President’s Message
By Mark Jacobson

Greeting members,

By June, the snow and ice had receded for most of the United States. So serious field collecting for the year has started once again. With the covid vaccine available to everyone; physical meetings have also restarted. In fact, I gave my first physical presentation, legally, to a mineral club on May 11th which was also simultaneously broadcast to more distance members via Zoom. Zoom presentations with a local or even remote speaker to an assembled audience, broadcast to remote audiences is an opportunity that I believe will start to be used more frequently. This is a technique that FM National plans to do for the February 2022 Tucson Gem and Mineral Show® mineral symposium. I believe that the April 2022 Rochester Mineral Symposium may plan to do the same thing for their symposium.

FM National though has not been idle. The board with the general membership’s voting help has approved the revision to the FM National by-laws. Now all meeting announcements can be done by email, and meetings can be combinations of remote and physical meetings, both for the general membership and the FM board. The final paperwork has been approved by our bank that has changed the signers for the organization’s bank accounts so we can start paying our expenses and fulfilling our obligations. Alexander Schauss has initiated contacts to find a repository home for FM’s historical documents and newsletters. The historical documents are to be organized, scanned to digital files, and a finding aid created before transmittal to the archive with the digital records provided to several other archives. The division of fiscal records for the Treasurer from the historical records for later archiving has started.

FM National’s Facebook page, which is open to all members, has several new editors who can add and solicit material. Although each chapter may already have its own Facebook page, each chapter has the right for an editor to add material of interest to FM National’s Facebook page. If your chapter does not have a National facebook editor and you want one, contact me. In addition, the educational outreach committee has been extraordinarily active with their own full report, which can be found in this newsletter.

For the 2022 February Tucson mineral symposium, we have a complete and full list of submitted speakers. Announcements for the symposium are on our website, our last newsletter, as well as in our Rocks & Minerals

(Continued on page 3)
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and Mineral News advertisements. The change of our magazine advertisements is thanks to the efforts of Erin Delventhal and Matt McGill.

The last National FM newsletter of the year in December will post a full speaker schedule with a website link to the speaker’s abstracts and brief biographies. In addition, the candidates for the at-large FM directors will be provided for email voting.

I am also impressed and thrilled with the increased engagement by the chapters with National. We want to provide a stronger voice for you. Field trips, smoozable/kibbitzable gatherings where information is shared, and symposia still remain the life blood of FM. Our publications, although significant, do not replace the lively oral transmission of knowledge and mineralogical values. Along that thought, I will be at both the Montana Mining and Mineral and the New Mexico Mineral Symposia. Although not FM sponsored symposia, they still have significant engagement by FM members.

I am also impressed by several members submitting articles to be included in the National newsletter. This is a great opportunity for these articles to reach a larger audience. I encourage all members to take advantage of our newsletter.

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The Museum is now open four days a week, Thursday-10-4, Friday-Sunday 10:00 to 5:00 pm, and requires advanced reservations. Health protocols continue to be instituted to protect the health and safety of visitors and staff.

Out of care for those who are not yet able to be vaccinated and our staff, the Museum continues to require visitors over age two to wear masks while on site. Thank you for understanding as we navigate the ever-changing landscape of COVID-19 guidance.

https://ricenorthwestmuseum.org/
Outreach Committee - newsletter update

The Friends of Mineralogy Outreach Committee has begun laying foundations to increase awareness of FM, develop relationships between National and its chapters and affiliates, and reinvigorate FM's role in the mineral community. Several initiatives are underway, including:

**Chapter & Affiliate Outreach**

The Committee is actively organizing meetings to connect with all FM chapters and affiliates. The goals of this effort are to create contact points with chapters/affiliates, establish points for collaboration and support, and re-establish relationships.

**Social Media Outreach**

As of late June, the Outreach Committee has initiated new activity on the existing FM Facebook Page and has established a corresponding Instagram account. The goal of these efforts is to increase and maintain a social media presence for Friends of Mineralogy which acts to spread awareness of the organization and its objectives. You can follow these accounts here:

Facebook: [https://www.facebook.com/FriendsofMineralogy](https://www.facebook.com/FriendsofMineralogy)
Instagram: [https://www.instagram.com/friendsofmineralogy/](https://www.instagram.com/friendsofmineralogy/)

**New Facebook group**

Friends of Mineralogy Community group: this is a private group that will be open to existing members of FM as well as any non-members interested in mineralogy. The purpose of this group is to foster communication and networking between existing FM members across all chapters and to serve as a point of outreach for drawing potential new members into FM, as well as to build friendships and a sense of community among the members.

We encourage you all to join! You can request to join the group here (please be sure to answer the membership questions!):
[www.facebook.com/groups/friendsofmineralogycommunity/](http://www.facebook.com/groups/friendsofmineralogycommunity/)

Friends of Mineralogy Outreach Committee

Jessica Robertson, Thomas Hale, and Erin Delventhal
PNWFM Symposium Update –
October 16, 2021
Minerals of Africa

We know that everyone would love to get together in Kelso next month for a live symposium, but that is just not the world we live in right now. So, this year’s symposium will be in the same Zoom format as last year. This worked to our benefit for this year’s theme: Minerals of Africa! We will have six talks, all presented on Saturday, October 16. Five talks will be on our Africa theme, and one will be local to the Pacific Northwest. Bryan Swoboda will be working with our speakers to record their talks and will apply his Blue Cap Productions magic to give them the professional polish that he is famous for. We will send a detailed schedule and Zoom instructions in advance, but we expect the start time to be 11 AM, Pacific Time.

The symposium will be presented via the Zoom platform so that all current members of PNWFM and guests will be able to join in. You will be able to ask questions of the speakers via a chat feature. There will be no registration fee for this virtual symposium.

Related: See Julian’s article about this year’s virtual display case on page 5!

The Minerals of South/Central Morocco

David Joyce (presenter) and Raymond McDougall (contributor). David Joyce has been a mineral collector since he was 12 years old, growing up in rock and mineral bereft Toronto, Ontario, Canada. He left Toronto at 19 years of age to attend the Haileybury School of Mines and upon graduation worked across Canada in the explosives and mining businesses. He later worked for mining and engineering contractors in the field of designing and building mining complexes his last real job was Vice President, Business Development for SNC-Lavalin Engineers and Constructors. David was an adjunct Professor at the University of Toronto for eight years, was past vice-president of the Canadian Institute of Mining and Metallurgy (CIM), past Chair of the Toronto Branch of CIM, Past President of the Walker Mineralogical Club and a founder of the Young Toronto Mineralogist Club (going 22 years now!). He has also served as director on the boards of several public and private companies.

