
THE BADGER DIGGIN'S

The Badger Lapidary and Geological Society, Inc.
Monroe, Wisconsin

Devoted to the Earth Sciences

Vol. 44, No. 1

January 2009

Meeting Minutes

The December meeting was called to order after a wonderful Christmas meal at the American Legion Post #84 in Monroe. The November minutes were approved and we moved on to the *Treasurer's Report*.

Daisy said, "We still have some money." Many of us thought this was an excellent report for December, but Daisy thought we should go into more detail. We have \$104.70 in savings with a few small expenses still outstanding. There is \$864.02 in checking, not counting some revenue for the show and the expense of the Christmas party. Dave said that the grant for show advertising has been held up. It should come through in January, but this source of funds may dry up in the near future. Daisy said that the newsletter is a possible money saver. It had been pretty expensive to print and mail, averaging around \$100 per month. The Norquays have covered this expense. Daisy suggested that we switch to an exclusively electronic version of the newsletter, except in cases where a hard copy is necessary (for those without a computer or e-mail/Internet access). She also said that the club needs to be made aware when members donate services like the Norquays have done with the newsletter. Daisy made a motion to send only e-mail newsletters, except when necessary. Teri Marché seconded this motion and it passed. Jordan Marché explained that the way he printed the December newsletter, it wasn't as expensive. It can be done for \$0.17 per double sided page and that four such pages come to \$0.68, plus \$0.42 postage. Each newsletter cost only \$1.10 to print and mail (and only ten copies were distributed thusly).

Old Business: The only old business concerned the Club's web site. It was decided that Dave Zimmerman & John Norquay will work on getting the club a functioning web site with Teri Marché serving as aesthetic adviser.

The first door prize was won by Jacob Lautenschlager. It was a bag of rough-cut poppy jasper that was donated by Kevin Ponzio from the Glacial Drifters club.

Next Meeting

Our next meeting will be held at 9:45 a.m. on Saturday, January 10, 2009, at the Monroe Public Library, 925 16th Avenue, Monroe, WI. Take the elevator to the second floor.

Program: To Be Announced

Meeting Minutes – cont.

New Business: Teri announced that there had been an officer's meeting where a calendar of field trips and monthly programs had been created. The other thing needed for the year was a snack list, so we asked for volunteers who responded thusly:

January: Marchés
February: Westbys
March: Reeces
April: Petersons
May: Greens
June: Norquays (picnic)
September: open
October: Trockes (lapidary day)
November: Dave Zimmerman
December: Christmas party



The January club field trip is planned for Chicago's Field Museum on Saturday, the 24th. Times, car-pooling information, and anything else regarding this trip will be posted in the January newsletter. Teri Marché is the trip coordinator.

We then discussed a proposal originating from Normand's club in Canada. That club has found a source for small specimen boxes — both flat (cardboard) and plastic boxes. They buy them in bulk and split the cost between club members. We will consider this option and possibly put together an order at the January meeting.

The last order of new business was elections. John Peterson moved to accept the slate of nominated officers as a whole; Mary Westby seconded this motion, and it passed. The current (2008) officers will remain in charge for 2009.

The second door prize was won by Steve Holmes. He acquired a very nice piece of poppy jasper, also donated by Kevin.

Show Business: Dave said that planning for the show is going well. He has had a lot of success with museums and universities donating displays for the show. The club is still waiting on payment from one dealer; we may have to find a replacement if this dealer doesn't follow through. Sign up sheets for helping at the show and for club display cases will be available at the next meeting. (See Dave's article to that effect in this newsletter.) The February meeting will be used for putting together the mailers and the March meeting will be used to assemble the fish pond bags. Please bring fish pond material to the March meeting. Laurie Trocke suggested moving the kids' games back to the entry where the fluorescent tent is set up. Teri urged that Dave should look at the overall floor plan and take that suggestion under consideration. Please bring fish pond material to the March meeting. Laurie Trocke suggested moving the kids' games back to the entry where the fluorescent tent is set up. Teri urged that Dave should look at the overall floor plan and take that suggestion under consideration.

The third door prize was won by Erin Trocke. It was a beautiful music box with a glass church on it, donated by Larry DeMars.

The meeting was adjourned so we could all play the gold brick game. Many wonderful gifts were won by all.

