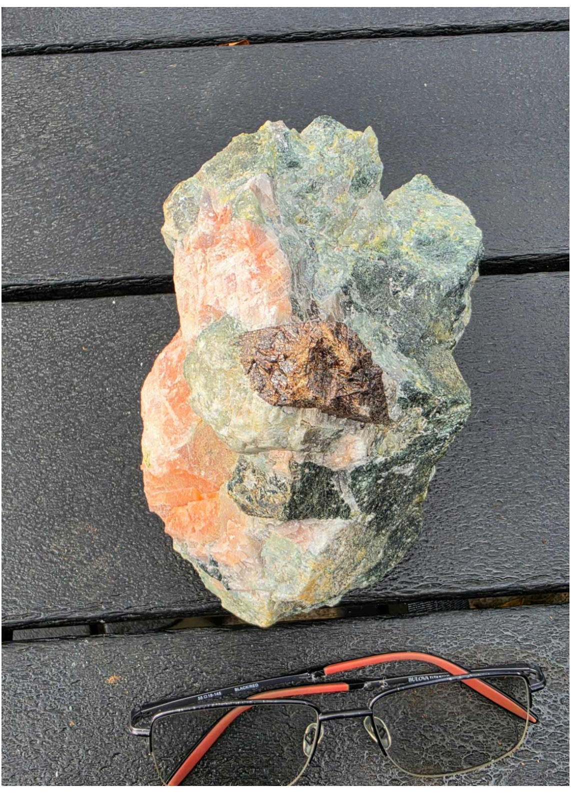
FOMS NEWSLETTER — 2026.10

Franklin-Ogdensburg Mineralogical Society

FRANKLIN, NJ

October 2026



Salmon calcite with titanite XL. Collected by Jim McMahon. The rock is part of a larger McMahon rock, collected at Hamburg, September 2026. Photograph by Dave Wellbrock.

October End of Month & Dig Reminder

!! > New link < !!

You can now RSVP for all the digs at once with Google.

Use the QR code above. Use your cell phone camera to access the form.

Problems registering:
Email: digs@foms-nj.us
Call Dave Kaminski: 845-548-9042

You cannot view the whole message in your email alone!
View this email in your browser
See link at top!

Saturday, October 24, 2026 -- FOMS Field Trip
9:00 a.m. - Noon - FOMS Field Trip / DIG
Collecting at Braen Limecrest, 217 Limecrest Rd, Lafayette, NJ 07848
Meet at the Quarry Office at 8:30 sharp to sign waiver forms, check your membership status, and attend site orientation.
Personal protective gear is mandatory!
Hard hats are strictly required in all quarries and supply yards.
Eye Protection: Safety glasses with side shields or protective goggles to guard against flying stone chips and dust.
Foot Protection: Sturdy, steel-toe work boots with reinforced caps and slip-resistant grip.
Hand Protection: Heavy-duty, abrasive-resistant work gloves.
High-Visibility Clothing: Reflective vests or high-vis jackets to remain visible around heavy machinery.

This is a busy quarry. Be alert for large trucks entering and exiting the quarry. Quarry equipment always has the right of way. Bypass the scale house to the left when entering the property, go left at top of hill and see the office. Bypass the scale to the right when exiting the property. Try not to drive over the scale.
Register here.

Notes on This Mailing

This mailing duplicates and improves upon the email sent out earlier in October via Gmail to members only. This version includes images and is free to all members and nonmembers on our mailing list. Consider joining and becoming a member if you enjoy our newsletter and would enjoy the camaraderie of being on our digs.

Hamburg Vulcan Quarry Field Trip Report

by David Vonderheide & Cristian van Rossen

The FOMS field trip on Saturday, September 26, 2026 occurred with an intrepid dozen or so members visiting the Hamburg Quarry just north of Hamburg, New Jersey. Andrew Rishel, plant manager, was kind to us in allowing a supervised group into a part of the quarry that is being opened up for rock removal–a freshly blasted area on the 650-foot level. Andrew had made note that material at this site included some of the salmon (orange) calcite that had not been seen in nearly a decade: several different types of gneiss were present with granitic masses as well as vertical fissures filled with orange calcite. The gneisses had feldspar compositions ranging from microcline to plagioclase, with bands of quartz and mica.