David Joyce has had a mineral business either full or part time for over 35 years and that is now his occupation. He is also a song writer/musician and has released a compact Disc recording, “Nuggets and High Grade” of his mineral collecting and Mining-related songs. He recently released a popular music video entitled “Diggin’ in a Hole”.

DANGERS IN LONG GRASS: Mineral Collecting in the Republic of the Congo

Demetrius Pohl has been collecting minerals ever since, when, as a young boy on a camping trip with his family to the tungsten and moly mining areas of New England in New South Wales, Australia, he found a topaz crystal in Oban creek. He still has it. After a false start in architecture, he switched to geology earning a Ph.D. from Stanford in geochemistry. His career yo-yoed between industry and academia with a stint as associate curator at the
American Museum of Natural History, and teaching at Columbia, but most of his career was spent in mineral exploration in Australia, South America, and Africa. With college friends he started his own mineral exploration company focusing on Africa and South America. Fortunately, this venture was sold after more than 20 years and some successes, to some optimistic investors in London and he is now retired, restoring old houses, tending his mineral collection, and trying to travel with his wife, Chris.

**The Kalahari Manganese Field: South Africa’s most famous mineral locality**

Bruce Cairncross obtained his Master degree from the University of Natal in 1979 and, after working for Rand Mines Ltd coal division, joined the University of the Witwatersrand obtaining his PhD in 1986. He then joined Rand Afrikaans University (RAU) Geology department, where he served as Head of Department for 14 years, from 2003 to 2016, during which time RAU merged with the Witwatersrand Technikon to form the University of Johannesburg (UJ) and he is currently Professor of Geology at UJ. Bruce has written 11 books on southern African minerals and gemstones and published over 150 articles on the same topics. He serves on the Editorial Board of The Mineralogical Record and Rocks & Minerals and many of his articles have featured in these two publications. He is an accomplished photographer and has won local and international awards for his mineral photos.

**Minerals, Mines and Geology of Namibia**

Bruce Cairncross

**The Evolution of Ruby Sources in East-Africa**

Wim Vertriebst graduated from the Catholic University of Leuven (KULeuven) in Belgium. He obtained a masters in Geology in 2014, specializing in ‘Geodynamics & Geofluids’ and gained his FGA and GG diplomas. Since joining GIA in 2015, Wim has participated in GIA Field Expeditions to numerous gem mining areas around the world focusing on ruby, sapphire, and emerald. He has (co-)authored articles on new gemstone localities, updates on existing mining localities, in-depth gemological studies, and treatment experiments. In his role as manager, Wim is overseeing the field gemology department and is in charge of GIA’s colored stone research collection in Bangkok.

**Rocks, Minerals & Geology of the Pacific Northwest**

Leslie Moclock (presenter) and Jacob Selander (co-author). PNWFM members know Leslie Moclock for her museum curatorship and displays and presentations at our last few symposia. She earned an MS in geology from the University of California–Davis, where she taught field and laboratory geology. She held the position of curator at the Rice Northwest Museum of Rocks and Minerals in Hillsboro, Oregon, for five years, where she enjoyed many opportunities to bring science to the public. Many of you know that she was working on a new book, and it has arrived! In “Rocks, Minerals, and Geology of the Pacific Northwest” she and co-author Jacob Selander present the minerals and geology of our little corner of the planet in a fresh and geologically interesting way: [https://www.amazon.com/Minerals-Geology-Pacific-Northwest-Timber/dp/1604699159](https://www.amazon.com/Minerals-Geology-Pacific-Northwest-Timber/dp/1604699159)
Symposium on Pennsylvania Mineralogy

Mineral Collecting Enthusiasts Meet and Learn
IN PERSON and ONLINE
Symposium November 13, 2021
Field Trip November 14
Bright Side Opportunities Center, Lancaster, PA
Please Register in Advance

The Friends of Mineralogy - Pennsylvania Chapter will hold their 2021 Symposium and field trip on the second weekend in November. Mineral collectors in attendance on Saturday will check in at the Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603.

Activities, including informative talks by knowledgeable speakers on minerals, geology and mining in Pennsylvania and beyond, are planned. Online attendance is also being planned. On Sunday, a field trip for those registered for the symposium will provide an opportunity for mineral collecting at a location to be announced. The field trip is open only to symposium registrants. Safety equipment will be required. All interested mineral collectors are invited to register and attend.

As usual, a few invited mineral dealers will be present, and there will be a silent auction, giveaway table, refreshments, and plenty of opportunities for visiting with fellow enthusiasts. Lunch is available at restaurants within short driving distance, and there is adequate parking at the Symposium venue. Arrangements are still being made, so please see the web site https://www.rasloto.com/FM/ for any updates, details, and the registration form.

Dates: Saturday & Sunday, November 13-14, 2021
Location: Saturday, Nov. 13: Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603.
Sunday, Nov. 14: collecting trip, to be announced
Registration: $25/person for non-members (or join for 2022 and get the member rate), $15/person for current FM-PA members; $5/person for college students; free for younger students. Parents must provide supervision of minors.
Please register in advance; a form is available on the web site.
Professional Geologists: lecture attendance qualifies for Professional Development Hours toward license renewal.
Web Site: https://www.rasloto.com/FM/
Contact: e-mail: <bstephens@stephensenv.com>

Call for Abstracts

Friends of Mineralogy - Pennsylvania Chapter invites submissions of abstracts to be considered for presentation at our annual Symposium. The Symposium is scheduled for Lancaster, PA, on Saturday, November 13, 2021, both in-person and online.
Presentations on Pennsylvania minerals or mineral localities, or other topics of interest to mineral collectors, are invited. Abstracts may be up to two pages and should include a title and the author's name and affiliation as they should be presented. The final abstract for publication in the program may include illustrations of sufficient resolution to look good in print; a biographical sketch and photograph of the author are also welcome, within the two-page limit.
We provide an honorarium of $100 for each presentation. Contact Bill Stephens <bstephens@stephensenv.com> or another Board member if you might be interested, or to submit an abstract for consideration. Please submit abstracts by September 30, 2021.
mindat.org

Mindat.org Update - August 2021

By Jolyon Ralph
jolyon@mindat.org

It has been an exciting year for mindat.org, despite the lack of international events to attend (or perhaps because of it and the reduction in distractions) we have a couple of exciting projects to announce that will help mindat.org grow and help the wider mineral community too.

