Friends of Mineralogy Inc. Midwest Chapter Newsletter

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Mineral Corner—Pride from member collections.

Calcite—Engineering Aggregates Corp. Quarries Plant No. 1 , Logansport, Indiana, USA

(images by, collection of Jim Roser, Lithos & Lumens Fine Mineral Photography ©; text by Johan Maertens. Reproduced with permission)

The Midwest is pampered by an abundance of collectible calcite and fluorite crystals.

Calcite labeled **Logansport, Indiana** can come from three quarries: the Engineering Aggregates Corp. Quarries (Plant No. 1 and No. 2) or the former France Stone Co. Quarries.

This calcite is a rare specimen from the Engineering Aggregates Corp. Quarries Plant No. 1 Quarry

Huizing (1986) docu-

Highlights

- *Calcite, Indiana*
- *Get involved*
- *Field Trips*
- *Ultraviolet Radiation of Calcite and Celestine from Maybee, Michigan*
- *Clifford Donation*
- *FM MW visits Marblehead Quarry*
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The newsletter is published bi-monthly.
Contact and submissions vie E-mail at newsletter@fommidwest.org

From the Newsletter Editor

As you read this, we're right in the heart of our region's outdoor activity season. I hope many of you are out there uncovering new specimens, revisiting old finds, or improving on past discoveries.

This year, personal circumstances have kept me from doing much active collecting. Instead, I've been focusing on "decollecting"—sorting through my inventory, trimming larger specimens, discarding lower-quality pieces, donating what I can, and keeping just a few for further study and a new exhibit I'm building at home.

For me, decollecting starts at the source. Rather than bringing new finds home, I've been sharing them directly with fellow enthusiasts and trip participants. I enjoy the thrill of hunting while also sharing the bounty with others—it's a win-win!

Now, I encourage you to do the same!

Share your discoveries with our community. Whether it's a new find, a memorable story, an event you attended, or even just a photo of your favorite specimen, we'd love to include it in our newsletter. Your contributions will help keep our collective passion for mineral collecting vibrant and engaging.

We look forward to hearing from you!

C.F. Poeppelman Quarry, Bradford, OH (2025)

Get Involved: Your Contribution Matters!

Inspired by the famous equation "E=MC²," we believe that our Existence as a thriving organization depends on Member-engagement and Two-Way Commitment. For this to work, we need your active involvement!

Commitment are key. We rely on members to stay connected with officers and committee chairs, while it's equally important that our leaders respond promptly to your inquiries. To keep things running smoothly, we need members who are ready to answer the call for action and step up in leadership roles.

The Friends of Mineralogy needs fresh energy, new ideas, and passionate individuals to help us grow. There are several open leadership positions, and it's crucial that we fill them with dedicated volunteers like you. Just as a body needs all its parts to function—arms, legs, back, and heart—our organization thrives when we all contribute. Together, we can build the resources we need, from insurance to training to credibility, that allow us to enjoy and advance our shared passion for mineralogy in ways no individual could do alone.

This is your opportunity to make a real difference. Help shape the future of the Friends of Mineralogy and take an active role in our community. Whether you have leadership experience or a passion for helping others, there's a place for you here. Ready to volunteer? Reach out to an officer

This Newsletter is published six times a year by the Friends of Mineralogy Midwest Chapter for digital distribution to members in good standing.

Opinions expressed do not necessarily reflect the views and policies of the Friends of Mineralogy. We reserve the right to decline any submission judged to be inconsistent with FM-MW's purpose or not in keeping with the sensitivities of its membership.

Contributions of articles and photos are welcome: Articles may be edited for style, clarity, and length. The newsletter assumes no responsibility for lost material. SUBMISSION DEADLINES: the 15th of every evenly numbered month, for each issue.

Guidelines for Newsletter Submissions: E-mail preferred (written material accepted); clearly state that the submission is intended for publication in the Newsletter; send photos as color, high resolution email attachments.

Send all submissions and suggestions to

newsletter@fommidwest.org

Field Trips

Field trip details are communicated by email to members.

