



Inside this issue:

President's Message	2
Noble Witt Award	3
Business Minutes	4
Symposium Displays	5
Morocco	8
Micro Mineral Collector	9

PNWFM NEWSLETTER



Barite; 6.2 cm across. Dreamchaser Claim, Lane County, Oregon, USA.
Bohemian Minerals specimen; Mark Mauthner photo

PNWFM held its 38th annual symposium last October in Kelso, Washington. The theme was "Sulfates" and the show featured outstanding talks and well presented displays. Our own "Barite Bill" Dameron, Les Presmyk of Arizona, Dick Dayvault of Colorado, and Alfredo Petrov, world citizen, headlined the speaker program. Talks were presented on a wide range of sulfate producing environments.

Displays were presented in the chapter's new cases recently purchased from the Denver Show. Given that this was the first time chapter members had assembled the cases, set up went smoothly and they provided a new clean look to some excellent mineral displays. Coordinator Ray Lasmanis details displays in this issue.

Mineral dealers Rick Kennedy, Dennis Beals, John Meek and Jim and Yolanda McEwen anchored the main floor, providing specimens for purchase to a wide range of interests and budgets. In addition, dealers, field collectors, and mineral hobbyists occupied the entire north wing on the main floor of the motel selling rocks, sharing wine and beer, and spinning tall tales until the early hours of the morning.

The Saturday evening banquet/ awards presentation/ auction was again the social highlight of the show. Food was good, bidding was vigorous, and the verbal barb exchanges between friends provided an entertaining evening. Allan Young was honored with the Noble Witt Award, PNWFM's highest honor for his contributions to the goals and ideals of Friends of Mineralogy.

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PRESIDENT'S MESSAGE - Bob Meyer

Dear fellow mineral collectors, we are into the second month already of 2013, and time seems to be flying by. It seems just weeks ago that we held our symposium, and it is surprising that a third of a year has passed. It is my hope that you are having an excellent not so new year, and that your holidays were pleasant.

The Pacific Northwest Chapter of Friends of Mineralogy is healthy, although this is the time of year when not much is occurring. Our routine events, including the Spring Meeting, the Washington Pass Clean Up in August, and our next symposium in October are still some time hence.

One issue that faces us is how to name our next symposium. The membership decided on the subject of Minerals of Alkaline Intrusives, but it was also suggested that we come up with a more catchy title. We have not yet come up with one, and are currently accepting suggestions. Regardless of the name, this is a subject that is near and dear to many of our long-time members, especially due to the close proximity of our beloved Golden Horn Batholith—Washington Pass—and there has been a quiet movement that has gained ground over the past few years to have a symposium with that topic.

This also begins the last year of my term as PNWFM president (actually my second or third term, depending on how you recon it). One of the things I intend to do this year is to not go out with a whimper. I will admit that this will be a challenge. What we can use is help, particularly with contributions to the newsletter and participating in committees. Feel free to submit article pieces to John Lindell, our newsletter editor, and let me know if you'd like to serve on a committee or help with the symposium.

As always, one of the best parts of this job is the opportunity to communicate with members. I encourage you to stay in touch via e-mail or telephone, and let me know what you are thinking about PNWFM.

Happy summer,
Bob Meyer



Gold in calcite;
5 cm tall.
Liberty,
Swauk District,
Kittitas County,
Washington, USA.
Private collection
Mark Mauthner photo



Noble Witt Award Winner—2012—Allan Young

by Bob Meyer

I am pleased to announce that the 2012 Noble Witt Award for Outstanding Service was presented to Allan Young at our most recent symposium. Allan exemplifies the spirit of the award both for his contributions to the promotion of mineralogical knowledge, and also for his outstanding service to our organization, the Pacific Northwest Chapter, Friends of Mineralogy. The breadth of his contributions in both areas makes him very deserving of this award.

Allan Young began collecting minerals over 40 years ago when he was in high school. He attended the University of Wisconsin, where he graduated with a degree in mining engineering. This led in turn to a career in mining and management. He worked for several years early in his career at the Idarado Mine in Ouray, Colorado, and his experience there stimulated his interest in mineral collecting. He works currently as the Idaho State Lead for the Mining Law Administration Program with the US Bureau of Land Management. He resides in Boise.

Most of us are familiar with Allan's superb displays of thumbnail sized mineral specimens. Allan has built a very fine collection of thumbnails, and he also maintains specialty suites of minerals from Tsumeb and Idaho. He has received both the prestigious Desautels and Lidstrom trophies in Tucson.

Allan has ranged into the field of mineral photography, concentrating on photographing his own collection. Like his specimens, his photographs are meticulous and very fine.