Firstly, earlier this year in partnership with the University of Idaho we submitted a funding request as part of the NSF-funded EarthCube project for a project called 'OpenMindat' - which aims to build an 'API' system (or application programming interface) for automated access to mindat data, and most importantly, to ensure that the mindat.org data provided into this system is in an open access format (which means anyone can use it for any non-commercial purpose without needing formal permission in advance.) It will also allow downloads of data sets from mindat.org, for example if you wanted to download all the localities with coordinates and their minerals in Utah, you could do this in advance of a trip there and load it into your GPS. The main beneficiary of this project will be academic studies; projects such as the 'Mineral Evolution' project led by Dr. Robert Hazen from the Carnegie Institute of Science that rely on mindat.org data. This open system will allow others to do similar research based on the data we have been collecting for over 20 years.

This project will also fund a more powerful search server for mindat allowing for faster and more accurate search results - and hopefully the end to the occasional problems with service availability that we've had recently.

The next project started as two separate ideas that merged into a single project - firstly the wish to build a structured database of references within mindat.org (so that you can identify which mindat.org pages cite any specific reference, for example) and the second was our wish to provide an online inventory of books and journals that are held in the mindat.org library.

The end result of this is now titled "The Rock H. Currier Digital Library", and is available to browse at https://www.mindat.org/reference.php where you will be able to search over 13 million references, and there are over 300,000 open access PDF files available for download right now, with more being added daily. As this system grows, and in conjunction with the improved search server mentioned above, this will provide even more powerful search possibilities for articles relating to all the geosciences and beyond.
News from our affiliate, *Mineral News*

*Mineral News* has been published continuously for thirty-seven (37) years, beginning in 1984 as a black and white, eight-page newsletter by Lanny Ream and acquired and expanded by Tony Nikischer of Excalibur Mineral Corporation in 2003. Today, each monthly issue is at least sixteen (16) pages long and produced in full color, and a U.S. subscription price remains at $30.00 per year.

Dubbed as “*The Mineral Collector’s Newsletter*”, content is generally divided into three major categories: new mineral finds, historical or ephemera-related articles of interest to collectors, and abstracted descriptions of new mineral species approved by the International Mineralogical Association. Brief announcements of upcoming shows and symposia are also provided, and obituaries of well-known collectors or dealers are occasionally presented, as are book reviews of new, mineral-related titles.

*Mineral News* has no paid authors, and new, previously unpublished articles relating to collecting stories and localities are actively solicited from collectors and dealers. Turnaround time for accepted articles is generally 60 days or less. Submissions are via email (MS Word, WordPerfect or similar formats), and all editing and layout work is provided free of charge. All submitted material remains copyrighted by the authors.

Since 2009, National Friends of Mineralogy has been presenting a certificate at the Tucson Gem and Mineral Show® awards banquet to the author(s) of the article that was voted the best article published in *Mineral News* for the previous year. In honor of the author, *Mineral News* receives a check for $200. Similar best article of the year awards are also made for *Rock & Minerals*, the *Mineralogical Record*, and *Mineral Monograph* (Werner Lieber award).

If you have a mineral-related story to tell, why not try a submission to *Mineral News*?

**Excalibur Mineral Corporation**

*Publishers of the Monthly Periodical* *Mineral News*

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Website: [www.mineralnews.com](http://www.mineralnews.com)    email: [news@excaliburmineral.com](mailto:news@excaliburmineral.com)
The Young Mineral Collectors group (YMC) comprises roughly 1,600 members, all mineral lovers under the age of 40. Founded in 2018 as a way to connect young people in the mineral community worldwide, the organization’s primary platform is Facebook, where members can show off new specimens, ask questions, and share knowledge, advice, and enthusiasm. We are proud to have a diverse membership, including individuals from the United States, Europe, Asia, Africa, and Latin America, as well as a significant presence of women within the group. The YMC leadership team strives to be representative of these demographics and brings together people with a variety of backgrounds, interests, and skills to help steer and facilitate the activities of the group at large.

So far, YMC has made a splash with displays featuring our members’ collections, such as the pod of ten cases we presented at TGMS 2020 which was awarded the Friends of Mineralogy Best Non-Institutional Educational Award. You can see photos and a video tour of these displays and others we’ve put together on the Media page on our website, youngmineralcollectors.org. We look forward to more displays and member meetups at future shows in the U.S. and abroad!

Some of our ongoing initiatives include educational talks, museum tour videos, articles written by our members about all facets of the mineral world, and an info hub housing resources to help those new to the hobby as well as more seasoned collectors.

YMC also has some exciting new projects coming down the pipeline. We are currently preparing for the launch of our mentorship program, in collaboration with Geology365. This program will bring together newer collectors with veterans of the community and help bridge the gap between the generations, allowing decades of knowledge to be passed along to eager mentees. Please take a few minutes to fill out this survey if you are interested in our mentorship program and would like to become a mentor or mentee. We are also very pleased to be a new affiliate of Friends of Mineralogy and look forward to a long and productive partnership. We hope to see the FM community serve as a “landing spot” for members aging out of YMC to transition into.

What’s Hot In Tucson © BlueCap Productions

We invite you to keep in touch with Young Mineral Collectors! If you are a collector under 40 years old, you can find us on Facebook and join the group (be sure to answer the membership questions). We enthusiastically welcome supporters who may fall outside our age bracket to find us online as well. Register to attend our educational talks over Zoom—or consider giving one yourself! We believe there is room for everyone in the mineral collecting community and YMC is working hard to draw in and support future generations.
The Mineralogical Society of America
Resources, Publications, Programs, and Outreach

Overview
The Mineralogical Society of America (MSA) was founded in 1919 to advance mineralogy, crystallography, geochemistry, petrology, and promote their uses in other sciences, industry, and the arts. MSA encourages fundamental research about natural materials; supports the teaching of mineralogical concepts and procedures; and raises the scientific literacy of society on issues involving mineralogy in the widest sense. MSA encourages the preservation of mineral collections, displays, mineral localities, type minerals, and scientific data. MSA publishes the journal *American Mineralogist*, *Elements* magazine, the book series *Reviews in Mineralogy & Geochemistry*, textbooks, and monographs.

Anyone with an interest in mineralogy/petrology is eligible to join MSA. Information about membership is on the MSA home page: [www.minsocam.org](http://www.minsocam.org).

