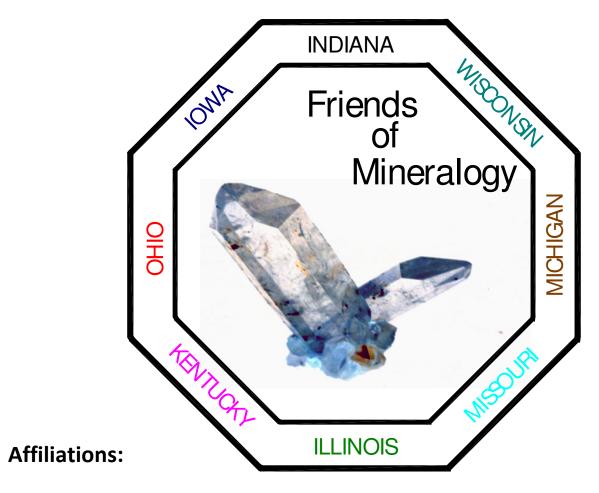
# Friends of Mineralogy

Midwest Chapter Newsletter for September – October 2014



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

Our purpose is to organize and 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.

Newsletter published bimonthly in January, March, May, July, September and November. Please submit all information for publication in the newsletter by the 15<sup>th</sup> of the previous month.



Eager rockhounds enjoying the 2014 copper country retreat.

#### In this Edition.....

Treasurer's Report – 3

Quarry Travel Guide – No trip information available for this edition

Presidents Message - 4

Field Trip Reports - 5

Feature Article - 9

The next FM meeting will be on Saturday, November 8th. The meeting time is from 3 to 4pm and will be held at the Cleveland Museum of Natural History.

#### 2014 Officers

**President** - Clyde Spencer, 1858 Robin Hood Dr., Fairborn, Ohio 45324 (937)878-9988 c\_spencer123@att.net

Vice President Programs –Randy Marsh, 6152 Old Stone Ct., Hamilton, Ohio 45011 (513)515-7890 marsh.rg@pg.com.

Vice President Field Trips - Reggie Rose, 4287 Parkmead Dr. Grove City, Ohio 43123 (614)875-2675 captaino@core.com

Secretary - Vacant

**Treasure**r - Jeff Spencer, 4948 Beachwood Dr., Cincinnati, Ohio 45244 (513)248-0533 jspencer@jsite.com

**Liaison Officer** – Nelson Shaffer, Ph. D., Indiana Geological Survey 611 N. Walnut Grove Ave., Bloomington, IN 47405 Phone: 812-855-2687 shaffern@indiana.edu

Fund Raising (Committee Chair) - Vacant

Newsletter (Committee Chair) Tom Bolka, 2275 Capestrano Dr. Xenia, Ohio 45385 (937)760-6864 tbolka@att.net

FM Brass Randy Marsh & Clyde Spencer present our check to Tom Serenko and Chuck Salmons of the Ohio geological Survey to support the re-publishing of bulletin 69.

Friends of Mineralogy

DATE July 11, 2014

DAY TO THE

OHIO DEPL. of Natural Resources

ONE Hundred for hundred and xx 100

DOUBLE SERVES OF SOLUTION

BEST STATES OF CHIA

BEST STAT

#### Treasurer's Report

We had 1 new member sign up in July. That brings our total membership to 105. Our current treasury balance is \$1018.29 and we have no outstanding obligations. Clyde presented a check for \$1,400.00 to the Ohio Department of Natural Resources to help fund the publishing of the revised edition of Bulletin 69 –Ohio Minerals book. This included \$500.00 from our treasury, \$500.00 from the National Friends of Mineralogy treasury and \$400.00 from individual member contributions.

Please send me any questions or concerns that you have. Jeff Spencer

Treasurer - Friends of Mineralogy Inc. Midwest Chapter <a href="mailto:jspencer@jsite.com">jspencer@jsite.com</a>

Hi FM field trippers.

Remember the 1990s remake of the movie "The Fly" with Jeff Goldblum? As he was dying at the end of the movie he cried out repeatedly in a tiny voice "Help me! Help me!" That is what I should be crying as the field trip guy. I need help in two areas. They are finding field trips, and field trip photos.

Let's talk about field trips first. There are several FM members working on getting more field trips for FM, because one person isn't enough. In fact, several people may not be enough. Although we have not had an official or unofficial field trip committee until this point, we now do. Congratulations, as a recipient of this edition of the FM newsletter, you are hereby nominated to serve on the field trip committee.

