

THE ROCKFINDER

Newsletter of the Michiana Gem and Mineral Society

Volume 48, Number 5

May, 2008

Visitors are always welcome.

Date: **May 18, 2008**
Doors open at 1:30.
Meeting starts at 2 p.m.

Place: Our Redeemer Lutheran Church,
805 S. 29th Street (29th & Wall) in
South Bend, River Park area.

Program: We will get organized for the
August show, sign up for committees,
discuss needs, etc.

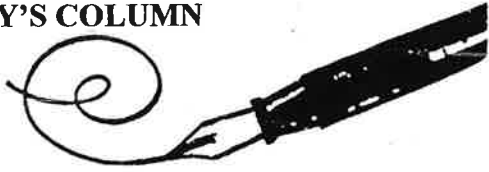
Refreshments: Phyllis Smallwood, Sue
Brown and Diane Gram.

UP AND COMING:

- May 17-18: Parma Lapidary Club (Cleveland), County Fairgrounds, Berea, OH.
May 16-18: Southgate, MI, 2008 Southeastern Michigan Gem and Mineral show, Southgate Arena, nwhanschu@prodigy.net.
May 24-25: Wheaton, IL, Chicagoland Gems and Minerals Association, DuPage County Fairgrounds, www.chicagolandgemshow.org.
May 31-June 1: Columbus, OH, Central Ohio Mineral, Fossil, Gem & Jewelry Show, Veterans Memorial.
June 28: Collecting at gravel quarry on Hwy. 12.
June 6-8: (Toledo) State Line show, Fulton County fairgrounds, Wauseon, OH.
June 20-22: Lincoln Gem & Mineral Club 50th annual show & Midwest Federation Convention, Pershing Center, Lincoln, NE.
June 20-22: Northwest Federation Convention, Ontario, OR.
June 27-27 California Federation Convention, Ventura, CA.
June 28-19: MGAGS Rockhound Seminar. Godwin H.S. Wyoming, MI (Grand Rapids).
July 10-13: Wonderful World of Agates, U. of Wisconsin Fox Valley, Menasha, WI.
July 20: Our club picnic. Potawatomi Park. Details to follow.
July 27-29: Bloomington show and swap, County Fairgrounds, Bloomington, IN.
Aug. 22-24: Our own Michiana Gem & Mineral Society show, 4-H County Fairgrounds, South Bend, IN.
Sept. 13-14: Geology Arts Fair, Eddy Discovery Center, Chelsea, MI.
Sept. 25-28: South-Central Federation Convention, Humble, TX.
Oct. 18-19: Flint Rock & Gem Club show, Carter Middle School, Clio, MI.

FIELD TRIP JUNE 28 9 a.m.---?

Those going on the field trip to collect at the Michiana Aggregate gravel pit *must* sign up ahead of time. Some have done this already. David Peltz will have the list at the May meeting. If you can't be there to sign the list, contact David. We will meet at nine or thereabouts at the site, which is 3265 West US 12 in Niles (1/2 mile west of the junction of Mayflower Road and US 12). Possible finds include fossils, Petokey stones, concretions and minerals brought down from Canada by the glaciers and deposited there. Large areas are safe for kids with adult supervision. There are some banks where the bulldozers have worked, but mainly we will search through piles of gravel. Wear appropriate clothes. A screwdriver or small tool might help to loosen crusty dirt.

KATHY'S COLUMN

Bob and I and Tom and Pat just came back from a super family reunion in Texas. We enjoyed an entire week of catching up with siblings. The Millers and McLaughlins even got to do an entire day of crystal collecting on the way home.

The coming meeting on May 18 will be our last official meeting until September; please mark your calendar and make a point to attend. Unlike the previous meetings with programs, we will use this time to sign up for the club picnic (we need to have a guestimate for buying meat and drinks), and the various committee chairs for the show will have sign-up sheets available too.

FYI, thanks to Julie and Rena, we now have a DVD player for any upcoming program or other function.