Resources
There are resources for the collecting community on the MSA website in the section entitled Collectors’ Corner. On this page are links to scientific information, rock and mineral keys, locations, articles, and much more. The link is [http://www.minsocam.org/msa/collectors_corner/index.htm](http://www.minsocam.org/msa/collectors_corner/index.htm).

Back issues of the *American Mineralogist* from 1914-1999 are available online free to anyone at [http://www.minsocam.org/msa/ammin/toc/](http://www.minsocam.org/msa/ammin/toc/). These earlier issues contain a wealth of collector information. *New Mineral Names*, which is the section of the journal that catalogues new minerals, is a free section even in all current issues. The *Handbook of Mineralogy*, authored by John W. Anthony, Richard A. Bideaux, Kenneth W. Bladh, and Monte C. Nichols, is now online and free to anyone at [http://www.handbookofmineralogy.org](http://www.handbookofmineralogy.org). In addition, it is being updated by Kenneth W. Bladh to include new minerals and now has 4914 species.

MSA also provides online educational resources for K-12 teachers, as well as college and university faculty. These resources, which include lesson plans, animations, videos, photographs, teaching suggestions, and more, were contributed by MSA members and are available on MSA’s website at [http://www.minsocam.org/msa/Teaching_Resources.html](http://www.minsocam.org/msa/Teaching_Resources.html).

Minerals Day
Last year for the first time, and again in 2021, MSA is sponsoring Minerals Day (October 11, 2021, the Monday of the American Geosciences Institute’s Earth Science Week). The purpose of Minerals Day is to highlight the importance of mineralogy and petrology to students and teachers, the collector community, and the general public. On Minerals Day itself, and during the rest of Earth Science Week, there will be live and recorded webinars and presentations focusing on the theme of Cool Careers in Mineralogy/Petrology. One of the webinars will be presented by representatives of the Young Minerals Collectors and the Friends of Mineralogy Virginia Chapter. Career webinars will include forensic mineralogy, aggregates, planetary mineralogy, gemology, museum curation, and federal and state agency jobs. The Minerals Day downloadable poster will also feature these careers. For more information on Minerals Day, go to [www.mineralsday.org](http://www.mineralsday.org).

Communications
MSA is on social media, including Facebook, Twitter, Instagram, and YouTube. Videos on the MSA YouTube channel cover a variety of topics in mineralogy, petrology, crystallography, and geochemistry. Another way of linking to the mineralogy community is through the listserv MSA-Talk and its 3,500 subscribers. The link to subscribe is here: [http://www.minsocam.org/msa/MSA_Talk.html](http://www.minsocam.org/msa/MSA_Talk.html).

Contact Us
We at MSA headquarters welcome suggestions for how to be of greater use to the collector community. Please send any ideas to business@minsocam.org.
Diverging group of seaborgite blades with ferrinatrite. Seaborgite (IMA2019-087), LiNa$_2$K$_2$(UO$_2$)$_3$(SO$_4$)$_2$(SO$_3$OH)(H$_2$O), is a new mineral species from the Blue Lizard mine, Red Canyon, San Juan County, Utah, U.S.A described by Kampf et al. (2021) American Mineralogist 106, 105-111. The field of view is 0.68 mm across.

BMS Ref No 88 – Aurichalcite (Zn,Cu)$_5$(CO$_3$)$_2$(OH)$_6$ – Monoclinic
Hilton Mine, Appleby, Scordale, Cumbria, UK.
Aurichalcite balls sitting on fluorite. Its “wet feather” appearance distinguishes it from rosasite
Photo by Martin Stalworthy. 32 images finished with Combine Z and Photoshop.
The Mineralogical Books by James and Edward Dana
By Herwig Pelckmans

I don't think there is any serious recreational or professional mineralogist out there that does not know about “Dana's System of Mineralogy” or “Dana's Manual of Mineralogy”. These books have been around forever, so it seems! For quite a while now I had been thinking of creating a list of at least the different “Systems of Mineralogy”, together with links to online versions that can be fully searched digitally.

So finally a few weeks ago, I started on this project only to find out a whole bunch has been written about these books, AND, some things looked quite complicated when it came to different editions, different printings, different titles, different authors, and so on!

On the other hand, there were many digital versions to be found online, but quite a few were not what they pretended to be. Frequently the date of printing was plain wrong, or the edition stated was incorrect, or … you name it. It was clear there was a need for a simple yet efficient list of the different editions of each work, linked to its digital version.

And so I compiled a “Links to the most important mineral books by Dana” that I published on Mindat towards the end of August. I wrote it as a text file first, which turned out not to be such a great choice, because the article on Mindat needs to be in html format. Since my Word document had a lot of different characters and a specific layout, morphing it into an acceptable html version took a lot of time and even more copy & pasta. ;-

Anyway, here is the link to my most recent article: https://www.mindat.org/a/links_to_dana_books

For people who are looking for more info on Dana, here are a few useful links:

* A detailed biography (and bibliography) of James Dwight was written by his son Edward Salisbury Dana, right after James passed away in 1895, and can be found here: https://babel.hathitrust.org/cgi/pt?id=hvd.32044107217713&view=1up&seq=9&skin=2021

* The most detailed bibliographic description of the mineralogical works by James Dwight Dana can be found here: https://mineralogicalrecord.com/new_biobibliography/dana-james-dwight/

* The most detailed bibliographic description of the mineralogical works by Edward Dana can be found here: https://mineralogicalrecord.com/new_biobibliography/dana-edward-salisbury/
WILLIAM STEWART WISE

August 18, 1933 – June 29, 2021

William S Wise died Tuesday, June 29 after a long bout with cancer. He was born in 1933 in Carson City, Nevada, the oldest of three boys. He often enjoyed camping and fishing in the surrounding Sierra foothills. At age 14, while in Boy Scouts, he discovered his life’s passion: geology. After graduating at the top of his class in high school, Bill put himself through Stanford University. It was at Stanford that he met his beloved wife, Mona. After obtaining a Bachelor’s degree, Bill served his mandatory 2 years in the Army, part of the time in Germany. He returned to Stanford for a Master’s degree in geology and then went to Johns Hopkins University in Baltimore for his Ph.D. Volcanology and mineralogy were his focus areas of study.

His thesis area was the Wind River area of Washington state where he spent several summers mapping and hiking. Before his thesis was even completely typed, he was offered a teaching position at the University of California at Santa Barbara in the geology department. He worked at UCSB from 1961 to 1994 as a professor, researcher, department head and associate Dean of Letters and Science. Teaching field courses in geology was a big part of his life. He believed that geology had to be experienced by walking over and through it. He believed that a field course was the capstone of a degree in geology.