Respectfully submitted,

Laurie Trocke

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Tentative Calendar of Club Events – 1st half of 2009

- January 10 Regular meeting: To be announced**
- January 24 Field trip: Chicago’s Field Museum of Natural History**
Trip leader: Teri Marché
Meeting time: 8:45 a.m.
Meeting place: Clock Tower Resort, Rockford (eastern-most parking lot). Car pools leave 9 a.m. Allow ~ 1–2 hours travel each way.
Admission: \$14/adult; \$9/child; parking = \$15/vehicle; plus gas, tolls, food.
- February 14 Regular meeting: Show advertising mailers**
- February 28 Alternate date for January field trip**
- March 14 Regular meeting: Fish pond bags (prep.)**
- March 28-29 39th Annual Mineral, Gem, & Fossil Show, Monroe High School, 1600 26th Street.**
Theme: *Driftless Treasures of the Badger State*
9a.m. – 5 p.m., Sat. & Sun.
- April 11 Regular meeting: Micro-mounting**
(presented by Dan Trocke)
- April 25 Field trip: Geodes – Jacobs and St. Francisville, MO**
Trip leader: Dave Zimmerman
- May 9 Regular meeting: Arkansas diamond discovery**
(presented by Dave Zimmerman)
- May 23–? Field trip: Southern Illinois fluorite collecting**
Trip leader: Dan Trocke
- June 13 Regular Meeting: Annual Club Picnic**
Host: Norquays
- June 27 Field Trip: Agate collecting (new place)**
Trip leader: Dave Zimmerman

Article of note — Neil Shea, “Crystal Palace,” *National Geographic*, November 2008, pp. 64-77, describes the giant selenite crystals discovered deep in the Naica mine in northern Mexico, one of which is over 30 feet long! Spectacular photos.

It’s [Almost] Showtime!

By David Zimmerman

Well, maybe the show is not next week, but it is certainly time to start thinking about it! Let’s talk a little bit about what’s new for the 2009 show, and what we can all do to make it our best show ever.

First of all, the single most important thing that you can do to help our show attendance is to take a handful of the show flyers and put them in your car! Yes, and then the next time you are driving somewhere for groceries, you can just grab one and put it up on the bulletin board at the store. When you see someone with kids, you can pass them a flyer and tell them to come out for the weekend. For that matter, take a digital copy of the flyer and forward it onto your contacts list for e-mails. These are some very easy things you can do, and this directly helps our show attendance; at the same time, it is the cheapest form of advertising that we can do.

Also new for this year is our show theme, “Driftless Treasures of the Badger State.” This is a catch-all title that references minerals, fossils, and geological items from that area of Wisconsin that the glacier did not touch. The Driftless Zone is usually considered to be that area comprising the southwestern corner of the state. Some portions included are: Green Country, the historic lead mining district, Baraboo hematite and quartzite areas, Hixton silicified sandstone area, Fennimore fossils, and so much more. We are hoping that our club showcases will be geared towards the show theme, but this is not a requirement! We simply want the cases filled; that is the most important thing.

Don't forget, we are doing a club sales table this year, in lieu of the traditional silent auction table. This will require you to fill out the new sales slips, instead of the old auction slips, when selling your items. If you have not seen these sales slips yet, and would like to sell something, then please call me and I will get them to you. I have great hopes that this process will create higher efficiencies in the club sales area, and reduce labor.

As part of the ramp-up toward the show activities, we will be assembling the show advertising envelopes during the February meeting. This is starting to be an annual event and has always gone over well. We will be playing a video in the background as we all pitch in and stuff the envelopes with show information that will be going out to local schools, libraries, and the like. I would then urge all of you to follow up with your local institutions to confirm that the show posters are being displayed.

At the March meeting, we will be doing our annual fish pond bagging. Members will be urged to bring in excess materials that you would like to donate for the kids at our show. This is usually another crazy meeting, with hands flying all over the place and many members and kids picking out a few stones that they would like to keep for their own personal collections.

I will be passing around the work sign-up sheets, and the showcase sign-up sheets at our upcoming meetings. If you cannot attend, but would like to participate, please call me at 608-921-0206 or e-mail me at david@showchair.com and I would be happy to sign you up. Also, if you have any pictures from previous fieldtrips or meetings, please e-mail those to me or else burn a CD so that I can have those playing on my laptop computer at the show.

Finally, I would really like to thank YOU. If it were not for you, then this show would not be possible. Yes, we as members get much out of the show personally, but it is also a wonderful thing for this part of the state. It allows hundreds of attending kids and families to have a great weekend of fun learning and it shows in their smiles. This is all made possible thanks to you, because without you, we would not be able to have such a wonderful show.