Andrew's words did not disappoint, for many large boulders of salmon calcite and related minerals were present. The FOMS group quickly swarmed these boulders in search of the many crystal species that occur within or at the contact of the calcite. Nicely formed greenish apatite crystals are found in the salmon calcite. Also present were crystals of the diopside-hedenbergite series and apatite. Other minerals present within or near the contact of the calcite were scapolite, gray-to-brownish colored titanite (sphene), biotite, pyrite, chalcopyrite, and less commonly zircon and molybdenite. For a more detailed review on the geology and nature of this deposit, the author recommends reading the article by Warren Cummings in the Spring 2009 edition of *The Picking Table*, titled "The Calcite-Apatite-Pyroxene Occurrence at Hamburg Quarry. A Bancroft Terrane Style Vein-Dyke?"

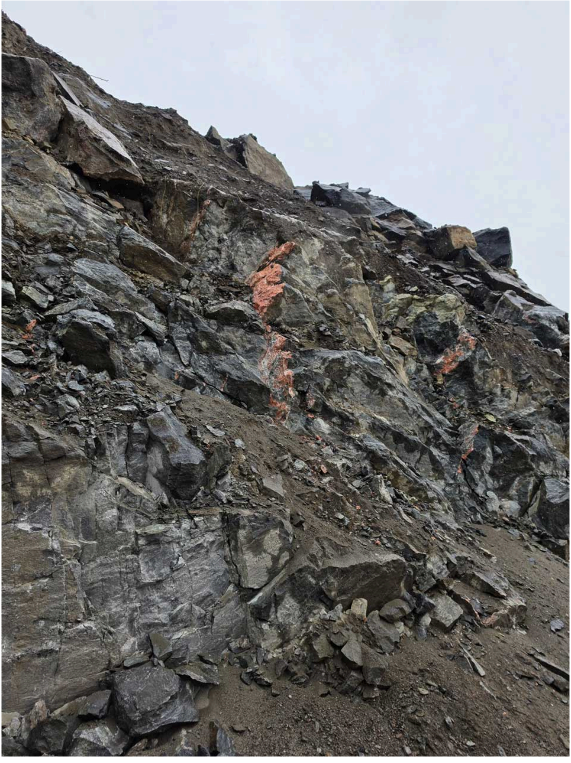
FOMS members were able to collect many specimens of the choice material from the salmon calcite assemblage and surrounding gneiss, among these: examples of the salmon calcite which had well crystallized diopside-hedenbergite, as well as one good titanite (sphene) crystal from the contact zone measuring up to almost an inch in length, and largely complete. The group also observed some much larger titanite masses, but were unable to extract this material. A curious example of chalcopyrite within the salmon calcite yielded some trace amounts of copper secondary mineralization, occurring as green grains and coatings around the chalcopyrite. The apatite seemed to be quite uncommon amongst the salmon calcite boulders, but was found in relative abundance in some samples. The apatite seemed to occur more frequently in the deeper orange salmon calcite that had noticeably less diopside-hedenbergite and biotite. Some boulders of this deep orange calcite were found, and from these, many good examples of greenish apatite crystals were collected. For our fluorescent collectors in the group, the salmon calcite veins were unfortunately not very fluorescent, but some minerals did exhibit some fluorescence. The apatite did fluoresce a mild pink under SW UV light, but it really stood out under MW UV light, which causes the apatite to fluoresce a much more intense pink, and the surrounding calcite to fluoresce a relatively strong red-to-violet. Samples consisting of irregular masses and grains of scapolite with an unusual rim of fluorite were collected by the author. These occurred in pyroxene-rich areas of the salmon calcite veins, and they occurred as masses within this assemblage. The scapolite fluoresces an attractive reddish-maroon color under SW, while the fluorite rims fluoresces a blue color under LW UV light.

Collectors were happy with their finds, and this excitement was shared later. A piece of the salmon calcite was carried to the meeting at FMM, and Dr. Steve Kuitems was able to provide a riveting and richly detailed description of the piece and the minerals.

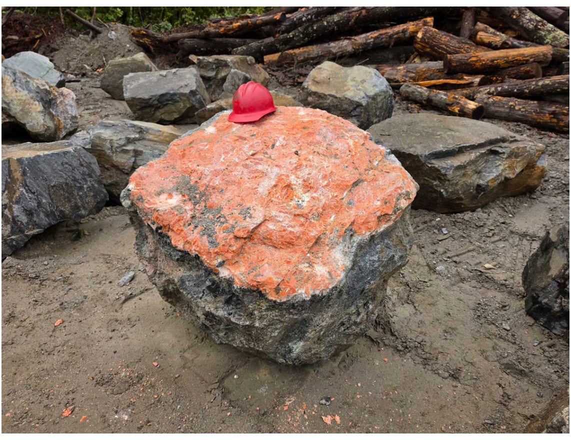
The trip was a great success, and we would like to thank Andrew Rishel, Hamburg Quarry Manager and the Vulcan Materials Company for access to this quarry.

