

# ROCK TRAILS



## Newsletter of the StateLine Gem and Mineral Society

VOLUME 54  
ISSUE IV  
APRIL 2014

### 2014 Officers and Directors

President: Edmund Jarzembki, 419 237-2000  
Vice President: Henry Porter, 313 694-7642  
Secretary: Patricia Baier-Hay, 517 263-8585  
Treasurer: Doris Brzezicki, 517 263-1669  
Past President: Richard Brzezicki, 517 263-1669  
First Year Director: Kelly Cleveland, 419 882-8515  
Second Year Director: Charles Swanson, 517 436-9299  
Third Year Director: Frank Kramic, 517 458-7191  
Show Chairman: Doris Brzezicki, 517 263-1669  
Publicity: Edmund Jarzembki, 419 237-2000  
Sunshine: Catherine Choske, 517 423-3572  
Education & Lapidary:  
Henry Porter, 313 694-7642  
Richard Brzezicki, 517 263-1669  
Newsletter Editor: Sandy Gerhart, 517 265-6553,  
s\_gerhart@yahoo.com  
Website: <http://stateline.freewebspace.com>

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



## Treasurer's Statement

Please check this newsletter for the membership list. You may want to print a copy for your own records.

State Line Gem & Mineral Society had a wonderful time at the Michigan Gem & Mineral Show in Jackson. Many thanks to the members who helped out at our booth, Henry Porter, Charles Swanson, Sherm Kardatzke, Bill & Phyllis Sipes, Richard & Judy Snyder, and Pat & Eddie Baier-Hay. Sales of geodes and the grab bags exceeded last year's figures. We also received an invitation to demonstrate at the Central Michigan Lapidary Society Show at the end of October. We can discuss this more at the next meeting to see how many members are interested.

I was able to pass on the advertising information for our show to Ed Jarzembki. Also we handed out quite a few flyers and talked to many people about attending the show. I lined up a potential dealer too!

This winter has been a challenge for all of us. Hopefully, Spring will enable us to get back in the swing of things. Hope to see more of you at the next meeting.

Doris Brzezicki, Treasurer



## Secretary's Scoop



President Ed called the meeting of the State Line Gem and Mineral Society to order at 2:20 PM. Richard B. gave the invocation and the pledge of allegiance followed.

Doris made a motion to accept the secretary's report as printed in the March newsletter. Richard B. seconded and the motion passed with all in favor.

Treasurer's report: Doris reported that there is a healthy balance at this time, however, the club received a bill from Consumers Energy for \$209.63 for last month's billing. Ed asked how there could have been such a large increase from past billings. Doris said there are a few things that could have caused the

high bill: This winter has had many more extremely cold days than usual. Our landlord had the partition (half wall) between the stained glass area and the rock working area removed. The employees who did the work may have left the door open with the heat turned up. The "exercise room" seems to be on the same meter and that has been used by the landlord. Doris is unsure of what will happen. It's a shocker but she is not pulling her hair out yet. Sherm made a motion to accept the report, Richard B. seconded it and the motion passed with all in favor.

Show Report: Doris reported that we are doing ok at this time. Shelly will not be returning this year and Colleen will not be available to demonstrate her wire wrapping. Alex has been telephoned and promised to call Doris soon with his decision of whether he will be able to do our show. Some vendors asked to pay later, and Doris agreed as long as the payments are in by May so that we will have enough money to pay for renting the fairgrounds. She also stressed that the club needs to have someone work on publicity. She noted that with health concerns, she may not be able to continue doing the show indefinitely. Ed thought that he and his wife could help with the publicity.

Doris asked if we wanted to do posters this year. Ed was disappointed with resolution of last year's posters. The distribution wasn't as good as in previous years. There was discussion about whether the size was too big, too small, or just right. The result was that we feel the big posters do have more visual appeal. In places where there is not enough room to post the large posters, we can display the smaller flyers. Ed said that we just had to walk the beat to get them out there. He noted that you hate to leave posters in places where you are not sure the business owners will post them so it's a good idea to talk to the owners if possible and get them on board. Doris said that most of the businesses in Morenci have been, and continue to be very supportive of our club. Doris made a motion to authorize Sandy to order more posters, seconded by Judy. The motion passed with all in favor.

