

FRIENDS OF MINERALOGY, INC MIDWEST CHAPTER



AFFILIATIONS:

THE MINERALOGICAL RECORD
THE MINERALOGICAL SOCIETY OF AMERICA
AMERICAN GEOLOGICAL INSTITUTE
ROCKS & MINERALS MAGAZINE

NEXT MEETING

Saturday, September 11, 2010, 12 Noon
Short, Informal Meeting at Greenfield, IN Show

Sunday, September 19, 2010, 3:00 PM
Falls of Ohio Show, Jeffersonville, IN
Steve Garza, Speaker



**SEPTEMBER - OCTOBER
2010**



FRIENDS OF MINERALOGY, INC
MIDWEST CHAPTER
JOHN BLUE, EDITOR
16155 SHURMER RD
STRONGSVILLE, OH 44136-6113



FIRST CLASS



**FRIENDS OF MINERALOGY
MIDWEST CHAPTER**

Vol XXIV No. 5

SEPTEMBER-OCTOBER 2010

Page 1

PUBLISHED BI-MONTHLY IN JANUARY, MARCH, MAY, JULY, SEPTEMBER & NOVEMBER
COPY DEADLINE 15TH PREVIOUS MONTH

**AFFILIATIONS:
AMERICAN GEOLOGICAL INSTITUTE
THE MINERALOGICAL RECORD
THE MINERALOGICAL SOCIETY OF AMERICA
ROCKS & MINERALS MAGAZINE**

OFFICERS 2010

PRESIDENT	Robert Harman, 3209 St James Ct, Bloomington, IN 47401 bobannhar@aol.com	(812) 337-8994
VICE PRESIDENT PROGRAMS	Nelson Shaffer, 530 Cabot Ct, Bloomington, IN 47408 shaffern@indiana.edu	(812) 339-6623
VICE PRESIDENT FIELD TRIPS	Dr Ernie Carlson, PO BOX 11164, Brady Lake, OH 44211 ecarlson@kent.edu	(330) 678-8875
SECRETARY Ohio Mtgs	Anne Cook, 684 Quilliams Rd, Cleveland Hts, OH 44121 abcook6@juno.com	(216) 381-9003
SECRETARY Indiana Mtgs	VACANT	
TREASURER	Len Gritzer, PO Box 22581, Indianapolis, IN 46222 lengritzer@hotmail.com	(317) 923-4227

COMMITTEE CHAIRS

FUND RAISING	Paul Schwin, 38 W Washburn St, New London, OH 44851	(419) 929-9074
NEWSLETTER	John Blue, 16155 Shurmer Rd, Strongsville, OH 44136 Jblue@n2net.net	(440) 238-4412

PURPOSE

Friends of Mineralogy, Inc - Midwest Chapter is organized to promote interest in and knowledge of mineralogy; to advance mineralogical education; to protect and preserve mineral specimens and promote conservation of mineral localities; to further cooperation between amateur and professional and encourage collection of minerals for educational value; and to support publications about mineralogy and about the programs of kindred organizations.

MINUTES OF JUNE MEETING

The meeting of the Friends of Mineralogy, Midwest Chapter, was held at noon, Saturday June 26 in conjunction with the Lawrence Country Rock Show, Bloomington, Indiana. Member George Heaton agreed to act as secretary and took these minutes. There were 11 members and 2 guests present. The meeting was preceded by a program given by Indiana State University Archeologist Mark Cantin. His program was on Indiana chert nodules. He showed various examples and discussed their use and trade by various tribes of Native Americans. This program was arranged by program chairman Nelson Shaffer and was well received.

Treasurer, Len Gritzer was not present, but sent his report. There is a balance of \$2,686.03 in our account and we have several new members. Field trip chairman, Ernie Carlson was not present, but our upcoming field trips are scheduled for Duff Quarry Ohio on July 10, Clay Center Ohio quarry on July 17, and Genoa Ohio quarry on August 21. You must have an MSHA certificate at least for Clay Center. If you plan to go on these trips, you should email Ernie Carlson directly at least a week before each trip.

There is some interest in scheduling a trip to the Arkansas, Crater of Diamonds Park for this fall or next spring. If you would be interested, let Nelson Shaffer know. He will move forward if enough interest is shown.

We discussed upcoming meeting sites and dates in conjunction with program chairman, Nelson Shaffer. Our next meeting will be at the Falls Of The Ohio Indiana State Park and Show on Saturday **September 18** in their meeting room, specific time yet to be determined. (**Editors Note: Date Changed to 19th**) There might be a program associated with that show so we will not plan anything additional. Please note that, at this time, I do NOT expect a formal FoM meeting at the September Greenfield, IN rock show. There probably will be a November meeting at the Cleveland Museum Micromount Conference and I will ask Janet Clifford to chair that one as she has kindly done in the past. Then, in January 2011, I plan to have a meeting at the Indiana State Museum in Indianapolis, also as previously done. The slate of club officers (new ??) will be given by then, so if you have any ideas or nominations, please let me or someone else know.

New and old business: A field trip to Bayport, Michigan quarry took place on June 19, but as I have no news, if someone was present and knows of the trip, please let me know for our next newsletter.

Some ethics of field trip collecting was further discussed. Several noted that some collectors approached the Salem Quarry highwall too closely. Please stay 20' - 50' away! Being careless can get us all asked to leave early! There also was a complaint about "horning in" (for want of a better term). If a collector makes a good find, it just seems right that others can come over to look, but if not invited to collect, the other collectors should respect the find and stay at least several feet away.

Finally, it was brought to our attention that some folks are not receiving the newsletter and/or field trip schedule. If you might be one of these let John Blue, Len Gritzer or me know and we will try to solve the problem.