Many students from UCSB returned to tell Bill about their successes in the field of geology. They remembered him as a great instructor, fair grader and strong proponent of women and minorities in that field. Two students were so moved by their experience with this professor that they chose to honor him in two ways. One student started the Hobson/Wise Field Studies Fund at the Earth Sciences Department at UCSB. He felt that the summer field class has greatly improved his classroom learning and had set him on the right path for this career. The other student discovered a new mineral, found only in Pakistan. He named it Billwiseite. This is probably the highest honor for a mineralogist!

Bill had three children and is survived by Brian Wise (and his wife, Gloria) and Michelle Hertig. He is predeceased by his eldest, Debbie Sichel. He taught all three children about geology on extensive camping trips to remote localities for collecting minerals. All three were regularly quizzed on the types of rock, names of minerals and landforms. He was also fascinated by birds and took many trips to the Mammoth Lakes area to study the bird life there and at Mono Lake. His love of teaching continued as he taught his grandchildren about the physical world around them. Both Rebecca Tissot and Ed Sichel can tell of many hours sitting watching Volcano Scapes videos.

After Bill retired from UCSB, he found other passions to pursue including volunteering at the Humane Society socializing dogs for adoption. He made a habit of adopting old dogs who needed loving homes. Another strong interest was collecting Chinese stamps. He wrote a regular article for a China Stamp publication. He also missed teaching and began to assist in the kindergarten and first grade classrooms of his youngest grandchildren, Zachary and Jared Hertig. He could teach a child to read a book as well as he could teach a graduate student to “read” a mountain.

The title, Bill liked the most in his life, was Professor. However, when his grandsons began calling him “Papa,” this title took a close second place. Family was always important to him and he remained a strong supporter of all of his family throughout his last days.

Bill will be interred privately at the Goleta Cemetery. Memorial gifts can be made to the Santa Barbara Humane Society, whose work he loved.
Editor’s Note:

Thank you to the contributors of all the articles and pictures for this issue.

Datolite

By Frank Konieczki

Datolite is a basic calcium boron silicate mineral CaB2SiO4(OH) that occurs in schists, tuffs, skarns, and most often as a secondary hydrothermal mineral in mafic igneous rocks, such as basalt. It is a widespread but relatively uncommon mineral, and some of its most frequent associates are quartz, calcite, prehnite, copper, danburite, and zeolites.

Datolite most often presents as blunt, wedge shaped to short prismatic crystals that are colorless, pale green or pink, red, or grayish tinged, are clear to translucent and have vitreous luster (See Fig. 1). Its crystal symmetry is monoclinic and most crystals are under 1 cm, but some large crystals (6 cm or more) have been collected from San Luis Potosi, Mexico, and formerly in Michigan. Its hardness is 5-5.5, its specific gravity is 2.8-3.0, and it exhibits irregular cleavage.

Notable worldwide locations for datolite include Russia, Japan, Norway, Germany, Italy, Austria, Mexico, and the United States. Fine specimens have been extracted from numerous sites in the Eastern U.S., including: Hartford Co., Connecticut; Hudson, Essex and Passaic Counties, New Jersey; Hampden Co., Massachusetts; Loudoun and Prince William Counties, Virginia.

Excellent datolite crystals that are similar to the previously referenced locales have been taken from about half a dozen mines in the Keweenaw Peninsula. Houghton County locations where crystalline datolite has been collected are Osceola (which yielded crystals to 5 cm) and Laurium, and the Keweenaw County sites are Copper Falls, North Cliff, Agency, and Clark.

Another form of datolite is unique to Michigan’s Ontonagon, Houghton, and Keweenaw counties and also a few sites on the north shore of Lake Superior in Minnesota. Most of the datolite in these locations is found as nodules in amygdaloidal basalt, and also in veins filling fractures in the host rock and in conglomerate lodes. The nodules are generally small, but nodules exceeding 30 cm diameter have been discovered. Although datolite nodules’ exteriors are most often lumpy and drab gray to brown, they can be attractive display pieces. Rough specimens are often cut and polished so that their interiors are revealed, and they are often exhibited as pairs. This datolite is usually opaque, but is sometimes translucent, and in Michigan, it comes in a wide array of colors. White, pink, red, orange, reddish-brown, and gray are the most common colors, but blue, green, and yellow are also found, and the latter three are the most prized colors for collectors. There are also specimens that are zoned and/or multi-chambered and these may include several colors (See Fig. 2 & Fig. 3).

Figure 1. Cluster of datolite crystals, size unknown. Photo courtesy of R. Weller/ Cochise College.
Inclusions of finely disseminated copper and chalcotrichite impart red, pink, orange, and reddish-brown hues to many of the datolite specimens found in this region. Blue-green dots in specimens, most notably from Centennial Mine, are due to oxidized copper inclusions. Datolite nodules in Minnesota are almost exclusively white.

Some of the world’s finest examples of Keweenaw Peninsula datolite are on display at the A.E. Seaman Mineral Museum in Houghton, MI, along with superb displays of other minerals from worldwide locations. The museum is renowned for its collections of Keweenaw Copper District and Lake Superior Iron District minerals, and also for other comprehensive mineral displays. Photographs of several outstanding datolite specimens may be viewed online by visiting the museum’s website and choosing the A.E. Seaman Collection portion of the portrait gallery.

Visit [https://museum.mtu.edu/](https://museum.mtu.edu/) and follow the links to Collections and then A.E. Seaman Mineral Museum Collection.

The most common source of the nodules are the poor rock piles of the now closed copper mines, but datolite can also (but infrequently) be found on the shores of Lake Superior, and also on its floor. The vast majority of the closed mine properties are private and closed to collecting; however, there are several opportunities for obtaining access to these sites. The A.E. Seaman Mineral Museum continues to host Keweenaw Mineral Days, a series of events that include lectures and mineral auctions/sales, and it also includes mineral collecting events at several mines, including several known to produce good quality datolite. Details pertaining to the events are available at the museum’s website. Additionally, the Copper Country Rock and Mineral Club sponsors collecting trips for its members. The Caledonia Mine in Ontonagon County had been open from June through August for mineral collecting by reservation until 2018. Most recently, the mine was then owned and operated by Evergreen Explorations, LLC, who had succeeded Red Metal Minerals, Inc. as the owner, but another possible change in ownership has rendered future collecting at this famous location uncertain.
Datolite and native copper in basalt matrix 5.6 cm, Mass Mine, Mass City, Ontonagon Co. MI. Author’s collection and photo.

