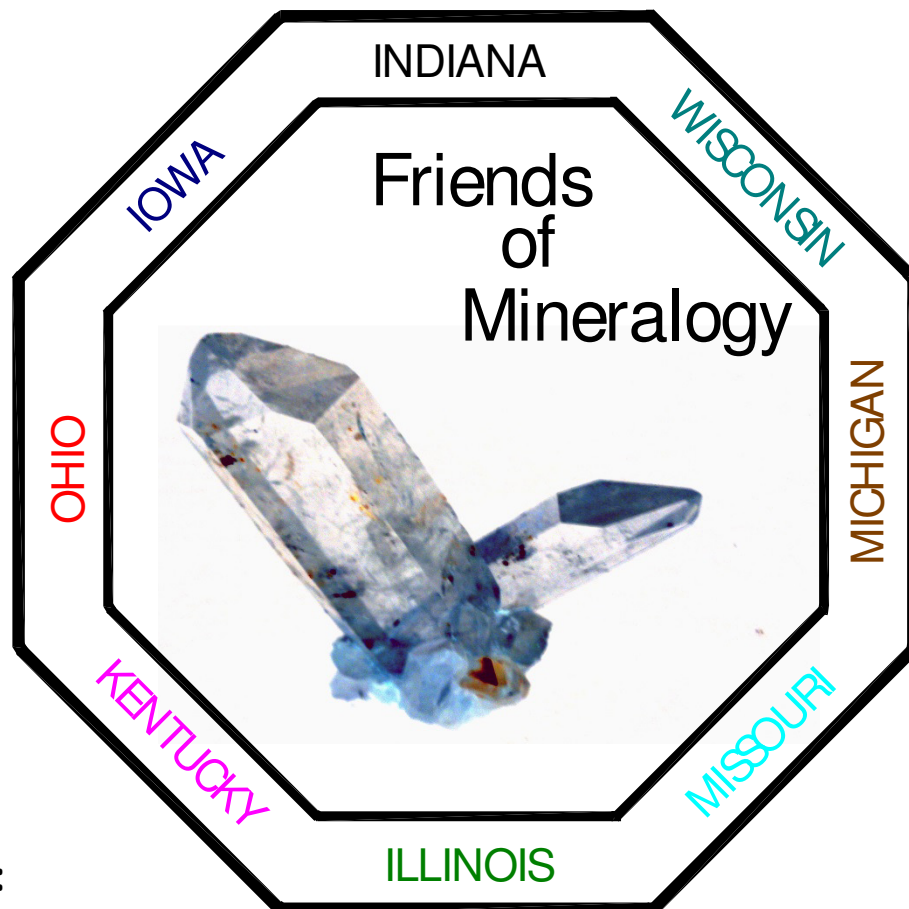


Friends of Mineralogy

Midwest Chapter Newsletter for

March – April 2015



Affiliations:

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 bi-monthly in January, March, May, July, September and November. Please submit all information for publication in the newsletter by the 15th of the previous month.



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The next FM general meeting will be on Saturday, March, 14th at 10:30am. It will be held in conjunction with the 3rd annual mineralogical symposium at Miami University. See the Event information on page 12 in this newsletter.

2015 Officers

President - Clyde Spencer, 1858 Robin Hood Dr., Fairborn, Ohio 45324
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Liaison Officer – Nelson Shaffer, Ph. D., Indiana Geological Survey
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Fund Raising (Committee Chair) - Vacant

Newsletter (Committee Chair) Tom Bolka, 2275 Capestrano Dr.
Xenia, Ohio 45385
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A nice Genoa Sphalerite specimen collected in 2013

Friends of Mineralogy

From The office of the President

Clyde Spencer

President's Message

Friends,

I just returned from my annual pilgrimage to the holy city of Tucson. I arrived in Tucson on Monday (Feb. 9th) after 2 ½ long days of driving. I stopped off at the Tucson Electric Park Venue to do a walk-through before going on to my motel in north Tucson. While there, I heard Kent of Kent's Tools announce that this will be their last year there (He's 67 years old.). He will warehouse

his inventory, so that you will still be able to buy things by notifying him ahead of time and picking it up at the warehouse.

While there, an employee approached me to ask if there was anything I hadn't been able to find. I asked about feathers and wedges. She said that they hadn't brought any because their inventory had been depleted recently when a Tucson club had gone to the San Carlos Indian Reservation (Gila Co., AZ) to collect from the 'Glory Hole.' I thought to myself, "Wouldn't that make a great trip for FM?" (Reggie, are you paying attention?)

I had never previously attended the Westward Look Fine Mineral Show on Ina Road, far north of where most of the venues were. Because it was only 5 miles east of my motel, I decided to visit it after checking in and having a quick lunch. I only had about an hour before their final closure for the week. However, that was enough. All of the cabinet pieces were well beyond my budget. The ones I found most interesting were invariably marked "POR;" I assume that is an abbreviation for "Priced Out of Reach," which is akin to "If you have to ask, you can't afford it." Even the thumbnails of ugly, black ore minerals had three-figure asking prices!

