ROCK TRAILS

Potluck

Newsletter of the StateLine Gem and Mineral Society

VOLUME 56
ISSUE 1
JANUARY 2016

In This Issue:

2016 Officers and Directors

President: Sherman Kardatzke, 517 673-5487
Vice President: Glenda Gafner, 517 451-2079
Secretary: Heidi Storehalder, 517 286-6450
Treasurer: Doris Brzezicki, 517 263-1669
Past President: Edmund Jarzembski, 419 237-2000
First Year Director: Jan Hauter, 517 286-6971
Second Year Director: Carl Mulholland, 734 428-1009
Third Year Director: Frank Kramic, 517 458-7191
Show Chairman: Doris Brzezicki, 517 263-1669
Publicity: Edmund Jarzembski, 419 237-2000
Sunshine: Catherine Choske, 517 423-3572
Education & Lapidary:
Frank Karmic 517 458-7191
Richard Brzezicki, 517 263-1669
Newsletter Editor: Sandy Gerhart, 734 347-4796
s_gerhart@yahoo.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

Secretary's Scoop

The State Line Gem and Mineral Society meeting was brought to order by president Sherm Kardatzki with Richard B. giving the invocation and the pledge of allegiance followed.

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

Treasurer's report: Bills paid include the Apple-Umpkin space rental, clubhouse rent, 2 Consumers Power bills and club insurance. Phyllis made a motion to accept the treasurer's report with a second from Heidi and the motion passed with all in favor.

Richard noted that the club sign-in book was missing from the meeting room and asked all members to keep an eye out for it.

Linda M. made a motion to have the club purchase wire so members can wire wrap jewelry to sell for the club at the club's gift shop. The wire wrapping classes have been going well and several members are becoming proficient in wire wrapping jewelry. Judy thought that volunteers could have a wire working workshop at the clubhouse on Saturday December 19th to coinside with the club's open house celebration starting at 10:00 AM. This would allow us to demonstrate for the public and get more jewelry made up for the club's gift shop. Sherm appointed Judy, Linda M. and Carl to a committee to oversee and assist the wire working volunteers. Phyllis made a motion to have the club authorize the committee to spend up to $100.00 for wire wrapping supplies to be kept at the clubhouse for club use. Doris seconded and the motion passed with all in favor.

Linda M. said that members may consider bringing various items such as beads and charms to use with the wire purchased by the club.

Frank said that his students will be cutting stones and making cabochons to graduate from his class. Phyllis asked if it was possible to place an announcement in the paper instead of a paid advertisement. Bill suggested that the Adrian radio station WLEN has free public service announcements. There was some discussion about a sandwich sign to put in front of the building but there were concerns about local sign ordinances.

Bill mentioned that he had brought in some non-slip mats the club could use to improve safety.

Jan H. had a question about acquiring hot water in the clubhouse. She noted that with the weather getting colder, it was very uncomfortable to grind cabochons in extremely cold water. Richard B. presented a printout of a sale for 2 ½ gallon on-site water heaters at $155.80 each. One for the kitchen and one for the bathroom would be a little over $300.00. Sherm stated that it might be better to get a 5 or 6 gallon heater and not have to install two separate heaters. He has a similar one at his garage and it has plenty of hot water for limited use and is inexpensive to operate. Doris made a motion to authorize Sherm to purchase and install a 5 or 6 gallon water heater for up to $300.00. Jan seconded and the motion passed with all in favor.

continued on page 3

continued from page 2

Sherm outlined the current list of club officers to be elected at this meeting as follows:

President	Sherm Kardatzki
Vice-President	Glenda Gafner
Secretary	Heidi Storehalder
Treasurer	Doris Brzezicki
1st year Director	Jan Hauter
2nd year Director	Carl Mulholland
3rd year Director	Frank Kramic

Phyllis noted that since there were no opponents to any of the offices, she made a motion to have the club accept all the listed officers as elected by club approval. Linda M. seconded the motion which passed with all in favor. The induction of officers will take place at the clubhouse on Sunday, January 3rd at 2:00 PM during the regular club meeting. **This meeting will also be a pot luck.**

Sherm reported that Glenda is hoping to have the field trip to Alpena rescheduled from 2015 to around May of 2016.

Sherm is currently playing phone tag with the Kentucky geode contact person. He has mailed out invitations for our show but has only had one response (Frank) so far. Carl said he had received his but has not submitted it yet.