Hamburg Quarry Photos

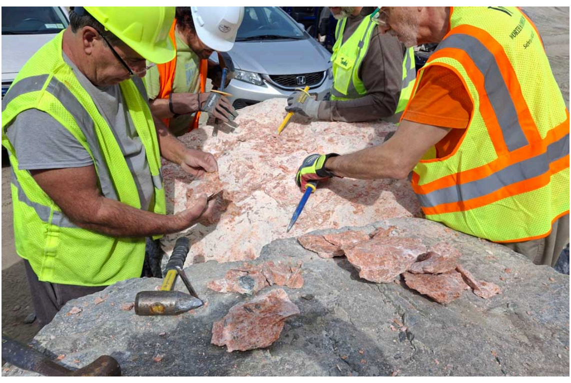
September 2026



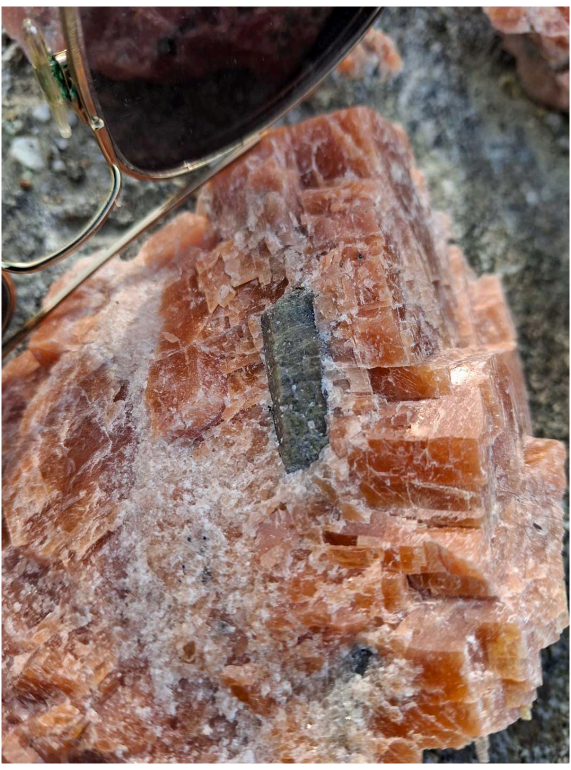
Veins of salmon calcite in quarry wall, 650 foot level. September, 2026. Photograph by Dave Wellbrock.



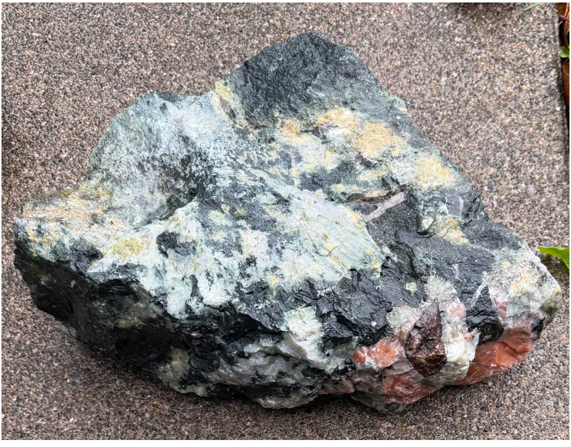
Boulder with salmon calcite. September, 2026. Photograph by Dave Wellbrock.



FOMS members at a boulder with salmon calcite. September, 2026. Photograph by David Vonderheide.



Salmon calcite with apatite crystal. September, 2026. Photograph by David Vonderheide.



Titanite crystal section in salmon calcite, scapolite with pyroxene, apatite, epidote. Brown titanite; pale green scapolite; blue apatite; pistachio green epidote; dark green pyroxene. September, 2026. Collected by Jim McMahon. Photograph by Dave Wellbrock.

Some Imaging and the Representation of Minerals and Their Colors: Nicholas Viltrakis

Thank you to Nicholas Viltrakis for allowing us to have access to his site and a link to these images of local Franklin and Sterling Mine minerals. This is the first of many posts on imaging, kinds of technology, filters, and more.

