

INDIAN MOUNDS
ROCK & MINERAL CLUB
WYOMING, MICHIGAN
A RROWHEAD
NEWS

NOVEMBER IS
**THE BEAUTY OF
FOSSILS**
See page 3 for details
Nov. 17 AT 7PM

LOIS BRAVES THE COLD...JUST FOR ROCKS!



RED HOT

FOLLOW
**KREIGH AS
HE DEFIES
LOCAL
ROCKHOUND
LORE !**

*SEE ARTICLE ON
PAGE 4*

IMAGE BY DON VAN DYKE

THE VAN DYKE'S HAD ANOTHER ROCKHOUDING ADVENTURE. AREN'T THEY BRAVE!
SEE ARTICLE ON PAGE 6

VOLUME 46 #7
November 2009

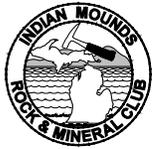
*The Indian Mounds Rock and Mineral Club
is a nonprofit organization, incorporated under the laws of the State of Michigan.*

*This club's objective is to develop and encourage interest in, and to further the study of minerals, gems,
fossils, rocks, lapidary arts, and earth science.*



AFFILIATED WITH THE MIDWEST AND AMERICAN FEDERATIONS OF MINERALOGICAL SOCIETIES

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or other non-profit organizations only, as long as proper credit is given (unless stated otherwise.)*



Welcome to the *ARROWHEAD NEWS*, official publication of the Indian Mounds Rock & Mineral Club of Wyoming, Michigan.



Visitors are welcome at all Meetings!

WHEN & WHERE

Club Meetings are held at 7:00 PM on the 3rd Tuesday, September through May, in the fellowship hall located in the basement of the Wesley Park United Methodist Church. The church is on the corner of Michael and 32nd Street, south of 28th Street, in Wyoming.

At 6:30 PM, on the 3rd Tuesday, June through August, our club has a **picnic** at Pinery Park in Wyoming, which is on DeHoop just north of 28th Street. Our usual spot is behind the north parking lot on the west side of DeHoop. Bring a dish to share, your own drinks, and table service.

Board Meetings are held right after the club meeting, or by special announcement on the 4th Tuesday of the month.

Club Membership dues are \$15 per family, \$10 per individual and \$5 per junior. Payment is due by the 3rd Tuesday of September and is for the following January – December. **New** members that join at or after the annual show, pay only one-half of the yearly dues. Membership includes 9 issues of the Arrowhead News.

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The **subscription rate** for the **Arrowhead News** is \$8.00 per year. *Emailing is encouraged - just ask!* Article submission is due to the Editor **before** the 25th of the month.

The Arrowhead News is also available on our website. Send **exchange newsletters** to the Editor.

All articles without a byline have been written by the Editor.

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PRESIDENT'S MESSAGE NOVEMBER '09

By Jim Elliott, President

November is here, with mixed weather, falling leaves and Thanksgiving on the horizon. I am thankful for so many things, some of which are Club related.

At our October meeting, we had our annual Silent Auction. What an evening! Our Silent Auction just gets better and better every year. This isn't just a mere coincidence. This event takes a lot of planning and effort, and under the guidance of Silent Auction Chairman Ed Krzeminski, I think this was one of the best ever. The tables were well stocked and monitored, turnover was quick and the room was filled with many eager bidders and visitors. We had a great evening with lots of items being auctioned and many happy faces. Thanks Ed, for the outstanding job you do with the Silent Auction. On behalf of the Board, I also want to thank all the club member volunteers for all of your help in setting up, in keeping the tables filled, helping people check out and ensuring everyone had a good time and that things went as smoothly as they did.

Our November meeting is the Annual Meeting when the Club holds elections for the officers and board member of our Club for the next year. In order to have a complete Board as required by our Bylaws, we need to elect a President, Vice President, Secretary, Treasurer, Field Trip Chairperson, Librarian and three Board Members. These are all one-year terms. It's not too late to volunteer for one of these positions. Nominations may be made from the floor at the Annual Meeting, providing the nominee gives consent. It's that easy! We are looking for new Board members and a new newsletter Editor. Brenda has been doing a tremendous job as our newsletter Editor putting together each issue of the *Arrowhead News*, but would like to step aside. She has put together all of the files necessary for someone to step in, take over and fill her shoes. Please think about this opportunity to help your Club and quite possibly gain recognition.