If you know of a quarry that is (a) mineralized and (b) accessible, now is the time to step up and contribute to the growth of FM. There are at least eight months in the collecting season. I would like to have a minimum of one trip per month. Finding eight mineralized, accessible sites is not as easy as it might seem. We lose quarries when mining ends and also when management or ownership changes. None of these reasons for losing quarries is our fault. But at least now FM Midwest has a powerful crew "beating the bushes" to get new host quarries on our schedule.

Now on to the subject of photos. When we are in the quarry and you find something worth a photo, seek me out. Either in the quarry or outside the quarry after the trip. Photos of your specimens are an important part of what we do. We are trying to educate each other about the various minerals and forms of minerals that we collect. We also have a certain portion of our membership who are no longer in a position to go on field trips and really look forward to reading their newsletter. So do not deny them the chance to see the beauty of what you have seen in the quarry. If you want to contribute photos of your specimens to the FM newsletter and want to remain anonymous, your anonymity will be honored. But allow non-collecting members to share the beauty of what you find. Educating others and yourself is more important than rushing home.



## From The office of the President Clyde Spencer

#### **President's Message**

Dear Friends.

It has been an interesting couple of months. On July 11<sup>th</sup>, Randy Marsh and I drove to Columbus for a couple of meetings. Initially, we met with Pat Jacomet, executive director of the Ohio Aggregates & Industrial Minerals Association (OAIMA), in FM member Scott Kell's office (ODNR). The general topic of discussion was access to collecting sites and whether or not OAIMA could be of any

assistance in convincing their members, which include quarries we visit, to be more open to collecting trips. Jacomet was sympathetic to our problems and promised to try to be of assistance. He mentioned that OAIMA will be forming an educational non-profit arm that may be useful. We will have additional meetings with him. Another related topic was MSHA hazard and safety training developed specifically for collectors by Scott Kell. Apparently, those taking ODNR training in the Columbus area have been getting the benefit of Scott's customized curriculum. However, for reasons unknown, the same ODNR trainers haven't been using the material for training elsewhere. The point of the discussion at this particular meeting was to explore the possibility that quarry operators might be more welcoming if they were familiar with the training designed specifically for collectors instead of miners operating heavy equipment. Scott provided us with hard copy and a CD of his training material, which Randy and I have reviewed. It is our opinion that it is excellent and we would like to see some variant of it become standard for training of FM collectors. It was suggested that we give a copy of the training to the quarries each time we visit so that they would have a better idea of the kind of training FM members receive.

We took a break for lunch and then met with the Ohio Geological Survey division chief, and State Geologist, Tom Serenko. Ostensibly, the purpose of the meeting was to present the division with a check for \$1,400 from Friends of Mineralogy to support the Bulletin 69 republication project. We turned it into a photo opportunity using an oversize check (see included photo) Randy had made. Randy and I are in the photo, along with Tom Serenko and Chuck Salmons, the publications editor. We took the opportunity to talk to Tom and the assistant division chief, Mike Angle, about our problems arranging field trips to quarries. He promised to do what he could to help and I have subsequently sent him a list of quarries that Reggie Rose provided me with that are problems.

Randy Marsh and John Davis attended the annual Keweenaw Copper Country Mineral Retreat. All members of the chapter were invited to participate, but only John Davis took advantage of the opportunity. See Randy's trip report below. Reggie Rose has trip reports for the two other field trips taken since our last newsletter. There will also be an August trip to Clay Center after the deadline for input for this newsletter.

So far, nothing has come of our discussions with the American Geosciences Institute representative. Despite a promise to provide me with a letter of recommendation to assist in getting into quarries, which was promised to be ready "this afternoon," back in June, nothing has happened.

Our annual general business meeting and election of officers is coming up in early November. I think that the current slate of offices will be willing to serve another term, but we are still in need of a secretary and fund raising chairman. So, please let me or one of the other officers know if you will be willing to help.

Lastly, I'd like to strongly encourage you to read my Op-Ed piece on issues of collecting ethics. Laws, regulations, and rules aren't always sufficient to guide our behavior as collectors. I'd like to have you think about the issues I bring up because we may move to formally adopt some of the suggestions if the membership sees merit in them.

