

The Mineralogical Cabinet

The Newsletter for the Friends of the New Mexico Bureau of Geology and Mineral Resources - Mineral Museum

Volume 5, No. 2, November 2020

From the Directors Desk:

We were closed in early March, reopened with safety protocols on September 9, and closed again on October 23 with the latest modification of the current public health order. Very similar to the on and off again mineral shows that, when open, are only partially attended. We are not allowed to participate in any shows officially and subject to quarantine if we leave the state. Of course, we had to cancel this year's symposium for obvious reasons. We are all riding the rollercoaster world of the Covid-19 pandemic but we are doing our best to improve the museum in the meantime. I am pleased to report we have not been standing still although our revenue sources have been essentially turned off, more on that later.

You will see in the "Curator's Corner" that Kelsey has been very busy during our "down time." She has created exhibits for the cases that we installed prior to last year's symposium. Without visitors, she has had time to develop her artistic talents in constructing a number of new exhibits. In addition, she has spent a large amount of time in the reference collections, reorganizing and cataloging a backlog of stuff. Not to mention a revamp of our fossil display in the teaching room.

Believe it or not, we have also been busy with some very significant donations. One of the largest were the files from one of New Mexico's most prestigious mining engineering firms—Chapman, Wood and Griswold. On the passing of our good friend, Doug Irving, the family donated the reports from the firm to our Geologic Information Center. These extensive holdings will greatly enhance our mining archives along with some nice artifacts. In addition, some of the company's and Doug's personal rock collection was also donated by the family. A few of



the more notable pieces were an aquamarine from the Harding mine, gold samples from production tests at the Little Joe Mine at Orogrande, and a gold ore sample (with visible gold!) from the York Mine in Tijeras Canyon near Albuquerque.

Another significant donation came via a Tech graduate who worked for the Argonne National Laboratory in Illinois. They decided to dispose of their sizable mineral collection and we were recommended to receive it. The collection is mostly reference material although most came with historical Ward's Scientific Establishment labels. We have only worked through half of it so far and added quite a few to our species holdings. The collection also contained some very significant New Mexico pieces that included a wolframite from Luna County, gehlenite from Camel Mountain, and danalite from Iron Mountain with original labels. But the prize of all was a silver-chlorargyrite specimen from Lake Valley. We are excited to see what the other half will bring!

We are contemplating a virtual program via the Zoom platform later this year, perhaps early January to break things up a bit. We will email all the Friends when we settle the details.

Having the museum mostly closed since March is starting to impact our financial situation, as you can imagine. We rely on gifts and museum sales revenue to buy new specimens, develop new displays, and pay some of Kelsey's salary. Please remember to renew your "Friends of the Museum" membership this fall to help us get through this difficult time. Please consider gifting to the museum and help us continue our mission of preservation and promotion of our mineralogical heritage.

Stay well.

—Virgil W. Lueth

Director's Choice

There seems to be a very strong consideration for the “aesthetic” in modern mineral collecting over the uniqueness or rarity of a specimen. Nothing is wrong with that, other than the fact that taste and beauty are often in the eye of the beholder. An intrinsically beautiful specimen often transcends personal preferences and we can often agree on its “value” based on how pleasing it looks. Other specimens can never possess intrinsic beauty but are notable for their rarity. My choice for this newsletter leans toward the latter, not because it is beautiful but rather for what it inspired in collectors who knew of its existence.

Greek mythology says that Helen of Troy's beauty was so great that it launched a thousand ships. My “choice” mineral specimen for this newsletter is somewhat like that, although it is notably lacking “aesthetic” charisma. However, its legend resulted in the collecting of many highly aesthetic pieces encountered during its pursuit. Thus, I will introduce you to “Helen of the Organs,” the rock the launched a thousand collecting trips.

The legend of “Helen of the Organs” is written into the New Mexico mineral “Odyssey” by Stuart Northrup in his second edition of *Minerals of New Mexico*. In 1949, “a new occurrence for massive topaz” in the Organ Mountains was reported (*Rocks and Minerals*, v.24, 1949, p.257). Topaz occurs as “massive nodules and giant crystals” in the Organ district, according to J.L. Albright (letter, Aug. 23, 1956), who later reported (oral communication, April 12, 1957) that some years ago several carloads of massive topaz were shipped. Upon the publication of Northrup's second edition the search was on, but “Helen” would remain elusive for almost 50 years. The searches led to the additional discoveries of miarolitic cavities in the Sugarloaf Peak area, south of US Highway 70. Beautiful smoky quartz, feldspars, and apatite were recovered but alas, no topaz.

