

# ROCK TRAILS



Real Rock Trails. Photo by National Park Service

## **VOLUME 62 ISSUE IV MAY 2022**

- 2 PRESIDENT'S LETTER**
- 3 SECRETARY'S REPORT**
- 4 REAL ROCK TRAILS**
- 8 BENCH TIPS**
- 8 MEMBERSHIP LIST ADDITION**
- 9 APRIL CALENDAR**
- 10 MAY CALENDAR**
- 11 JUNE CALENDAR**

### **2022 Officers and Directors**

President: Edmund Jarzembksi, 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 Jarzembksi, 419 237-2000  
Sunshine and Membership: Judy Snyder, Kathy  
Boyers  
Library: Curt and Linda Miller  
Education and Lapidary:  
Sherman Kardatzke, 517 673-5487  
Richard Brzezicki, 269 267-7666  
Newsletter Editor: Kathy Boyers,  
517 917-5036, [kboyers@mail.com](mailto:kboyers@mail.com)  
Website: <http://statelinegms.com/index.html>

Meetings are held the first Sunday of each month  
at 2:00 PM, at  
201 W. Main St. Morenci, MI 49256

# President's letter

## Rocks Bring People Together

I was invited to the Michigan Gem and Mineral Society's club meeting and awards presentation in Jackson, Michigan on April 9. I was guest of Mrs. Carol Kent who completed a stone carving for me, which was ready to deliver. She suggested I come to the meeting and bring a geode for a door prize. Bill Schultz sent me with one of our \$65 Mexican geodes. There were over 50 members in attendance at this meeting. After I was introduced, I thanked them for inviting our club to participate at their show and offered the geode as a gift of appreciation and congratulations to them for their great show. What was most impressive to all in attendance was the announcement by club president, John Hoskins, that half of their membership, over 40 people, helped at the show. No one knew what to expect so this was a cause for celebration after not having a show for two years, plus there was a change of venue. The Jackson Club presents a good lesson of club loyalty and dedication, a lesson worth emulating by all rock clubs.

Ironically, my number was the first one drawn for the door prize. "I'm not taking the geode home." The room broke out in laughter. I took one of their "mystery prizes." The geode was won by a young woman and her husband, new members of the Jackson Club. This was their first meeting.

We need everyone possible for ideas at our May meeting and for participation in our show in June. I'll see you at both events.

Best regards,  
Eddie

## Secretary's Report

The April 3, 2022 meeting of the Stateline Gem and Mineral Society was called to order at 2:10 PM by Edmund Jarzembksi, president. Invocation and pledge of allegiance was led by Richard Brezicki. There were eight members present. There was no secretary officially appointed so Edmund Jarzembksi offered to be secretary pro tem for the meeting. The March 6<sup>th</sup> minutes were voted on and approved as presented in "Rock Trails." Doris Brezicki gave a detailed treasurer's report of the club's financial standing. She reported on our successes in participating at the Jackson Gem and Mineral Show. Sherm Kardatzke, a dealer at the show gave his opinion that it was a very good and profitable show for everyone. Congratulations to the Michigan Gem and Mineral Society for a great show! A motion was made by Richard Brezicki to accept the treasurer's report as given. The vote was passed unanimously.

Bill Schultz presented a problem with the application form about our scholarship fund. It requires three days of show attendance by the scholarship recipient to receive the award, an impossibility by his candidate to comply. After some discussion, it was agreed by the membership to accept all applications and encourage an appearance by the scholarship winner at our show; no one would be disqualified for non attendance.

Bill Schultz gave a report of how low the inventory is of our Mexican geodes. They need to be replenished to get us through our September shows. A motion to spend \$3000 on geodes was voted on and passed unanimously.

Sherm Kardatzke, show chairman, reported that all tables are filled by quality dealers for our 60th annual show, the first week of June.

The question came up about our club kitchen and the profitability using our membership to make it run efficiently. Our treasurer, Doris Brzezicki, gave a net result of profit from last year's show. The margin was small enough for Charlene Hacker to propose a catering service for the show. It was agreed that the members in attendance to look for a catering service and report at the next meeting. The meeting adjourned at 3:30 and the next meeting was scheduled for May 1, 2022. The door prize winner was Richard Brezicki who chose a stone carved elephant figurine. Congratulations Richard.