I attended the FM general membership meeting on Tuesday (Feb. 10th) afternoon at the Hotel Tucson City Center. The meeting was run by the current VP and soon to be president, Alex Schauss. I made a presentation on the Midwest Chapter activities. I think that one of the most important things to come out of the meeting was an announcement by Alex that he is going to take steps, with support from the University of Arizona, to push back against MSHA in their attempts to close mines. Because small-mine operators usually don't have the resources to comply with all the MSHA mandates, he hopes to get exemptions for 'artisanal' miners. I share his concerns about federal agencies making it ever more difficult to collect minerals and will be working closely with him on these issues.

Another related topic that generated considerable discussion, brought up by Nelson Shaffer, was the unfavorable impression created by the "Prospectors" program shown on the Weather Channel. Concerns were expressed about the unsafe mining conditions shown and the potential impact on regulators.

The last topic on the agenda was the question, "How can the National FM further its objective while better serving its members?" I'd like to ask the same question with regard to the Midwest Chapter.

On Wednesday afternoon I was at the 22nd Street venue where members of the Prospectors show had booths. Nelson Shaffer saw me and waved me over to the booth of Brian Busse, one of the shows participants and producers. We talked a bit and I remarked that some people had concerns about safety and the negative impression potentially

created with regulators. He thanked me for the input about how those impressions might result in undesirable impacts on collecting. He remarked that he was talking with a Colorado legislator to institute a licensing procedure for prospectors to help support search and rescue. I have mixed feelings about this approach to modify the 1872 Mining Law, but there isn't space here to address the issues in detail.

I attended the opening day (Thursday) of the main Tucson Gem and Mineral Show at the convention center. I walked the floor to see what was going on, become reacquainted with dealers and other professionals, and check out the display entries. I discovered that one of my new duties as National VP will be to chair a judging committee and sign certificates for those who win recognition in various categories. I spent considerable time at the table that Shaffer was running upstairs to recruit members. I had also brought some mineral specimens provided by Tom Bolka; they were quickly snapped up by children and those young at heart (or who couldn't afford the asking prices on the show room floor). Our table was next to the Mindat booth, which was showing spectacular 3D images of mineral specimens on a special wide-screen monitor.

I attended the annual FM business meeting on Saturday morning. At that meeting, it was announced that I had been elected, along with others, to the board of directors by the general membership. Allen Young said that I could not have two votes. Because I was on the slate for the position of VP, and would presumably be elected by the board (which I was), I had to formally resign as the Midwest Chapter representative at the end of my chapter activity report. We will need a volunteer to fill that position. (I think it would be best to be a current officer, but that isn't a requirement.) Alex Schauss vacated the position of VP and became the new president of National and I was installed as the new VP after the board of directors voted on the candidates. During the meeting it was announced that Mindat had obtained official non-profit status; thus, the board approved an official relationship with Mindat. I offered a motion to provide the Midwest Chapter with a \$200 stipend to help offset travel costs for the main speaker at our next symposium; it was approved unanimously. Should you be interested in more detail about the business meeting, it will be in the next National newsletter.

The drive back was challenging because I detoured north to Denver to avoid storm Octavia, which was predicted to have freezing rain along the highway 40 corridor that I came in on. The detour cost me extra driving time and I laid over about 20 hours with Dan Kile so that I could head out between storms. As it was, I still encountered snow along the way back.

This month we have another submission from my friend in Colorado, Dan Kile. He originally wrote the article on Thunder Bay amethyst for the Colorado FM chapter, but graciously agreed to allow our chapter to publish it also. I think you will really enjoy the article!

I recently had a long telephone conversation with Kathy Baily, an FM member, and once again the field trip coordinator for the Dayton Gem and Mineral Society (DGMS). All organizations are feeling the pinch when it comes to trying to get into quarries to collect. In spirit, I'm in favor of trying to coordinate with other organizations to partake in field trips. For one thing, it potentially means the quarry operators have to spend fewer Saturdays at the quarry, which means they might be more willing to accommodate us. However, in the past, when we have tried to do that there have been some problems. One of the problems is that many of the quarries put a limit on the number of attendees and our field trips fill up quickly with FM members. One possible solution is for DGMS members to become FM members, which some already are. Another possibility is, if for some reason a trip doesn't fill, to extend an invitation to them. Lastly, what might help is continuing to 'prospect' for additional sites that haven't been our traditional collecting locations. I'll continue to try to work with DGMS because they are in my backyard. In the meantime, if any of you learn of any potential collecting sites, please let Reggie Rose know.

