



THE  
TULIP CITY  
CONGLOMERATE



Bulletin of the Tulip City Gem & Mineral Club, PO Box 2082, Holland, Michigan

Website: [www.Tulipcity.org](http://www.Tulipcity.org)

January 2012

Volume 45, Edition 1

# Rockin in the New Year!



## General Meeting & Presentation

January 25 at 7pm

Howard Miller Community Center in Zeeland



Speakers: Adam Davis and Adam Mulling, Geology students from GVSU and 2 of the first 3 recipients of the *Norman & Helen Gibson Geology Field Study Scholarship*.

Come and learn how these students used their scholarship as they share their exciting field of study! We also welcome Gibson family and GVSU faculty to the meeting.

This scholarship fund was created in honor of Norman and Helen Gibson in 2007 and is now fully endowed by the Gibson family and the Tulip City Gem & Mineral Club to support students in the geosciences.

Geology is the study of the world around us and the way it was formed. The study expands beyond the earth and includes the building blocks of the whole universe. Without the study of geology, it would have been very difficult to build the modern world around us. For one thing, it would have been impossible to locate building materials for our roads, houses, and office buildings. Without ready access to metals like gold, we would never have been able to make the wide range of electrical devices like cell phones and digital cameras that we all depend on.

The study of geology is about more than just identifying rocks or finding mineral deposits. It is the study of how all Earth's systems work together so that we can work with nature instead of against it, and we can have a better grasp of the future implications of our actions on the world around us.

An understanding of geology and the Earth's systems has become critical in a wide range of fields. It's not just miners, oil riggers and college professors who study the story of the rocks: it is also civil engineers, architects, urban planners, and investors. Via [www.universalclass.com/i/course/learn-geology-101.htm](http://www.universalclass.com/i/course/learn-geology-101.htm)

This Beautiful Amethyst Cathedral was donated by show dealers: Bill & Linda owners of Heyworth Beauties of Creation.



We will sell tickets (\$5 each) at the General Meetings. The winner will be drawn at the April Scholarship Banquet.

### THE NEW MEETING PLACE FOR THE

**TULIP CITY GEM & MINERAL CLUB IS:**



**HOWARD MILLER COMMUNITY CENTER  
14 S. Church St, Zeeland, MI 49464**

## BOARD OF DIRECTORS

President & Past President	Dave Nienhuis	<a href="mailto:dpnienhu@sbcglobal.net">dpnienhu@sbcglobal.net</a>
Vice President	Jon Mull	<a href="mailto:solace247@yahoo.com">solace247@yahoo.com</a>
Secretary	Shared	
Treasurer	Julia Sherwood	<a href="mailto:bobandjulia@accn.org">bobandjulia@accn.org</a>
Directors at Large	Chris Cooper Ken Zeedyk	<a href="mailto:kayakno1@yahoo.com">kayakno1@yahoo.com</a> <a href="mailto:zekeshouse@wmol.com">zekeshouse@wmol.com</a>
Field Trip Chair	Bob Sherwood	<a href="mailto:bobandjulia@accn.org">bobandjulia@accn.org</a>
Historian	Betty Hoekstra	<a href="mailto:kbhoek@att.net">kbhoek@att.net</a>
Jr. Club Co-Chair	Rick Smith Linda Winklemann	<a href="mailto:smithr@hope.edu">smithr@hope.edu</a> <a href="mailto:lindawinklemann@att.net">lindawinklemann@att.net</a>
Liaison	Esther Kirkendall	<a href="mailto:ekirken@yahoo.com">ekirken@yahoo.com</a>
Membership Chair	Shari Luttkhuizen	<a href="mailto:sluttikh@oaisd.org">sluttikh@oaisd.org</a>
Newsletter Editor	Karri Nienhuis	<a href="mailto:dpnienhu@sbcglobal.net">dpnienhu@sbcglobal.net</a>
Show Chair	Ralland Malone	<a href="mailto:rallandm@aol.com">rallandm@aol.com</a>
Social Chair	Shared	

## FEBRUARY BIRTHDAYS

Birthstone: **Amethyst**

2/3	Carson Mantooth
2/3	Dave Nienhuis
2/5	Juanita Nielsen
2/6	Michelle Reineck
2/6	Matt Smith
2/6	Tatsch, David
2/6	Logan Volakakis
2/7	Irener Bartlett
2/8	Lilly Mantooth
2/13	Ann Meskauskas
2/13	Patty Valentine
2/14	Patricia Gardner
2/15	Jana Tafelski
2/16	Susan Katt
2/16	Ralland Malone
2/20	Jeff Sanford
2/23	Dave Root
2/24	Scott Huber
2/24	Joy Sabo
2/25	Lora Huizingh
2/26	Trevor Wallar
2/28	Conner Brown



### January Question of the Month?

What is the name of this mineral?