He is active in contributing to the mineral community as well. Allan is currently President of the Board of Directors for the Mineralogical Record and has written two articles that I am aware of in the past couple of years, in both cases concerning mineral localities in Idaho, the Blackbird Mine in 2010 and the Belshazzar Mine in 2012. He is also the current President of the National Friends of Mineralogy and is the past Vice President.

His contributions to our group are no less impressive. He is quite visible at this symposium as our speaker chair and master of ceremonies, a role he has served admirably in since 2009. In addition, he has been an active and helpful member of our symposium committee, and he has been of great help to me with his support and advice. It has been a real pleasure to work with him.

PNWFM Business Meeting

October 14, 2012

President Bob Meyer opened the meeting with 24 members present at the close of the annual symposium. Minutes from the May meeting were approved as printed in the newsletter. The treasurer's report was presented and approved.

Symposium Report: Many thanks to the symposium committee for another successful symposium. All went smoothly with the hotel liaison. Approximately 85 individuals attended this year's symposium on sulfates. Now that we have purchased cases to be used at our annual show we need to find a small storage unit nearby. Suggestions for improvement: 1. Move the membership meeting to Sunday morning at 8:30 and then have the Sunday speakers follow the meeting. 2. Try having the Sunday program focused more on local interest (at least every other year). 3. Try to take the topic, like sulfates, and turn it into a more interesting title to entice more attendees. 4. Add a specific individual to the symposium committee to be in charge of all publicity. Publicize locally to bring in more walk through traffic for dealers. Possibly offer a few local scholarships for attendees through the local clubs to encourage more participation. 5. If speaker chair is in Tucson and hears a terrific speaker, then give them the opportunity to change the symposium focus if the speaker is available for our symposium. 6. Utilize the extra room for more specific interests such as the NW Micromounters Mineral Group or the Fluorescent Mineral Society. Try to organize in advance with these organizations. Symposium themes: 2013 Theme discussion around Minerals of the Himalayas. After much discussion, Al Liebetrau made a motion to change the theme to Alkaline Intrusives including local and worldwide sites. Motion seconded and passed. Randy Becker volunteered to speak on the Golden Horn Batholith. 2014 theme is Minerals of Colorado.

Rice NW Museum of Rocks and Minerals: Curator, Lara O'Dwyer-Brown was introduced. She spoke briefly on what is happening at the museum. We voted to continue our group membership for a \$500 annual fee.

Newsletter: John Lindell, newsletter editor extraordinaire, is doing a fantastic job. He would like more assistance from all of us. Please send John articles and photos for the newsletter.

National FM: Request for more support on projects. Support needed to fund and educational magazine more focused on children. This would be a supplement to the Mineralogical Record.

Good of the Order: Al Liebetrau reported that the Fluorescent Mineral Society would be meeting in Abbotsford, B. C., April 12 – 14, 2013, at the annual show. The show will focus their theme on fluorescent minerals.

Meeting adjourned.

Karen Hinderman, Secretary



Symposium pics by Al Liebetrau

SYMPOSIUM DISPLAY CASES 2012

This year marks the 38th year that the Pacific Northwest Chapter of Friends of Mineralogy has held their annual fall symposium. The theme for 2012 featured sulfates. Members and guests put together 13 display cases- all but one highlighting theme minerals. This is the lowest count of displays that have been assembled: probably as a result of a number of our members scheduled to go on the Morocco trip right after the symposium and the uncertainty about our ability to acquire the Denver cases.

What was lacking in numbers was certainly compensated by the beautiful displays that included two cases of barite from the renown collection of Bill and Diana Dameron. The most popular sulfate, by case count (five), was barite from the Rock Candy Mine of British Columbia, Canada. Pages could be written about each case, but with time constraints, I have taken the prerogative to pick and choose what I was attracted to and of course try to list all specimens on display from the Northwest.

Lara O'Dwyer Brown, Curator of the Rice Northwest Museum of Rocks and Minerals, put together a display with 15 world-class specimens. Certainly the most spectacular was a 10"x14" geode containing 2 ½"x3 ½"x 4" long, clear, lustrous, light blue celestite xls. from the Sakony Mine, Valee De La Sofia, Mahajanga Prov., Madagascar and donated by Richard and Helen Rice, #RM3037. The Northwest was well represented with the following: from the Rock Candy Mine, B.C., atypical, up to 2" xls. on attractive 5"x8" matrix (donated by Des and Virginia Hinds, #RM3411) and thin transparent golden xls. on

5 ½" x 6" fluorite matrix (collected by Ed McDole, donated by Richard and Helen Rice, #RM1457). There were two specimens from Idaho: beautiful blue cyanotrichite on 8"x12" matrix, Lemhi County (#RM1330) and up to 1" barite xls. on 3x3 ½" matrix, Willow Creek, Freight Spring, Custer County (donated by Rudy Tschernich, #RM5460). From Oregon, a relatively new discovery of blue barite blades in a 3 ½"x4" geode, Pony Butte Bed, Richardson's Ranch, Madras, Jefferson County, Oregon (donated by Johnny Richardson, RM#6709).