There is a reference attachment to this message that identifies the Club Officers and Board member positions as specified in our Bylaws. Please take a moment to review this prior to the Annual Meeting. (*Editor's note: see page 4 for list of positions and current position holders*)

I look forward to seeing you all at the next meeting.

Stay safe and have fun,

Jim

JUNE CULP ZEITNER (1916-2009) A ROCKHOUDING LEGEND

From Alan Hukill, MWF

This legend of our "rocky" world passed away on October 12th at her home in Rapid City, SD. She was 93 years old and had been in failing health for some time. The recipient of the first AFMS Recognition Award, June certainly brought the joys of our hobby to the public through her books, notably: *Midwest Gem*, *Fossil & Mineral Trails*, *Gem and Lapidary Materials for Cutters, Collectors and Jewelers*, and her latest, *Geodes*, co-authored with Brad Cross and articles in *Lapidary Journal* and *Rock & Gem* magazine. She was active in the Midwest Federation, serving as President in 1968-69, and she served as a bulletin judge for the AFMS annual Bulletin Editors' Contest for many years. Editors found her comments wonderful...helpful and to the point! June attended many AFMS Conventions over the years, and she was a regular fixture at the Tucson Gem and Mineral Shows. Having dinner with June was always great fun as she regaled the group with stories about her rockhounding adventures throughout the United States. June was also the founder of the National Rockhound & Lapidary Hall of Fame in Murdo, SD, (www.rockhoundhalloffame.org) and the recipient of the prestigious Carnegie Award in 2005. If there's a rockhound heaven, June is there leading a field trip!

NO TREASURER'S REPORT

NO CLUB OR BOARD MEETING MINUTES Due to the silent auction in October

INDIAN MOUNDS ROCK & MINERAL CLUB EVENTS

- November 17 **IMRMC MEETING**
Wesley Park United Methodist Church
Tuesday - 7 PM - 9 PM
Program: "The Beauty of Fossils" presented by Bobby and Terry House
- December 15 **IMRMC MEETING**
Wesley Park United Methodist Church
Tuesday - 6:15 PM - 9 PM
Christmas Party
- January 19 **IMRMC MEETING**
Wesley Park United Methodist Church
Tuesday - 7 PM - 9 PM
Program: "Beadwork, Wirework and Gems" presented by Doris Koehn

OTHER THINGS TO DO

- the 1st Tuesday MWF Mineral Study Group
The home of Kreigh Tomaszewski
53 Burton St. S.E., Grand Rapids, MI 49507
Tuesday - 7 PM - 9 PM

COURTESY CORNER

Kitchen Hosts for November
Judy Barber and Maureen Gregory

Kitchen Hosts for December's Christmas Party
Everyone!

Bring a hot and cold dish to pass and your table service.
Punchbowl starts at 6:15. Meat and beverages provided by the club.

PROGRAM REVIEW AND PREVIEW

By Nancy Spalenka, V.P./Program Chair

A BIG thank you to all who helped in anyway to make our Silent Auction a success last month. There was a great turn out with lots of great items for sale. A special thanks to all who helped put the tables back in place following the event.

"The Beauty of Fossils" is the theme for our November 17 program. I told Bobbie House that I never thought of fossils as "beautiful", but she assured me that there are some very beautiful ones, and we will see them at the meeting she and her husband, Terry, have planned for us. There will also be lots of hands-on examples in which we will be challenged to distinguish fossils from rocks, mineral, and agates. Kids especially will enjoy this program, so invite your young friends.

HONEY GYPSUM FROM THE ALABASTINE MINE

by Kreigh Tomaszewski

It was almost 50 years ago when I first visited the Alabastine Mine (Michigan Natural Storage Co.). I was in awe to actually be in an underground mine. I had a small rock collection, and had joined the Grand Rapids Mineral Society; my Dad took me to the monthly meetings at the Museum since I was not yet 10. This report is a tribute to the support my parents gave me in my early interest in rockhounding.