A coincidence led to the discovery of “Helen” and where “she” came from. James L. Albright's son, John, was a student of mine when I taught college in Texas. I never realized he was related to the great New Mexico collector, until I moved to New Mexico Tech and John contacted me about the disposition of his dad's collection. Amongst one of the finest collections we have ever brought to the museum was “Helen.” She was as large as advertised and immaculately labeled, as was



“Helen of the Organs”
Topaz, Goldcamp Canyon, Organ Mountains, New Mexico

Jim's custom. There was an entry for the specimen in his collecting notebook, “Wm. Hauser, the claimholder, found a very well developed xt about 3 x 6, which he gave to Bob Hamilton who in turn presented it to me.” A description of location was also in the notebook, not south of the highway, but north, in the Precambrian granites near the “gold camp canyon area”; firmly planted in the White Sands Missile Range and off-limits to modern collectors.

Like other Greek stories or fables, we might be inclined to say that “Helen of the Organs” is challenged in the beauty department and not worth pursuing, somewhat like the Aesop's Fable about the fox and the grapes. But, like many people, I take great joy in solving a New Mexico mineral mystery. Like many collectors say, sometimes the greatest joy is in the hunt.



Labels on the base of “Helen”

Curator's Corner

Greetings Friends!

Since mid-March it has been eerily quiet here on campus and in the museum, meaning conditions have been perfect to put in new displays and work in collections. Don't get us wrong, we've missed our friends and visitors, but we also enjoyed the following (in no particular order): relaxed dress attire, quarantine hairdos, blasting music, letting flats pile up before taking to recycling, and long periods of uninterrupted quiet.

NEW DISPLAYS

Since closing, the Rex Nelson Collection of New Mexico Minerals display has been completed, filling out a Waddell case from bottom to top.



The Rex Nelson Collection of New Mexico Minerals in its entirety (apologies for the blindingly bright LEDs).



A portion of the display that highlights variety and color.



Quartz & feldspar from the Organ Mountains, former Bob Dickie Collection.



Two fragments of wood replaced by chalcocite and coated by copper sulfates.

In addition to a wide variety of New Mexico minerals, Rex gifted the museum a comprehensive suite of raw, polished, & cabbed turquoise from Hachita, Burro Mountains, Hillsboro, Orogrande, and Cerrillos. The pieces have been arranged in a table-top exhibit with some informational signs and historic documents—a crowd pleaser for sure!



Deep purple fluorite from the Zuni Mountains.



Close-up of the Orogrande turquoise section with a scanned Fred Harvey postcard from the Bob Eveleth Collection.



A portion of the New Mexico Turquoise display with colorful and informative signs.



The entire New Mexico Turquoise tabletop display. All pieces were donated by Rex Nelson.

The fossil exhibit in the museum classroom has been revamped—with additional specimens, educational placards, and updated taxonomic classification. Many of the newest pieces are vertebrate specimens gifted by Lloyd & Dorothy Keller of Albuquerque, with a significant amount of Miocene- to Pliocene-age fossils from Polk Co., Florida. The fossil display is behind locked doors, but visitors are able to view if an appointment is made ahead of time.

Keep your eyes peeled for upcoming displays to fill out the remaining Waddell cases, which include: Mining Artifacts, Grant Country Fluorspar History & Minerals, and Geiger counters (to accompany a loaned Trinity Site display).

NEW ACQUISITIONS

Since closure of the museum, our number of new acquisitions has dropped substantially. Don't fret, here are some stunning Spanish sphalerite gemstones (say that three times fast!) which were faceted by the talented Nancy Attaway from material donated from the estate of Rene Steensma who was one of the last operators in the Hansonburg district and a museum donor.



Crinoids, mostly gifted by L.R. Laudon, on display in the museum classroom.



This shelf is dedicated to “Pseudofossils”, because these are brought in for fossil identification by visitors 95% of the time!



The arthropods shelf is full of fossil trilobites, crabs, shrimps, and insects.



A portion of the chordates shelf with information posted in the background.

Alan Perryman was busy this summer polishing up nice trunk portions of Arizona petrified wood, one of which is now on display in the museum.



Rose cut oval sphaerulite gemstone, Cantabria, Spain, 100.2 carats. Faceted by, and gift of Nancy Attaway, with original rough donated by Titia Dons Barham (stepdaughter of Rene Steensma).