Respectfully submitted,  
Edmund Jarzembksi  
Secretary Pro Tem

# Real Rock Trails

Nestled in a remote valley between the Cottonwood and Last Chance Ranges, the Racetrack is a place of stunning beauty and mystery. The Racetrack is a playa--a dry lakebed--best known for its strange moving rocks.

## Caution: Rough and Remote Road

The road to the Racetrack is rough, and good tires, 4x4 and high clearance are usually required. Standard rental vehicles are not recommended, and often get flat tires. Use extreme caution on this road in the summer heat. There is no cell phone coverage in the area. Drive time from Furnace Creek is at least 3.5 hours each way. Other access roads make for even longer and more remote adventures. [Driving offroad is strictly prohibited.](#)

The road to Racetrack Valley begins near Ubehebe Crater. Normally, it is recommended for high-clearance vehicles with heavy-duty tires as it can be rough and washboard. Off-road driving is prohibited as the desert is very fragile and vehicle tracks can remain for years. Watch for Joshua trees along the way. Often confused with cactus, Joshua trees actually are a type of yucca that can grow up to 30 feet tall. Twenty miles in you will reach Teakettle Junction. Follow the road straight ahead to the Racetrack playa. The road to the left leads into Hidden Valley and connects with the Hunter Mountain road which usually requires 4-wheel-drive to travel. Two miles further the short spur road to the right leads to the Ubehebe Lead Mine. It operated during the late 1800's and again during World War I.

## The Grandstand

After traveling 26 miles you reach the north end of the Racetrack and the Grandstand parking area. A short walk out to the Grandstand can be rewarding. This large island outcrop of quartz monzonite offers spectacular views of the Racetrack. Those interested in a longer hike should try the old miner's trail to **Ubehebe Peak**. This strenuous 6 mile round trip hike involves an elevation gain of 1800 feet. Look for this trail west of the Grandstand parking lot. The Racetrack is a playa (dry lakebed) about 3 miles long and 2 miles wide. At least 10,000 years ago this region underwent climatic changes resulting in cycles of hot, cold and wet periods. As the climate changed, the lake evaporated and left behind beige colored mud, at least 1,000 feet thick.

## **Moving Rocks**

To see the moving rocks, drive two miles south of the Grandstand parking area. Walk at least a half mile toward the southeast corner of the playa for the best views of rocks and their tracks on the playa. Erosional forces cause rocks from the surrounding mountains to tumble to the surface of the Racetrack. Once on the floor of the playa the rocks move across the level surface leaving trails as records of their movements. Some of the moving rocks are large and have traveled as far as 1,500 feet. Throughout the years many theories have been suggested to explain the mystery of these rock movements. A research project has suggested that a rare combination of rain and wind conditions enable the rocks to move. A rain of about 1/2 inch, will wet the surface of the playa, providing a firm but extremely slippery surface. Strong winds of 50 mph or more, may skid the large boulders along the slick mud.

## **August 27, 2014: Mystery Solved?**

Racetrack Playa is home to one of Death Valley's most enduring mysteries. Littered across the flat, dry surface of this dry lake, also called a 'playa', are hundreds of rocks – some weighing as much as 320 kilograms (700 pounds) –that seem to have been dragged across the ground, often leaving synchronized trails that can stretch for hundreds of meters.

What powerful force could be moving them? Researchers have investigated this question since the 1940s, but no one has ever seen the process in action –until now.

In a new [paper](#) published in the August 27, PLOS ONE, a team led by Scripps Institution of Oceanography, UC San Diego, paleobiologist Richard Norris report on first-hand observations of the phenomenon. Because the stones can sit for a decade or more without moving, the researchers did not originally expect to see motion in person. Instead, they decided to monitor the rocks remotely by installing a high-resolution weather station capable of measuring gusts to 1 second intervals and fitting 15 rocks with custom-built, motion-activated GPS units. (The Park Service could not let them use native rocks, so they brought in similar rocks from an outside source.) The experiment was set up in Winter 2011 with permission of the National Park Service. Then –in what Ralph Lorenz of the Applied Physics Laboratory at the Johns Hopkins University, one of the paper's authors, suspected would be "the most boring experiment ever" –they waited for something to happen.