Linda M. made a motion to adjourn, seconded by Jan H. which passed with all in favor.

The Brewery Rock?

Diatomite

The sedimentary rock used as a filter, absorbent, filler, abrasive, and more.

What is Diatomite?

Diatomite is a friable light-colored sedimentary rock that is mainly composed of the siliceous skeletal remains of diatoms. It is a very porous rock with a fine particle size and a low specific gravity. These properties make it useful as a filter media, an absorbent, and as a lightweight filler for rubber, paint, and plastics. When diatomite is crushed into a powder, it is usually called “diatomaceous earth,” or D.E.

What are Diatoms?

Diatoms are members of a large, diverse group of algae that drift freely in the waters of oceans and lakes. A few types of diatoms live on the bottom of these water bodies and in soils. Most diatoms are microscopic, but a few species are up to two millimeters in length. As a group, diatoms are unique because they are single-celled organisms that produce an external cell wall composed of silica, called a frustule. These frustules are very thin and have a delicate structure.

Nearly all diatoms are photosynthetic and live in water less than about thirty feet deep where sunlight can penetrate. Diatoms are prolific and responsible for producing nearly half of the organic mass in the world’s oceans. Their abundance and small size places them at the base of the marine food chain.

When diatoms die, their siliceous frustule sinks. In some areas the frustules are not incorporated into the bottom sediment because they dissolve as they sink or dissolve while on the sediment surface. If the sediment is composed of over 30% diatom frustules by weight, it would be called a “diatom ooze” or a “siliceous ooze.” These are the sediments that are lithified into the rock known as diatomite.

Uses of Diatomite and Diatomaceous Earth

The four main uses of diatomite in the United States during 2013 were filter media (56%), cement additive (15%), fillers (14%), absorbents (13%), and other (2%). The properties of diatomite that make it useful in these applications are: small particle size, high porosity, high surface area, relatively inert siliceous composition, and low specific gravity.

Filter Media

The small particle size of diatomaceous earth and the open structure of the frustules enable it to work effectively as a particle filter. The pores within and between the frustule are small enough to trap bacteria, clay particles, and other suspended solids. It is used at drinking water treatment plants, swimming pools, breweries, wineries, chemical plants, and where juices and syrups are made. These fluids are forced through a layer of wet diatomaceous earth, and suspended particles are trapped because they cannot fit through the pores.

continued on page 5

continued from page 4

Cement Additive
Diatomite is often used as an additive in the manufacture of portland cement. High-quality diatomite contains over 80% silica, and it is added to the cement-making process to boost the silica content of the product. Diatomite straight from the mine is crushed and blended with the limestone, shale, or other materials being used to make the cement.

Absorbent
If dry diatomaceous earth is placed on a liquid spill, it can absorb and hold an amount of liquid equivalent to its own weight. This absorption facilitates containment, cleanup, and removal. Capillary action of liquids into diatomaceous earth is enhanced by its small particle size, high surface area, and its high porosity.

These same properties make diatomaceous earth able to absorb skin oils when used in cosmetics and facial masks. Diatomaceous earth is an absorbent ingredient of some kitty litters. It is also used as a soil treatment to absorb and hold water.

Filler
Diatomaceous earth is used as a lightweight, inert filler in some manufactured products. It is added to paint as a whitening agent and extender. It is added to plastics as a lightweight filler. It is used as a filler and anti-stick agent in asphalt shingles. It is used as a filler and to improve adhesion resistance in many rubber products.

Mild Abrasive
Diatomaceous earth is used as a mild abrasive in some toothpastes, facial scrubs, and metal polishes. Its silica particles are small, friable, have a high surface area, and are angular in shape. These are properties that help it perform well as a mild abrasive.

Gardening
Diatomaceous earth is used as a growing medium in hydroponic gardens. It is inert, holds water, and has a porosity that allows the soil to breathe. To help grain and other seeds from sticking together and remain dry, they are dusted with diatomaceous earth.

Insect and Slug Control
Diatomaceous earth is an abrasive and an absorbent. These properties make it effective in controlling slugs and certain insects. To control ants, fleas, roaches, lice, mites, and ticks indoors, vacuum the infested area, then dust it with a small amount of diatomaceous earth. Repeat every few weeks until resolved.