Antique pear cut sphaerulite gemstone, Cantabria, Spain, 29.2 carats. Faceted by, and gift of Nancy Attaway, with original rough donated by Titia Dons Barham (stepdaughter of Rene Steensma).

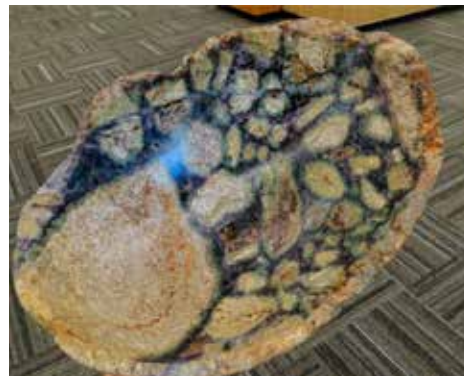


Square cut sphaerulite gemstone, Cantabria, Spain, 61.16 carats. Faceted by, and gift of Nancy Attaway, with original rough donated by Titia Dons Barham (stepdaughter of Rene Steensma).



Alan working hard polishing petrified wood and making rainbows.

Gary McWilliams, an artist and rockhound from Silver City, stopped by recently with a hand-carved bowl composed of fluorite breccia from the Burro Mountains. He found a boulder and pried it apart into fragments big enough to cut and polish ornamental bowls, which is not an easy task considering the differences in hardness. This unique piece will make an excellent addition to the upcoming Grant County Fluorspar display.



Three views of the same bowl, showing angular porphyritic clasts encased in green and purple fluorite, from the Burro Mountains, Grant County, New Mexico. This piece will be showcased in a Grant County Fluorspar display.



Look at that yellow and pink coloration! This 20 x 15 x 12 inch piece is now on display in the museum.

COLLECTIONS WORK

A significant amount of pandemic time has been devoted to restoring the mining artifacts collection, including the tasks of cataloguing, deaccessioning, re-labeling, and organizing various artifacts. Since this project began, I've catalogued over 250 historic pieces, and the collection number is now sitting around 500 total. Now that everything has a number and information, a mining artifacts display is in the works. Stay tuned...

Outreach News

Rockin' around New Mexico Goes Virtual

Rockin' around New Mexico is an annual K–12 educators fieldtrip organized by the Bureau of Geology's outreach manager, Cynthia Connolly. This year marked the 25th anniversary, which was hosted virtually and centered on a theme of "Volcanoes and Seismicity." Twenty eight teachers signed up for the event, where they toured NM volcanoes and volcanic deposits, learned about associated mineral deposits and geologic hazards, and completed related classroom activities. According to Cynthia, the teachers went above and beyond by "aligning the classroom exercises with Next Generation Science Standards (NGSS) and adding extensions that could be used in their classrooms." Next year's Rockin' will take place in Española, focused on rifting and geology of the Española Basin. All K–12 certified teachers are welcome to sign up. For more information, please contact Cynthia Connolly at cynthia.connolly@nmt.edu.

Facebook Posts

Since shutting our doors, we have provided more educational content on the Museum Facebook page. Currently, we are focused on a series highlighting rock-forming minerals, with posts providing mineralogical information, fun facts, and how minerals are used in everyday lives. We hope these blurbs help to educate and spread awareness about the importance and aesthetics of minerals. Here is a screenshot of a recent post on the mineral calcite:

Calcite (CaCO_3) is a very common and ubiquitous mineral, but exhibits a wide variety of shapes and colors. It is easily recognized through simple physical properties tests; calcite scratches with a pocket knife or copper coin (with a hardness of 3 on the Moh's scale), effervesces (produce bubbles) easily with weak acids (like hydrochloric & vinegar), and typically exhibits a rhombic shape when fractured (aka cleavage).

Calcite occurs as crystals, and in massive (as veins and coatings) and globular forms (cave formations). Crystals vary in shape, with scalenohedrons (aka dogtooth spar), hexagonal prisms, and rhombohedrons the most common. Sometimes individual specimens can display a number of forms as overgrowths or phantoms. Color can vary remarkably due to: impurities (elements or other minerals) or inclusions (elements or fluid) in the crystal structure, color centers (defects in the molecular structure), and charge transfer (when two or more elements exchange electrons and cause selective light absorption).