Treasurers Report

2014 wrap up

The Friends of Mineralogy Inc. Midwest Chapter began 2014 with a balance of \$1622.17. Dr. Dan Hall performed the required audit of last year's record. This amount included \$660.00 in 2014 dues paid in 2013. An additional 71 members signed up in 2014 raising \$1415.00 for a total 2014 membership of 104.

As of 12/31/2014, 21 members had paid dues for 2015 yielding \$420.00

Tom Bolka had a few of our t-shirts remaining and their sale brought in an additional \$60.00.

The chapter raised funds in memory of Dr. Carlson for the Ohio Department of Natural Resource Bulletin 69 project. President Clyde Spencer secured a \$500.00 contribution from the National Chapter and an additional \$400.00 was contributed by members. Our chapter made a donation of \$500.00 from the treasury. A check for the total of \$1400.00 was presented to ODNR.

Other expenses were as follows:

Chapter insurance premium:	\$650.00
National dues at \$4.00/member	\$416.00
Mailing/shipping expenses	\$12.88

This left us with a 2014 year-end balance of \$1938.29

If anyone would like to volunteer to perform the 2014 audit, please notify me or another officer.

2015 Report

We purchased some coffee mugs and pens for \$186.55 to use to promote the chapter. So far I have received 2015 registration and dues from 41 members. This brings our current balance to \$2151.74.

Don' forget that registration and dues of \$20.00 per member are due by March 1st! The form is in this newsletter.

Jeff Spencer
Treasurer - Friends of Mineralogy Inc. Midwest Chapter
jspencer@jsite.com

Remember! – Membership dues should be paid by March 1st. After that time they will be delinquent.

Amethyst from Thunder Bay, Ontario:

A 1970s–1980s Perspective

Daniel Kile

Littleton, Colorado



Amethyst, Thunder Bay Amethyst mine
9.5 cm across

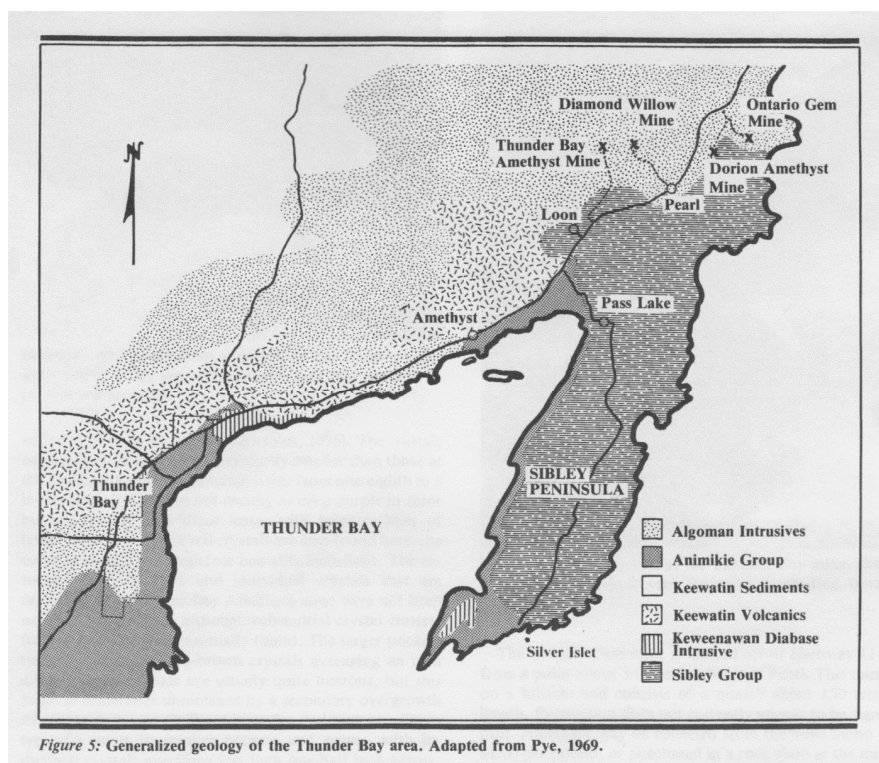


Hematite-included amethyst from the
Diamond Willow mine, 8cm across

Located along the North Shore of Lake Superior just across the Canadian border, several amethyst mines in Ontario have provided fine specimens for more than 50 years. Crystals from this district generally show both positive and negative rhombohedral termination faces with little or no prism development. Specimens are often rounded, forming aesthetic three-dimensional clusters. Much of the amethyst from the Thunder Bay area is distinctive from that found in other worldwide localities – signature red subsurface iron oxide inclusions set it apart especially from the seemingly infinite supply of specimens from South American localities. The area is heavily wooded, and infested in the summer with legions of mosquitoes, black flies, and other biting creatures. Accordingly, many amethyst veins have been discovered via road construction. In past years, amethyst from Ontario has been scarce on the collector market; it has, however, in recent years become somewhat more prevalent.

