Field Trip Coordinator. Planning continues for future trips. Ideas or suggestions for field trips? Call Gary at 231-590-3397.

From Gary Bull, Field Trip Coordinator

July Trip Details:

Beach hunt at Norwood Township Park in Norwood, Michigan at 10am July 24th. This park is situated on Lake Michigan. There is a picnic table area and restrooms. The address is: 736 Lake Shore Dr, Charlevoix, MI 49720. To look at the township's website, check out www.norwoodtp.org. Bring a dish to pass, Gary will bring his grill! Please call Gary to register for the Norwood field trip, so that he knows approximately how many burgers need to be made. Gary's phone number is 231-590-3397.

October Trip Opportunity:

Samels' Farm Open House, Williamsburg, Michigan October 9th from 1:00 - 4:00 pm. Gary and Deb attended this event before, and really enjoyed the archaeological and geographical information.

"There will be food available, music, wagon rides, tours of the woods, archaeological exhibits/lectures, and games." www.samelsfarm.org

Membership Renewal Information

From Deb Bull, Membership Chair:

Reminder to members that the deadline for 2022 membership dues was March 31st. You must be a paid member in order to continue to receive club benefits (participation in club sponsored classes, outings and receiving club newsletters.)

2022 membership dues may be mailed to:
Deb Bull, Membership, GTARMC
6091 Creighton Rd SW
South Boardman, MI 49680

Name badges are an additional \$8 per badge. Thank you!

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The above contact list will be included in each newsletter so that you know who to contact for various items.

Club Email Addresses

gtarmc@tcrockhounds.com (main club email address)

[If you have any photos that you would like to share of club events or members, those can be sent to:](#)

photos@tcrockhounds.com or noonanjohntc@gmail.com

[For scheduling requests for classes or workroom time, please note the email change to:](#)

scheduling@tcrockhounds.com

[To view club photos on Flickr, enter the following web address:](#)

[GT Rock & Mineral | Flickr](#)

E-mail Scams and Safety

Over the past few years, scammers have gotten our club information from time to time and tried to scam club members. Usually, the ploy is that Jared is somewhere and in trouble, or needing help and that you can help by sending gift cards to a link or email address.

Jared would never ask for gift cards or money to be sent somewhere. We can help cut down on this by sending emails to club members by using the bcc (blind carbon copy) method of emailing. We have been doing this for several months on newsletters and other mass club mailings. Also, any email requests should be confirmed with phone calls.

Lapidary Magazines

Karen Blackhurst <kjbmidland@gmail.com> contacted the club to say that they have stacks of old lapidary magazines available. If you are interested contact Karen at the above email address.

Equipment Available

Sterling Smith has a Beacon Star combination, 8 inch expanding drum sander and 8 inch grinding stone unit for sale. It was recently overhauled and has a newer drive belt. It also has a gravity feed water lubrication system for the wheels. The asking price is \$350.00.



If interested, contact Sterling at 231-920-3052.

Old Club Audio / Visual Equipment

At the July meeting, a motion will be sought to sell the club's older projector that connects to a computer or other device, and a combination VCR / DVD player. If passed, the items will be sold at the July meeting by auction or sealed bids.

Following is an interesting article written by Steven Veatch on, "Geology of Leonardo's, *Virgin of the Rocks*".

Thanks Steven!

Geology of Leonardo's *Virgin of the Rocks*

By Steven Wade Veatch

Leonardo da Vinci (1452-1519), considered to be one of the greatest painters of all time, used his knowledge of geology to inform his art. Leonardo was also noted for his work in sculpture, anatomy, mathematics, architecture, and engineering during the Italian Renaissance (about 1330 to 1450).