Some years later I started work on my first Boy Scout Merit Badge, Geology, as I worked towards becoming an Eagle Scout. I had to write a geology report and I did it on the Alabastine Mine, documenting its history and some of the geology. The owners were most helpful. I was able to independently obtain a survey map of the mine.

Years went by and I got to take school classrooms, and other groups of kids, into the mine as an adult chaperone. Then the mine was sold and access stopped. I used up all of the honey colored gypsum I had been trading for decades. Another collecting location lost.

During all these years everyone had always told me that the honey color of some of the gypsum (selenite) from the Alabastine was due to a salt (halite) impurity. Most of the mine has beautiful white alabaster, selenite (including a unique pencil variety), and some satin spar, gypsum. But there are areas where the gypsum is a beautiful, rich, dark, honey color. It was always worth collecting because it makes some of the most attractive specimens.

And then magic happened. A local college professor at GVSU obtained access to the lost mine locality and I got to go collecting again (in the middle of the winter!) after more than a decade. And a few months later I got to lead a field trip to the mine with six hours of unlimited access. My lost friend had returned.

But my rockhounding has matured from just pretty to the science hidden in the specimens. What was the real reason for the orange/red honey color of the best gypsum from the Alabastine? Was a halite impurity an adequate explanation? It was time to find out.

My matured rockhounding experience also found some affordable lab access, and I sent a sample off to a friendly college Professor (with a nominal donation to the college's geology scholarship fund)

I ran an XRD on the orange gypsum today. I didn't see any peaks (no halite) other than gypsum peaks for the orange material. I'm not sure what the pigment is, though it wouldn't surprise me if it was a trace of very fine FeOO (goethite, lepidocrocite) or hematite. The green clayey material is dominantly quartz with a mica-like clay, possibly celadonite or glauconite, considering the green color.

(Editor's note: Kreigh has some cool graphs backing this up, but I couldn't get them to publish.)

OK, it is time to throw away at least 50 years of accepted local lore. It is not halite causing the color. Now it is time to find the real cause of the honey coloration. I get to do some real science and discover something new.

Checking with a few local geology professors produced a consensus opinion of Potassium, but none could cite any published research. Local lore again. I tapped a friend at the USGS and did a search of the literature. Found some very interesting articles on Michigan Formation gypsum, but nothing to explain the color. Same results from a couple geology professors I asked.

It is time for brute force when XRD does not make a conclusive identification. Back to the lab for a Mass Spec (my first). It won't identify any minerals, but knowing what elements are present will be a big help. It doesn't hurt to get a friendly Geology Professor interested in a good question.

I think the color in the gypsum is due to iron oxides. The ICPMS analyses suggest that there's about 0.01 wt% K, 0.18 wt % Na, and 0.37 wt % Fe in the gypsum, with other candidate elements being well below those levels. The orange-red is typical of iron oxide pigments, too. I suspect the Na and K are mostly present as chlorides in inclusions of the brine the gypsum precipitated from.

see Honey Gypsum on page 5

HONEY GYPSUM

Continued from page 4

For the analysis, I dissolved 0.0131g of red gypsum in 18M-ohm water and 1 mL of sub-boiling double-distilled HNO₃ and diluted to 100.08g of solution (1 mL conc. HNO₃, balance = water, all ultra high purity). The analysis was done on a Varian UltraMass 600 ICPMS, with the following analytes set (this analysis was tagged onto the end of another analysis I was doing to identify a steel alloy): Be, Na, Mg, Al, K, Ca, Ti, Cr, Mn, Fe, Co, Ni, Cu, Zn, Mo, Cd, Sn, and W.

Under the microscope, I could see the red coloring is not even—it is somewhat mottled, but does not follow growth zones that I could see. And the Fe oxide pigment particles are too small to resolve optically (I'm using a Nikon Optiphot-pol research-grade polarized light microscope) even with a 100X oil immersion objective lens, so the particles are well under 0.05µm.