Historical:

The town of Thunder Bay and Fort William started in the early 1800s to support the fur trading industry. Silver mining (e.g., Silver Islet) took hold by mid-century. Amethyst has long been known in the area, but large-scale mining efforts did not commence until the late 1960s. Although amethyst collecting and associated tourism has become a mainstay in the local economy that continues to the present, mine ownership and collecting opportunities have changed in the past 40 years. In earlier years, the two principal mines producing amethyst were the Thunder Bay Amethyst mine, now known as the Thunder Bay Amethyst mine Panorama, and the Diamond Willow mine, now called the Blue Point mine.



Geology of the Thunder Bay area, from Kile (1984)
Adapted from Pye (1969)

Geology:

The amethyst deposits occur in the Algoman Formation, a Precambrian quartz monzonite (a plutonic rock predominantly composed of plagioclase, orthoclase, and quartz) that is overlain by sedimentary rocks of the Animikie and Sibley groups; a late episode of basaltic flows conspicuously comprises the area landscape. Faulting via late Precambrian igneous activity provided the structural control (fault planes and brecciation) necessary for mineralization.

General Mineralogy:

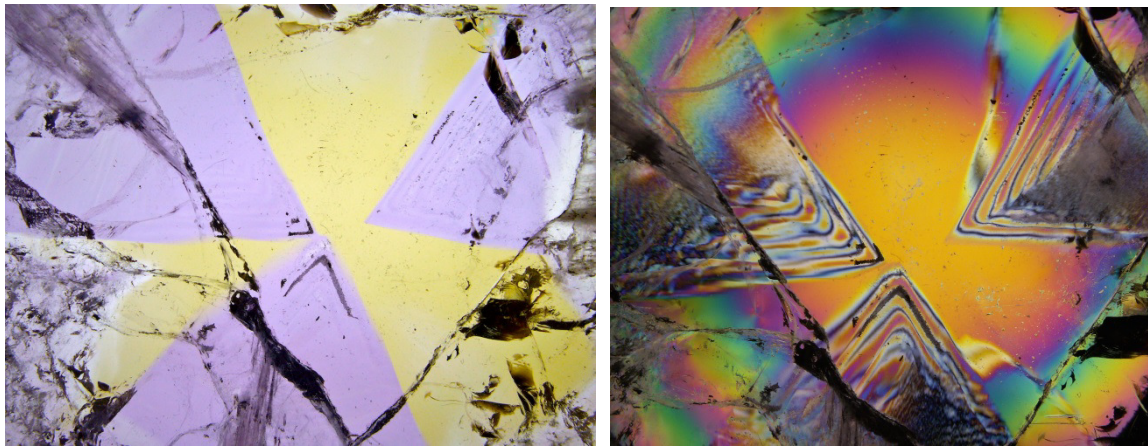
Amethyst forms at relatively low temperatures, from 80 to 285 °C. (Dennen and Puckett, 1972). The color is due to the substitution of trivalent iron (i.e., Fe^{3+} , in an oxidizing environment) for silicon (Si^{4+}). The charge imbalance, together with post-crystallization radiation, results in an unpaired electron that creates a color center that in turn gives a light absorption spectrum that results in a characteristic amethyst color.

Thunder Bay amethyst contains as much as 500 ppm Fe^{3+} (Kustra, 1969), in contrast to Bolivian amethyst which varies from 19 to 40 ppm (Vasconcelos et al, 1994). In contrast, citrine in Bolivian ametrine contains ca. two to four time more Fe^{3+} than that in the amethyst sectors (Vasconcelos et al, 1994). The amethyst color is destroyed at temperatures above 500 °C.

Subsurface inclusions of various iron oxides (FeO_x) including goethite, hematite and presumably other amorphous and hydrous Fe-oxides, create the distinctive red to red-brown coloration for Thunder Bay amethyst, readily differentiating it from other worldwide occurrences. The underlying amethyst tint (particularly from the Thunder Bay mine) is also often much darker than that in crystals from Brazil and Uruguay, as would be expected from the higher Fe^{3+} content, and also from the frequent presence of internal zones of smoky coloration (the latter color due to Al^{3+} substitution for Si^{4+}). In contrast to amethyst from South American localities, Thunder Bay specimens often show damage, ranging from minor to moderate, from post-crystallization tectonic activity and resultant pocket collapse.

Amethyst from worldwide localities is commonly Brazil-law twinned, which is an intergrowth of right- and left-handed quartz. The commonplace twinning in amethyst is likely a result of unit cell distortion caused by the substitution of Fe^{3+}

that has a different atomic radius than Si^{4+} . Such twinning is evidenced only by examination under polarized light. It results in sectors which, when viewed in a slice cut near the crystal termination perpendicular to the c-axis, show symmetrical trigonal patterns of dark bands known as Brewster's fringes, which were described by him in 1823 (!). These fringes arise in areas where the thicknesses of the two overlapping twins are equal, giving bands of zero retardation (not extinction).