Flyers: New this year to the flyers is the paid admission aspect. Members can circulate the flyers which have a dollar off discount if they bring the flyer with them to the show. Current flyers have to be updated with current information and Doris will take care of the updates. Judy asked if there was a list of people or places to go to for distributing the flyers. Doris said mainly public places, such as schools, libraries, stores etc. usually one month prior to the show. Doris plans to have the flyers ready for members to distribute by the May 1<sup>st</sup> meeting. Ed feels that yard signs are effective too.

Glenda submitted the forms for the student applications for scholarships. The plan is to award the scholarship to the chosen student at our jewelry, rock and gem show. Doris reviewed the applications and felt they looked pretty good. Ed asked how the applications would get to students? Doris said that it was Glenda's project but suggested that they would be distributed to various school systems including Morenci, Adrian and surrounding cities or the applications could be accessed on line. May 13<sup>th</sup> is the deadline for submitting the completed applications. Judy asked if we award a

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## Secretary's Scoop

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scholarship every year? Doris said that our by-laws allow for it if we have enough money in the treasury. Doris had copies of the by-laws for those who were interested. I asked if we had funds for the scholarship this year. Doris said that money from the dealers was coming in. The Jackson show was a fundraiser and charging for admission should leave us in good shape.

Ed mentioned that John Zarnach's son, Walter, was selling some lapidary equipment. Sherm visited Walter and said that he had a variety of rocks and equipment for sale. Ed asked if there was anything left and Sherm was unsure. He had the impression that Walter wanted to sell it all together.

The Jackson Show will be March 14<sup>th</sup>, 15<sup>th</sup>, and 16<sup>th</sup>. We have been invited to that show to demonstrate also and we were encouraged to bring "Geode" our grab bag lion and our geodes for cracking. Thanks to the members and friends who have worked on sewing the grab bags and donating them to the club.

Doris wanted to show some pictures of past members who were active with the club, such as John and Goldie Zarnach who had passed away and others who are still around. Members chatted about various topics and memories.

Richard made a motion to adjourn the meeting and Sherm seconded. With all in favor, the meeting was adjourned.



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## Devils Tower

Devils Tower rises above the surrounding grassland and Ponderosa pine forests like a rocky sentinel. Northern Plains tribes have worshiped near this remarkable geologic formation for thousands of years. Fur trappers, explorers, and settlers alike were awed by the tower's majesty. In 1906, President Theodore Roosevelt established Devils Tower as our nation's first national monument.

Most of the landscape surrounding Devils Tower is composed of sedimentary rocks. These rocks are formed from broken or dissolved fragments of other rocks and are usually deposited by water or wind.

The oldest rocks visible in Devils Tower National Monument were laid down in a shallow inland sea. This sea covered much of the central and western United States during Triassic time, 225 to 195 million years ago. This dark red sandstone and maroon siltstone, inter-bedded with shale, can be seen along the Belle Fourche River. Oxidation of iron rich minerals causes the redness of the rocks. This rock layer is known as the Spearfish Formation.

Above the Spearfish formation is a thin band of white gypsum, called the Gypsum Springs formation. Gypsum is an important mineral resource commonly used in making drywall. This layer of gypsum was deposited during the Jurassic time, 195 to 136 million years ago.

Seas retreated and returned. Gray-green shales deposited offshore in deep marine environments were inter-bedded with fine-grained sandstones, limestones, and sometimes thin beds of red mudstone. These rock layers, called the Stockade Beaver member, are part of the Sundance Formation—also of Jurassic age.

The Hulett Sandstone member, also part of the Sundance formation, is a yellow, fine-grained sandstone deposited on an ancient beach. Resistant to weathering, it forms the nearly vertical cliffs that encircle the Tower itself.

Seas retreated and advanced; landforms developed and eroded. New sediments were deposited. Approximately 50 to 60 million years ago, during Tertiary time, pressures within western North America climaxed, uplifting the Rocky Mountains and the Black Hills. At this time or shortly after, magma (molten rock) welled up toward the surface of the earth, intruding into the already existing sedimentary rock layers.

Geologists agree that Devils Tower was formed by the intrusion (the forcible entry of magma into or between other rock formations) of igneous material. What they cannot agree upon is how that process took place and whether or not the magma reached the land surface.

Numerous ideas have evolved since the official discovery of Devils Tower. Geologists Carpenter and Russell studied Devils Tower in the late 1800s and came to the conclusion that the Tower was indeed formed by an igneous intrusion. Later geologists searched for more detailed explanations.