For those of you who attended the Granitech field trip and have some pieces to show off, bring them for display, or share some ideas on how to use the granite you collected. If you have been collecting anything else this year, be sure to bring that. If Bob and I can get our crystals cleaned we will show you some of the "Miller Mountain" finds.

Cordelia has been hard at work with the juniors toward the goal of getting their merit badges completed, so it would be good to have your junior(s) attend this meeting. I think the juniors have more fun than the adults!

David should have the collecting date for the June field trip lined up and give us a report as to day and time, and he will have his sign-up sheet available again for folks who couldn't make the April meeting.

I would like to thank David for taking over the meeting while we were out of town and I am looking forward to seeing all of you as we start toward our "looking down" collecting season!

Kathy

MINUTES OF THE APRIL MEETING

Vice-President David Peltz called the meeting to order at 2:00 p.m. on April 27. In attendance were 30 members, 8 junior members and 2 guests. Joe Perry led the Pledge of Allegiance.

David welcomed new members and guests. Marie Crull made a motion to accept the minutes of the last meeting as printed in the *Rockfinder*. Sally Peltz seconded the motion. Motion carried.

Lana Wright gave the treasurer's report and it will be filed for audit.

LIAISON REPORT: Sally Peltz has lots of new fliers for upcoming shows. Our juniors program was featured in the *MWF Newsletter*. Also, Bob and Kathy Miller had an article for show exhibitors in the newsletter.

Sue Brown (MWF state director) reported that the MWF Show and Convention will be June 20-22 in Lincoln, Nebraska. Our club needs a delegate to attend the show. Contact Sue for more information. The MWF is also selling T-shirts.

COMMITTEE REPORTS:

EDITOR: Tom Noe would like articles written by club members to publish in the *Rockfinder*.

FIELD TRIP: David Peltz has a sign-up sheet for the field trip to Granitech on May 10, and to Michiana Aggregate on June 28.

HOSPITALITY: The refreshments for April were furnished by Gladys Pacholke, Sr. Jeanne Finske and Michelle Winters. For May, Phyllis Smallwood, Sue Brown and Diane Gram will furnish the refreshments.

JUNIORS: David Peltz reported that the juniors were working with clay and stone tools this month. Next month they will learn how to polish Petoskey stones. If anyone can help with supplies for next month's project, give Cordelia Tomasino a call.

LIBRARIAN: Pat Bell reported that there are three new books in the library, two in memory of Kent Hoffman.

SHOW: Marie Crull has lots of fliers made and we need to start looking for places to display them. Sue Brown suggested we put the flier on our web site and Diane Gram said she would e-mail the flier to Jim Daly to put on the web site. Joe Perry

reported that we still need to add two dealers for the show.

Patty Enos needs people to sign up to work the door at the show. Tom Noe is looking for a video camera to use at the silent auction table at the show.

OLD BUSINESS: None.

NEW BUSINESS: The next meeting is May 18.

Sally Peltz made a motion to adjourn the meeting and Sister Jean seconded the motion. Motion carried.

PROGRAM: David Peltz demonstrated how to do flintknapping and club members talked about the items they brought in.

Marty Perry, Secretary

Rockhound Riddles

1. Name a likeable rock.
2. What mineral is always hungry?
3. How do geologists measure water?
4. What should all geologists know?
5. What mineral catches thieves?
6. What is an opening in a fence?
7. How do you keep a goat from drifting?
8. What vegetable is used for weighing gemstones?
9. Where does a skeleton sleep?
10. Name a citrus rock.
11. What is a teenage snake?
12. A through F paid. What about G?
(Answers on page 7).

Conglomerate (May, 2007)

MAY BIRTHSTONE

EMERALD

From Simon & Schuster's Guide to Gems and Precious Stones

EMERALD. The name is of ancient origin. The Latin 'smaragdus' appears, in fact, to have referred to the stone we call Emerald, which is now considered as a distinct species. It is basically the green variety of Beryl, although not all gemstone-quality beryls are called emeralds: yellow-green stones are called heliodors; soft blue-green or even pale green specimens (their color due to iron, not chromium, as in emerald) are called aquamarines.