## Field Trip Report "Keweenaw Mineral Days Event" (Randy Marsh)

The Keweenaw peninsula contains one of the largest and most unique native copper deposits in the world. The peninsula is approximately 150 miles long and 50 miles wide. Utilization of copper from glacial float as well as shallow mines can be traced back at least 6800 years. Native Americans may have mined between 100 and 500 million pounds of copper from deposits on the peninsula and Isle Royale. More than 11 billion pounds of copper were produced in the district over roughly 150 years of mining activity, almost all of which was stopped in 1967. Collecting is now done mainly in the waste rock piles from the mines. In addition finding native copper, it is also possible to find copper-silver hybrids, copper-included calcite crystals, chalcocite, copper arsenides, secondary copper minerals, datolite nodules, chlorastrolite (greenstone), and Lake Superior agates.



Copper Specimen - Randy Marsh

Each year in August the A. E. Seaman mineral museum organizes a week of collecting at various sites, known as Keweenaw Mineral Days. This year I set out with John Davis to participate in the event. We arrived on Monday, August 4 and spend the day driving around. We found a number of folks who were selling mineral specimens out of their yards (some great deals!), and also spent some time looking around Prospector's Paradise, the largest mineral shop in the area. On Tuesday, August 5 we enjoyed the open house at the A. E. Seaman mineral museum and listening to Chris Stefano give an introduction to local minerals. In all, about 140 people had signed up to participate in all or some of the events over the remainder of the week. The morning of Wednesday, August 6 we headed to Seneca for seven hours of collecting. Seneca is well known for native copper and native silver. Soon the air was filled with the excited chirping of dozens of metal detectors as about 80 people starting scanning all the rock that had been turned over with a backhoe for the event. John and I probably loaded 200-300 pounds of rock into the back of the truck on this first day. On Thursday, August 7 we were off for four hours at Connecticut and another four hours at Central Exploration. The focus

at these sites was datolite and greenstone in addition to native copper. Friday, August 8 was split between three hours at Wolverine and four at Baltic, hunting for native copper, chalcocite, and copper in agate amygdules. We joined a



picnic at Keweenaw Gem and Gift back in Houghton that evening, and watched how copper specimens are prepared for sale at the store by soaking in muriatic acid, washing in water, soaking in nitric acid, washing in water, and then soaking in Copper Bright, followed by a last wash in water. This results in very shiny specimens (since the nitric acid etches into fresh copper). Using just muriatic acid alone and a power washer gives more natural looking specimens with most of the original patina intact. Our last day, Saturday, August 10 was spent at Central. I wound up finding my nicest specimen of the trip there. The specimen was prepped by soaking in muriatic acid for an hour (see photo above).

For anyone who likes collecting copper, this is the place for you. Given that various companies are grinding up the dumps to make gravel, collecting in the peninsula may only be around for another dozen years or so.

## Field Trip Report "Great Lakes Quarry" (Reggie Rose)

#### **WOLVERINE STATE SAYS "GO BLUE"**

On July 12<sup>th</sup>, FM went on a collecting field trip to the Great Lakes Aggregates quarry in South Rockwood, Michigan. This trip had many built in twists and turns that refer to the Big Ten athletic conference. FM Midwest has a significant number of members from Michigan, so they must chuckle when their FM field trip VP has to write a field trip report on a quarry in their home state. To add another Big Ten twist to this scenario, the quarry is located right in the heart of the University of Michigan's support base. The Saturday quarry crew were ardent U of M fans, so the FM field trip leader's vehicle created quite a stir. Great Lakes employees could not appreciate the beauty of the "Buckeye" van. To further complicate the Big Ten picture, the quarry superintendent turned out to be a graduate of Michigan State, home of the (green and white) Spartans. And to put one more cherry on top, FM members Frank Konieczki (Belleville, MI) and Marty Povirk (Franklin, MI) have been seen on field trips in blue shirts with yellow M's on them. Marty gets a pass this time because he works for GM and the field trip leader's van in a GMC. If the truth be known, we can all chuckle at such sports rivalries as mineral collectors, because we are all friends in the same hobby, and our hobby has a higher purpose than any gridiron rivalries.