But in December 2013, Norris and co-author James Norris (of Interwoof and Richard's cousin) arrived in Death Valley to discover that the playa was covered with a shallow

pond no more than seven centimeters (three inches) deep. Shortly after, the rocks began moving.

"Science sometimes has an element of luck," Richard Norris said. "We expected to wait five or ten years without anything moving, but only two years into the project, we just happened to be there at the right time to see it happen in person."

Their observations show that moving the rocks requires a rare combination of events. First, the playa fills with water, which must be deep enough to allow formation of floating ice during cold winter nights but shallow enough to expose the rocks. As nighttime temperatures plummet, the pond freezes to form sheets of "windowpane" ice, which must be thin enough to move freely but thick enough to maintain strength. On sunny days, the ice begins to melt and break up into large floating panels, which light winds drive across the playa pool. The ice sheets shove rocks in front of them and the moving stones leave trails in the soft mud bed below the pool surface.

"On December 21st, 2013, ice breakup happened just before noon, with popping and cracking sounds coming from all over the frozen pond surface", said Richard Norris. "I said to Jim, 'This is it!'"

These observations were surprising in light of previous models, which had proposed hurricane-force winds, dust devils, slick algal films, or thick sheets of ice as likely contributors to rock motion. Instead, rocks moved under light winds of about 3-5 meters per second (10 miles per hour) and were driven by ice less than 5 millimeters (0.25 inches) –too thin to grip large rocks and lift them off the playa, which several papers had proposed as a mechanism to reduce friction. Further, the rocks moved only a few inches per second (2-6 m/minute), a speed that is almost imperceptible at a distance and without stationary reference points. "It's possible that tourists have actually seen this happening without realizing it," said Jim Norris. "It is really tough to gauge that a rock is in motion if all the rocks around it are also moving".

Individual rocks remained in motion for anywhere from a few seconds to 16 minutes. In one event, the researchers observed that rocks three football fields apart began moving simultaneously and traveled over 60 meters (200 feet) before stopping. Rocks often moved multiple times before reaching their final resting place. The researchers also observed rock-less trails formed by grounding ice panels –features that the Park Service had previously suspected were the result of tourists stealing rocks.

"The last suspected movement was in 2006, and so rocks may move only about one millionth of the time," said Lorenz. "There is also evidence that the frequency of rock

movement, which seems to require cold nights to form ice, may have declined since the 1970s due to climate change."

Richard and Jim Norris, and co-author Jib Ray of Interwoof started studying the Racetrack's moving rocks to solve the "public mystery" and set up the "Slithering Stones Research Initiative" ("Science for the fun of it") to engage a wide circle of friends in the effort. They needed the help to repeatedly visit the remote dry lake, quarry rocks for the GPS-instrumented stones, and design the custom-built instrumentation. Ralph Lorenz and Brian Jackson (of the Department of Physics, Boise State University), in contrast, started working on the phenomenon to study dust devils and other desert weather features that might have analogs to processes happening on other planets. "What is striking about prior research on the Racetrack is that almost everybody was doing the work not to gain fame or fortune, but because it is such a neat problem", says Jim Norris.

So is the mystery of the sliding rocks finally solved?

"We documented five move events in the two and a half months the pond existed and some involved hundreds of rocks", says Richard Norris, "So we have seen that even in Death Valley, famous for its heat, floating ice is a powerful force driving rock motion. But we have not seen the really big boys move out there....does that work the same way?"

Death Valley National Park wants to remind people that the Racetrack is located in a remote area of the park and road conditions are variable at best, requiring high clearance vehicles and heavy duty tires. Do not attempt a trip to the Racetrack without a plenty of fuel and water. There is no cell phone service in the area. Be prepared for the possibility of spending the night if your vehicle becomes disabled. A more easily-accessible location to observe the tracks of sliding stones is the Bonnie Claire playa east of Scotty's Castle--between the park boundary and Highway 95. The south shore of the playa runs right along the north side of Highway 72. The area is administered by the Bureau of Land Management. There is abundant evidence of sliding stones at this playa, which is believed to experience the same rock-moving conditions as the Racetrack.