The author has made numerous forays to Michigan’s Upper Peninsula to collect minerals, including datolite, over the last dozen years. Searching for the nodules is certainly challenging. They are almost always small and unbroken nodules are very difficult to detect because the exterior colors are almost identical to the host rock. These trips yielded datolite nodules from Caledonia Mine (about 60 specimens collected 2008-2012), Central Exploration (2013), Wolverine #2 (2015), Delaware Mine (2015) and Mandan Gravel Pit (2018) as well as a single specimen of well-worn, copper included crystals from Laurium Mine (2019). Of these, a few are especially interesting. First, a 9.0 cm datolite and quartz specimen collected at Caledonia Mine contains several sprays of pinkish natrolite, which is an uncommon association in Michigan. Second, a pair of datolite nodules collected at Delaware Mine contain small, well-formed pumpellyite inclusions. Last, one datolite after prehnite pseudomorph was recovered from Central Exploration Mine. It is certainly not very showy, but relatively rare and very interesting.

Bibliography


Via Midwest Chapter Newsletter 9-10/21
Fluorite from Copperthwaite, Swaledale

David Green & John Chapman

When it comes to fluorite, Yorkshire isn’t the first British county that projects into consciousness. Despite extensive boundaries, it is a poor relation to neighbouring Cumbria, Durham, Derbyshire and Northumberland. And that’s just in the north of England. Yorkshire fluorite is typically friable. The colourless to yellow and occasionally purple crystals are usually rather dull with mosaic structures on the crystal faces. Simple cubes are almost the only crystal habit. Specimens, in short, lack the ‘kerbside appeal’ of neighbouring counties.

In the small world, however, there is always a chance of some excitement. On a recent visit to Wensleydale a specimen came out of a drawer, with a ‘what do you think of that’ sort of flourish, which is almost bound to presage something revelatory. It was found at Copperthwaite near Reeth in Swaledale by the indefatigable Charles Lamb.

At first glance the specimen looked like any other colourless Yorkshire fluorite, with a scattering of drusy hemimorphite providing a little added interest. In such a situation it is usually best to pause and reach for a hand lens before commenting. This revealed odd looking ‘chamfers’ on the crystal edges. Not the usual single chamfers, which are well known on crystals from Weardale, but chamfers in symmetrical pairs.

Figure 1. Colourless fluorite cube with complex modifications, about 0.75 mm on edge, collected by Charles Lamb at Copperthwaite near Reeth in Swaledale. Photo John Chapman.
Fluorite crystals from northern England often have a slender dodecahedral face between the cube faces and the corners of cubes are commonly modified by three tiny trisoctahedral faces. However, the crystals from Copperthwaite are different (Fig. 1). As well as the pairs of chamfers between rather convex cube faces, there are smaller faces modifying the corners in groups of six and three.

In common with the rest of the scientific world, crystallographers use a bunch of technical jargon to describe the subjects they study. At times it can seem impenetrable. There are occasions when Wittgenstein’s observation that ‘language constrains thought’ appears to be meant ironically. Photos, models and diagrams can help in this sort of situation. An online search revealed a clear and accessible guide to crystal forms by the redoubtable Donald Peck and Alfred Ostrander (Peck and Ostrander, 2019).

Fluorite crystallises in the hexoctahedral class of the isometric crystal system. Crystallographers prefer the term isometric to cubic and hexoctahedral is just a way to describe a particular class in the system that has a lot of symmetry elements. There are six ‘special forms’ as well as the general hexoctahedral form. Each of these is illustrated in Peck and Ostrander (2019). The cube (also known as a hexahedron) and octahedron need no introduction. The dodecahedron is a common form in garnet-group minerals and the trapezohedron will be familiar to anyone with a specimen of analcime. The remainder are rare and little known.

In the isometric system, crystal forms are reasonably easy to identify if they are well developed. However small modifications to corners and crystal edges can test one’s identification skills. The cube faces, though slightly curved, are obvious in Figure 1. For those with crystallographic pretensions they are described using Miller Indices as {100}. The paired chamfers to the edges of the crystals belong to the rare tetrahexahedral $^{(1)}$ crystal form. The outer ring of six faces which surround the corner of the crystal were at first puzzling. After consulting the diagrams in Peck and Ostrander (2019) it became clear that they must belong to the hexoctahedron $^{(2)}$. The dictates of symmetry are such that it is the only form that can produce six crystallographically identical faces in this position. Hexoctahedral forms are relatively rare and something of a coup for Copperthwaite!

The three small triangular faces at the corner of the crystal were initially thought to be trisoctahedral as is usually the case in crystals from the north of England. A few experiments were made using a crystal drawing package, just to be sure. Every trisoctahedral corner modification had the ‘60° errors’ shown in Lagerwall (2011). The
only way to produce a realistic drawing was to replace with trapezohedral modifications.

After some experimentation a satisfactory approximation to the crystal habit was produced using the cube a {100}; tetrahedron b {210}; hexoctahedron c {410} and trapezohedron d {211} (Fig. 2). This is compared with the photo, a portion of which is enlarged to roughly the same scale in Figure 3.

The reader is left to judge whether the differences between the photo and the crystal drawing are significant. Numerous rare and unusual fluorite crystal forms are listed in Goldschmidt (1918), and it’s quite possible that one of these is present on the specimens from Copperthwaite. More detailed studies would require a reflecting goniometer (and a sacrificial specimen from which crystals could be detached).

Footnotes

1. In a fully developed tetrahedron, four faces replace each cube face to produce a low pyramid (Peck and Ostrander, 2019). It is described using Miller Indices as {hk0} where h≠k.

2. The hexoctahedron is the general form of the hexoctahedral class in the cubic system. The axial intercepts are at different lengths on each axis. It is described using Miller Indices as {hkl} where all three indices are different and none are zero.

3. The difference between trisoctahedral and trapezohedral forms is subtle. Each has 24 faces. In a fully developed trisoctahedron three triangular faces replace each octahedron face to produce a low pyramid. The trisoctahedron is described using Miller Indices as {hl1} with h>l. The trapezohedron has 24 four-sided trapezoidal faces, three of which replace the faces of an octahedron but in a different manner. It is described using Miller Indices as {hll} with h>l.