To get to the actual field trip, 21 FM collectors journeyed to the Great lakes Aggregate's South Rockwood Michigan quarry. It is known to have fluorite (clear to brown), calcite (yellow nailhead), Celestine (white to blue), and quartz (drusy / chert). This author has seen all four minerals here in the past, collecting here has been historically tough, and this year was no exception. Despite a lack of high quality specimens, good samples were present, representing what was a wider variety of minerals present than listed above. This year Celestine was present in clear and blue with a blocky habit; some specimens displayed both colors and some crystals showed abrupt zoning from clear to blue. There was a wide variety of calcites present: nailhead (clear to yellow), poor rhombohedral (yellow and gray), and drusy scalenohedral (forming white coatings and "popcorn" masses). Also, a surprise guest showed up at the quarry in the form of sulfur (chalky looking, dull and yellow). Not surprisingly, chert was also found. Though chert is of little interest to most collectors, this microcrystalline variety of silica showed a number of interesting features. Most were light or dark gray or bluish. Sometimes the chert showed color horizons, some were finely banded, at least one specimen showed a wild bullseye pattern.



Calcite - "popcorn masses" - Reggie Rose

Now back to the Big Ten references. Why such a strange title for a mineral report? Well, the quarry is in the Wolverine state. thus the word wolverine appears. But why the phrase "Go Blue"? "Go Blue" is in the title because this quarry is known for its beautiful glassy clear blue Celestine. And at least one FM collector was saying "go blue" all day. That collector was Jay Medici (Fredericktown, OH) who hit a nice pocket of blue Celestine. Hopefully a picture of his specimens will appear in this report. And if we can't say "Go Blue", at least we'll say "oh (what a pretty) blue".

## Field Trip Report "Roger's & Lehigh Heidelberg Quarries" (Reggie Rose)

#### FUN & SUN IN THE HOOSIER STATE

FM made a trek west to Indiana on the weekend of June 27 & 28 to do some collecting and to attend the Lawrence County mineral Show. The weekend began with 16 members attending the Friday collecting field trip to the Roger's Group Quarry in Mitchell, Indiana. This quarry is known for selenite and pyrite, and it did not disappoint. The group started on a lower quarry level but were not having much luck.



#### The Heidelberg quarry Group

Subsequently, the group moved to an upper level where shale overburden is dumped. Here selenite was abundant in a tabular habit from clear thin plates to thicker plates exhibiting fishtail twin growth. Kathy Bailey (Dayton, OH) found the largest thin plates, while Jeff Spencer (Cincinnati, OH) found the largest plate with the fishtail twin feature. Their specimens were easily six inches across. There was a fair amount of pyrite present. It was seen in thin layers 5 mm. or less and exhibited masses of cubes piled on each other 1 -2 mm in diameter. The fragile pyrite plates were 2 - 5 mm in thickness.

Bored with the pyrite and selenite, John Lindsay (Pinckney, MI) and Mike Royal (Defiance, OH) journeyed back to the lower level and came up with huge calcite specimens massed together in stepped scalenohedrons, sometimes commonly called a cathedral habit. Friday continued and concluded with the group splitting up to collect geodes at various sites. Maps to geode collecting sites were passed out on small piece of paper. If you received one of these, you can discard it, because the maps were inaccurate. Better maps will be available next year.

On Saturday, 17 FM collectors attended a second collecting trip to the Lehigh Heidelberg Quarry of Mitchell, Indiana. In Previous years we have collected calcite, celestine, gypsum, selenite, marcasite and quartz. Although the collecting was tough, this author did find one specimen with all three minerals which represented all that I saw "mineralogically". The specimen had clear blocky celestite up to 5 mm, sugary, white calcite with an indistinct crystal habit which appeared to be somewhere between a typical rhomb and a scalenohedron (2 - 3 mm). Also, it had one distinct doubly terminated white hexagonal quartz crystal between 2 and 3 mm on its long axis. Also seen were potential yard rocks with masses of rhombohedral calcite. Frank Konieczki (Belleville, MI) identified some microcrystalline marcasite. That was about it, a tough day here with only a few specimens to treasure. After the morning field trip we were privileged to hear our own

and Indiana's finest, Dr. Nelson Shaffer speak at the FM meeting. In the audience, in addition to the chapter officers, were three longtime FM members: Dave Straw, past FM president (Richmond, IN) and the Heaton brothers George (Haslett, MI) and Roger (Amelia, OH). It was a nice chance to catch up on things with a couple of past and present FM members who were working as dealers. Past FM president Bob Harman (Bloomington, IN) was selling off part of his massive geode collection, while Stan Espenshade (Tucson, AZ) and Dave Straw also manned dealer tables.