Ametrine from the Anahi mine, Bolivia, field of view ca. 6 cm.

Left photo in ordinary light showing alternating amethyst and citrine sectors.

Right photo in crossed polarized light showing Brewster fringes in alternating sections.

In Bolivian ametrine, these fringes are found only in the alternating amethyst sectors, and not in the citrine sectors, reflecting the different levels of Fe^{3+} in the positive rhombohedral amethyst sectors.

Thunder Bay Amethyst Mine

Activity at this mine commenced ca. 1967 following the discovery in the early 1960s of an amethyst deposit during construction of a road to a fire tower. The vein is over a mile long, extending under Elbow Lake. At that time, Rudy Hartviksen operated the mine as a commercial venture to extract building stone, landscaping rock, and to a lesser extent, catering to tourists. The vein was blasted (evidenced by numerous holes in nearby building roof tops!) and flushed with a monitor (one could visualize amethyst crystals flying yonder into the adjacent lake) to expose amethyst-bearing cavities; the debris was removed via a front-end loader and placed near the parking lot for tourists to comb through. At that time, a nearby "bench" was available for more serious collectors to prospect for in-situ veins. One pocket, found in this area in 1978, was 3 x 4 x 9 feet in dimension and yielded more than 900 pounds of crystallized amethyst. The cost at that time was (thankfully!) only 75¢/pound, for crystals or rough.



Thunder Bay Amethyst Mine in 1982; Elbow Lake in the background

Crystals from the Thunder Bay Amethyst mine range in colors from a very dark purple to light purple to red and reddish brown. Amethyst from this mine is usually darker in color than those at the Diamond Willow mine; crystals are, on average, larger than those found in the Diamond Willow mine, with 6-to-8 inch diameter individuals not uncommon. Smaller crystals tend to have fewer FeO inclusions, whereas larger crystals (4-6 inch diameter) tend to have more inclusions and overgrowths of a later-generation quartz, imparting a rough or mottled exterior. All cavities collected by the author at this mine were completely filled with clay, rendering crystal extraction very time consuming.

In addition to subsurface iron oxides (mostly as minute platelets or spherules), microscopic inclusions of goethite (as acicular sprays), pyrite (cubic) and chalcopyrite have been noted. Macroscopic crystals of calcite (as doubly terminated scalenohedra) have been found, often with microscopic sulfide inclusions.

The mine changed hands in the early 1980s when Rudy Hartviksen passed away. Steve Lukinuk assumed ownership, and active mining was then scaled back, with an increased emphasis on tourism. Collecting in-place veins was also generally not permitted, however, in 1982 we were afforded the opportunity to collect a large pocket in the main quarry, with crystals averaging 10 cm across and clusters weighing as much as 350 pounds.

The current collecting status at this mine, judging from Internet commentary, is limited to searching on piles of mine tailings, and tools are limited to a hooked probe. Fees have, as expected, considerably escalated since the 1970s. The cost of self-collected crystal specimens in 1975 was 50¢/pound for crystal specimens or mine rough; in 1982 it was \$4.00/pound for crystals and \$1.00/pound for dump material (entry fees at that time were \$1.00/person). In recent years the prices for dump-collected material has risen to \$3.50/pound with an entry fee of \$8.00/person; crystallized specimens are available in the store and priced individually.

Diamond Willow Mine

Our first visit to this mine, near Pearl, was in 1982, when the mine was owned by Gunnard Noyes and operated intermittently by lessees. Due to active mining by lessees at that time, collecting was limited to searching various dumps, but numerous small amethyst clusters could nonetheless be found with patience and good mosquito netting. We returned again in 1984, and were able to collect in inactive parts of the quarry, whereupon we found a large, approximately 3 foot long, pocket containing lustrous red crystals in groups to 12 inches across. The fee for either crystal specimens or rough was ca. \$2.00/pound; a truckload of crystals from the aforementioned pocket was exceedingly reasonable.



Diamond Willow mine in 1982, showing lessees working in the open pit

The mine transferred to family members when Gunnard passed away some years ago. Renamed the Blue Point mine, it is now owned and operated by Lyndon Swanson; permission to collect in-situ cavities in the quarry has been given on at least an occasional basis (Merkel, undated). Prices have risen to \$20 per 2-gallon bucket of either crystals or rough amethyst.

Amethyst at the Diamond Willow trends toward more pastel and pale lavender tints, brighter red colors, and smaller crystals than those from the Thunder Bay mine. Massive calcite is common here, with barite being occasionally noted (well-crystallized bladed barite was, however, noted at the Ontario Gem mine, located ca. 5 miles northeast of Pearl).