Flambeau Mine, located 1.5 miles south of Ladysmith City, Wisconsin

By Normand Labbe and Johanne Paradis
Edited by: David Zimmerman

The door prize I received, on November 8, 2008, was a piece of the mineral chalcocite from the Flambeau Mine in Ladysmith, WI. Thus, Johanne and I decided to present you with a little bit of history about where the specimen came from.

The Flambeau Copper Deposit was first discovered in 1969. Kennecott Minerals Company began the process for obtaining a mining permit in 1974. There were many revisions to the proposal along the way, particularly due to its proximity to the Flambeau River. The final permit to mine was issued in accordance with the newly adopted Metallic Mining Reclamation Act, which just went into effect in 1993 before the Mine opened. The Deposit was then mined for a period of four years (1993-1997). During the operation, 181,000 tons of copper, 334,000 ounces of gold and 3.3 million ounces of silver were produced from the open pit mine.

The area of the site was about 181 acres, or the equivalent of an 18-hole golf course, while the size of the open pit was about 35 acres excavated to a depth of 220 feet.



Flambeau Mine pit at its greatest depth of 220 feet.

After operations were completed, backfilling took place using nearly 5,000,000 cubic yards of mined rock, additional crushed limestone (to counteract natural oxidation), and it was capped with original topsoil. Backfilling operations were completed in the fall of 1997. Today, at the former Flambeau Mine site, you can visit a wetland (10 acres), clusters of trees, and prairie grass that provide habitat for wildlife. Also, 32 acres (to be used for industries) are leased to the Ladysmith Industrial Development Corporation.



July 2000, after reclamation.

Vegetation, environmental, and groundwater monitoring are taking place as part of the reclamation of the site. Monitoring will last for decades; for example, until at least 2041 for groundwater monitoring.

As of 2000, vegetation covered more than 95% of the site; over 200 native plant species are thriving; thirty-six bird species are using the site according to a breeding bird survey; and seven butterfly species were found using the reclaimed mine site.

“This is the only mining of massive sulphides in Wisconsin!” (Mindat.org)

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- <http://www.flambeaumine.com/history.html>
- <http://www.flambeaumine.com/documents/factsheet/s/overview.pdf>
- <http://www.dnr.state.wi.us/org/aw/wm/mining/metalllic/flambeau/index.htm>
- <http://www.kennecottminerals.com/public/report/flambeau.htm>
- <http://www.mindat.org/loc-4496.html>

‘Sample’ the Moon – Without Leaving Earth! Part II.

Jordan D. Marché II

Collecting anorthosite rock is not quite so simple, however, because most of the Wolf River igneous complex has been covered over by much younger glacial deposits. As a result, only a few outcrops of anorthosite are readily accessible. The rest of this article describes the author’s visits to two such localities in October 2008.

These two localities are both situated on County Highway J, just south and just north of Wisconsin Route 29 in Shawano County. The first of these (the southern site), is exposed on private property about one-quarter to one-third of a mile south, on the west side of County J. There, the rocks may be viewed behind a metal fence; but as permission was not obtained from the property owner, no collecting was attempted. The other locality (the northern site) is found about 0.5 mile north of Route 29, on the east side of the road. A low outcrop, several feet high and perhaps 30-50 feet long, was examined (Figure 1). [Whether this outcrop is on public or private property could not be determined; no dwelling is visible anywhere near the site.]



Figure 1. Anorthosite outcrop.

The rock here appears freshly exposed, and pieces from the outcrop, as well as loose samples from the ground itself, were collected. Anorthosite is quite uniform in appearance. It has a coarse crystalline texture, and is of a medium-gray coloration.

Readily seen are the crystals of plagioclase feldspar, some of which (on fresh breaks) show fine parallel striations (Figure 2). Traces of darker minerals, likely pyroxene and occasional small flecks of biotite, are also visible. While a third, nearby locality of anorthosite, i.e., that beside the high school athletic field at Bowler, has also been described (Dott and Attig, 2004, p. 300), I did not attempt to visit that site.



Figure 2. Anorthosite sample.

Studies of the samples returned by Apollo astronauts have revealed at least two significant differences in the chemical compositions of lunar and terrestrial rocks: (a) lunar rocks are largely deficient in many of the heavier elements (such as iron and nickel) that occur more abundantly in earthly rocks; and (b) lunar rocks are almost totally devoid of lighter, volatile elements (including water). These chemical differences, in turn, have led to the creation of a new and dramatic theory of the Moon's origin, which is termed the "Giant Impact Hypothesis" or "violent-birth" scenario.