**Bob Harman – Lawrence County Show** 

Calcite - Mike Royal - Roger's Quarry

#### Code of Ethics By Clyde Spencer

A couple of members have suggested that the chapter should have a Code of Ethics. They shall go nameless to protect the guilty. I say that because I'm not sure they really understand what the word ethics means. Basically, "ethics" relates to standards of conduct and moral judgments. It goes without saying that we should not break any laws. Indeed, ethical guidelines are often created by organizations to cover situations where laws or regulations do not proscribe behavior. This is in part because it is impossible to have laws that cover every possible circumstance. When we attempt to make laws very specific, and all

encompassing, we invariably create 'loop holes' that provide lawyers with an income.

Most of the general ethical considerations of the chapter, with respect to our role in society, are covered in the goals in our constitution and it would be redundant to re-state them in a separate document. One of my favorite ethical guidelines, a supplement to the Golden Rule, is to consider what the world would be like if everyone were to act as you are about to act

In general, we should not vandalize or destroy property of **anyone**, not just our hosts that allow us to

collect on their property. And, when we visit a friend's house, and they ask us to not put our glass of ice water on their coffee table without using a coaster, we abide by their request. Similarly, when our hosts for field trips tell us what they do not want us to do, we should behave just as if we were in a friend's house. Therefore, we should ask what is unique about our mineral collecting activities that might require a special set of guidelines.

The American Federation of Mineralogical Societies (AFMS) has published a so-called Code of Ethics (http://www.amfed.org/ethics.htm) that supposedly covers our activities. Unfortunately, it is a mish-mash of specific safety pronouncements, statements about select laws, and even a few general ethical principles actually thrown in. When and where to build a campfire isn't really an issue of ethics. Public Land managers have regulations that cover the issue and, if you start a wildfire on private land, you can expect to be sued for damages. The AFMS 'Code of Ethics' appears to be intended as a guide primarily for collecting on public land (although it mentions private land) without creating a negative impression amongst those who are not mineral collectors. Most quarry and mine safety issues are addressed by MSHA regulations and are not really ethical issues. Whether or not one abides by the regulations is an ethical issue because the quarry operator is the one who will probably be punished, not the individual violator. Compare the AFMS code to the IEEE Code of Ethics: http://www.ieee.org/about/corporate/governance/p7-8.html The IEEE code provides general principles about how members are to conduct themselves in the pursuit

Some concerns about our collecting do fall under the umbrella of personal ethics – specifically, how we interact with each other. These include how much area one can exclude others from while collecting and for what duration. These are not new problems.

of their profession and in their interaction with the

public. Unfortunately, it is not a perfect model for our

activities. However, it does illustrate how the emphasis

is on general principles of proper conduct and doesn't

confuse safety with model moral behavior.

When the Argonauts of 1849 arrived in California, there were no courts or even laws. Basically, when new mining districts were discovered, the miners would get together and agree on basic principles such as how one laid claim to a piece of land, the size of claims, and when a claim was abandoned. These activities preceded the 1872 mining law by more than two decades and consequently influenced the federal law.

How large of an area can a person claim to control and exclude others from in a quarry? I once had a member announce to me that "This is all mine!" and then spread his arms in front of the blast pile. What is a reasonable area – a single large boulder, or an area they can touch with both hands, or something else?

In the case of most placer claims it was generally necessary to have large acreage along streams or rivers to be profitable. Although, Rich Bar, along the Feather River, was so rich that the miners declared it would be immoral for any man to have a claim larger than ten feet on a side. (Approximately 1 million ounces of placer gold were recovered from about 10 acres.) It is impractical for any of us to expect to be able to reserve for our exclusive use a very large area in any quarry. Our circumstances are more similar to those found at Rich Bar. It is not uncommon for us to be working a boulder pile on a bench that is 100 yards long and maybe only 10 yards wide. With 20 collectors, that means an average area of 50 square yards, or a little more than 7 yards by 7 yards. However, it is common for there to be only 2 or 3 hot spots in the blast pile at the collecting site. Do all but the lucky few have to be satisfied with little or nothing to show for their efforts? Therefore, one might ask, at what point is the 'claim' of the lucky person (first person to see something) invaded by someone else? Sometimes a couple of close friends will work shoulder to shoulder; however, generally, a stranger would be viewed as invading the space of the 'claim holder' when that close. How close is too close? One practical consideration is safety. When one is swinging a sledge hammer there is a risk of hitting someone who is too close. Also, rock

spalling off from hammer strikes can be a hazard to someone too close.