The biggest and most beautiful emeralds come from the famous Chivor and Muzo mines of Colombia. Other locations of emeralds are Brazil, East Africa, India, Pakistan, Russia (Urals), and formerly Austria. Stones of fine color, weighing more than 2 carats, are among the most highly valued gemstones, and their price may equal or exceed that of diamonds.

ORIGIN OF THE RUBY

By Clyf Bourne

Of all the gemstones, the ruby is one of the most beautiful and one of the rarest too. Rubies belong to the corundum family, along with the equally beautiful sapphire. Normally, corundum is pure aluminum oxide (Al₂O₃) and colorless.

Color is imparted when impurities (metallic oxides) replace a few aluminum atoms in the crystal lattice. A few atoms of chromium oxide in a corundum crystal cause the red color and we call it a ruby. Similarly, other oxides can cause the corundum to be brown, black, yellow, blue or violet, which we then call sapphire. One would think it would not be difficult to identify one from the other. Why not say if it is red, it is a ruby, otherwise it is a sapphire. In general, such is the case; however, as color grades from a deep red to pink and beyond, some say a pink stone becomes a sapphire.

Corundum is hard (Mohs scale, 9) second only to diamond (10); fairly heavy, a specific gravity of 3.9 - 4.1, and often fluorescent.

Rubies and sapphires were treasured in Greco-Roman times. They were highly regarded even before that in India. The earliest classification of gemstones was attempted by the Greeks, which was by color. This method allowed not only rubies but garnets, spinels and other red gems to be in one classification. Theophrastus, a Greek, called them all 'carbuncles', (the color of glowing embers.)

It was Pliny, a Roman, who observed that the ruby could be identified from other red gemstones by the weight (specific gravity), hardness and also by certain inclusions. Those who worked the stones always knew there was a difference because rubies were so much more difficult to fashion. Indian and European rulers continued to be taken in by dealers, judging from the many 'imposter' stones in the collections of the rich. Rubies (corundum) are found in igneous formations, also pegmatites, and metamorphosed rock. They may be associated with kyanite, spinel, garnet and high calcium feldspars. United States occurrences are rare; Georgia, North Carolina, Montana and California. If you visit these places, don't count on getting a pocket full easily. I recall a pleasant sunny afternoon several years ago

spent hunting for rubies at the Probst Ruby Mine, just south of Hickory, NC. We had skipped out of the EFMLS convention show for a couple of hours to go ruby-hunting. I seem to remember a lot of reddish-brown dirt with patches of the lady's lawn still showing between the trenches behind the barn. Unfortunately, in spite of considerable digging and sifting of dirt, nary a ruby did I find. The place to look for a ruby is along a band of marble, 1,800 miles long, extending from the Himalayas, Tajikistan through Afghanistan, Pakistan, Kashmir, Nepal, into China and Vietnam. Scientists believe tectonics is involved, that is, the collision between Asia and India to raise up the Himalayas.

Fifty million years ago, the Tethys Sea separated these two continents. Continental drift, which is going on even today, moved the two continents together, closing up the Tethys Sea. The sea floor contained deposits of limestone, calcium carbonate and all the other minerals that had eroded from surrounding land and mountains. This included all the minerals necessary for rubies: aluminum, oxygen and chromium. As the collision of these continents drove the sea floor limestone down into the earth, the compression rose to six kilobars and the temperature to 1,200 degrees Fahrenheit.

Under these conditions, the material metamorphosed into sparkly marble and granite. Fluids flowed up through the rock, releasing any silica, but left alumina behind. During this period of time, 40 to 45 millions of years, the two continents, moving together, raised up the Himalayas. Eventually, erosion exposed an 1,800 mile band of ruby deposits.