\_\_\_\_\_ is an iron [sulfide](#) with the [formula FeS<sub>2</sub>](#). This mineral's metallic [luster](#) and pale-to-normal, brass-yellow hue have earned it the nickname **fool's gold**.

When you arrive at the General Meeting; write the answer and your name on a piece of paper (found near entrance of the auditorium) for your chance to win a prize.

### WELCOME NEW MEMBERS

Timothy & Missy Kent and  
Children: Brendan, Jay and Bryan  
Hudsonville, MI

Michael Larson - Kentwood, MI

Tedd & Joy Oyler - Douglas, MI



Our deepest sympathy to club member Jean Prys and family. Timothy P. Prys, age 58, of Grand Haven, passed away on January 5, 2012 at home. Tim graduated from Grand Haven High School and went on to serve in the U.S. Navy. He enjoyed collecting and polishing rocks, digging, gardening, and wood working. He also enjoyed reading and even wrote his own book.



## CLUB CALENDAR

January 25<sup>th</sup> - General Meeting &  
Geology Presentation at 7pm  
HOWARD MILLER COMMUNITY CENTER

January 31 - Tuesday, 7pm  
Show Committee Mtg  
Howard Miller Community Center in Zeeland

February 15 - Board Meeting 7pm  
Howard Miller Community Center in Zeeland

February 29 - General Meeting &  
Presentation  
Howard Miller Community Center in Zeeland

March 14 - Board Meeting 7pm  
Howard Miller Community Center in Zeeland

March 28 - General Meeting &  
Presentation on Field Safety and Tools  
Howard Miller Community Center in Zeeland

April 11 - Board Meeting 7pm, HMCC

April 25 - Scholarship Banquet, 7pm, HMCC

May 16 - Board Meeting 7pm, HMCC

May 30 - General Meeting &  
Presentation, 7pm, HMCC

June 14 - Board Meeting 7pm, HMCC

June 27 - General Meeting &  
Presentation, 7pm, HMCC

July 14 - ANNUAL CLUB PICNIC POTLUCK  
Location to be determined

August 15 - Board Meeting 7pm, HMCC

August 29 - General Meeting at the  
Holland Civic Center 7pm - Show Prep

**September 14, 15 & 16**  
**Tulip City Gem & Mineral Club's**  
**43<sup>rd</sup> Annual Show**  
**Holland Civic Center**

## VICE PRESIDENTS MESSAGE

by Jon Mull

I just wanted to say Thank You to all who presented a Favorite rock or tool at the December meeting. It was great to hear all the stories and a fantastic job to all the Juniors!

Also, I am working on a **SPECIAL GUEST SPEAKER FOR THE APRIL SCHOLARSHIP BANQUET...** He is an author, speaker, has been featured in many publications. Stay tuned as we uncover



To help fund our special events we would like to do a monthly raffle. If you have any items that you would like to donate to the club, please see Ken Zeedyk.

We will be auctioning off two 3lb rotary tumblers, donated by an anonymous donor, at the February General Meeting.

## SHOW BIZ

All members: Please come to help us plan our 2012 Annual Show at the Howard Miller Community Center on Tuesday, January 31st at 7pm!

There are committee positions that need to be filled.

Ralland Malone, Show Chair  
Karri Nienhuis, Interim Co-Chair

## OTHER EVENTS:

**Feb 12: LINCOLN, NE**, Geology Day, Lincoln Gem & Mineral Club, Nature Center, Pioneer Park, Coddington & W Van Dorn, 1:00-4:00 PM, Contact: Lincoln Gem & Mineral Club, Inc, PO Box 5342, Lincoln, NE 68505, [jna@inetnebr.com](mailto:jna@inetnebr.com), [www.lincolngemmineralclub.org](http://www.lincolngemmineralclub.org)

**Feb 25-26: ROSEVILLE, MN**, Pre-Spring Show, Anoka County Gem & Mineral Club, Har Mar Mall, 2100 Snelling, Sat 10:00-6:00, Sun Noon-5:00, Contact Martha Miss, 8445 Grange Blvd, Cottage Grove, MN, 55016, (651) 459-0343, [info@rock-biz.biz](mailto:info@rock-biz.biz)