Field trips Williamsport (August 23), Caldwell Stone (October 11) + Sylvania Minerals (November 8)

To offer a field trip you can organize, contact the Field Trip Chairperson or a FM MW officer (see below).

For your education, watch Collector Safety Training videos by Scott Kell on YouTube. See FM-MW newsletter Volume 39 Issue 2.

FM-MW Fieldtrip Requirements

1. Be a FM-MW Member in good standing to participate.

2. All field trips are weather dependent per decision of quarry supervisor.

3. Field collecting is physically demanding! All trips require at least an average level of physical fitness!

4. Quarry trips require members to be at least 18 years old, and fully comply with the FM-MW field trip guidelines posted on https://www.fommidwest.org/field-trip-guidelines/

Complete and sign the Waiver of liability and hold harmless agreement for activities (including field trips) of the Friends Of Mineralogy – Midwest Chapter Inc.

After receiving the announcement, sign up for the field trip by email to the acting Field Trip Coordinator.

MSHA Hazard Training

ALWAYS bring your **certificate of training Mining Safety and Hazard** with you to all quarry field trips.

If you did not complete Hazard training , or you lost your certificate or if you are new to the club, then you can **take the online safety training course**.

To sign up and receive instructions about the online course, contact Craig Kramer at craigwkramer@gmail.com with the following information in your email:

- club affiliation
- full name
- address
- telephone number

Website for test : https://edpuzzle.com

If you have taken the class before online .go to test website. Top right click Log In. Select **I'm a student**

Enter user name and Pass Word

Rock and Mineral Shows, Clubs, Rock Shops, Mineral Museums can be found using the Internet
www.rockandmineralshows.com;

https://xpopress.com/show/exposearch;

https://www.mindat.org/museums/;
https://www.mindat.org/shows.php?frm_id=searcher&cform_is_valid=1&current=1&country=1&su

Friends of Mineralogy Inc. - Midwest Chapter

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Vice President Field Trips/ Safety Officer *– Johan Maertens*
Secretary *– Frank Konieczki*
50355 W. Huron River Dr., Belleville, Michigan 48111
(734)-699-3321 secretary@fommidwest.org
Treasurer *- Jeff Spencer*
4948 Beechwood Rd, Cincinnati, Ohio 45244
(513)476-2163 treasurer@fommidwest.org
FM Liaison Officer *- Vacant*
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Newsletter *(Committee Chair) - Johan Maertens*
8267 Asbury Lane, Cincinnati, Ohio 45243
513 745 0030 mr.calcite@verizon.net
Webmaster *- Jeff Spencer*
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ments this still active quarry, exposes the Kenneth Limestone Member and the underlying Kokomo Limestone Member of the Salina Formation of Silurian age. Twinned calcite crystals were collected from highly brecciated vugs in the Kokomo. Untwinned calcite occurs as translucent, grayish white to light brown, steep rhombohedrons, up to 10 cm in length, doubly-terminated by a low rhombohedron up to 10 cm across.

The featured specimen is dominated by larger prismatic crystals with a flat rhombohedron truncation with minor saddle-shaped dolomite crystals on a small calcite crystal covered limestone matrix.

Similar to several Midwest locations the calcite responds in different colors to exposure with different wavelength ultraviolet radiation, through a mixture of organic inclusions and ion substitutions.

Reference: Huizing & Russell (1986) Indiana Minerals A • Locality • Index, Rocks & Minerals, 61:3, 136-152, DOI: 10.1080/00357529.1986.11768455

To share a pride of your collection, share pictures and descriptions to Johan Maertens.

2025 Dues

Annual dues currently are $20.

Dues are for calendar year January 1st through December 31st

Dues should be paid by January 15th

Dues must be current to participate on FM MW activities.

To register for 2025 membership you have 2 options for payment.

1. You may print the form and mail it with your $20.00 payment

2. You may pay on-line ($21.00) through our website with a credit/debit card or PayPal. You do not need a PayPal account to use a credit card. Our website has received security verification and certification.