I suppose the particles might be detected using scanning or transmission electron microscopy.

The lab work is not done (I want positive results instead of a process of elimination), but I think it is time to share preliminary results that seem to be conclusive. It is not Sodium. It is not Potassium. It is Iron that makes the beautiful honey colored gypsum from the Alabastine mine.

The field work is not done either. My impression is that the honey coloration in the Alabastine seems to reflect a pond and stream topology in the gypsum beds, with the iron being introduced in the flowing/ponding water. I want to confirm this by mapping the honey color in the mine onto the survey map.

More research is needed. I hope I can get enough mine access to complete it.

THERE WAS A CLUB MEMBER NAMED HUGHES

Who waited too long to pay dues,
She was struck off the roster,
Did not realize it cost'er

The workshop, club field trips and news.

By Peter Martin, from Calgary Lapidary Journal, December 2006 via the Facets, January 2008

HAVE YOU PAID YOUR MEMBERSHIP DUES YET?

More than half of our membership have not paid their dues which were due in September. Attendance at our meetings have been at all-time high numbers, so we know you have been attending the meetings. Please pay your dues at the November meeting or mail Rhonda Leep, membership chair, with your renewal as soon as possible. See the front of this newsletter with her contact information.



WET, WETTER, AND COLD!

By Don Van Dyke

It was a busy fall and our agate trip had been pushed back from September to the first two weeks of October. When we left early October 5 it was raining off and on. Our plan was to 'camp' the 1st night at the Walmart in Ashland, WI. (It) was just about dark when we reached the Walmart 'campground', whoo...what are all those signs? Every light post was 'posted', "no truck or RV overnight parking by the order of----". So on we went for another two hours, all the way to the Walmart in Cloquet. We were bushed, and being of Dutch decent, decided to save a nights camping fee, and stay at the Walmart there. Tuesday it was raining when we arrived at the Cloquet City campground. Being gluttons for punishment we set up in the rain and ASAP headed on to the gravel pit. I could hardly believe my eyes, there were a number of other 'fools' already out there busily scratching around the banks and piles. We put on the rain duds and spent the rest of the day, 6 hours or so in a steady rain, diligently hunting. We did fairly well, but didn't find any trophies. The weather was better Wednesday & Thursday, though it was cloudy most of the time, with a sprinkle now and then, which made the agates hard to see.



Alex's
(from Omars)
'beauty'

Thursday one of the owner's sons, Alex, was in the pit loading trucks. Between loads he came over and showed us a 'beauty' that he had found earlier, a nice agate, just under a pound; that he found laying out in the open next to the hopper. It had been laying there at least 3 days with no one spotting it. He then pointed out a pile he thought we should hunt, and joined us between loads looking. Every now and then he'd pick one up and throw it in front of us, we just don't 'have the eye!' All told we ended up with about 17 pounds, some quite nice. Thursday morning a 'fancy' car drove into the pit and the driver dressed in shorts, got out and talked to Alex. After a bit he hauled out an ice cream bucket and started to show off some nice agates (better than anything we had) so I walked over. He wanted to sell them. Lois came down too and took a look. We bought them, 57 of them, all good ones. The 'pit' is about 6 miles from the Black Bear Casino and I think the guy was 'down on his luck' and needed some quick cash.

Friday morning we headed back to the U.P. In Wisconsin we ran into some showers and snow. I could hardly believe the weather forecast, they had a tornado watch on until 2 pm! When we got into Michigan the weather cleared up, the colors were as good as they could get! We got to the Hancock City Campground and found that the sites were very muddy, they had had a lot of rain, in fact the campfire rings were filled to the top with water. Saturday morning the trailer was 'rocken.' Looking out it looked like a blizzard! The forecast was for winds of 40-50 MPH with snow, so we headed to the State Mineral Museum at Michigan Tech. At noon it looked a bit better so we headed north another 30 miles to the old mine dump near Central. It was slippery; there were signs of slide-outs. When we got to the dump we could hardly recognize it, Someone had been in with some heavy equipment, there were deep pits everywhere. The word must have gotten out that some good finds had been recovered. We spent about 4 hours in the snow, it was tough looking, the surface rocks were snow covered, and the 'dirt' underneath was pure mud. We found next to nothing.