Slugs can be detered outdoors by dusting problem areas with diatomaceous earth. If slugs are disturbing plants, dust the soil around the base of the plant. Diatomaceous earth works only when dry. The best time to apply it is when slugs are present and rain is not expected for at least 24 hours.

continued on page 6

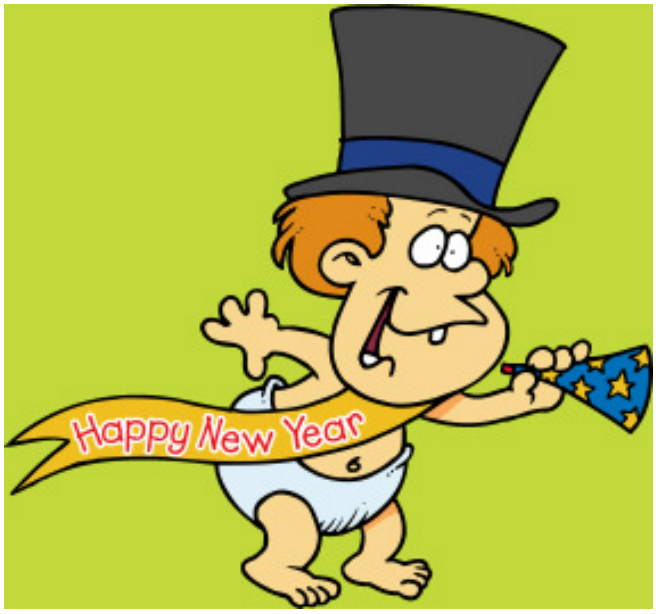
Continued from page 5

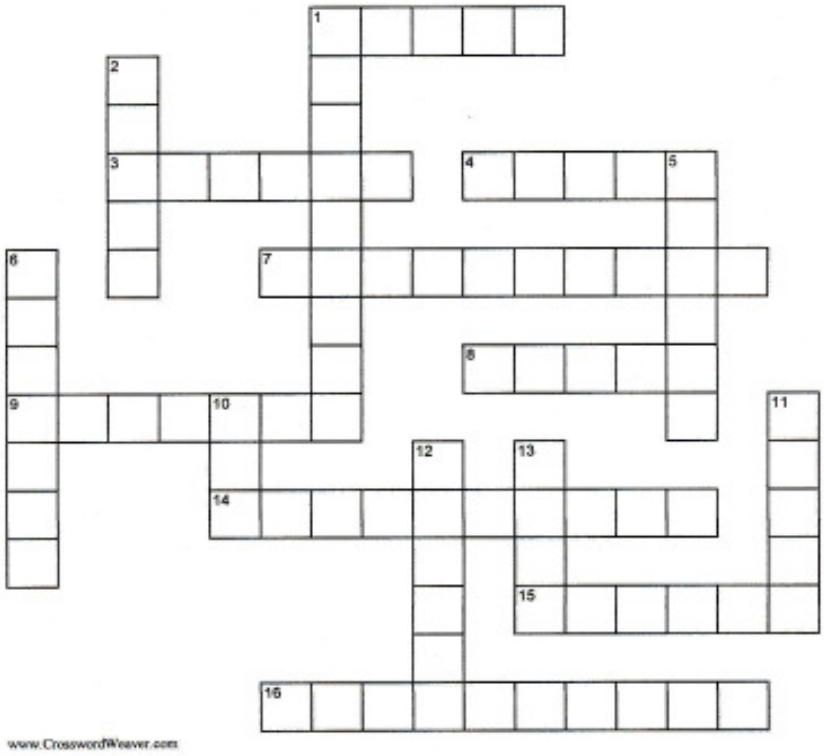
Flea and Tick Control
Dogs and cats can be treated with food grade diatomaceous earth to control fleas and ticks. Before treating the pet, clean their bedding materials, and vacuum rugs where the pet is allowed to roam. Then lightly dust these areas with diatomaceous earth. Repeat every few days.

To treat the pet, brush, comb, and inspect the animal to remove fleas and ticks. Then dust the pet lightly with diatomaceous earth. Bathe the pet after two or three days with a moisturizing shampoo. After the bath, brush or comb the pet to remove any fleas or ticks that remain. Repeat dusting and combing every few days. Bathe the pet about once a month with moisturizing shampoo.