References and Additional Information:

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Vos, M.A. (1976) *Amethyst deposits of Ontario*. Division of Mines, Ministry of Natural Resources: Geological Guidebook No. 5, 99 pp.

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2014 Clay Center Fluorite Specimen
John Rakovan



2014 Clay Center Celestine Specimen
John Rakovan

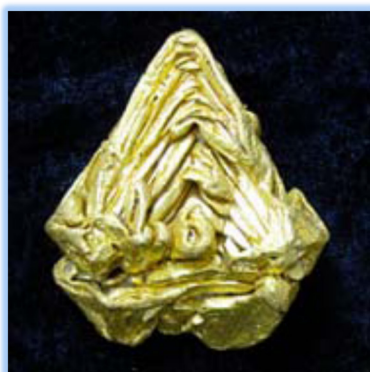
FRIENDS OF MINERALOGY MIDWEST CHAPTER
3rd ANNUAL MINERALOGICAL SYMPOSIUM
(SPONSORED BY THE KARL E. LIMPER GEOLOGY MUSEUM)



NATIVE METALS



Copper Crystals
from Michigan



Single Gold Crystal
from Venezuela



Silver Crystals on Copper
from Michigan

DATE: Saturday March 14, 2015

TIME: 10:00 AM – 4:30 PM

LOCATION: 116 Culler Hall (Adjacent to Armstrong Student Center), Miami University, Oxford, Ohio

CONTACTS: John Rakovan, PhD, Professor of Mineralogy, Miami University (rakovajf@miamioh.edu or 513-529-3245)
Randy Marsh, PhD, Vice President Programs, FM Midwest Chapter (marsh.rg@pg.com or 513-515-7890)

DETAILED AGENDA:

10:30-11:00 FM Midwest Chapter Meeting (open to all)

11:00-12:00 *"The Many Facets of Copper Crystals"* – John Jaszczak, PhD, Professor of Physics & Adjunct Curator at the A.E. Seaman Mineral Museum, Michigan Technological University, Houghton, MI

12:00-1:00 Lunch Break

1:00-1:30 *"The Bizarre Habits of Crystallized Gold: Examples from the Keith Proctor Collection"* – R. Peter Richards, PhD, Morphological Crystallographer, Heidelberg University, Tiffin, OH

1:30-2:00 *"Magnificent Gold Crystals from Venezuela"* – John Rakovan, PhD, Professor of Mineralogy/Geochemistry & Graduate Director, Dept. of Geology and Environmental Earth Science, Miami University, Oxford, OH

2:00-2:30 *"The Use of Scanning Electron Microscopy in Native Metal Analysis"* - Sean Kelly, Graduate Student, Dept. of Geology and Environmental Earth Science, Miami University, Oxford, OH