Sunday morning the temperature was in the 20's, and at breakfast the furnace decided it preferred to only blow cold air, the furnace had given up. The only time we were warm was in church! So we decided to head home Monday since the forecast was for 3 more days of rain and snow, we had 'just had it.'



INDIAN MOUNDS EXECUTIVE COMMITTEE AND BOARD MEMBERS:

Club Officers (all are 1 year elected term by regular members at the Annual Meeting in November):

Executive Committee:

President – Jim E.

Vice President & Program Chair – Nancy S.

Secretary – Rhonda L.

Treasurer – Dave L.

Field Trip Chair (& Safety Chairperson) – Roger K.

Librarian – Arlene K.

Board Member/Sales – Ed K.

Board Member/Monthly Meeting Publicity – Nick VD.

Board Member/Publisher – Donna G.

Other Board Members (President appointed & Board approved):

Liaison Officer – Don VD.

Bulletin Editor – Brenda VD.

Sunshine – Eleanor B.

Historian – Arlene K.

Kitchen/Hostess (Courtesy) –

Membership – Rhonda L.

Show Committee Chairperson – John K. and Harry B

Show Dealer Chairperson – Nancy W. and Bob Q.

Show Publicity Chairperson –

Immediate Past President – Don VD.

PHOTO PAGES



EDITOR'S NOTE

When preparing this email version of the *Arrowhead News*, I found the following article from Ed...

My sincerest apologies to you Ed for missing it in the hard copy edition. ~Brenda

SILENT AUCTION – LOST & FOUND

By Ed Krzeminski, Sales Chair

Our October Silent Auction sale appeared to be a big success. There seemed to be a large number of folks shopping for rockhound bargains (and getting them!), and there were plenty of Sellers who brought in a plethora of various types of hobby materials to sell. In addition to the usual deals on mineral specimens, crystals, cutting slabs, and fossils, this year's bounty included grinders and saws, rockhound and earth science books, necklaces and jewelry, faceted loose gems, tumbler materials, kids' specimens, and even a gold pan! Several non-members introduced themselves to me, drawn in by our publicity flyers and Grand Rapids Press advertising, and admitting to having a very good time! I have not yet received any sales totals from our Treasurer, but I'll bet the auction was also a financial success for the Club.

While no volunteer-driven event such as this occurs without a hitch or two, it seemed to me that there were fewer overall complaints than in the recent past. The Board is already discussing suggestions and possible improvements for next year's auction sale, and I am personally interested in hearing from you if you have any such suggestions. Please email them to me, the Auction Chairman, at ekrzemin@grcity.us. I know that the sales room was a bit warm and somewhat cramped for space, so we are looking into a possible room change or table reconfiguration for next year. There also seemed to be fewer complaints of sales items "disappearing", as we did try to increase our internal security measures this year, and we will strive to improve in this category.

LOST & FOUND: In the sometimes-chaotic fun of the auction evening, some folks were bound to mis-place items, and sure enough, I have heard from at least one member who found someone else's winnings mixed in with his (there were no names with them), and he would like them to be returned to the rightful owner. We appreciate that sort of honesty! Also, there were several items left behind after clean-up – some with Bid Slips and some not – which I picked up, in hopes that they are claimed soon. As in previous years, any unclaimed items will eventually become Club property for use as future door prizes or sale items, unless I hear from you.

I would like to hear from anyone who either Lost or Found any items at the October Auction Sale, to see if we can re-unite the owners with their wayward items. Email me, or call me at 616-530-9571. I will not be at the November Club meeting, but I am asking Club members to please bring any "found items" to that meeting to see if they can be claimed by their rightful owners. I don't anticipate there to be many, but if you saw the excitement on some kids' faces for their auction wins, you would understand the disappointment of mis-placing those winnings.

A big "thank you" to all of you who helped out at the auction sale. I could start naming names, but I know that I would surely forget someone, so.... thanks! It would not have been a success without the help from each and every one of you!