Figure 2. Approximate model of the modifications of fluorite from Copperthwaite (Fig. 1) using the cube a {100}; tetrahedron b {210}; hexoctahedron c {410} and trapezohedron d {211}. This is purely speculative as no measurements were attempted. However, the rather distinctive angle of the edge between the tetrahedron and hexoctahedron is not reproduced by any other small whole-number combination of Miller Indices. Miller Indices for the individual faces are in round brackets.
Figure 3. Highly magnified view of the crystal in Figure 1, showing the modifications to the crystal corners and edges using form letters for the cube a {100}; tetrahedron e {210}; hexoctahedron f {410} and trapezohedron n {211}.

Photo John Chapman

REFERENCES


COLORADO CHAPTER UPDATE
http://friendsofmineralogycolorado.org/

Congratulations to Dr. Pete Modreski for his election into the American Federation of Mineral Societies' Bulletin Editor's Hall of Fame, for many accomplishments as editor of the Friends of Mineralogy Colorado Chapter.

Summer 2021

Friends of Mineralogy Colorado Chapter has been hosting a series of remote talks over Zoom this summer. The first talk in July was supposed to be on mining emeralds in Columbia in the 1920s, but our presenter was in a car wreck and forgot he was giving the talk. Fortunately, Thomas Hale with the Virginia Chapter was able to step in and give a photo presentation on the minerals of Virginia. It was well received by everyone that was on, with lots of questions concerning Virginia mineral deposits afterwards.

Our Second presentation was given in August. It was by Dermot Henry, with the Museum of Victoria, who gave an excellent talk on Gold in Victoria, Australia. His talk covered all the gold discoveries in Victoria starting in 1852 and all the amazing nuggets discovered from then until today. Everyone who attended thought his presentation was great and there were lots of discussion afterwards.

Our third presentation will be by Sarah Caldwell Steel, she is from England and will be giving a talk on Jet. She is the world expert on Jet, which is a fossil polymer. She's a dynamic, passionate speaker with an absolute wealth of information. This talk will take place on October 17, 2021, at 3:00 PM MDT over Zoom. An announcement and link to the presentation will be sent out in the later part of September.

Other activities for the chapter include providing mineral identification at the Denver Gem & Mineral show at the Denver Convention Center September 15th thru 19th, 2021 for which we are one of the sponsor organizations.

We are hoping to start having in person meetings starting in October, but we are waiting to see if the Colorado School of Mines will allow us to meet on their campus. If so, we will have in person presentations going forward. If not we will be looking for a new meeting location.
Congratulations!

Dr. John C. Medici Wins the 2020 Carnegie Mineralogical Award

“The award honors outstanding contributions in mineralogical preservation, conservation, and education”

Click the link below to view the article from the Carnegie Museum of Natural History website.


MISSISSIPPI VALLEY CHAPTER UPDATE

Your Report could be here!

NEW JERSEY CHAPTER UPDATE

https://fomnj.wordpress.com/

Your Report could be here!

PACIFIC NORTHWEST CHAPTER UPDATE

www.pnwfm.org

See Symposium information on pages 5-6
A Wild Ride Moves Us Along
President's Message
by Bill Stephens, PG

The last quarter since taking office has been a bit of a wild ride. Once we finally secured a venue for our Annual Symposium, things began to fall in place more quickly. We also voted to permanently move our symposium date to the second weekend in November, where it has traditionally been the first weekend in November. This move will free members up to attend other important events in the region that would normally conflict with our symposium, and members of other organizations to attend our symposium if they desired without missing events they would typically attend in lieu of our symposium.

This year FM-PA's symposium will be held at the Bright Side Opportunities Center in Lancaster, PA. Flyers will be issued shortly with all the details. Our field trip is to be announced, but we are pretty certain we know where it will be. Calls for speakers will also be issued directly. This year and probably most years going forward our symposium will be hybrid - in person and remote access via Zoom.

For the first time since I've been involved with FMPA we have secured insurance with a different vendor/provider and agent. Frankly, we were quite pleased with the price and the coverage. We have offered to aid our collaborating sister Chapters and any clubs that reach out for assistance. Many have complained to me that some quarries were demanding $3 million in liability coverage, which many thought would be too expensive to obtain. We were able to secure $3 million per occurrence / $6 million aggregate for a very reasonable rate.

I've been working with Tom Hale of the Virginia Mineral Project (V.P.) and the new sister FM-VA Chapter to get a collaborative effort going and just last week we had Tom and Jessica from the FM National Outreach committee along with President Mark Jacobson join us for a Board of Directors meeting. We invited Tom and Jessica to provide us the general approach they are using to get more people interested and engaged in the mineral world, share some of their strategies for engaging mining companies in a manner that they would see us more as a public relations partner than a pesky group begging for collecting access, and social media campaigns.

They gave us some great info and we are moving forward together to promote FM and broader interest in mineralogy. Finally, I'll be giving one of the talks at our FM-PA symposium this fall and it will be on the famous Phoenixville Lead-Zinc Mines, including the Wheatley, Chester, SW Chester, and Brookdale Mines. Today I submitted an abstract for FM-National's symposium at Tucson next February. That proposed talk will focus on the world class pyromorphite from those mines. Pyromorphite is within the Apatite Supergroup, the FM National Symposium topic.

We have a lot in the works after clearing the plate of some frustrating issues including COVID related restrictions on available venues. I'm proud of my Board. They all really dug in and helped get things done this summer.
SOUTHERN CALIFORNIA CHAPTER UPDATE

Our chapter leadership has been active this year working with national leadership in a variety of new ways and in planning our reactivation of field trip programs as we transition from mandated lock-downs and significant restrictions on gatherings of any kind during the COVID 19 pandemic into a new “Norm” for this fall.

Our chapter officers and Board members shifted to Zoom meetings this last year as California lock-downs and restrictions showed no letup. In February through early summer as Chapter President, I participated in several National FM Zoom Board meetings that led to special meetings to address changes to the By-Laws for both National FM and our chapter. FM Executive Board asked me to participate in an executive committee for the final editing processes that led to this summer’s submission of By-Laws to all members for voting approval.

Subsequently in June and July President Jacobson and our newly elected FM National Treasurer Bruce Bridenbecker transferred the FM banking accounts to California. As Chapter President I was asked to serve as cosigner for legal state of California corporation requirements.

In early August, Jessica Robertson and Thomas Hale, the National Outreach Committee chairs met with our chapter officers in a Zoom meeting and … we will be going Social soon!!! With help from Jessica and Thomas, we will be establishing Facebook and Instagram pages to start us off into the world of “social media platforms”. This will help us with our outreach program for all whom are interested in minerals and to encourage others to promote and support our chapter. We will be using these platforms for organizational updates and of course to educate and expand the world of mineral collecting. We will endeavor to show how minerals further technological and commercial value to our world, and of course what the beauty of minerals and the art of collecting specimens means to us.