**BOARD MEETING MINUTES**

December 7, 2011



Present: Dave Nienhuis, Chris Cooper, Betty Hoekstra, Shari Luttikhuizen, Jon Mull, Karri Nienhuis, Bob Sherwood, Rick Smith, Julia Sherwood, Cindy Root, Ken Zeedyk

Absent: Esther Kirkendall, Linda Winkelman, Kathy Steffler, Patty Valentine

Guests: Chet Smith, Ken Hoekstra, Dave Root

The meeting was called to order by President Dave Nienhuis at 7:10pm

Board Meeting minutes of November 16, 2011 were discussed and changes included:

- Addition of Kathy Steffler on the list of those absent.
- Change to the vice president's report as follows: "The evening will be an opportunity for members to share some of their 'favorites'."
- Correction to spelling on title of "Field Trip Report"
- The meeting ended at 9:15pm

General Meeting minutes of November 30, 2011 were discussed and changes included:

- The two-line ad referred to by the Donkers is an e-mail ad, not one in a newsletter.
- The carrying forward of proceeds by the treasurer is not an on-line process, but is accomplished by using accounting software.
- The date for the show meeting is January 31, 2012.

Both sets of minutes were approved as corrected.

Treasurer's Report as given by the president was accepted.

Vice President's Report: Professor Peterson is continuing to work with two students regarding an upcoming presentation. The March program will be about field safety and tools. Possibilities for other programs were also discussed.

Field Trip Report: Four field trips are currently listed on the website. Bob is working on a tour of the Shelby Gem Factory will take place on Saturday, February 11. Details announced at the January general meeting.

Basement field trips will take place March 10 and 24.

Unfinished Business: The club has 22 calendars remaining. The pros and cons of where the club should meet were discussed and a recommendation will be made to club members of have our meetings at the Howard Miller Community Center. An effort will also be made to have activities at Hope College. Work was continued on the Job Duties of board members.

New Business: With Board approval, Julia Sherwood has been appointed Treasurer. A budget committee was formed for the year which includes Dave Nienhuis, Julia Sherwood and Ken Zeedyk.

The meeting was adjourned at 9:20pm

Respectfully submitted,

Cindy Root, Secretary pro tem

**GENERAL MEETING MINUTES**

December 21, 2011

President Dave Nienhuis called the meeting to order at 7:06pm at the Howard Miller Community Center (HMCC). There were 50 adults and 23 juniors in attendance.

New member Mike Larsen was introduced along with one visitor.

Following their prize drawing, juniors were dismissed to their meeting.

The adult drawing took place with Ken Zeedyk the winner.

Consent agenda items including the Nov.16 and Nov.30 minutes were accepted.

Treasurer's report: Expenses (mostly newsletter) \$145.62, deposits \$905(dues and calendars).

Dave reviewed the items of discussion from the December Board meeting with no questions or comments from the membership.

Old Business: V.P. Jon Mull stated that the workshop questionnaires were available on the back table at the meeting and also online. Anyone wanting a "mentor" can contact Jon to be matched with another club member.

Field trip: Bob Sherwood reported on 4 upcoming field trips. See Club website.

Show: Karri Nienhuis is filling in for Show Chair Ralland Malone while he is out of state this winter. The first Show meeting will take place at the HMCC on Tuesday, January 31. Signup sheets for various positions are available from Karri.

Calendars: There are still 22 available for purchase; see Chris Cooper.

New Business: Julia Sherwood was appointed by the President to fill the Treasurer's position, which was approved by the Board. Her appointment was approved unanimously by the general membership.

Dave recognized members who are leaving the Board: Cindy Root, Past President; Kathy Steffler, Secretary; Rebecca Cistaro, Treasurer; Patty Valentine, Show Chair.

Cindy Root conducted the Installation of Officers. Since there was no Secretary or Hospitality Chair, the positions will be appointed monthly by the President.

Dave presented the pros and cons that the Board developed in their last meeting in regard to the choice between Hope College and HMCC as a permanent meeting location. After discussion with the general membership, Dave reported that the Board recommendation was to choose HMCC. An oral vote was taken and HMCC was unanimously selected.

Ken Zeedyk conducted the auction of a donated calendar (\$10 Jan Sjoquist) and donated petrified log piece (\$170 Chelsea Proos). In answer to a question, the proceeds are going to the scholarship/memorial fund.