Membership information at https://www.fommidwest.org/announcements/pay-2022-membership-dues-on-line/ or use QR

Ultraviolet Radiation of Calcite and Celestine from Maybee, Michigan

By Calvin Harris

Introduction

A large number of mineral collectors are familiar with calcite ($CaCO_3$) and Celestine ($SrSO_4$), from Maybee Quarry, Maybee, Exeter Township, Monroe Co, Michigan. Some collectors know that these minerals may exhibit fluorescence and phosphorescence. There are publications that describe the luminosity of these minerals, but they include a large number of mineral species and by necessity, descriptions are brief. This article supplements the basic descriptions by including the fluorescent and phosphorescent color responses and intensities, as well as, phosphorescent duration when four wavelengths of ultraviolet radiation effect certain specimens from this locality.

Geological Setting

Maybee, Michigan is located in Southeastern Michigan and the geology of this area consist largely of carbonate rocks and sandstone that formed during the Silurian and Devonian periods. The area of interest is the Detroit River Dolomite of the Middle Devonian period, which consists of brown and gray limestone with small vugs. Dolomite is also present and shares the same descriptive qualities, but has a dense microcrystalline texture. Calcite and Celestine form within vugs and sulfur has been reported to crystallize in fractures within the deposit.

Minerals Description

Specimen A is composed of transparent low steeped rhombohedron calcite crystals measuring 1mm. These crystals are scattered throughout the surface of the specimen. Additionally, opaque, poorly developed sulfur crystals measuring 3mm-19mm are located on the periphery of the specimen. The calcite and sulfur crystals rest on a light gray limestone or dolostone matrix. The specimen measures 15.7cm×11.5cm×5.7cm.

Specimen B consists of translucent, light blue, tabular orthorhombic Celestine crystals with light beige calcite crystals. The Celestine crystals measure 4mm-40mm. The calcite crystals were too small to measure using as 30cm ruler. All crystals have glassy luster. This specimen measures 8.3cm×7.3cm×5cm.

Specimen C is made of a large cluster and smaller calcite crystals. The crystals range from 1.2cm to 2.2 cm. These crystals are light brown, translucent prismatic forms with glassy luster. The Celestine consists of dark beige micro-crystals with a dull luster. The matrix is a light gray limestone or dolostone material. This specimen measures 12cm×8.3cm×5.2cm.

Specimen D (Obverse) is comprised of light tan, translucent low steeped translucent rhombohedron calcite crystals measuring 5mm-23mm on edge. In addition, some tan colored, glassy, opaque Celestine microcrystals and minor amounts of white opaque Celestine crystals are present. The Celestine crystals measure 12mm-15mm on edge.

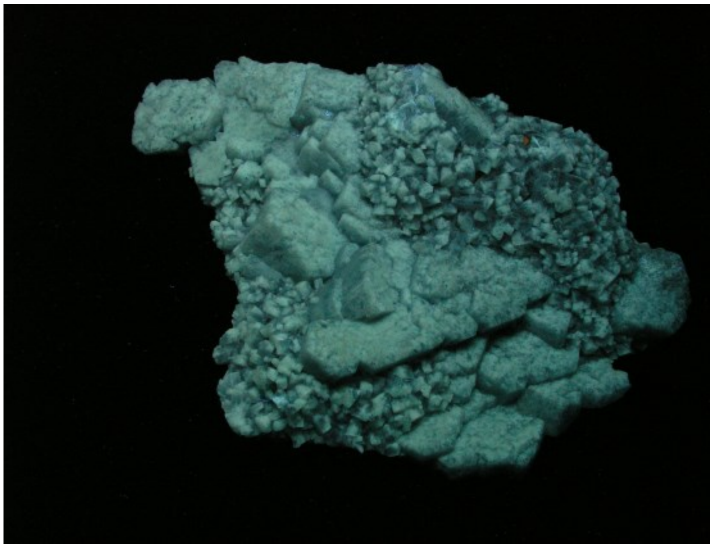
Specimen D (Reverse) is comprised of white, opaque platy Celestine crystals. They measure 10cm-20mm on edge. These crystals are located on one side of the specimen. Minor amounts of Celestine are located on various areas of the specimen. The crystals are perched on a gray-tan limestone or dolostone matrix. The specimen measures 12.2cm×6cm×4.6cm.