BOB

FASCINATED ABOUT MICA?

By Michael Wilson

(1st Place SFMS 2002 Original Adult Article)

The five most common rock forming minerals are feldspars, pyroxenes, amphiboles, quartz, and micas. They are all silicates that account for over ninety percent of the earth's crust. All basic building blocks, which consist of four oxygen tetrahedron atoms held by a single silicon atom. When this tetrahedron shares three oxygen atoms with the next tetrahedron it forms a thin sheet held together by weak positive ions of a metal (van der Waal's force). These positive ions are sandwiched between two thin sheets. This type of sheet silicate is called "mica" or phyllosilicate (GK-phyllo, "leaf"). This layered atomic arrangement is why mica splits into thin sheets and is soft. A one-inch thick piece of mica can be split into a thousand sheets. Mica crystals are usually pseudo-hexagonal (6 sided) but are actually monoclinic.

There are two types of micas. Those that are flexible or elastic, and those that are brittle. It is these elastic micas that are valuable and extremely important as a natural resource. They are muscovite, biotite-vermiculite, phlogopite, and lepidolite.

Muscovite, which is called "common or white mica," is derived from "muscovy" - Moscow, Russia, is a very common rock-forming mineral. It is a hydrous potassium aluminum silicate often associated with quartz, orthoclase, microcline, albite, tourmaline and beryl. Most of the economic concentrations are found in granitic pegmatites in India, Brazil, and Madagascar. The largest single crystal of muscovite was found in India weighing eighty-five tons. Unusual sheets of muscovite have also been found with inclusions between the sheets, such as black magnetite or hematite crystals or flattened almandine garnets.

There are several varieties of muscovite such as mariposite, fuchsite, alurgite, and sericite. Mariposite (Mariposa, California) is a blue-green chromium mica associated with gold. Fuchsite is another chromium variety. Alurgite is a red and pink muscovite, and sericite is a fine-grained weathered muscovite.

Muscovite has many uses. Before glass window panes were made, large transparent sheets of muscovite (Muscovy glass or isinglass) were used. Today it is still used for windows in wood stoves, lantern shields, furnaces and the old house fuses. The primary use for muscovite is in high temperature electrical insulation, including electronic equipment. It is also used as a dry lubricant, an additive in the manufacturing of porcelain, paper, rubber, fireproof paint, and a special manufacturing paper with crushed muscovite held in plastic. Other less practical uses are for effigies and ornaments cut out of mica for crafts. Scrap mica or flake mica is used as furnace linings. Christmas tree 'snow', wallpaper, plastics, paint, and a specimen man-made fluorine-bearing muscovite is used in ceramic. Interestingly, the United States is the largest producer of crap mica.

Another common rock-forming mineral is biotite. It is the iron-rich member in a series with phlogopite, the magnesium-rich member. Because of the iron, biotite is conductive, and useless as an insulator. Biotite is useful in that it readily alters into vermiculite (Latin: "to breed worms") and chlorite. Vermiculite is extremely valuable. It contains lots of interstitial water which when heated, vaporizes into steam causing it to expand and become porous (thirty times). This makes vermiculite an excellent insulator for both heat and sound. It is also used for fire proofing and agricultural purposes, like potting soil.

Phlogopite (GK - "fire-like") is a bronze mica and like muscovite is a prized electrical insulator. Phlogopite commonly shows a six- or twelve-rayed star in transparent sheets. The largest mica crystal ever seen was a pseudo-hexagonal book of phlogopite weighing ninety tons at the Lacy Mine in Ontario, Canada.

Lepidolite is a lithium-bearing mica contain fluorine. This lilac mica is found in lithium-bearing megmatite. It is a major source for the light metal lithium.

(Mica, Cont'd)

These flexible micas are an intricate part of our lives. Who would have thought that a simple book of mica in your backyard would hold such a value?

BIBLIOGRAPHY:

- Holden, Martin *Encyclopedia of Gemstones and Minerals*
Michael Friedman Pub Group Inc, 1999, p 47 and p 175
Motanna, Crespi and Liborio, *Simon and Shuster's Guid
To Rocks and Minerals*, Simon & Schuster 1978, p 225
Plummer, Charles C & David McGear, *Physical Geology*,
Wm C Brown Co Pub, 1979, pp 23-30
Pough, Fredrick, *Peterson Field Guide to Rocks and
Minerals, 5th Edition*, Houghton Mifflin Co 1996, pp303-06
Vanders, Iris & Paul F Kerr, *Mineral Recognition*,
John Wiley & Sons, Inc, pp273-76
1998 *Compton's Interactive Encyclopedia*, Muscovite & Biotite

NEXT MEETINGS

Saturday, September 11, 2010, 12 Noon, 500 Earth Sciences Club Annual Show, Hancock County Fairgrounds, Greenfield, Indiana

Sunday, September 19, 2010, 3:00 PM, Falls of Ohio State Park Show, Jeffersonville, IN.
Steve Garza, Speaker.

FILLERS

(Your items arrived too late)

Ever notice that anyone going slower than you is an idiot, but anyone going faster is an idiot?

When you give a lesson in meanness to a critter or a person, don't be surprised if they learn their lesson.

If you get to thinkin' you're a person of some influence, try orderin' somebody elses dog around.

When I'm feeling down, I like to whistle. It makes the neighbor's dog, that barks all the time, run to the end of his chain and gag himself.

Birthdays are good for you. The more you have the longer you live.

If you can smile when things go wrong, you have someone in mind to blame.

Everyone has a photographic memory. Some just don't have film.