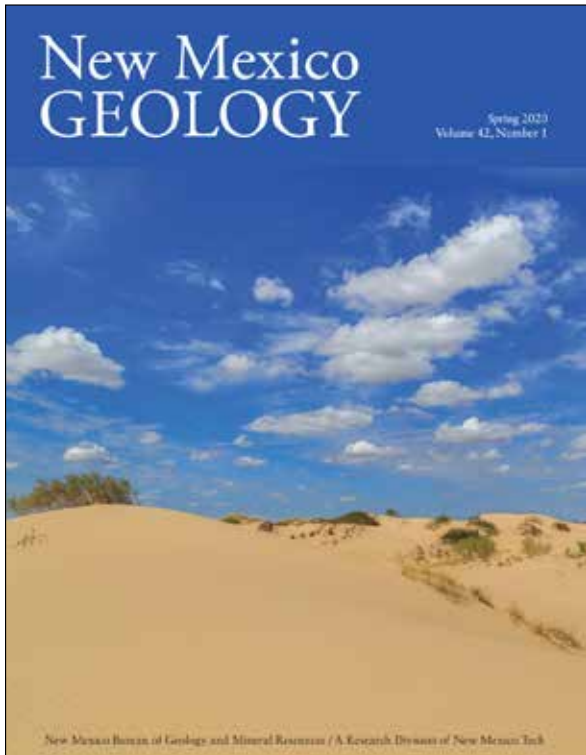
Varietal names of calcite range from those based on inclusions/impurities (e.g sand calcite & manganoan calcite) to shape (nailhead calcite) to original locality (Iceland spar, Mexican onyx). Though somewhat soft, it is still used for lapidary and ornamental purposes. Calcite may be one of the most common minerals on Earth, but it is also one of the most beautiful and diverse!



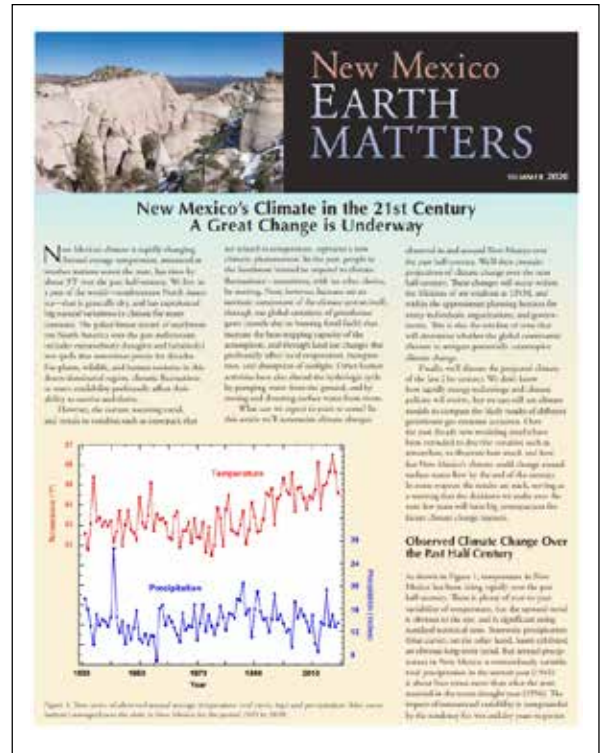
Bureau Periodicals

Need some bathroom reading? Well the New Mexico Bureau of Geology has three periodicals that you might want to peruse! A new issue of *New Mexico Geology*, *New Mexico Earth Matters*, and *Lite Geology* are available for free download from this website: geoinfo.nmt.edu/publications/periodicals/home.cfm

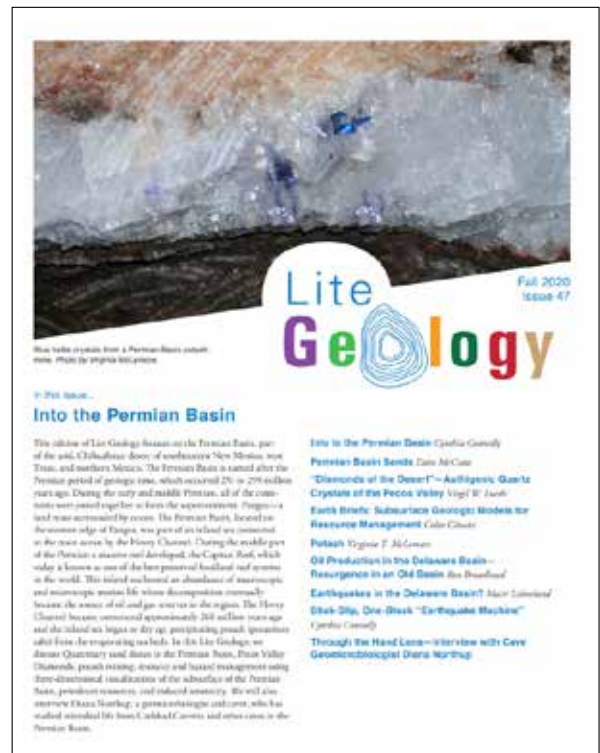
These publications also range from jargon-rich (*New Mexico Geology*) to jargon-“lite” (*Lite Geology*), with *New Mexico Earth Matters* smack dab in the middle of the jargon scale. If you’d like a free email subscription, a link is available below each particular publication.