Bill and Diana Dameron presented two display cases with selections from his passion – barite. Case one contained 33 small cabinet specimens from North America and other countries that represent the best of the species from each locality. Catching my eye was an absolutely transparent smoky 2 ½" barite xl. from El'Bruskiy Mine, Kuban River, Karachry-Cherkessia, Russia. From the Ukraine, there was rhodochrosite filling a cavity in a 3" fossil clam with barite xls., Kerch, Crimea; from Australia, unusual deep golden elongated 3 1/2" long barite on matrix, Olympic Dam uranium mine, Roxby Downs, South Australia; and, from Mexico, 1 ½" thin barite xl. standing vertical between two deep purple amethyst xls., Piedra Parada, Las Vigas, Veracruz. From the US, ¾" x 3/8" clear barite xl. on and including native copper, White Pine Mine, Ontonagon County, Michigan and from the Murray Mine, near Elko, Elko County, Nevada two 2 ½" to 3" barite xls. partially covered by thin stibnite needles. The Northwest was represented by a white, thin, radiating, sheaf-like 3 ½" x 4" barite group on quartz xls. from 04 Bench, Spruce Ridge, King County, WA; a 3" deep honey-colored barite xl. and a 8.65 ct. faceted (cut by Mike Gray) stone from near Myers, Treasure County, MT; and from our most popular barite locality, Rock Candy Mine, north of Grand Forks, B.C., a 4" golden xl. on green fluorite. All of these specimens and others can be viewed on Bill's web site at <http://www.baritespecimenlocalities.org>.

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Bill Dameron's second case contained 39 outstanding colorful barite specimens from Europe, Africa, and South America. From two localities there were bladed, light-colored, barite xl. groups with termination edges frosted bright orange red: Lavrion, Attica, Greece and with realgar inclusions, Baia Sprie, Maramures, Romania. From Germany, the display had a pair of huge 2" x 6" long honey-colored barite xls., Pöhla-Tellerhäuser Mine, Saxony. From the Sidi Laheen Mine, near Nador, Oriental, Morocco there were light blue curving xls. and from the famous Tsumeb Mine, Tsumeb, Otjikoto, Namibia, dark chocolate-brown, lustrous 2" xl. on smithsonite matrix. From the Congo, I was attracted to a group of 2" green barite xls. due to malachite inclusions, Shangulowe Mine and Bill's web site cover photo specimen, a deep honey-colored, zoned, transparent 3 1/2" floater xl. from the Mashamba West Mine, Kolwezi, both from Haut-Katanga.

A.J. Luzier has been mining barite specimens from the Dreamchaser Claim, Lane County, OR. This is the old L & L Mine, Lookout Point near Lowell. He presented a display case with 19 representative opaque yellowish specimens from single floater xls. up to 2 1/2" to a 8" x 10" crystal group.

FM members Bart Bretherton, Steve Falconbury, and Scott Ankenbrand joined forces to put in a case displaying 26 thumb nail to cabinet-sized specimens representing sulfates from well known world-wide localities. Displayed were two nice gypsum roses from the Red River Spillway, Winnipeg, Manitoba. There were three very nice barite specimens from the Rock Candy Mine of British Columbia: a 5" x 8" group of up to 1 1/2" xls.; thin, transparent, 1 1/2" xls. on green fluorite; and, very attractive, golden yellow, 3/4" thick xls. on fluorite matrix.

As a former exploration geologist, for me John Lindell's display was a treat. He diverted from the theme and decided to display ore specimens from the economic geologist R.E. Mackay collection that went to Griffin and then to John. The specimens represent an era, now long gone, when the Northwest was in the forefront of metal production including Butte, MT and the Sullivan Mine in B.C. Specifically, the 39 ore specimens included: from the West Mayflower Mine, Kelly Mine, Leonard Mine, Mtn. Con Mine, and ore with cuprite, Bullwhacker Mine (#3050), all from Butte; galena from the Pend Oreille Mine (#4332) and the Grandview Mine (#3014), Metaline Falls, Pend Oreille County, WA; electrum from the Knob Hill Mine, Republic, Ferry County, WA (#3129) and from the 5th Level, Governor Vein, Engineer Mine, Atlin, BC, #4241 (former Mark Mauthner coll.). Oregon was represented by a specimen of stibnite from the Bohemia District, Lane County (#3122).