Here are the 15 comparisons that Nicholas Viltrakis has provided:

https://nicholasviltrakis.zenfolio.com/p702824357

While *The Picking Table* has decades of writing about mineral specimens and mineral photography, the ways in which we photograph, reproduce, and view minerals continue to change. Images may now be made with devices ranging from cell phones to dedicated cameras and viewed not only in print but on screens of many types, brands, sizes, and qualities.
What, then, happens to the appearance of a mineral—and particularly its color—as it moves from the specimen to the camera and ultimately to the viewer?

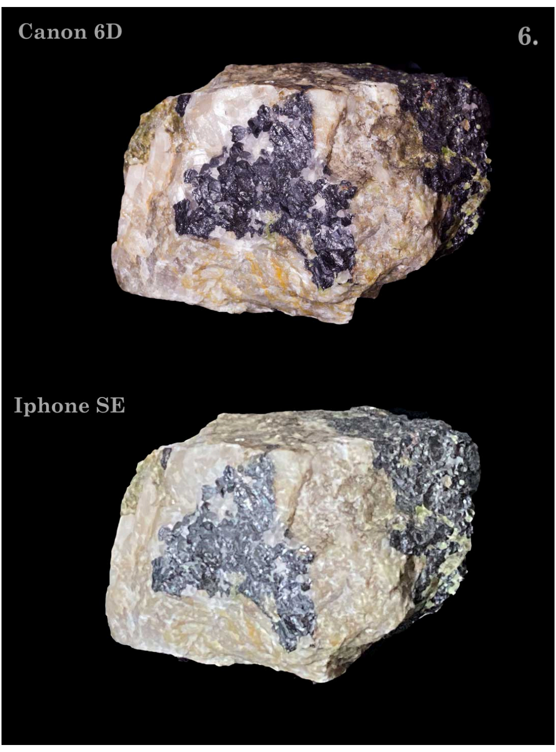
This page is intended to open that discussion in the newsletter and on our online platform. The photographs linked here offer some simple comparisons, including images made with an iPhone and a Canon camera. They are not intended to establish which device produces the “correct” image, but to help us look more carefully at how our minerals are imaged and how those images appear on our screens.

A Few Terms for Discussing Color

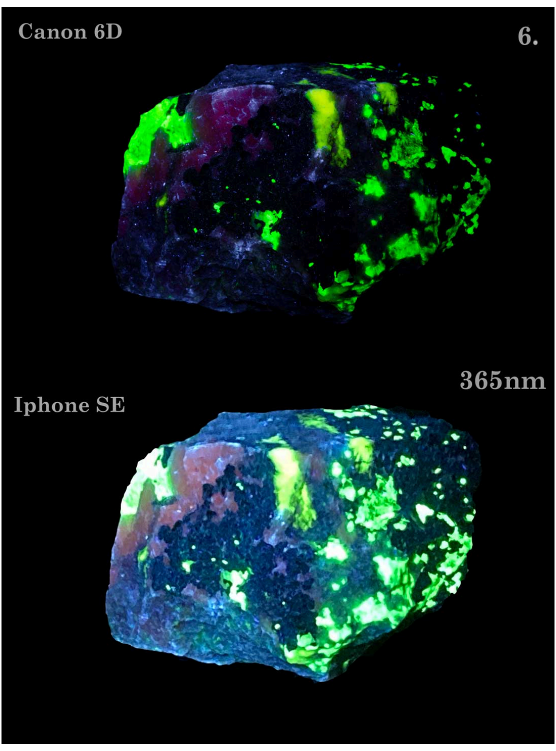
When comparing photographs and the appearance of minerals on different screens, simply saying that a color looks “different” may not tell us very much. For mineral discussion, it may be useful to distinguish among several characteristics:

- **Hue** — the color family: red, orange, yellow-green, blue, etc.
- **Value/lightness** — how light or dark the color appears.
- **Saturation/chroma** — how vivid or intense the color appears, as opposed to muted or grayish.
- **Color** — the broader term for the overall visual impression produced by these characteristics.