This issue of *New Mexico Geology* includes peer-review papers on Lower Cretaceous trace fossil assemblages in southeastern NM, as well as the results of a pilot study using infrared stimulated luminescence to date units in west Texas and New Mexico. geoinfo.nmt.edu/publications/periodicals/nmg/home.cfm



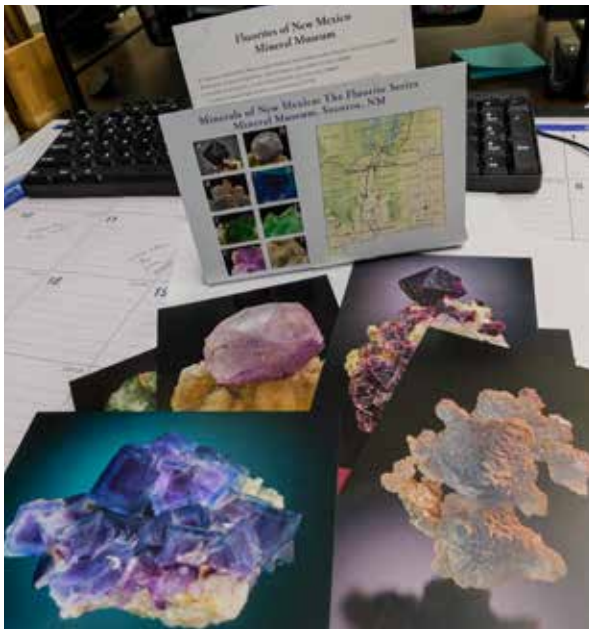
Dr. David Gutzler, a professor of Earth & Planetary Sciences at UNM, authored this informative paper on climate change in New Mexico. The article focuses on observed climate change over the last half century and what is projected for the future in the Land of Enchantment. geoinfo.nmt.edu/publications/periodicals/earthmatters/home.cfm



The current issue of *Lite Geology* focuses on the Permian Basin, with articles about Pecos diamonds, potash, oil, and earthquakes (just to name a few!). geoinfo.nmt.edu/publications/periodicals/litegeology/home.cfm

Publications Store News

The Publications Store is rocking and rolling with Mineral Museum hats, t-shirts, and a set of eight NM fluorite postcards. If you are interested in purchasing any of these items, please contact the Publications desk at (575) 835-5490 to reach Kelly Luster (kelly.luster@nmt.edu) or Elena Taylor (elena.taylor@nmt.edu).



The New Mexico Fluorite postcard 8-pack features Jeff Scovil images and a sleeve with a locality map and mineralogical information.



I get my minerals from the Mineral Museum at the New Mexico Bureau of Geology and Mineral Resources!

Black t-shirts feature New Mexico minerals on the front with a topo map background, and a cheeky message on the back. They are available in sizes S, M, L, XL, & 2XL.



The Mineral Museum hat is adjustable and gray with purple embroidery on front and back. Half of proceeds benefit the Mineral Museum. This item is available online here: geoinfo.nmt.edu/publications/index.cfm?sc=hat-Mineral+Museum+*ONLINE+ONLY

For updates and photos on what's happening at the museum—I try to post weekly/bi-weekly on our Facebook page—facebook.com/NMBGmineralmuseum

The New Mexico Bureau of Geology ALSO has a Facebook page! Please check it out at this address: facebook.com/NMBGMR

—Kelsey McNamara

“Friendly Reminder”

Annual dues for the Friends of the Museum expire in November

You can pay dues at the Museum or remit payment to:
NMT - Mineral Museum Gift Fund and send it to:

NMBGMR Mineral Museum
Friends of the Mineral Museum
801 Leroy Place
Socorro, NM 87801

You can use a credit card too, contact:
Kelly Luster or Elena Taylor
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