Membership renewals are due; pay the Treasurer in order to avoid being dropped from the membership list.

Break for refreshments and social time.

? of the month—where is the only location to find copper replacement agates---Keweenaw Peninsula. Winner, Ken Zeedyk, declined since he won the drawing earlier. Next winner, Pam Haverman.

Program: Jon Mull introduced "Favorites"—rocks, places/trips, tools, etc. A number of juniors and adults regaled the group with their favorites.

Meeting adjourned at 9:15pm

Respectfully submitted by Kathy Steffler, Secretary

**Note: Board Meetings are open to the Club members.**



**FIELD TRIPS** by Bob Sherwood, Field Trip Chair, email [bobandjulia@accn.org](mailto:bobandjulia@accn.org) or 269-637-7097

Here are field trips that are currently scheduled for 2012 for all members to consider and plan around well in advance!

January 28 or February 25: Alabastine Gypsum Mine (Michigan Natural Storage Co.) Grand Rapids, MI - Details below for the Alabastine Gypsum Mine.

*Details will be coming in the next few months* for the following:

March 10 & 24: Regional Club "Basement" Field Trips, arranged by Kreigh Tomaszewski, Indian Mounds Club

April 6 & 7, Spring Break Field Trip: "Collecting Petoskey Stones along Michigan's West Coast"

June 9 - July 2: "Utah! 3 weeks of collecting in Utah's fascinating red rock, canyons, buttes and mesas"

July 26 - 29: "Celebration of Agates" Show, Minnetonka, MN, visit their website: [www.minnesotamineralclub.org](http://www.minnesotamineralclub.org). Followed by a week collecting in the Black Hills of South Dakota.

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## FIELD TRIP TO THE ALABASTINE GYPSUM MINE (Michigan Natural Storage Co.) January 28 or February 25, 10:00am to 4:00pm

Please carefully read the entire notice before responding.

I have made arrangements with the mine owner to make two collecting trips into the former Alabastine Mine, that is now owned by Grand Rapids Natural Storage. There is a wide variety of specimens to be collected. 'Pencil' selenite and alabaster gypsum are abundant, both white and honey/salmon colored. You may find clear selenite or satin spar gypsum. Fossil collectors may find shark coprolites, teeth, or spines, and plant and wood fragments, in the shale near the dolomite ceiling; ceiling collecting is strongly discouraged as a safety issue (and prohibited for petrified wood). Mineral collectors may enjoy seeing epsomite hairs hanging from the ceilings, but should only collect those that have fallen or that are growing on rubble on the floor.

**Risk:** Entering a mine implies accepting risk, including the chance of serious injury or death. By voluntarily signing up for this trip you agree to accept this risk personally and hold the mine owner, the Indian Mounds Rock and Mineral Club, or their agents, blameless for any accidents that may occur during the trip.

**Safety:** Everyone must sign in when entering the mine. Everyone must sign out when leaving the mine. NO EXCEPTIONS. The safety list will be in the mine next to the elevator. I don't want to spend hours searching six miles of tunnels for some idiot who failed to sign out (you won't ever be invited back). I will accept no excuses for failing to follow this basic safety procedure. Safety is not optional underground. Please do not collect alone. Use common sense. Don't get hurt. Cost: There is a \$2.00 fee per person for entering the mine to cover the cost of electricity for lights and the elevator. Pay when you arrive as part of sign-in. You will not be allowed entry if you have not paid the fee. Please have the correct amount so I don't have to make change as you sign in.

**Equipment:** Hard hats are required. If you have extra hard hats, please bring them along (we usually have a few that do not have a hard hat, or forget theirs). Safety glasses are not required, but are always a good idea.

You MUST have at least two light sources. The mine tunnels we will be collecting in are not lighted. Make sure you start with new batteries, and have extras in your pocket. It is not possible to have too much light when you are 85 feet underground.

You MUST bring two pairs of shoes. One pair will be worn for travel in and out of the clean part of the mine that has cement floors. The second pair will be worn in the very muddy part of the mine where collecting will take place. It is strongly recommended that your second pair be boots for collecting in the drifts. It is very important to the mine owner that the finished parts of the mine remain clean because of the foods they store. We want to be able to return again, so this is an absolute requirement (unless you want to walk out barefoot, not recommended).

## ALABASTINE GYPSUM MINE *continued*

The mine is a constant 50-52 degrees. It is very muddy. Clearance in some tunnels is 4 feet (most are 12 feet) so you may do some crawling. Please dress for the conditions. Expect to get very dirty. Gypsum/shale mud is very sticky.