Michael G. Walker put in a case of 30 barite specimens, many acquired during the course of mineral exploration in Nevada as well as specimens from China, Mexico, Chile, Poland, and Namibia. The case also had up to 1" brown barite xls. on matrix from Palos Verdes, Los Angeles County, CA and a 4" x 4" compound, clear, lustrous barite xl. from Grand Junction, CO. There were three specimens of bluish barite xls. from Muddy Creek, Mineral County, CO. From the Northwest, Michael had four specimens of barite on fluorite from the Rock Candy Mine, B.C. and a nice 3" x 4" specimen with 3/4" yellowish barite xls. on matrix from Flagstaff Mtn. Mine, near Northport, Stevens County, WA.

Si and Ann Frazier put in a very interesting display of 38 specimens titled "Quartz Pseudomorphs after Various Sulfates". The case contained chalcedony and drusy quartz replacing barite from Morocco, Mexico, and Peru. There was chalcedony after gypsum and quartz after anhydrite from Brazil. The case also had very attractive drusy quartz replacing 2 1/2" to 3 1/2" x 5" barite xls. from three Colorado localities: Rochester Claim, near Howardville, San Juan County; Minnie Gulch, Silverton, San Juan County; and, O.S. Pocket, Ouray County. Of special interest to me was a specimen from a locality I collected at as a teenager: quartz after anhydrite, Upper New Street Quarry, Patterson, Passaic County, NJ.

Allan Young's case, "Sulfate Minerals", treated the viewer with 32 superb thumb nail specimens selected for their perfection or rarity. Besides five barite crystals from various localities, the display contained sturmaite, kleinite, ettringite, langite, creedite, and glaucocerinite. I was attracted to the purplish, 1" transparent anhydrite xl. group from the Simplon Railway Tunnel, Wallis, Switzerland; a 1" purple coquimbite xl. from Javier Mine, Ayacucho Dept., Peru; brochantite as ½" long needles, Milpillas Mine, Sonora, Mexico; and, a perfect yellow octahedron of sulphohalite, Searles Lake, San Bernardino County, CA. From the Northwest, Allan had a beautiful specimen of cyanotrichite, Peacock Mine, Lemhi Co., ID.



It is always a pleasure to see a display by our FM President, Bob Meyer. He had the most colorful case of the symposium with 27 specimens ranging from thumb nails to cabinet-sized groups. Localities in Dem. Republic of Congo, South Africa, United Kingdom, Mexico, Chile, Bolivia, and Peru were represented. The case was strong in minerals from the Mammoth-St. Anthony Mine, Tiger, Pinal County, AZ: linarite, wherryite, munakataite, and caledonite. On display was a beautiful, deep green, velvety xls. of brochantite, Acoacagua Mine, Sierra Gorda District, Antofagasta Prov., Chile and a classic specimen of blue crystallized langite from the Mountain Mine, Allihies, Castletown-Beaverhaven Copper Mines, Beara Peninsula, County York, Ireland. From the Mex-Tex Mine, Bingham, Hansonburg Dist., Socorro County, NM, the case had bright spangolite on 4" x 6" matrix. From the Northwest, Bob displayed a 2" x 2 ½" specimen with small orange swanbergite xls. on magnesite and dolomite, Mount Brusilof Mine, Radium Hot Springs, Golden Mining Div., B.C.



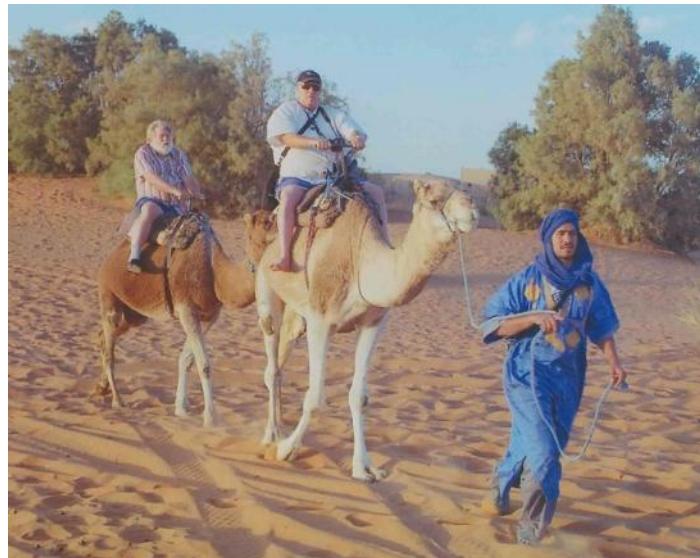
Ray Lasmanis submitted two cases. In the first case, Ray put in six large cabinet specimens with two from the Northwest: golden barite xls. on fluorite, Rock Candy Mine, N. of Grand Forks, B.C. (#1985, collected by Rod Tyson, 1976) and gypsum coating rock fragments, old stope, 2000 foot Level, Pend Oreille Mine, Metaline Falls, Pend Oreille County, WA (#2814, coll. April 7, 1995). The second case displayed 31 thumb nail to small cabinet sized specimens of sulfates including personal favorite linarite on quartz xls., Mex-Tex Mine, S. of Bingham, NM (#1479, coll. Oct. 19, 1967) and a single xl. in a vug from the Grand Reef Mine, Graham County, AZ (#2954, coll. Feb. 14, 2000). Yes, Latvia has minerals: case had barite xls. from Saulkalne, Salaspils Municipality (#2020, from Latvian Nature Museum, 1977) and gypsum from Saurieš Quarry, Stopiņi, Stopiņi Municipality (#1937, from Voldemars Lasmanis, 1973). From the Northwest, Ray had two single golden barite xls. from the Rock Candy Mine (#1984, coll. 1976 and #2139, coll. June 6, 1979); from Butte, MT, chalcanthite, Steward Mine (#995, coll. 1960); honey-colored small barite xls. on calcite, Pend Oreille Mine, N. of Metaline Falls, WA (#1380, from E.M. Pierpoint); and, a large single selenite xl. from the Joy Mine, GE 4 Claim, near Princeton, B.C. (#1973, coll. July 11, 1976).