From a geological perspective, Leonardo da Vinci's paintings present a realistic portrayal of nature. In his *Virgin of the Rocks* (1483-1486), on display in the Louvre in Paris, the geological accuracy is striking (Pizzorusso, 1996). The painting's subject is both the Virgin and the rocks. The Virgin sits in front of a grotto or cave. Various aspects of the grotto, according to geologist Ann Pizzorusso (1996), "are rendered with astounding geological accuracy. Leonardo has painted a rich earthscape of rock eroded and sculpted by the active geological forces of wind and water. Most of the rock formations . . . are weathered sandstone, a sedimentary rock." What looks like basalt, an extrusive igneous rock formed by the cooling of lava, appears above Mary's head and at the top right of the picture. Leonardo even painted the columnar joints formed by the cooling of the rocks.

Also, just above her head is a precisely painted seam between the sandstone and igneous formations, and a rock joint runs horizontally to the right of her head. Art historians believe that the landscape in this painting is not an actual place, but one conjured up by Leonardo's experience, understanding of geology, and observation (Issacson, 2017).

A second version of the painting, also called the *Virgin of the Rocks* (1495-1508), is exhibited in the National Gallery in London. This painting fails to depict such a faithful rendering of geology as the one in Paris. Despite decades of analysis by scholars, there are doubts that it is an authentic da Vinci painting, but rather a copy of the original painting by another artist.



Leonardo da Vinci's *Virgin of the Rocks* (1483-1486). From his studies of geology, Leonardo learned how the Earth works and improved the realism of his paintings. Location: Louvre, Paris. Oil on panel transferred to canvas. Height: 199 cm (78.3 in). Width: 122 cm (48 in). Image is in the

Leonardo da Vinci was ahead of his time in his understanding of geology, and he meticulously recorded his observations in notebooks and journals (Bressan, 2014). After his death, his notebooks ended up on the bookshelves in libraries and private collections throughout Europe, while other notebooks disappeared into history (Waggoner, 1996).

Da Vinci wrote in one of his notebooks, the *Codex Leicester*, about the fossils he found as he walked the countryside. Da Vinci recognized that fossils were the remains of once-living organisms and relics of former times and other worlds—traces of a past hidden to other thinkers of the time. Da Vinci also observed that distinct layers of rocks and fossils covered large areas, and the layers were formed at separate times—not in the single biblical flood (Issacson, 2017). And centuries before Darwin, Leonardo conjectured through his understanding of rocks, fossils, and the slow processes of erosion and deposition that the world is much older than what church fathers proclaimed (Jones, 2011).

Leonardo da Vinci's observations of fossils found on the tops of mountains wore a path through his thoughts. Since fossils are found in the mountains, the surface of the Earth, Leonardo posited, has changed over time. For example, an ancient sea is now dry land (Jones, 2011). Leonardo concluded that as mountains formed, they lifted marine sediments—carrying fossil-bearing rocks skyward to become mountain peaks. Today, geologists know that tectonic plates and other geological processes form mountains.

In another of his notebooks, the *Codex Arundel*, now housed in the British Library, Leonardo describes graded bedding in layers of sedimentary rocks (Pedretti, 1998). He also had a basic understanding of the superposition of rock strata, where the oldest rocks in a sequence of sedimentary rocks are at the bottom. This concept would not be recognized until the second half of the 17th century when Danish geologist Nicolas Steno, carrying the light of learning, took up the subject in 1669, laying the foundation for modern stratigraphy and geological mapping (Capra, 2013).

Da Vinci never published his theories. He only wrote his observations in his notebooks, which ended up scattered or lost. For more than three hundred years, his notes were not part of the progression of science. It was left for future scientists to rediscover Leonardo's observations on the vastness of geological time, sedimentary layering, and the significance of fossils, and to make these discoveries part of science.

Leonardo da Vinci's endless curiosity and boundless creativity made him the quintessential Renaissance man. He was a keen observer of nature whose interest led him to paint nature not only beautifully, but accurately.

Works Cited

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Pizzorusso, A. (1996). Leonardo's Geology: the Authenticity of the Virgin of the Rocks. *Leonardo*, 440.

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