Tools: Rock pick, 2-5 lb sledge, chisels. Make sure you have a bucket or collecting bag to carry out specimens. You may want some wrapping material (newspaper) for protecting your best specimens. You may want to consider a pry bar. Travel light. You may bring a cart to the staging area underground.

Food: Mining is hard work. Bring a sack lunch and snacks. Everything you bring into the mine must be carried out. There are rest room facilities on the surface. Don't forget water.

Elevator: If you use the elevator you MUST leave the doors closed so it can be recalled from the surface or the mine. None of us want to be forced to use the stairs. The staff depends on the elevator being callable; we don't want to lose mine access because someone forgot to close the elevator door.

Directions: 131 to Burton Street West. Right on Clyde Park, Left on Chicago Drive, Right on Judd. 196 to Chicago Drive (exit 72), Right to Burlingame, then Left onto Chicago Drive, Left on Marquette, Left on Judd. Back parking lot on the right. Please arrive at least 20 minutes early to pay your fee and sign in. Use Google Maps or Mapquest if you have doubts about the directions. Everyone must arrive on-time (the mine requires us to go down as a group - come late and you don't go down), but you may leave any time you have finished collecting.

The mine has restricted access due to city and other regulations. The first 40 people who confirm reservations with me for either date will be able to attend this trip. Children are welcome, but we ask that they be at least 8 years old. Please let me know as soon as possible if you are unable to keep your reservation. If registering a (family) group, please provide the name of each person. Specify which date you would like to sign up for in your request.

I will keep a waiting list; please include your phone number with your (emailed) request so I can contact you at the last minute if someone drops out, or if there are last minute changes (you will go to the end of the list if you forget your phone number on your reservation request). People on the waiting list from the last trip always have the first opportunity to sign up for the next trip (if they provided an email address).

Do not hesitate to ask questions. Contact (IMRMC) is Kreigh Tomaszewski at 616-243-5851 (home) or 616-787-7955 (work), or [Kreigh@Tomaszewski.net](mailto:Kreigh@Tomaszewski.net) (email). Email is preferred. Complete requests will be first-come, first-served, but you really do need to give me the full names of all those attending in your party, their club affiliation, your email address, which date you want to attend, and your phone number (in case of any last minute changes). If you can't give me all the details I asked for in this notice, up front, you might get bumped to the waiting list when someone else responds completely while I wait for you to supply any missing details. If you are not a member of the Indian Mounds club please CC your club Field Trip Director on your response so they know you are applying for this trip (and so I can verify your club membership).

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## LEARN SOMETHING NEW: WHITE SANDS

by Keri Dearborn

Gypsum is a water soluble material. Yet, the shifting dunes of White Sands, New Mexico, are made of this material. How did it get there and why hasn't it been washed away?

250 million years ago the gypsum was a dissolved mineral floating in a shallow inland sea. As the climate changed and the ancient sea retreated into the lowest corner of its previous domain, the gypsum was concentrated. When the last of the water evaporated away, the gypsum was left behind. The glittering white sand dunes of gypsum survive today because there are no rivers or streams that drain the low-lying basin. Even when the rare rainfall comes, the gypsum cannot escape. When the rainwater evaporates the gypsum is left behind again. Only wind threatens to scatter the white mineral crystals. The gypsum dunes of White Sands are very unusual and fortunately for all of us, President Herbert Hoover used the Antiquities Act of 1906 to protect the area in 1933.

Via The Show Me Geode summer 2005



## GET TO KNOW YOUR FELLOW MEMBER: Jean Prys

Interests/Hobbies: quilting, ceramics- rock hunting & traveling

Favorite Rock: Crystals from Arkansas

Do you have a workshop: Anywhere I have room in the house

Favorite food: baked sweet potatoes

Least favorite thing: Mushrooms

What is/was your profession: Accounting-Human Resources

One thing no one knows about you: My real first name (Gezina)

What is the weirdest thing in your home: My secret drawer

Trip you would like to take: Out to Lake Havasu Calif.

Involvement or favorite thing about the club: I am sorry I can no longer be as involved - (health)

Jean states: "Henry and I helped start the Grand Haven meetings in 1966. We had to disband in the 70's, as we had very few youngsters, and that is what keeps a club rolling as they grow."