Article from the National Park Service, Death Valley

# Bench Tips

Smart Solutions for Your Jewelry Making Problems

Amazon.com/author/bradfordsmith

## File Organization

An easy way to keep all your files organized at the bench is to use a magnetic tool strip. They're not expensive and help keep a lot of small tools from cluttering the bench top. I got a couple of them from Harbor Freight for about \$5 each.

See <http://www.harborfreight.com> and search on-"magnetic-holder"

My only regret was putting some of my small drills on the magnets. The drills got a little magnetized and now stick together when I carry them in a bottle in my tool box.

## Membership List

Please add to your membership list:

Curtis and Linda Miller  
12577 State Hwy 109  
Lyons, OH 43533  
[millerlake2525@embarqmail.com](mailto:millerlake2525@embarqmail.com)  
419 923-2090



# APRIL 2022

| Sun        | Mon | Tue | Wed | Thu              | Fri                   | Sat                   |
|------------|-----|-----|-----|------------------|-----------------------|-----------------------|
|            |     |     |     |                  | 1                     | 2                     |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
| 3          | 4   | 5   | 6   | 7                | 8                     | 9                     |
| State Line |     |     |     | Indian<br>Mounds | Indian<br>Mounds      | Indian<br>Mounds      |
| Meeting    |     |     |     | Rock and         | Rock and              | Rock and              |
| 2 PM       |     |     |     | Mineral          | Mineral               | Mineral               |
| Clubhouse  |     |     |     | Show             | Show                  | Show                  |
|            |     |     |     | Wyoming,<br>MI   | Wyoming,<br>MI        | Wyoming,<br>MI        |
| 10         | 11  | 12  | 13  | 14               | 15                    | 16                    |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
| 17         | 18  | 19  | 20  | 21               | 22                    | 23                    |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
|            |     |     |     |                  |                       |                       |
| 24         | 25  | 26  | 27  | 28               | 29                    | 30                    |
|            |     |     |     |                  | Kalamazoo<br>Rock and | Kalamazoo<br>Rock and |
|            |     |     |     |                  | Mineral<br>Show       | Mineral<br>Show       |
|            |     |     |     |                  | 2900 Lake<br>St.      | 2900 Lake<br>St.      |
|            |     |     |     |                  | Kalamazoo,<br>MI      | Kalamazoo,<br>MI      |

# MAY 2022

| Sun  | Mon | Tue | Wed | Thu | Fri | Sat  |
|--|-----|-----|-----|-----|-----|--|
| 1<br>State Line<br>Meeting<br>2 PM<br>Clubhouse                      | 2   | 3   | 4   | 5   | 6   | Cayuna7<br>Agate and<br>Mineral<br>Show<br>Brainard<br>Minnesota |
| 8<br>Cayuna<br>Agate and<br>Mineral<br>Show<br>Brainard<br>Minnesota | 9   | 10  | 11  | 12  | 13  | 14   |
| 15   | 16  | 17  | 18  | 19  | 20  | 21   |
| 22   | 23  | 24  | 25  | 26  | 27  | 28   |
| 29   | 30  | 31  |     |     |     |  |

# JUNE 2022

| Sun                        | Mon | Tue | Wed | Thu | Fri                        | Sat                        |
|----------------------------|-----|-----|-----|-----|----------------------------|----------------------------|
|                            |     |     | 1   | 2   | 3<br>Stateline<br>GMS show | 4<br>Stateline<br>GMS show |
|                            |     |     |     |     | Fulton<br>Fulton           | Fulton<br>Fulton           |
|                            |     |     |     |     | County                     | County                     |
|                            |     |     |     |     | Fairgrounds                | Fairgrounds                |
|                            |     |     |     |     |                            |                            |
| 5<br>Stateline<br>GMS show | 6   | 7   | 8   | 9   | 10                         | 11                         |
| Fulton<br>Fulton           |     |     |     |     |                            |                            |
| County                     |     |     |     |     |                            |                            |
| Fairgrounds                |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
| 12                         | 13  | 14  | 15  | 16  | 17                         | 18                         |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
| 19                         | 20  | 21  | 22  | 23  | 24                         | 25                         |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
| 26                         | 27  | 28  | 29  | 30  |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |
|                            |     |     |     |     |                            |                            |

Meetings are held the first Sunday of each month at 2 pm, at  
201 W. Main St, Morenci, MI 49256