Please look in upcoming newsletters and announcements for further information on our upcoming Social Media Break Out!! See you all soon!!

Dr. Don Buchanan, President; Professor Bruce Bridenbecker, Treasurer; & Alicia Borchmann, Secretary (Social Media Guru).
Dear Friends of Mineralogy,

FM-Virginia continues to push forward despite upticks in COVID-19 cases due to the delta variant. Our organization remains committed to its monthly speaker series and even hosted a summer social at a brewery with local members. In addition to our speaker series and new tri-monthly social events, FMVA now offers a space for the Young Mineral Collectors of the VA/DC/MD area to meetup. This fall, the YMC group will be meeting for a trip at the Smithsonian Museum of Natural History.

FMVA also assisted the Lynchburg Gem and Mineral Society with their first show/swap in the SW part of the state in July. The event was a huge success, and it is the hope of all participants to expand next year. FMVA encourages other FM chapters and interested groups to join in on our virtual speaker series and sign up for our emails. This is a great opportunity to engage with others across the country and even the world. Our speaker series will remain virtual even after COVID-19. All videos are uploaded a week after on our YouTube channel!

Going into the fall and winter months, FMVA will attend multiple public outreach events, gem shows, and educational symposiums in our state and nationally. FMVA will participate in four different gem and mineral shows in the state, two educational and industry events, and a national virtual event for Minerals Day sponsored under the Mineralogical Society of America and the American Geosciences Institute on October 11th. These opportunities help increase awareness of FM as a brand and also support our outreach initiatives locally.

Our group has secured partnerships with the Virginia Transportation and Construction Alliance (VTCA), the Virginia Association of Science Teachers, and the Virginia Earth Science Teachers Association. These critical organizations will grant us access to industry support, educators, and students across the Commonwealth. VAST will be hosting its fall training event where FMVA will partner with VTCA to design and distribute rock kits to teachers and raffle a display case to a classroom in the state which FMVA will curate. Teachers who do not wish to travel to the meeting location due to COVID-19 will be offered a “rock day” pick up where they can visit local quarries and get supplies for their classrooms. FMVA will also promote FM-National and FMVA activities in their newsletters and continue to spread the word about FM.

As clearly stated in our mission and showcased with our current work, FMVA is redefining how an FM chapter can operate. In a time where decreased or non-existent accessibility to localities is the norm, organizations like FM must find new ways to serve its purpose. For FMVA, that is connecting to industry and teachers through educational and outreach projects that solidifies our organization into state infrastructure. Our group believes FMVA can play a primary role in teacher training, research, outreach, and education in the Commonwealth.

The Virginia Mineral Project, under FMVA, has also finished its first Rockhounding 101 course that trained participants about our hobby, providing core geology and mineralogy educational skills. Training and classes like this will become a primary offering of FMVA. This outreach work has also spurred interest with industry to re-evaluate safety programs that could allow for trained groups to enter quarries once again.
of the Richmond Gem and Mineral Society passed away in June after a long battle with cancer. The following is a short obituary written by Thomas Hale of the Virginia Mineral Project and current president of FMVA. *The complete article was published in the August edition of Mineral News.*

Betsy Martin (October 7, 1943 – June 21, 2021)
*Micromounter, Morefield Mine Expert...*

With the passing of Betsy Martin, the micromineral world has lost a giant, and many of us have lost a great friend and mentor. As we mourn her death, it is fitting that we also celebrate her life, her many achievements, and her legacy.

A teacher by profession, Betsy Martin was a renowned micromounter and mineral researcher for over 30 years. During this time, she contributed award-winning articles to many publications with both hobby and professional status.

Perhaps her most passionate work, occupying more than 25 years, was her research into the mineralogy and development of the famous Morefield Pegmatite in Amelia County, Virginia. She published detailed descriptions of the mine and its minerals, spent many hours in sample preparation and documentation for testing, and carried out the photomicrography and digitizing work required in maintaining the historical record. Her efforts earned her co-authorship in publications in a number of professional journals. These contributions in 2000, 2004, and 2016 provided detailed reports of new mineral discoveries at the mine.

**Looking forward into 2022...**

FMVA continues to push forward despite a time where uncertainty and change has put many organizations in gridlock. Our group firmly believes that the future of FM and this hobby will require groups to coordinate, communicate, and organize on scales never seen before. The ease of Zoom meetings encourage conversation and have allowed many friendships to flourish despite a time of much isolation. All FM members are encouraged to join in on our board meetings, receive our weekly “one-minute” briefings, and engage in discussions that will benefit us all. Together, 2022 will be an amazing year with renewed passion, growth, and interest in the field of mineralogy and collecting. If you would like to reach out and learn more about our initiatives then please email Thomas. Alex is also working on the speaker series lineup for 2022. Please email him if you are interested in giving a talk before our schedule fills up!

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NATIONAL MEMBERS “AT-LARGE”

Your Report could be here!

Would someone like to speak up for the “at-large” members?
Needs, wants, comments?

Our cover picture is of carminite from the fabled Clara Mine at Wolfach in Germany which was enthusiastically described by Einhard Kleist in BMS NL 105. Now David Iffold has arranged for a Dutch perspective on Clara Mine from Henk Smeets and Jacques Feijen who will give their talk on the ‘Minerals of Clara Mine’ at the 2019 BMS Symposium. And if the photograph above is any indication we can also hope for some advice on micro mineral photography! The specimen is from the collection of Felix Maassen and the image taken by Jaques Feijen has a field of view of 2.5 mm.
The Friends of Mineralogy is a long-time affiliate of The Mineralogical Record magazine. The magazine was founded in 1970 by John White, who was at that time a curator in the Mineral Sciences Department of the Smithsonian Institution. With the initial help of a financial backer, Arthur Montgomery, White succeeded in launching and bootstrapping the fledgling publication to the point where it was marginally self-sustaining. After seven years as editor and publisher, White stepped aside for a new Editor, Wendell Wilson.

Since then the Mineralogical Record has grown steadily in size, quality and prominence, thanks to the contributions of over 700 authors, photographers, artists, advertisers and donors. It has become a collective labor of love on the part of the entire mineralogical community worldwide. It is the only journal to have a new mineral species named in its honor (minrecordite), and it is the only journal to have received the Carnegie Mineralogical Award. Subscriptions, back issues, books and a variety of free databases are available online at www.MineralogicalRecord.com.