## SKETCH OF MICHIGAN'S GEOLOGIC HISTORY

by Prof. Kyril Spiroff, Mich. College of Mining & Technology

The state of Michigan is richly endowed by Nature with varied geologic phenomena. There is evidence to show that within the state there were lofty peaks of active volcanoes, that prevailing westerlies ruffled the waves of the shallow seas that once covered it, and that in turn, deserts, jungles and ice ruled where now the genus *homo* ekes out a living.

In the upper Peninsula the bedrock formations include some of the oldest rocks known. Many of these were originally gravels, sands, marls and silts, deposited in the shallow seas or on great outwash plains that existed in this region a billion or more years ago. Life was not abundant in those ancient times, but humble forms of the plant and animal kingdom were present. Some of these lowly organisms formed reefs that are similar to deposits of a much later date; other remains formed carbonaceous or graphitic layers, but nothing like coal.

A unique feature of these oldest rocks are the iron formations. The total quantity of iron-bearing minerals deposited in the shallow seas of this period has never been repeated. A comparatively small amount, much less than 1%, of this iron formation was later concentrated into commercial iron ore by natural processes. For many years the iron deposits of the Lake Superior region have yielded 80-90% of the iron produced in the United States. Since 1840 Michigan has been a steady producer.

After great thicknesses of the iron formation and associated deposits were laid down, the district became the site of a profound crustal disturbance. The beds were contorted and broken, high mountains were formed, and great masses of molten rock surged within the earth's crust and broke out to the surface in the form of volcanoes. In the center of Lake Superior, where deep cold water now conceals the remnants of this activity, large fissures poured forth lavas that flowed as far as the present shores of this great lake. Intermittently, layers of gravel and sand spread over lava flows. Spent by all this activity the area then sank, leaving the outer part of the volcanic series as rims round the present Lake Superior.

Within the porous and fragmental part of the lavas and the interstratified gravels now found in the Keweenaw Peninsula, native copper was deposited in veins, long famous for their unique character, the only large deposits of native copper in the world. The purity of the copper is such that it cannot be improved by metallurgical treatment; and the lodes are among the most persistent known in the world, continuing down along the incline for a distance of 10,000 feet and horizontally for distances measured in miles. How much farther they go down into the earth is unknown. The working have been limited by mining and economic factors rather than by the continuity of the deposits.

## Sketch of Michigan's Geologic History *Continued...*

This copper lured man of the Stone Age, evidenced by crude implements found in shallow pits where shafts now go a mile or more deep.

Several of the mines in the Upper Peninsula have the distinction of being the deepest in the United States. The Quincy at Hancock attained a depth of 9,009 feet along the incline, or 6,254 feet vertically. The Red Jacket of the Calumet and Hecla Co. at Calumet had a 5,690-foot vertical shaft. Auxiliary shafts reach to 9,500 along the incline.

A million years or more after the eruptions of the Keweenaw an epoch the Michigan basin began to develop. During Paleozoic time this large basin slowly filled with sediments from nearby landmasses, along with chemical precipitates and shells of an infinite number of marine creatures.

In shallow bays and arras of the sea toxic conditions prevented complete destruction of accumulating dead vegetable or animal remains. Natural distillation of some of these organic materials formed crude natural oil and gas. Oil and gas, being mobile, migrated into anticlinal structures formed in the more porous rock beds.

Strata of gypsum and salt, interbedded with various other sedimentary rocks, were precipitated during several of the many flooding of the basin. These sediments furnish raw material for such important industries as Portland Cement, gypsum, salt and brine. The Dow Chemical Company at Midland alone produces several hundred products from natural brines.

By the end of Paleozoic time, the basin became a broad floor plain of low swampy nature. Life had made enormous strides in development. Fishes, crustaceans and mollusks were abundant. Plant life was very conspicuous. The luxuriant vegetation of tree ferns, giant mosses and horsetails, growing in the warm moist climate transformed this low land into jungle swamps exceeding those today.

One economic product of these former swamps is coal. It represents accumulation of vegetation under conditions that prevent complete oxidation. As vegetation accumulates on the surface it forms peat, composed of partly decayed stems, leaves,

and woody materials, along with an amorphous black jelly-like substance which results from complete decomposition. When buried and covered with mud and sand, however, the partially decomposed substance is compacted by pressure to form lignite coal at first, and after long burial, bituminous or soft coal.