2:30-2:45 Break

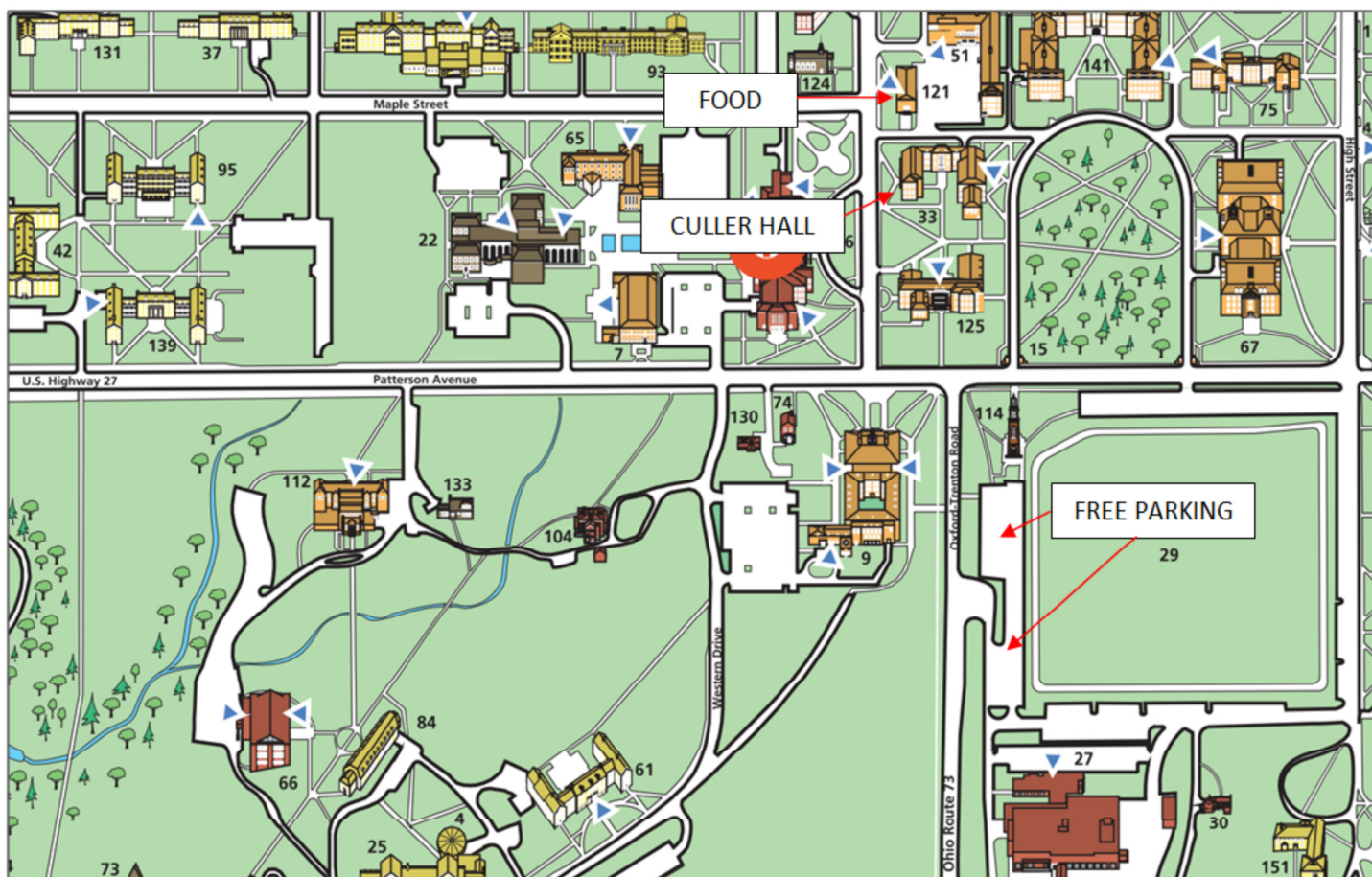
2:45-3:15 *"Native Metal Investigations using Electron Microscopy"* - Michelle Burke, Graduate Student, Dept. of Geology and Environmental Earth Science, Miami University, Oxford, OH

- 3:15-3:45 “Morphological Evidence of Authigenic Gold Deposition in Lateritic Placer Deposits from the Guyana Shield in Venezuela” - Josh Silverstein, Graduate Student, Dept. of Geology and Environmental Earth Science, Miami University, Oxford, OH
- 3:45-4:15 “Prospecting for PGMs in Northern California” – Clyde Spencer, MS, President of Friends of Mineralogy Midwest Chapter
- 4:15-4:30 Wrap-Up of Session

SPECIMENS: A display case has been made available for anyone who would like to display native metal specimens.

DIRECTIONS and PARKING: The Geology Department is located in Culler Hall (33 on map below) while Shideler Hall (125 on map below) is under renovation. Parking on Saturday is free in Cook Field Parking Lot at the corner of 27 and 73.

FOOD: A variety of food types are available in the Armstrong Student Center, immediately adjacent to Culler Hall.



FRIENDS OF MINERALOGY, INC.

Midwest Chapter

APPLICATION FOR MEMBERSHIP

MEMBER DATA SHEET

Please fill in this application and mail it along with your check to the address listed at the bottom.

Name _____
Last First Middle Initial

Address _____
Street City or Town

State Zip/Postal Code

Telephone Number _____ (Home) _____ (Office/cell)

E-mail address _____

Would you be willing to serve as an officer or committee member/chair? _____

I affirm that I support the purposes* of Friends of Mineralogy:

Signature _____ Date _____

Friends of Mineralogy, Inc. is composed of the members of 7 local chapters, plus national members not affiliated with a chapter. **Prospective Midwest Chapter members should send this completed application and \$20.00/year dues to:**

Jeff Spencer, Treasurer
Friends of Mineralogy, Midwest Chapter
4948 Beachwood Dr., Cincinnati, Ohio 45244

- *1. To promote interest in and knowledge of mineralogy.
- 2. To advance mineralogical education.
- 3. To protect and preserve mineral specimens and promote conservation of mineral localities.
- 4. To further cooperation between amateur and professional and encourage collection of minerals for educational value.
- 5. To support publications about mineralogy and about the programs of kindred organizations.



Friends of Mineralogy Midwest Chapter Field Trip Waiver/Hold Harmless Agreement

1.0 I, _____, desire to participate in Friends of Mineralogy Inc. Midwest Chapter ("FMMC")

(please print full name of participant)

field trips/activities ("Activity"). I fully understand and appreciate the dangers, hazards and risks inherent during any Activity, in the transportation to and from the Activity, and in any independent research or activities I undertake as an adjunct to the Activity, which dangers include but are not limited to serious and mortal injuries and property damage.