A very special thanks and appreciation is extended to all members that took the time and made the effort to assemble specimens for displays for everyone to enjoy. All your work contributed to the success of our 38th annual symposium.

Ray Lasmanis
November 21, 2012



The Road To Morocco



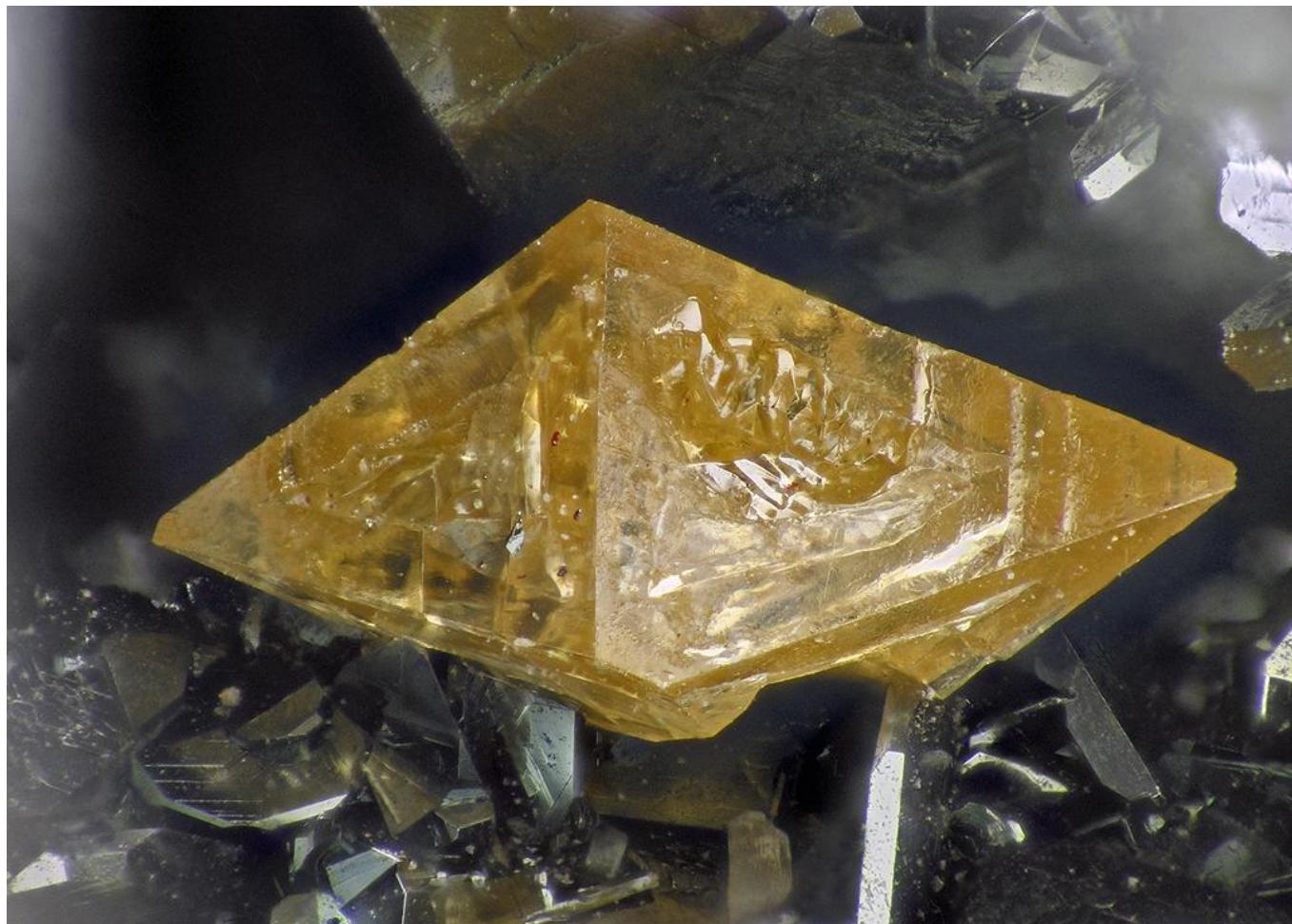
Pacific NW Chapter
Friends of Mineralogy
Attends the
MinDat Conference
In Morocco