According to this conjecture, the Earth was struck with a glancing blow by a Mars-sized body, during the final stages of our solar system's formation (~ 4.5 billion years ago). A large portion of the Earth's crust and mantle was torn off by this impact and completely melted; this material later coalesced to form the Moon. This scenario has been extensively modeled through computer simulations. It is thought that the denser core of the impactor was later incorporated into the Earth's core, while the impact's heat (and resulting small mass of the Moon) enabled all lighter, volatile elements to escape it.

Such heat would also have turned the Moon's entire outer crust into a magma ocean, wherein the lighter remaining rocks, such as anorthosite, would have 'floated' to the surface and hardened. No other theory of the Moon's formation is able to explain the observed chemical differences. As a result, the Giant Impact Hypothesis has become the most widely accepted theory of the Moon's formation held today (see e.g., Spudis, 1999).

The next time that you glance up at the Moon, located some quarter million miles away, note the apparent difference between the lighter-colored highlands and the darker-colored maria (the familiar 'Man-in-the-Moon'). And then remember that it isn't necessary to go there, in order to collect and study that same type of rock, anorthosite, that comprises the bulk of the Moon's surface. Instead, a good approximation can be 'sampled' right here on Earth, at a few special places, including east-central Wisconsin.

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- Pough, Frederick H. (1976). *A Field Guide to Rocks and Minerals*, 4th ed. Boston: Houghton Mifflin.
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One Eye in the Rearview Mirror; One Foot on the Gas Pedal!

By David Zimmerman

You know, sometimes people get so anxious looking forward to all the fun things that this club can do, that we often forget to pause and think about what we have accomplished. I can say that it even surprised me, when I began to think about it a few days ago. I first tried to write an article with narratives about the separate items, but it proved impossible to keep this article short. So instead, here's the list itself:

1. The club's largest single purchase in its history – the Club Trailer
2. Painted the inside of the club trailer and shelves (Thanks, Roy)
3. Purchased advertising lettering for the outside of the trailer
4. Purchased plastic totes to organize our assets (Thanks, Teri)
5. Purchased a 10-inch rock saw for the club (Thanks, Wil)
6. Purchased a chain-style geode cracker (Thanks, Bob)
7. Repainted the club cases (Thanks, Jordan, Teri, and Steve)
8. Purchased club domain names and new websites
9. Made the club's largest donation to the Library (Thanks, Daisy)
10. Implemented a new sales table at the show
11. Increased data collecting at the show
12. Annually getting insurance for our members, including injury insurance
13. Annually getting advertising grants to help with show expenses
14. Monthly putting out wonderful newsletters for our members (Thanks, Norquays)
15. Annually funding a local scholarship for a high school student (Thanks, Donna)
16. Annually subsidizing much of the Christmas Party (Thanks, Francis)
17. Monthly educational programs at the meetings
18. Monthly fieldtrips making many members happy
19. Annually making hundreds of kids happy at the show
20. Annually doing community outreach programs with geology
21. Annually donating to the Monroe FFA and the Apostolate to the Handicapped
22. Annually doing T-shirt printing for our members (Thanks, Teri)
23. Annually purchasing pizza for helpers during show set-up
24. Monthly awarding three door prizes to members at meetings
25. Monthly providing snacks at the meetings

So, when someone asks, "What does your club do?", we will always have a touchstone to look at and see what we have done as a group. I am sure that I am neglecting many things on this list, too! The point is that this club does many wonderful things for its members (and the surrounding community) throughout the year. It is also easy to overlook the accomplishments that this group has made after only a year or two. So, perhaps this will become an annual article for the newsletter, as proof of our accomplishments from the passing year.

That said, it is always important to keep one foot on the gas pedal! An organization without goals is sure to fail, so I would like you to think about possible future items for purchase or investment: (1) a metal detector; (2) orange safety vests to wear when collecting; (3) a faceting machine; (4) videos for the library; (5) saving money for land leasing; (6) a cart-dolly for the show; (7) a website upgrade; (8) a canoe! Who knows! Even if these purchases cannot be made in this coming year, it is nice to have goals to strive for, and to provide a focal point for the group. If you want to consider them by 'placing a carrot in front of the Badger', then so be it! So, please think about this list. Please talk about it and then get back to me with your thoughts. Hopefully, in the coming year, we can come up with new projects like these to tackle as a group.

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