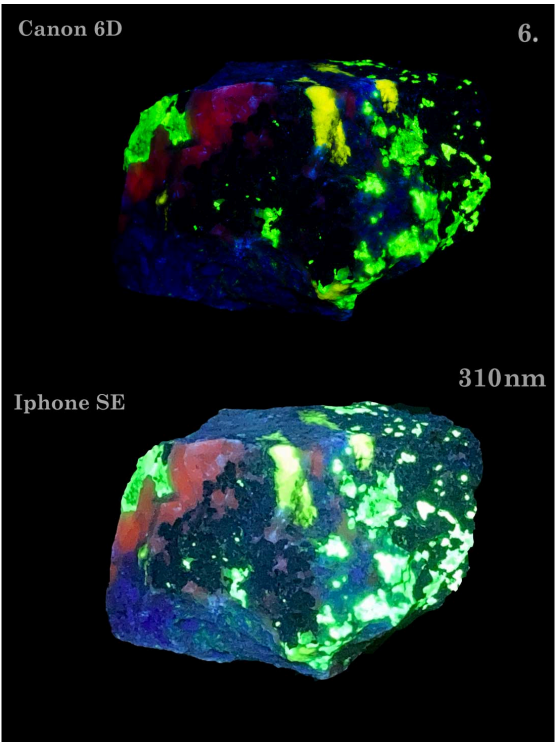
These distinctions may help us describe what changes—and what does not—when the same mineral is photographed with different equipment or viewed on different screens. See a sample of one set of images and the descriptions by Nicholas Viltrakis below.



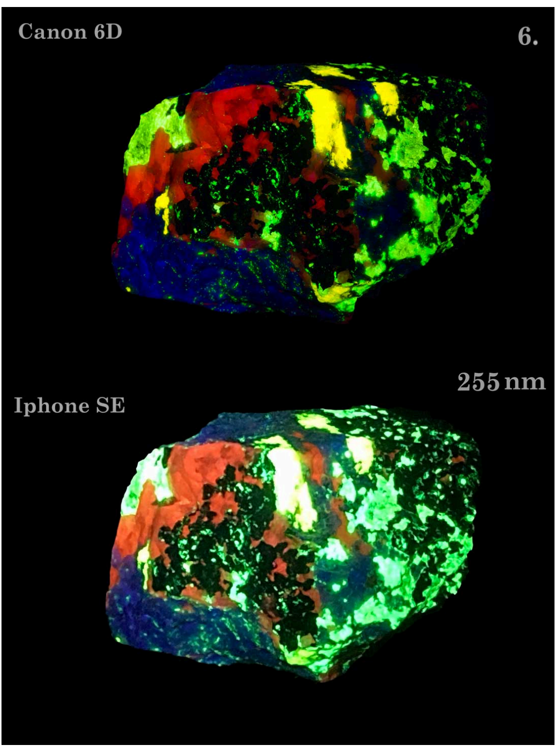
Calcite, hardystonite, willemite, esperite, Parker Shaft, Franklin, NJ. Daylight. Photographs by Nicholas Viltrakis.



Calcite, hardystonite, willemite, esperite, Parker Shaft, Franklin, NJ. 365 nm. Calcite (red), hardystonite (blue), willemite (green), esperite (yellow). Photographs by Nicholas Viltrakis.



Calcite, hardystonite, willemite, esperite, Parker Shaft, Franklin, NJ. 310 nm. Calcite (red), hardystonite (blue), willemite (green), esperite (yellow). Photographs by Nicholas Viltrakis.



Calcite, hardystonite, willemite, esperite, Parker Shaft, Franklin, NJ. 255 nm. Calcite (red), hardystonite (blue), willemite (green), esperite (yellow). Photographs by Nicholas Viltrakis.

Apple iPhone vs. Full-frame DSLR Camera (Canon 6D)
Fluorescent Mineral Image Comparison and List