2.0 Knowing the dangers, hazards, and risks of such Activity and research, and in consideration of being permitted to participate in the Activity and research, on behalf of myself, my family, heirs, assigns, my estate and anyone claiming through me, release waive, forever discharge and covenant not to sue FMMC, it's officers, directors, members, agents or third parties (hereafter called the "Releasees") connected with the FMMC Activity of any and all claims, loss, injury, damage, demands, actions, causes of action, costs, and expense of every nature, known or unknown for damage to personal property, personal injury, death, as well as any emotional or psychological harm, or damages or loss of reputation, employment, contract, property rights and due process.

I further agree to assume all the risks and responsibilities known or unknown surrounding my participation in the Activity, including transportation to or from, or any independent research or activities undertaken as an adjunct thereto. I understand the activities have inherent risks and I understand those risks and assume responsibility to protect myself from those risks and acknowledge that FMMC cannot foresee all risks and hazards.

3.0 I understand and agree that Releasees do not have medical personnel available at the location of the Activity. I understand and agree that Releasees are granted permission to authorize emergency medical treatment if necessary, and that such action by Releasees shall be subject to the terms of this agreement. I understand and agree that Releasees assume no responsibility for any injury or damage which might arise out of or in connection with such authorized emergency medical treatment.

4.0 In signing this Release, I acknowledge and represent that I have fully informed myself of the content of the foregoing waiver of liability and hold harmless agreement by reading it before I sign it, and I understand that I sign this document as my own free act and deed; no oral representations, statements, or inducements, apart from the foregoing written statement have been made. I understand that the corporation (FMMC) does not require me to participate in this Activity, but I want to do so, despite the possible dangers and risks and despite this Release. I further state that I am at least eighteen (18) years of age, and fully competent to sign this Agreement – and that I execute this Release for full, adequate, and complete consideration fully intending to be bound by the same. I further state that there are no health-related reasons or problems which preclude or restrict my participation in the Activity, and that I have adequate health insurance to provide and pay for any medical costs that may be attendant as a result of injury to me.

5.0 I further agree that this Release is in effect in perpetuity once executed, unless revoked in writing and shall be construed in accordance with the laws of the state in which FMMC is incorporated, Ohio. If any term of this provision of this Release shall be held illegal, unenforceable, or in conflict with any law governing this Release, the validity of the remaining portions shall not be affected thereby.

IN WITNESS WHEREOF, I have executed this Release this ____ day of the month of _____, 20____.

Participant Signature: _____

Address: _____, _____, _____, _____

Street

City

State

Zip Code

Phone (with area code): _____ **email:** _____

Emergency Contact: _____ **Phone (with area code):** _____

Witness Signature (must be at least 18 years old): _____

Upcoming MSHA Training Opportunities (both will be using collector specific training developed by Scott Kell)

Once again, The Dayton Gem and Mineral Society in Dayton, Ohio, will be holding the annual MSHA renewal course. There will be no fee charged for the training. Please let me know if you plan to attend.

The MSHA training is scheduled on March 24th 8:30 am-4:30 pm at Dayton Liederkrantz Turner, 1400 East 5th Street, Dayton, OH 45402. Becky Newberry will be teaching.

Kathy Kovacs-Bailey
jimkatbailey@aol.com

The central Ohio MSHA hazard training will be offered Friday April 3rd, 2015 at the Ohio Department of Natural Resources facility at 2045 Morse Road (on Fountain Square), in Columbus, Ohio (43229). The course will be in building E1 of the Assembly Center, from 8am to 5pm. Hazard training is required by many quarry operators to enter their work site for field trips. Sign up with Reggie Rose: email: captaino@core.com; phone: 614-875-2675.

Upcoming Area Events

TITLE: Eastern Indiana Gem & Geological Society Annual Rock & Gem Show
DATE/TIME: March 6-8
LOCATION: Wayne Co. Fairgrounds, 861 Salisbury Road, Richmond, IN
HOST/COORDINATOR: Joe Wirrig (sunow@frontier.com)
TITLE: Symposium on Native Metals
DATE/TIME: Saturday, March 14, 10:30 AM – 4:00 PM
LOCATION: Miami University, Oxford, OH
HOST/COORDINATOR: John Rakovan (rakovajf@miamioh.edu)
ACTIVITY: See separate advertisement for details
TITLE: 17 th Annual Spring Indianapolis Bead, Gem, Mineral & Jewelry Show
DATE/TIME: March 27-29
LOCATION: Indiana State Fairgrounds, Agriculture/Horticulture Bldg, Indianapolis, IN
HOST/COORDINATOR: Van Wimmer (van@toteshow.com)
TITLE: Des Plaines Valley Geological Society's Annual Gem, Mineral and Fossil Show
DATE/TIME: March 28-29
LOCATION: Des Plaines, IL
HOST/COORDINATOR: Karen Schuster (773-791-9653)