The Micro Mineral Collector

By Bob Meyer



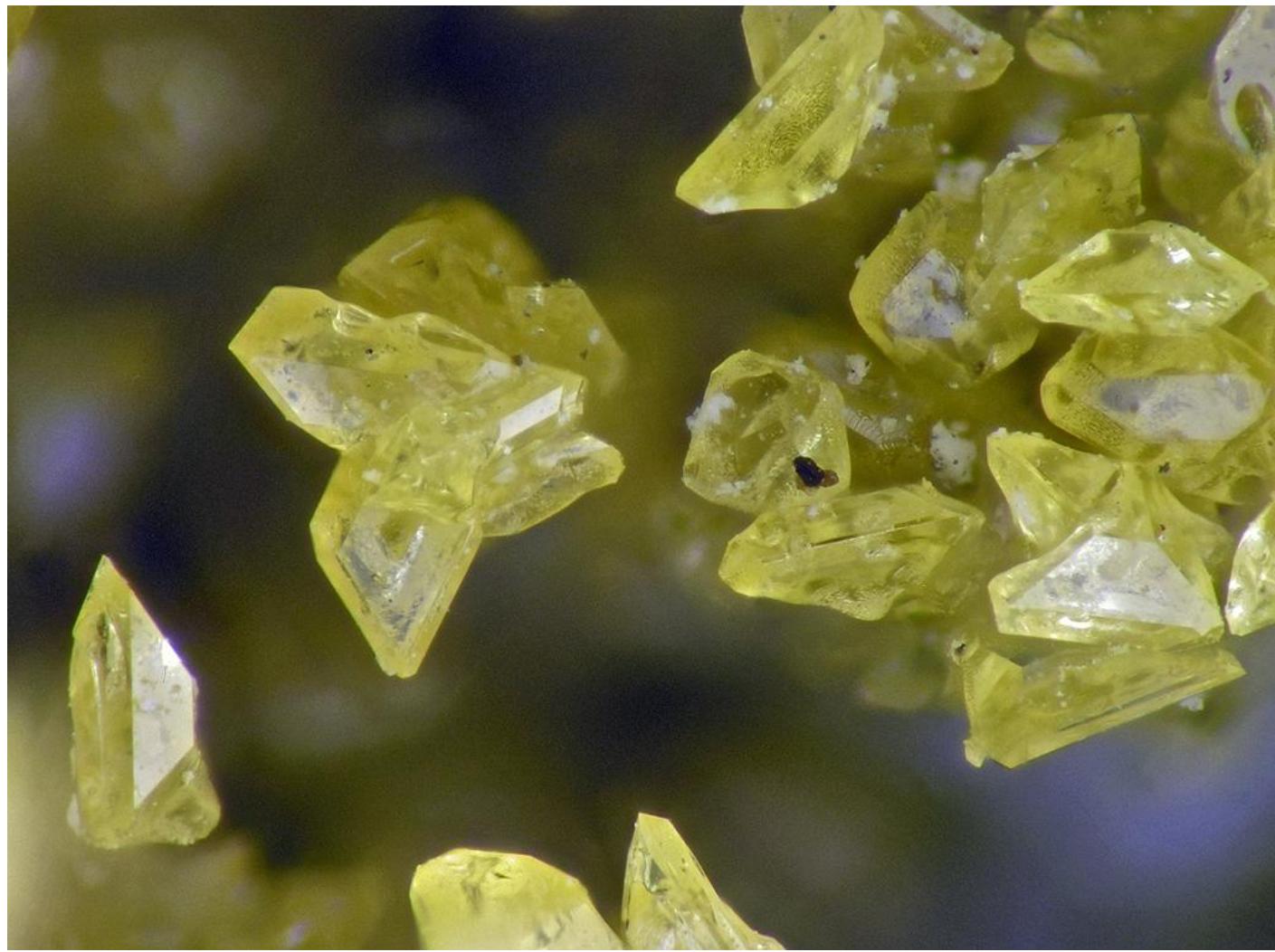
Wulfenite—a dipyramidal crystal on Hematite from the Payún volcano, Altiplano de Payún Matru, Malargüe Department, Mendoza, Argentina. The wulfenite and hematite from this deposit were deposited from volcanic gas. Wulfenite of fumarolic origin is unusual. It much more typically forms in the oxidized zones of lead and molybdenum deposits. The deposit is well-known for producing large skeletal hematite pseudomorphs after magnetite. This specimen was obtained from Alfredo Petrov in February 2012. The field of view is 2.3mm.