Freshwater vs. Saltwater Diatomite
Diatomite forms in marine water and freshwater environments. These origins are an important consideration when a diatomite source is being considered for use. Any use that will be associated with human, animal, or plant contact should come from freshwater deposits. Diatomite from saltwater sources can contain salts that can produce objectionable or toxic effects.

http://geology.com/rocks/diatomite.shtml





ACROSS

1 changes from a solid into a liquid
3 the solid, liquid, and gas forms of matter
4 water in the gas state
7 units for measuring the amount of space things fill
8 having molecules that are very close together
9 substances that flow easily. always stays the same size, but its shape can change
14 changes from a liquid into a gas
15 substances that stay the same size and the same shape
16 water in the gas state

DOWN

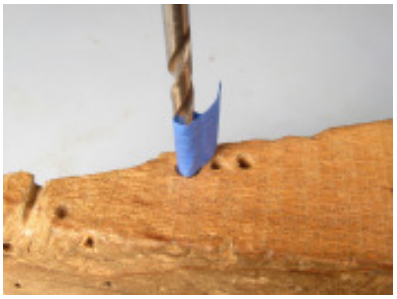
1 the smallest pieces that a substance can be broken into. made up of atoms that are joined together.
2 substances that can change their size and their shape. can spread out to fill any container.
5 what all things are made of. takes up space and can be weighed
6 bubbling and changing from a liquid into a gas
10 solid water
11 the tiny particles that make up all things
12 the amount of space that an object fills
13 the amount of matter an object is made of

Bench Tips

by Brad Smith

DEPTH GAUGE FOR DRILLING

Sometimes you need to drill a number of holes all to the same depth. One quick and easy way to do this is to wind some tape around the drill bit so that the tape just touches the part surface when the hole is deep enough.

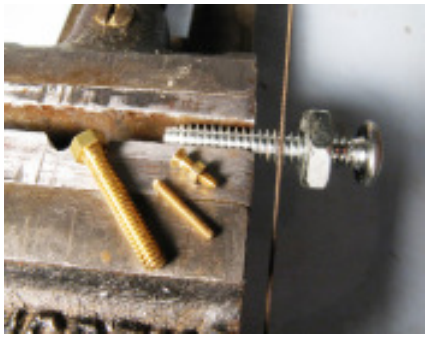


You can set the depth either by measuring from the tip of the drill to the tape or by drilling to the correct depth, leaving the bit in the hole, and wrapping tape around the bit at the surface level.

Note that a little extra tape left free on the end will blow away debris from the drilling.

- -

CUTTING A BOLT



Whenever you have to cut a threaded bolt shorter, it's often difficult to get the nut to thread back onto it. And the smaller the bolt, the more difficult it is to restore any distorted threads. The problem is easily solved with the use of a nut. Here's how I do it.

First, screw a nut onto the bolt before cutting it. Grip the bolt by the threaded section that is to be sawed off. Then saw the bolt to the desired length, taper the end with sandpaper or file, and unscrew the nut from the bolt.

Unscrewing the nut over the freshly cut end of the bolt will straighten out any damage that sawing and filing did to the threads. Gripping the bolt by the piece to be sawed off localizes any crushing damage to the piece that will be thrown away.

"Bench Tips for Jewelry Making" and
"Broom Casting for Creative Jewelry"
are available on Amazon

Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on Amazon
www.amazon.com/dp/0988285800/

Upcoming Events

Sunday, Jan. 3, 2016
State Line Gem & Mineral Society
monthly meeting & induction of officers
Potluck
2:00 p.m.
201 W. Main St.

February 19 - 21, 2016
Indianapolis, IN
GeoFest
14th Annual Indiana State Museum Fossil,
Gem & Mineral Show
Indiana State Museum
650 West Washington Street
Indianapolis, IN

March 4 - 6, 2016
Richmond, IN
43rd Annual Show
Wayne County Fairgrounds
861 N. Salisbury Rd.
Richmond, IN

March 18 - 20, 2016
Jackson, MI
Michigan Gem & Mineral Society
Annual Show
"May the Quartz Be With You"
Jackson County Fairgrounds
American One Event Center
200 W. Ganson
Jackson, MI

April 29, 30, May 1, 2016
Kalamazoo, MI
Kalamazoo Geological & Mineral Society
57th Annual
Rock, Gem, Fossil and Mineral Show
"Dinosaurs Will Rule"
Kalamazoo Expo Center
2900 Lake St.
Kalamazoo, MI

Solution:

Rock Trails

Sandy Gerhart, Editor
704 W. US 223, #205
Adrian, MI 49221

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