It was the French who first noticed the rubies are not evenly distributed along the marble deposits. A more even distribution in the marble would be expected. Some believe the uneven distribution of salt, a remnant of the Tethys Sea, is the cause. Salt acts as a flux, mobilizing the aluminum sufficiently to mix with any chromium present. It is important that there is fluid present to flush out excess silicon to allow the aluminum to mix with chromium to form the rubies. Experts disagree as to whether the granite plays any role in the process.

Perhaps the most highly prized of rubies is the Burmese (pigeon blood) from the country of Burma, renamed Myanmar. Geologists and other experts are

still not in complete agreement as to how rubies are made. We still have much to learn.

References:

Ward, Fred, *Rubies & Sapphire*; Pub. Gem Bock Publishers, revised edition, 1998 and 2004.

The Geology of Rubies, sc r, Pub. Buena Vista Magazines, Volume 26, No. 11, 11/04.

<^7p://www.palagems.com/burma_ruby.htm>

SIX-YEAR-OLD BOY DISCOVERS PTEROSAUR BONES ON ISLE OF WIGHT

Publisher: Jon Land

Published: 10/07/2007 - 14:41:39 PM



A six-year-old boy has unearthed 120 million-year-old pterosaur bones while hunting for dinosaur relics on a holiday beach. Owain Lewis discovered the rare fossil, part of a flying reptile called a pterosaur, with his family at Compton Bay near Freshwater on the Isle of Wight. The find comprises wing bones of the extinct flying reptile, which soared above the skies of the island during the lower cretaceous period. At the time, the area was a coastal lagoon occupied by crocodiles and dinosaurs.

Pterosaurs are rare finds as their bones are very delicate, like those of birds which means they do not preserve very well, according to Dr Martin Munt, curator of geology at Dinosaur Isle Museum in Sandown. He said: "The bones are folded against each other which is usually seen when such finds are made. "We are very pleased that Owain brought the find to us. It reinforces our reputation as one of the main areas in the United Kingdom where anyone can discover rare dinosaur bones, just by going out for a walk on the beach."

Dr Munt said the fossil might

represent an ornithocheirid pterosaur, which had a four meter wingspan - a new species that was found at Sandown four years ago. Alternatively, the bones may come from another type of pterosaur, istiodactylus, that had an estimated wingspan of five meters, he said. Owain and his father Glyn reported their find to the Sandown museum that sent them to the Natural History Museum in London whose experts will analyze the fossil.

Owain's mum Kaye said: "Most six year old boys are interested in dinosaurs but Owain seems to be exceptionally keen. He is always coming back with boxes of things he has found." When he went to the island, he knew he would get a few finds and he is chuffed to bits that he has discovered something so important.

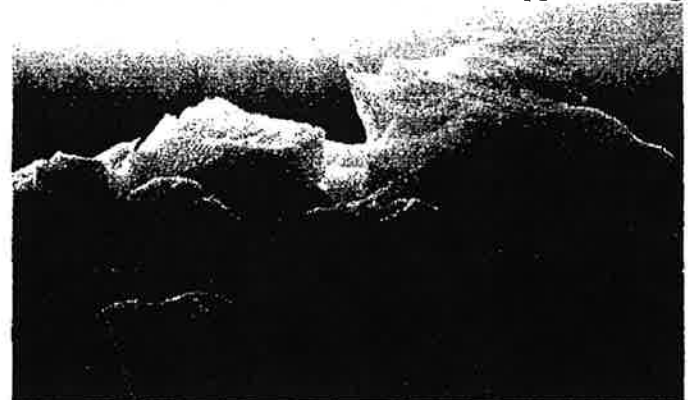
"We would like to think he would follow a career in paleontology but we will see."

Flint Flashes (July, 2007)

MELTING ICE CAP BRINGS DIAMOND HUNTERS AND HOPES OF INDEPENDENCE TO GREENLAND

By Paul Brown

Changing landscape - an iceberg off Ammassalik island, Greenland. Native people are being forced to retrain as their traditional livelihood disappears along



with the ice. Photograph: John McConnico/AP

Helicopters have been hard to hire in Greenland this summer. In most countries that would not be a big problem, but for the locals on the world's biggest island - where there are no road networks and sparse settlements are often 100 miles apart - it can make life tricky.