Test Procedures

The procedures allow collectors to carefully determine fluorescence and phosphorescence in the field and under controlled conditions. They are easily repeatable and provide consistent results.

Three, SuperBright II lamps and one SuperBright III lamp were the sources of ultraviolet radiation. The SuperBright II lamps emit wavelengths measuring 254nm (shortwave), 312nm (midwave) and 351nm (longwave), while the SuperBright III lamp emits a longwave wavelength of 370nm. Fluorescence and phosphorescence are determined by placing the lamps from the specimens 3-4 inches and 2-3 inches, respectfully. A 10-second exposure time was used to produce phosphorescence. Between testing, a delay of two minutes allowed phosphorescence to dissipate and prevent misleading results caused by subsequent exposure. An AC electric source was used to operate the ultraviolet lamps.

The effects of various ultraviolet wavelengths are provided hereafter.



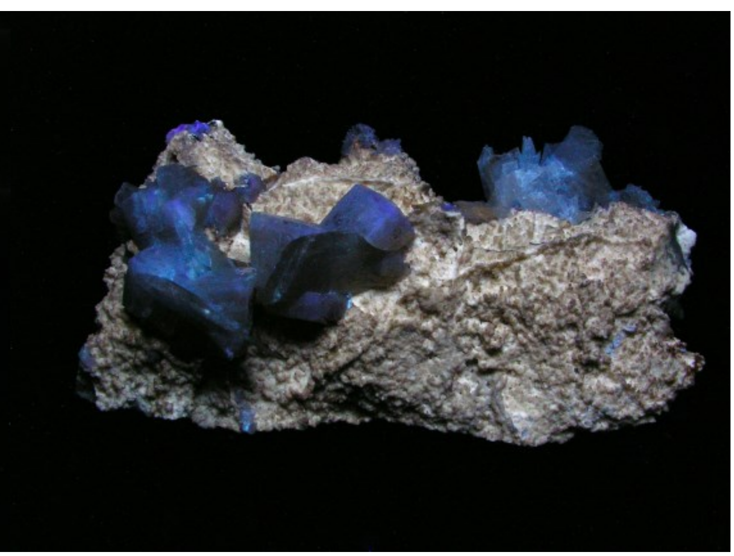
Specimen A. Celestine from Maybee Quarry. 370nm UV radiation luminescence. Jim Roser image

Specimen B . Celestine and Calcite from Maybee Quarry. 351nmUV radiation luminescence. Jim Roser image

<u>Results for Specimen A</u>

Wavelength	Fluorescence	Phosphorescence
254nm	**Calcite**: Light blue, moderate-bright	**Calcite**: Lime-green, bright, 9-second duration.
312nm	**Calcite**: Similar to Shortwave, except less color saturation.	**Calcite**: Color similar to Shortwave, except less saturated; bright; 10-second duration.
351nm	**Calcite**: Color similar to shortwave; moderate-bright.	**Calcite**: White with lime-green tint; bright; 8-second
370nm	**Calcite**: Similar to Shortwave.	**Calcite**: White coloration; moderate; 8-second duration.

Specimen C. Celestine and Calcite from Maybee Quarry. Daylight. Jim Roser image



Specimen C. Celestine and Calcite from Maybee Quarry. 312nmUV radiation luminescence. Jim Roser image

Results for Specimen B

Wavelength	Fluorescence	Phosphorescence
254nm	**Calcite**: lime-green, bright. **Celestite**: brown, moderate-low.	**Calcite**: yellow, bright, 13-second duration. **Celestite**: lime-green bright, 13-second duration.
312nm	**Calcite**: Similar to Shortwave. **Celestite**: Similar to Shortwave, except slightly brighter,	**Calcite, Celestine** similar to Shortwave.
351nm	**Calcite**: yellow, bright. **Celestite**: tan, moderate.	**Calcite**: pale yellow, low, 8-second duration. **Celestite**: gray, low, 8 second-duration.; 8 second duration.
370nm	Similar to Longwave 351nm.	Similar to Longwave, 351nm.