Buy and Use a Good Microscope—*adopted from Neal Yedlin*

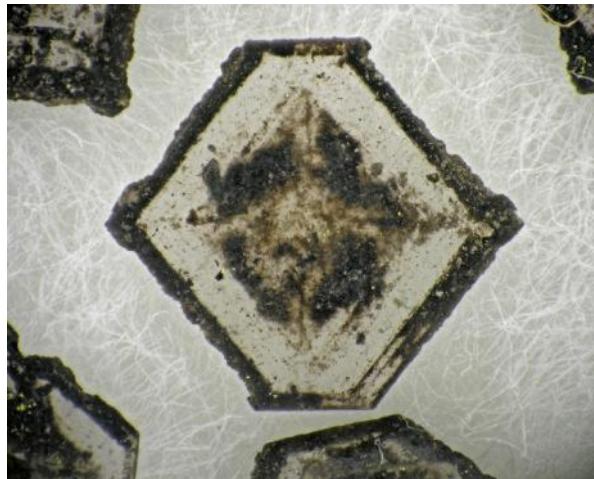
What's New in Micro Mineral Collecting. In attempting to come up with a theme for this installment, many ideas were considered and then dismissed. Some were beyond the scope of this column or would take more time than was available. In most cases, these ideas concerned field collected material from localities deserving of a thorough treatment. Finally, I simply started pulling recently acquired stuff out of drawers and boxes and began photographing. An idea emerged about the writing a sort of *What's New in Micro Mineral Collecting* column. Except not so. There are thousands of active micro mineral collectors out there, and my own activities comprise only a tiny cross section. Most of what is “new” in the micro mineral world pertains to field collected material, and I had eliminated even my own field collected material from this selection. Thus, I cannot make a representation that I know what's new in micro mineral collecting. There is too much going on.

So, here is what's new to my micro mineral collection, excepting the field collected stuff. More like, here's some stuff that has crossed my desk recently. That's about as pretentious as it should be.

As I look at them, however, certain themes do arise. The most recent PNWFM symposium featured a talk given by Alfredo Petrov on the minerals of volcanic fumaroles and burning mines. This is an interest I share and three of the specimens featured in this installment are from volcanoes. Unusual environments such as fumaroles have the potential to produce minerals and associations not seen elsewhere, adding to the diversity of specimens available to study. As we have explored in past articles, the micro mineral collector should study specimens with a microscope. In time, this study leads to a greater understanding of the science underpinning the specimens we collect, and an appreciation of the great diversity of specimens available. A micro mineral collector is typically drawn to collecting from localities producing specimens of unusual composition, unusual origin, or complex parageneses. Some of these localities are widely known among collectors, for example, Tiger, Tsumeb, Laurium, and Mont Saint-Hilaire. While collectors as a whole appreciate the greatness of these localities, the micro mineral collector understands and is drawn to them on a more fundamental level.