The scarcity has been caused by a diamond rush with prospectors, mostly from North America, believing they can strike it rich. As the ice cap recedes due to rising temperatures, rock covered for centuries could produce spectacular finds. The interest in the Greenland tundra was sparked partly by the announcement this year of the discovery of a 2.4-carat diamond at Garnet lake in west Greenland, the largest of 236 diamonds found in a trial dig in the area by Hudson Resources of Vancouver. While the Hudson company was willing to announce its find, presumably to encourage its investors, most prospectors are less keen to discuss their activities in this vast mineral-rich wilderness.

The belief in Greenland's potential riches stems from the fact that the geology is identical to that found across the now ice-free northwest passage in Canada, which has led to large opencast mining in the Arctic region.

But Greenland has other potential riches too. Gold has been discovered and is already being mined, although so far at a loss, and there are deposits of other minerals such as zinc, that could be exploited. Oil giants are negotiating licences to explore blocks of the coastline covering thousands of square miles.

The dash for minerals is fueling another debate in Greenland: whether the country should go for independence from Denmark. With its 56,000 population scattered over an area almost the size of Europe, Greenland is heavily dependent on a subsidy from Denmark for survival. The island has internal self-government but Denmark is responsible for foreign policy.

Aleqa Hammond, the foreign minister in Greenland's home-rule government, hopes that the oil and mineral companies moving in will create sufficient wealth for her country to break from colonial rule. "It is natural for a country to want to be independent. We do not feel ourselves part of Europe - we are an Arctic people - but our way of life is changing and we have to change with it. My mother's

generation fought for Greenland homeland government and achieved it in 1979, leaving only foreign affairs and defence in the hands of Denmark.

"Then, we could not strike out alone because we were so heavily dependent on Danish money, and we still are, but we can change that by exploiting our natural resources to achieve financial and political independence."

But some argue that independence has dangers. Greenland is the land mass closest to the North Pole and has rapidly assumed greater strategic importance as its much more powerful and populous neighbours vie for a slice of the Arctic's supposed mineral wealth. The United States is strengthening its air base at Thule on the extreme north of the island and the Russians have already planted flags on the sea-bed.

But rather than putting her faith in mineral wealth, Mrs Hammond believes that her country's best prospect of buying its independence lies in hydro-electricity. The vast lakes and melting ice cap provide enormous potential for electricity free from fossil fuel and the Greenland government is negotiating with Alcoa, an aluminium company, to build the world's second largest smelter. No contract has been signed but the minister hopes this project will provide 3,500 much-needed jobs.

It was ironic, she says, that climate change had melted the ice sufficiently for prospectors to move in, and that might in turn give the nation its independence. A referendum in Denmark had shown a majority in favor of granting Greenland home rule. "We hope it will happen soon."

But Professor Minik Rosing, of the University of Copenhagen, who was born in Greenland, believes it would be a disaster if his country had a big oil find and used the revenue to buy independence. "As everybody gets more desperate for that commodity you do not want to be a very, very small, very independent country, very far from anywhere else. Much better to stay with the friend you know."

A major mineral find could be catastrophic, he said. "With such a small population we could be overwhelmed by people coming to work here. We should be cautious of suddenly finding ourselves in the minority."

Aqqaluk Lynge, an Inuit leader and former

chairman of the Inuit Circumpolar Conference, is also cautious about independence. "Frankly I think it is still a long way off. We do not want to rush into these things. We need to avoid conflict and assess exactly what the resources and options are before we make decisions."

Mrs. Hammond's government has introduced education programs so that native hunters can retrain to prepare for new lives and independence. "The fact is we cannot go on as we are," she said. "The hunters wait one month later for the ice to form and it melts one month earlier in the spring. It is like an employer taking away three months of your pay without notice. They cannot find enough food for themselves and their dogs. Less than 500 of the whole population can now survive only by hunting."