After the disappearance of the last of the Paleozoic seas, Michigan may not have been submerged again. However, the state was covered several times by enormous sheets of ice, as Greenland is today. These glaciers modified the appearance of the land. As they moved ahead, they grooved and polished the resistant rock outcrops, picked up and carried away the residual soil and acted as large ball mills pulverizing the granite, forming "rock flour" rich in potash and phosphates -- ideal plant foods. As the glaciers retreated the load was deposited in chaotic fashion, leaving hills, gravel beds and shallow lakes.

As a result of geological process, the Upper Peninsula of Michigan is favored with enormous deposits of iron ore and copper, while the Lower Peninsula can boast of its salt, oil wells, gypsum beds, coal mines and good farming lands. The scenic wonders, sandy beaches, forests, streams and lakes beckon the traveler, fisherman and hunter, and the state is one of the nation's favorite playgrounds.

So reads the fantastic tale, the terse natural biography of our state. To the little boy who might ask, "Do you expect me to believe this?" I reply, using the phrase of another little boy, "You are blind in one eye, and can't see with the other". Nevertheless, come be a good sport. Master the alphabet so you can read the things you see.

It may be that a crystal, a fossil, a pebble, or perhaps a scenic feature is waiting to be described or interpreted. Their underlying causes are found in the records of the past. The ability to properly interpret these records depends upon the knowledge of the forces which produce them. Thus, the study of geology leads one to the understanding of the laws which contribute to our daily welfare, for these processes have been in operation from the beginning and are in operation now, and will continue.

Midwest Federation of Mineralogical & Geological Societies  
Twentieth Annual Field Trip Convention, July 1-2-3-4, 1960  
"Souvenir Bulletin of the Jaspillite"

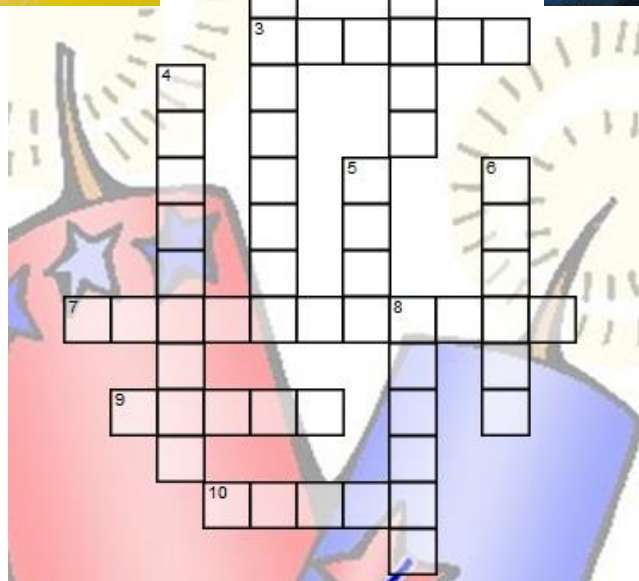
# Junior Rock Club Page

Junior Club Advisors  
Rick Smith and Linda Winkelmann

## Talc - The Softest Mineral

A beautiful, carved vase is sitting on a shelf. Talcom powder and soapstone are nearby... It sounds like you are preparing for a pleasant bath! Indeed you could be... and you would be surrounded by the mineral TALC itself. What a surprise! A hydrous magnesium silicate, formerly a metamorphic rock, has become part of your routine!

TALC is soft (Mohs 1), feels greasy and is rarely seen in free crystals. In its flaky form, it makes an excellent body powder. In its massive form, called SOAPSTONE, it has been used for thousands of years to make tabletops, cosmetics and pottery glazes. It can be whittled and carved into works of art. It is usually white or green, but can be gray or black. -- Juniors will enjoy making graffiti marks with their fingernails on their take-home specimens.



**DOWN**

- 1 Chemistry is \_ Silicate Hydroxide
- 2 \_ is not soluble in water
- 4 Talc is used to make facial
- 5 Happy New
- 6 Name of your Rock Club
- 8 Widely known as baby \_

**ACROSS**

- 3 Feels
- 7 Talc is formerly a \_ rock
- 9 Talc is the softest on the Mohs \_
- 10 Streak Color

### TULIP CITY GEM & MINERAL CLUB MEMBERSHIP RENEWAL FORM

Make check payable to: TCG&M Club  
 Mail to: **Shari Luttkhuizen**  
 6582 Rollingview Drive  
 Hudsonville, MI 49426

Check membership type: [ ] Individual - \$15 [ ] Family - \$20

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

[ ] I would like to receive my newsletter via email only.