Results for Specimen C

Wavelength	Fluorescence	Phosphorescence
254nm	**Calcite**: Sky-blue color, moderate-bright. **Celestite**: Yellowish-tan, bright.	**Calcite, celestite**: sky-blue, bright, 9-second duration.
312nm	**Calcite**: Pale-blue, violet, bright. **Celestite**: Yellowish-tan, moderate-bright.	**Calcite**: Sky-blue, moderate-bright, 5-second duration. **Celestite**: Yellowish-tan, moderate bright, 13-second duration.
351nm	**Calcite**: Similar to Mid-wave, except no violet, moderate. **Celestite**: Similar to Mid-wave, except moderate.	**Calcite, celestite**, similar to Shortwave, except moderate-bright, 8-second duration.
370nm	**Calcite, celestite**: Similar to Mid-wave. Except moderate.	**Calcite, celestite:** Similar to Shortwave, except moderate-low, 7-second duration.

Results for Specimen D (Obverse)

Wavelength	Fluorescence	Phosphorescence
254nm	**Calcite**: bluish-gray, moderate-low. **Celestite**: Canary-yellow, bright.	**Calcite**: Undeterminable. **Celestite**: Lime-green, moderate-bright, 13-second duration.
312nm	**Calcite**: Bluish-gray, moderate. **Celestite**: Canary-yellow, bright.	**Calcite**: Undeterminable. less saturated. **Celestite**: Canary-yellow, bright, 10 second duration.
351nm	**Calcite**: Similar to Mid-wave. **Celestite**: Similar to Mid-wave, except greater color saturation.	**Calcite**: Undeterminable. **Celestite**: Pinkish-gray, low, 8-second duration.
370nm	Similar to Longwave 351nm.	Similar to Longwave 351nm, except 7-second duration.

Results for Specimen D (Reverse)

Wavelength	Fluorescence	Phosphorescence
254nm	**Celestite**: Blue-gray, moderate-low.	**Celestite**: Sky-blue, moderate-low, 6-second duration
312nm	**Celestite**: Same as Shortwave, except moderate.	**Celestite**: Same Shortwave, moderate, 6-second duration.
351nm	**Celestite**: Blue-violet, low.	**Celestite**: Same Shortwave, low, 5-second duration.
370nm	Same as Shortwave, low.	Blue-gray, very low, 4-second duration.

Discussion

The results show diverse responses, which is interesting considering the specimens originated from the same locality. The responses indicate that different activators were involved.

The ambiguity among the results can be resolved by testing a large number of specimens. An in-depth study to identify the type and role of the activators should help explain any unexpected results.

The phosphorescence of calcite in Specimen D (Obverse) was undetermined due to celestite's bright response.

A supplementary article to this essay will describe how *flash* or phosphorescence characterized by bright and brevity, will offer some information about inorganic and organic activators related to these specimens.

References

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Clifford Donation

By Johan Maertens

We thank Janet Clifford for the donation of sets of perky box mounted crystal specimens to the FM MW, along with rock and mineral magazines.

These specimens will be used for fund raising for FM MW.

To-date funds raised: over $50.

Janet and her late husband Paul Clifford are esteemed figures in the mineral collecting community, particularly recognized for their contributions to micro mounting and mineral curation.

Janet Clifford is a geologist by training and has been an avid mineral collector for over four decades. Her passion for minerals extends beyond collecting; she enjoyed field trips, exhibiting at mineral shows, volunteering at the Cleveland Museum of Natural History, and contributing to mineralogical publications. In 2015, she co-authored an article titled "A Marriage of Science and Art: Creating Quartz Specimens in the Laboratory," showcasing her involvement in both scientific and artistic aspects of mineralogy .