The Guardian October 4, 2007

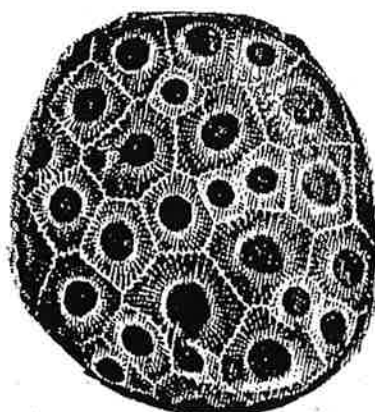
Answers to Riddles

1. gneiss
2. apatite
3. with quartz
4. their faults
5. copper
6. agate
7. ankerite
8. carat
9. in a bonebed
10. limestone
11. serpentine
12. geode

GUATEMALA'S NEW BLUE JADE

Miners unearth a large deposit of deep blue jade in the Montagua valley of Guatemala, home to the historic jade mines of the ancient Mayan Indians. The jade deposit has yielded mostly green stones and some green — blue stones. This mine now produces the first blue jade known in the world. Ventana mining owns the deposit that now produces blue jade that compares in hue to that of blue sapphire. The jade is translucent to opaque and is thought that titanium gives the jade its blue color.

Colorado Mineral Society (Jan., 2007)



Petoskey Stones Needed!

The juniors will be learning to hand-polish these beautiful fossil stones but not all kids have their own to bring. Please call or email me if you will be able to donate and bring some to the May meeting. Thank you! --Cordelia (269) 684-3454, tomasinos4@juno.com.

KRYPTONITE UNEARTHED

That lethal green crystal that saps the strength of Superman is still a piece of fiction, although a new mineral recently discovered bears a close chemical kinship. The unique chemistry described in the film *Superman Returns* matches closely a real mineral found in a Serbian mine. It fluoresces a pinkish-orange but doesn't glow. The chemical makeup was worked out and the literature was searched with the surprising result that the mineral's chemical formula, sodium lithium boron silicate hydroxide, is the same formula as that of the fictional kryptonite. The new mineral does not contain fluorine, which the fictional mineral did, nor does it contain any krypton, a real element in the Periodic Table that takes the form of a gas. The new mineral cannot therefore be named kryptonite, but will probably be called "jadarite" after Jadar, the name of the place where the Serbian mine is located.

Juniors' Page



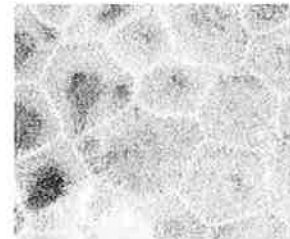
April meeting notes: Wow! You juniors have some nice Stone Age tools in your collections already and some great field trip experiences. Kara displayed grinding stones, arrowheads, spear heads, and numerous other nifty artifacts. Jason shared about his recent trip out West and the great rocks he collected, the Indian crafts he learned about, and explained about the obsidian arrowhead he is working on. He also shared Apache tears with all the juniors and told us their sad folklore. Vincent brought in pottery shards, arrowheads, and a hide scraper from Arizona. Everyone worked with Mexican red clay to fashion cups, pots, vases, garden tags, and some abstract art after we learned a little about Stone Age tools and art.

May Meeting: Beginning Lapidary Projects



Rock Pets: Younger juniors, put on those old clothes again as I'll bring paint, glue, googly eyes and various craft supplies so you can make a rock pet or a pretty garden stone. Bring a large smooth rock or several small ones to decorate.

Petoskey Stone Polishing: Older rockhounds, bring in a smooth, well-worn Petoskey stone from your collection. We'll try out those instructions from last month's newsletter and bring out the beautiful fossil patterns in our stones.



If you don't have any stones, we'll be asking for some help from the adult rockhounds—to share some of the rocks from their collections.

—Juniors' Activity Chair: Cordelia Tomasino

(269) 684-3454, email: tomasinos4@juno.com