In 1907, scientists Darton and O'Hara decided that Devils Tower must be an eroded remnant of a laccolith. A laccolith is a large, mushroom-shaped mass of igneous rock which intrudes between the



## Devils Tower

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layers of sedimentary rocks but does not reach the surface. This produces a rounded bulge in the sedimentary layers above the intrusion. This idea was quite popular in the early 1900s when numerous studies were done on a number of laccoliths in the Southwest.

Other ideas have suggested that Devils Tower is a volcanic plug or that it is the neck of an extinct volcano. Although there is no evidence of volcanic activity - volcanic ash, lava flows, or volcanic debris - anywhere in the surrounding countryside, it is possible that this material may simply have eroded away.

The simplest explanation is that Devils Tower is a stock—a small intrusive body formed by magma which cooled underground and was later exposed by erosion.

The magma which formed Devils Tower cooled and crystallized into a rock type known as phonolite porphyry. It is a light to dark-gray or greenish-gray igneous rock with conspicuous crystals of white feldspar. Hot molten magma is less dense and occupies more volume than cool hardened rock. As the rock cooled, it contracted, forming hexagonal (and sometime 4-, 5- and 7-sided) columns separated by vertical cracks. These columns are similar to those found at Devil's Postpile National Monument in California but those at Devils Tower are much larger.

Until erosion began its relentless work, Devils Tower was not visible above the overlying sedimentary rocks. But the forces of erosion, particularly that of water, began to wear away the soft sandstones and shales above and around the Tower. The much harder igneous rock of the Tower survived the onslaught of erosional forces, and the gray columns of Devils Tower began to appear above the surrounding landscape.

As rain and snow continue to erode the sedimentary rocks surrounding the Tower's base, and the Belle Fourche River carries away the debris, more of Devils Tower will be exposed. But at the same time, the Tower itself is slowly being eroded. Rocks are continually breaking off and falling from the steep walls. Rarely do entire columns fall, but on remote occasions, they do. Piles of rubble, broken columns, boulders, small rocks, and stones, lie at the base of the Tower, indicating that it was, at some time in the past, larger than it is today.

Eventually, at some time far in the future, even Devils Tower itself will erode away!

<http://www.nps.gov/deto/naturescience/geologicformations.htm>





## Upcoming Events

**Apr. 6, 2014**

### **StateLine Gem & Mineral Society**

monthly meeting  
2:00 p.m.  
201 W. Main St.  
Morenci, MI 49256

**April 5 & 6, 2014**

### **Central Ohio Mineral, Fossil, Gem & Jewelry Show**

Northland Performing Arts Center  
4411 Tamarack Blvd  
Columbus, OH 43229  
6 blocks east of I-71 on Morse Rd.  
next to Menard's

Look for the yellow building  
with the blue scaffolding tower.

Adults - \$7.00 2-Day pass - \$12.00 Children 6-16  
- \$3.00 Children 6 & under are free Scouts. 4-H  
uniform, or with ID free

**April 10-12, 2014**

### **Wyoming MI Indian Mounds Rock and Mineral Club show**

Rogers Plaza Town Center  
972 28th Street Southwest  
free admission,

**April 12, 2014**

### **The Macomb County/Mt. Clemens Gem & Lapidary Society 38th Annual Gem, Mineral and Lapidary Show**

10:00 am to 7:00 pm.

Roseville Recreation Center  
18185 Sycamore  
Roseville MI

1 block north of I-696 (11 mile rd.)  
runs east off Gratiot.

**April 26-27, 2014**

### **Summit Lapidary Club/Akron Mineral Society Spring Gemboree 2014**

Emidio and Sons Expo Center  
48 East Bath Road  
Cuyahoga Falls, Ohio

Adults - \$5.00

Seniors (55 and Over) & Students - \$4.00  
Children ages 7-14 -\$1, (Free for Scouts in  
Uniform and children under 6.)

**May 2-4, 2014**

### **Kalamazoo Geological & Mineral Society 55th Annual Rock, Gem, Fossil and Mineral Show Kalamazoo County Expo Center**

2900 Lake St.

Kalamazoo, MI

Adults \$3.00

Children under 12 free w/paying adult





# Rock Trails

Sandy Gerhart, Editor  
210 Chestnut St.  
Adrian, MI 49221

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first Sunday of each month  
at 2:00 PM  
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