Janet's dedication to micro mounting—a specialized field focusing on the collection and study of microscopic mineral specimens—has been recognized by her peers. In 2018, she was inducted into the Micromounters' Hall of Fame by the Baltimore Mineral Society, an honor bestowed upon individuals who have significantly promoted and advanced the hobby of micro mounting .

Together with Janet, her late husband Paul has been deeply involved in the micro mounting community, contributing to symposiums and educational initiatives. Their collaborative efforts have fostered a greater appreciation for microminerals among collectors and enthusiasts.

Janet in front of specimens she and Paul donated to the Seaman Museum.
Detroit Mineral show 2024 exhibit. Jamison Brizendine image and © .

In 2003, Paul and Janet pledged to donate their extensive mineral collection, comprising approximately 4,000 specimens, to the A. E. Seaman Mineral Museum at Michigan Technological University. By 2023, they had donated over half of their collection, significantly enriching the museum's holdings. Additionally, they established an endowment to support the acquisition of new specimens, ensuring the continued growth and diversity of the museum's collection.

Through their combined efforts in collecting, curating, and educating, Janet and Paul Clifford have made lasting contributions to the field of mineralogy, particularly in the specialized area of micro mounting.

FM MW visits Holcim Group Marblehead Quarry, Marblehead, Ottawa Co., Ohio

By Johan Maertens

Images by Tim Marshall, Reproduced with permission.

10 members attended the FM MW field trip to the Holcim Group Marblehead Quarry (aka Lafarge , Standard Slag Co. Marblehead Quarry), Marblehead, Ottawa Co., Ohio October 12, 2024.

Marblehead quarry is one of the largest (with 2500 acres of land) and highest volume quarries in Ohio and on the Great Lakes, producing over 4 million tons of construction aggregates annually. Much of this material is transported to customers via lake freighters.

Because this quarry has unique safety requirements for vehicle entry, beyond the required PPE. a few members could not participate. Consider investing in the equipment. I started using the equipment in other quarries creating goodwill with the operators.

The plant mines the Marblehead Member, Columbus Limestone, Eifelian Stage, lower Middle Devonian

The Columbus Limestone is a significant carbonate unit in the Devonian of central and northern Ohio. It's part of a much more widespread sheet of Devonian carbonates that extends from New York State to the Midwest. The Columbus Limestone represents deposition in a subtropical, shallow-water, carbonate platform environment. The rocks are principally micritic limestones, fossiliferous wackestones, and fossiliferous packstones. Some chert nodules are present in the unit.

Common minerals are calcite, fluorite, baryte with rarely pyrite. Quartz is present as chert, without confirmed individual crystals.

Fossils are typical Paleozoic shallow marine invertebrates - favositid corals, rugose corals, stromatoporoids brachiopods, crinoids, blastoids, bryozoans, trilobites, bivalves, gastropods, cephalopods, rostroconchs, and tentaculites. Microfossils include conodonts and charophyte oogonia.

Clyde Spencer assumed responsibility for site coordination for FM MW. Thank you.

While safety rules require one foot firm on the quarry floor at all times, accessing rock piles is limited. There is an extreme abundance of rocks to collect from compared to other regional quarries.

“Good” finds reportedly were limited. Friends collected calcite, fluorite and baryte.

Tim Marshall completed collecting a large vug with sharp calcite crystals discovered during a previous trip by Johan Maertens.

Johan Maertens, Editor

Friends of Mineralogy Inc. - Midwest Chapter

8267 Asbury Lane

Cincinnati, Ohio 45243

The Midwest Chapter covers an 8-state region: Ohio, Indiana, Michigan, Illinois, Wisconsin, Missouri, Iowa and Kentucky.

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.

2025 Calendar year
dues are $20 per person.

Membership information at

https://www.fommidwest.org/announcements/pay-2022-membership-dues-on-line/

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