https://nicholasviltrakis.zenfolio.com/p702824357

1. Franklin concrete, aggregate willemite (FL green SW), calcite (FL red SW), cement made with willemite and calcite sand (FL green and red SW). Dimensions: 6.5" x 5" x 2.5", 43 oz. / 1218.2 grams), Franklin Mine, Trotter Dump, Franklin, NJ.
2. Sphalerite (LW orange), willemite (SW green), minor talc (LW blue), kutnohorite (non-fluorescing pink). Dimensions: 7”x 5”, 1607.8 grams, Sterling Mine, Ogdensburg, NJ.
3. Five colors! Fluorescent arsenian apatite (fluorapatite), dull orange, calcite (bright orange SW/MW), willemite (green SW, MW, LW)) on microcline or feldspar (purple/red SW, light blue MW), and there is carbonate coating, likely aragonite (light blue SW/MW phosphorescent teal), Franklin Mine, NJ, Dimensions: 5.25” x 4.25 x 2.75”, 960.2 grams.
4. Hardystonite, willemite, andradite. 4.75” x 3”x 1.25”, 536.6 grams, Franklin NJ.
5. Hardystonite, willemite, calcite. Dimensions: 3” x 2.75” x 2”, 604.2 grams, Franklin, NJ.
6. Calcite (red), hardystonite (blue), willemite (green), esperite (yellow). Dimensions: 2.5" x 2.5" x 3.75", 704.2 grams, Parker Shaft, Franklin, NJ.
7. Sphalerite (var. cleiophane) SW pink/orange/blue, LW pink/blue, plus SW. Dimensions: 10 x 6 x 4 cm, 324.7 gram, Franklin Mine, Taylor Road Area, Franklin, NJ.
8. Fluorapatite (yellow), calcite (red), meionite (pink-violet), hydrozincite (blue), microcline (deep red) with hastingsite and grossular garnet, 217.5 grams, Sterling Mine, Ogdensburg, NJ.
9. Esperite (yellow SW), willemite (green SW,) zincite, calcite, franklinite, 359.6 grams, Parker Shaft, Franklin, NJ.
10. Barite (white) and calcite (red), 70-foot level, 120 grams, Sterling Mine, Ogdensburg, NJ.
11. Willemite crystals (green), calcite (red), 3” x 2”, 301.3 grams, Sterling Mine, Ogdensburg, NJ.
12. Clinohedrite (orange), willemite (green), hardystonite (blue), 2” x 2.5” x 2”, 258.8 grams. Franklin, NJ.
13. Willemite (green SW), 2. Axinite-mn (red SW/LW), 3. Xonotlite (violet-blue in SW/MW), 4. Pectolite (orange SW, weak orange LW), 5. Prehnite (pink/violet SW, gray MW, light blue LW), 6. Charlesite or nasonite (light blue-green SW, gray MW, light blue LW), 3.5” x 2”, 140.5 grams. Parker Shaft, Franklin Mine, Franklin, NJ.
14. Norbergite (yellow) , diopside (blue), 173.73 grams, Franklin Quarry, Franklin, NJ.
15. Chlorophane (violet-blue LW, teal afterglow), little willemite (green), apatite (orange MW), 197 grams, Buckwheat Dump, Franklin, NJ. Collection of Dave Fox.

Physical and Chemical Properties of Minerals Relevant to Specimen Cleaning, Development and Conservation
by Dr. Steve Hardinger

Review by Dr. Noah Horwitz

Deciding on the best way to clean a mineral specimen is often a challenge. Judicious preparation can greatly enhance a specimen, while inappropriate techniques can cause permanent damage, reducing its aesthetic, scientific, and monetary value. To this end, FOMS members may be interested in a new website and free e-book developed by Dr. Steve Hardinger, *Physical and Chemical Properties of Minerals Relevant to Specimen Cleaning,* *Development and Conservation*: https://www.mincleandev.com/ . Steve is a PhD chemist and draws on this experience in compiling the above works (some may also recognize his name from his now-closed business, Dragon Minerals).

Though it might not be obvious from the home page, the best place to start is with the e-book, *Mineral Specimen Cleaning and Development for the Amateur*. The book opens with a set of guiding principles, which are worth reading before starting work on a specimen. The text then continues with descriptions of specific cleaning and preparation techniques. The section on “removing black coatings” is likely to be particularly relevant to FOMS members, given the nearly ubiquitous manganese oxide coatings on dump material. In addition to the well-known acid/peroxide treatment, several alkaline treatments are described that might be useful for specimens containing acid-sensitive minerals like calcite or clinohedrite.
The remainder of the website contains a document with some general chemical principles and an extensive index of mineral species, with each linking to a short description of the sensitivity of that mineral to various chemicals. The index includes local favorites like calcite, willemite, and hardystonite, as well as less common minerals (roeblingite, mcgovernite, loseyite, and more) - unsurprisingly, the entries for rare minerals are less detailed than those for common ones.

In summary, this new resource is definitely worth a look for those interested in learning more about mineral cleaning and preparation

Society Contacts & Websites

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membership@foms-nj.us
newsletter@foms-nj.us
pickingtable@foms-nj.us

Events, Digs & Sales

Local Only

FRANKLIN-OGDENSBURG MINERALOGICAL SOCIETY (FOMS) DIGS ONLY
October 24, Braen, Lime Crest Quarry / Meeting 1:30–3:00 p.m., FMM, public invited
November 21, Andover Mine / Meeting 1:30–3:00 p.m., FMM, public invited

FRANKLIN MINERAL MUSEUM (FMM) NIGHT DIGS ONLY 2026
November 7, Night dig on Buckwheat Dump at FMM, 6:30–10:30 p.m.

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