*Note: New Members that signed up at the Sept. show are paid for 2012.*



Circle Interests:  
 Minerals, Fossils,  
 Lapidary, Field Trips,  
 Club Office

Comments:

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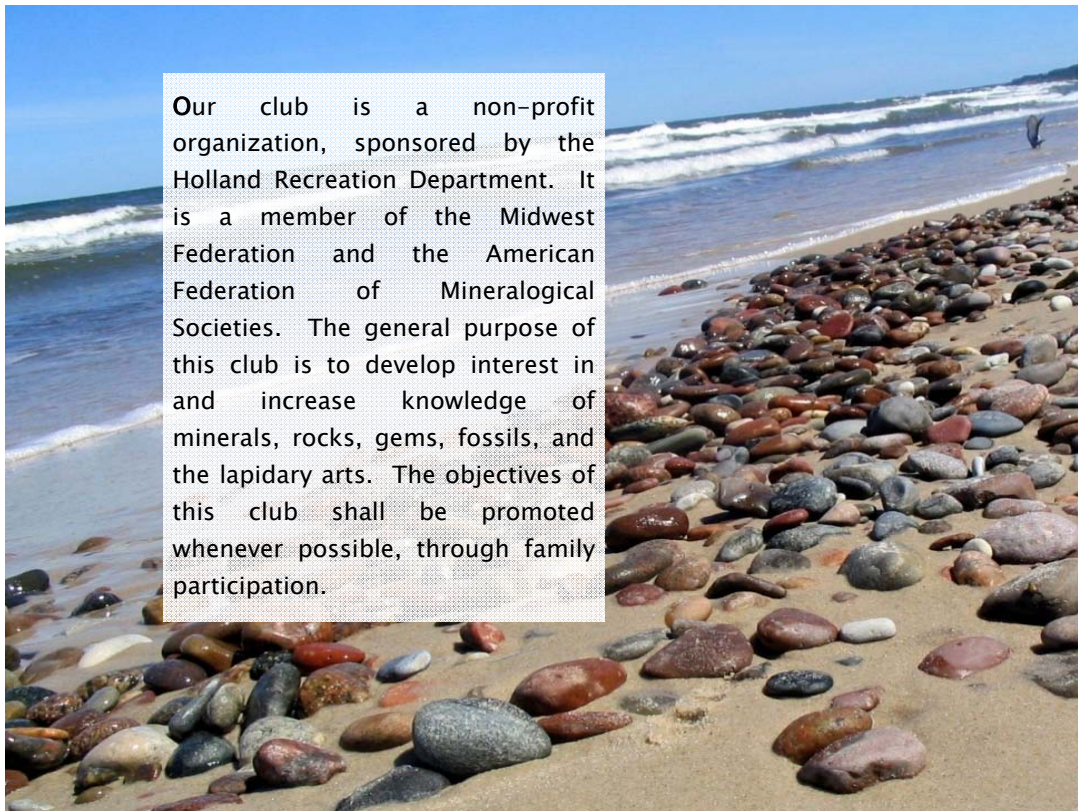
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Our club is a non-profit organization, sponsored by the Holland Recreation Department. It is a member of the Midwest Federation and the American Federation of Mineralogical Societies. The general purpose of this club is to develop interest in and increase knowledge of minerals, rocks, gems, fossils, and the lapidary arts. The objectives of this club shall be promoted whenever possible, through family participation.

Advertising rates for Club members are: \$5 for business card size, \$10 for ¼ page, \$15 for ½ page, \$30 for full page. Double the rates for non-members. Payment by check; made out to: TCG&M; to be submitted with ad copy to Editor.

Deadline for Article Submission to the Editor is the Friday after the Board Meeting.

*Articles in this bulletin may be reprinted, provided credit is given to the source, author and bulletin.*

Dues: Family \$20 Single \$15

Meetings are held monthly on the last Wednesday of the month. See Calendar for meeting location announced in this TULIP CITY CONGLOMERATE. A Junior Club welcomes young rockhounds and meets separately during the evening.



Tulip City Conglomerate  
Karri Nienhuis, Editor  
4121 60<sup>th</sup> Street  
Holland, MI 49423



**SAVE THIS STAMP FOR MWF ENDOWMENT**

The \* by your name indicates dues for 2012 are not paid and this will be your last Newsletter. Send your check to: Shari Luttikhuisen, 6582 Rollingview Dr, Hudsonville, MI 49426. Please include any changes in address, phone or email.

**FIRST CLASS POSTAGE**