Some collectors engage in a high speed reconnaissance (prospecting) of boulder piles and if they see something that looks promising, they will leave a tag there such as a piece of their equipment or a piece of brightly colored tape. That way a single person can control many of the better finds. Others, perhaps less sophisticated (like me), will be locked out if they immediately start working a promising pocket and don't employ the above strategy. So, the ethical question becomes, is it acceptable for one person to lay claim to any spot(s) other than the one they are actually actively working? Something to consider is that if a person lays claim to more spots than they have time to work, then they prevent others from working them. That is at odds with our constitutional goals of conserving minerals. What we don't collect goes to the crushers. Therefore, claiming many spots can defeat our Chapter purpose while maximizing what some individual's take home. That get's to the heart of most ethical considerations, where the group suffers at the hands of one or more individuals.

Another ethical issue to consider is for what duration is exclusive control valid? In the early placer and even lode mining in California, if you ceased working a claim and moved on, it was considered to have been abandoned and subject to appropriation by someone else. We are usually confronted with a deadline by which we have to leave a quarry and therefore have to quit working a pocket or boulder, sometimes before all the potential material is extracted. I don't think that one's discovery should give rights in perpetuity. That is, it shouldn't be the initial discoverer's exclusive collecting site as long as the boulder remains in the pit. Is it reasonable, since we typically visit a particular quarry annually, that the right of exclusion should extend to the next season's collecting – or, should the person who next 'discovers' the boulder have the rights for that day? If the person, who first discovered the boulder, doesn't attend the next field trip, is the boulder off limits to others so that the original discoverer can again work it the following

season? If so, who is going to be responsible for identifying the boulder and preventing others from working it? I don't want the job!

Because we have no legal rights when collecting as guests on private property, it is imperative that we abide by ethical principles to avoid conflicts. There is little to guide us other than past practice and agreement as to what is fair and reasonable behavior. Our indomitable field trip leader recently suggested that people share their finds. However, that is probably not practical unless one finds an exceptional trove of specimens that is more than they really want. For those who sell specimens, there probably is no such thing as "more than they want."

Another ethical concern is the impact of the use of powers saws. When they are allowed, saws can be a godsend. However, there is a general principle that one's rights only extend as far as to infringe on someone else's rights. When someone is using a diamond-blade saw, without a mister to control the dust, they create an annoyance and potential problem for others downwind. I don't think that everyone around the saw user should have to be required to wear a dust mask, especially since they don't directly benefit from the use of the saw. What do chapter members want to do about this? One solution is to require that saw users be required to use the mister that the saw came with.

No sane person intends to get injured on a field trip; however, accidents do happen. If the accident is a result of a lack of training, then that is something that we can potentially address – and, we have an ethical responsibility to do so. Carelessness is a little more difficult to address because sometimes we get tired or excited and lose coordination or move more quickly than we should. There was an instance I observed when one of our former officers was running to get into a good viewing position just before a blast in the quarry. He tripped and fell right in front of the quarry geologist, getting skinned up and bloody while doing so. We haven't been back to Corydon since then. While injuries primarily come under the consideration of safety, there is an ethical aspect. Serious injuries are supposed to be

reported promptly to MSHA. There is the potential that the quarry operator could be fined if MSHA determines that some safety regulation was violated. You can imagine that we would be less than welcome in the future if we end up costing the quarry a lot of money. Saws present their own special risks and that is probably why some quarries don't allow their use. Following from that consideration, it should be obvious that each and every one of us has an ethical

responsibility to the FM chapter (and the collecting community in general) to do their very best to avoid injuring themselves or others.

These are truly ethical issues and I think they are something the membership should consider, discuss, and come to agreement on as to how they should be handled within the chapter. Please think about these issues.

#### Michiana Gem & Mineral Society's Annual

# Jewelry, Gem & Mineral Show and Sale

### Come To Our 51st Annual Show

August 22, 23, & 24, 2014

Friday 2-7 pm \* Saturday 10-6 pm \* Sunday 10-4 pm

St Joseph County 4-H Fairgrounds

Esther Singer Building

5177 South Ironwood Road

(Ironwood and Jackson Road)

South Bend, Indiana

For information contact:

(574) 272-7209 or (574) 291-0332

Show Chair Society President

- \* Jewelry and Mineral Dealers \* Displays
- \* Lapidary Arts Demonstrations \* Kids Korner
- \* Door Prizes \* Silent Auction
- \* Exhibits and more!

Admission: Adults: \$3.00 Kids 6-12: \$1.00

Under 6: FREE Parking: FREE

www.MichianaGMS.org