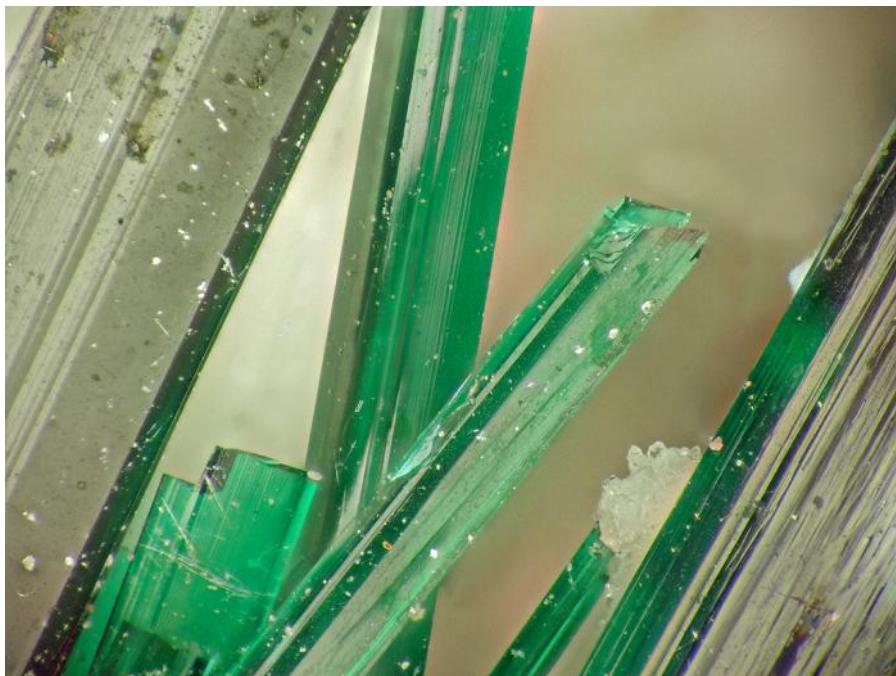


Challacolloite—yellow crystals from the La Fossa crater, Vulcano Island, Lipari, Eolie Islands (Aeolian Islands), Messina Province, Sicily, Italy. This species is a potassium lead chloride—an unusual species from an unusual locality. La Fossa crater is the type locale for 26 species, and many others with unusual compositions containing such things as thallium, bismuth, fluorine, and ammonium. Collecting is performed in active fumaroles at this locality, an interesting prospect given the heat and the composition of the gases one must be breathing. This specimen was obtained from Gunnar Faerber in February 2012. The field of view is 1.6 mm.

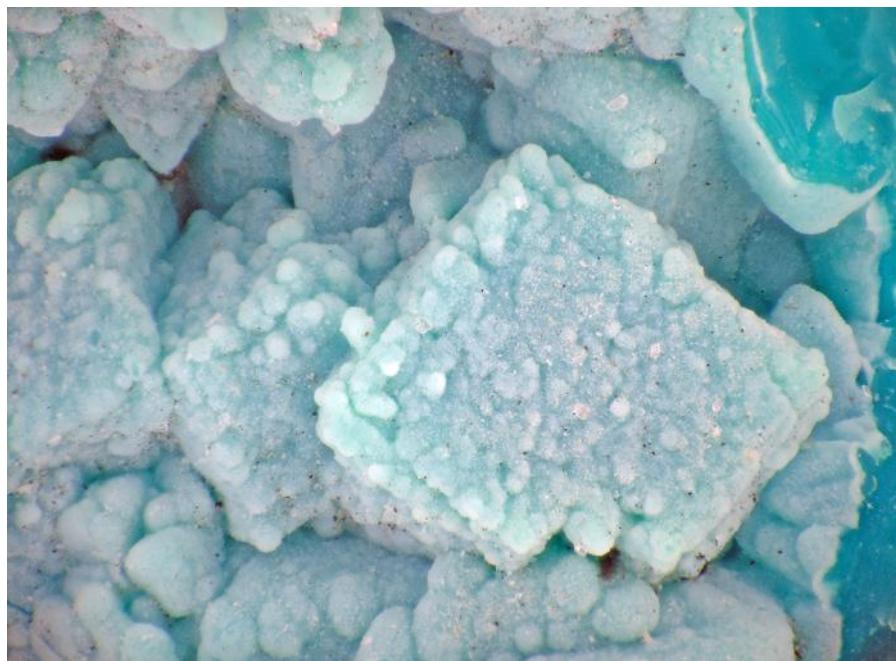


Examples of “Japanese-Style” micro specimens. Per Alfredo Petrov at the recent PNWFM symposium, these mounts are typical of Japanese micro mineral collectors. The small boxes are 4 cm on edge. The specimens on the left, with detail below, are loose crystals of color-zoned Barite that formed, in hot crater mud in an 874 meter Volcano. From Osorezan, Mutsu City, Shimokita peninsula, Aomori Prefecture, Tohoku Region, Honshu Island, Japan. The field of view of the detail is 6.6 mm. The specimens on the right are Sakura-Ishi (cherry blossom stones), or Muscovite pseudomorphs after Indialite and Cordierite from Gyojayama, Kameoka City, Kyoto Prefecture, Kinki Region, Honshu Island, Japan. The field of view on the detail is 6.0 mm.

The next series of specimens I took to be a brief trip around the world, starting in Mexico, journeying south to Bolivia, across the globe to Namibia, and finally back to North America—the US and Canada. I sometimes think of mineral specimens as tiny bits of extremely fancy real estate. Collectors of world-wide minerals are like small time real estate magnates, with property parcels secured from across the globe. Out of control collectors, which includes me and most of you folks reading this, can build up a lot of land in their drawers, flats, cabinets, basements and such.



Brochantite—a artistic detail of a small cabinet-sized example of matchstick crystals in a jackstraw arrangement from the Milpillas Mine, Cuitaca, Mun. de Santa Cruz, Sonora, Mexico. The Milpillas Mine is famous for its superb electric blue Azurite crystals. In addition, the mine has produced excellent examples of Malachite, as pseudomorphs after Azurite; rich specimens of the barium copper vanadate, Vésigniéite; and these excellent examples of Brochantite. Obtained in December 2012 from mineralspecies.com. The FOV is 2.3 mm.



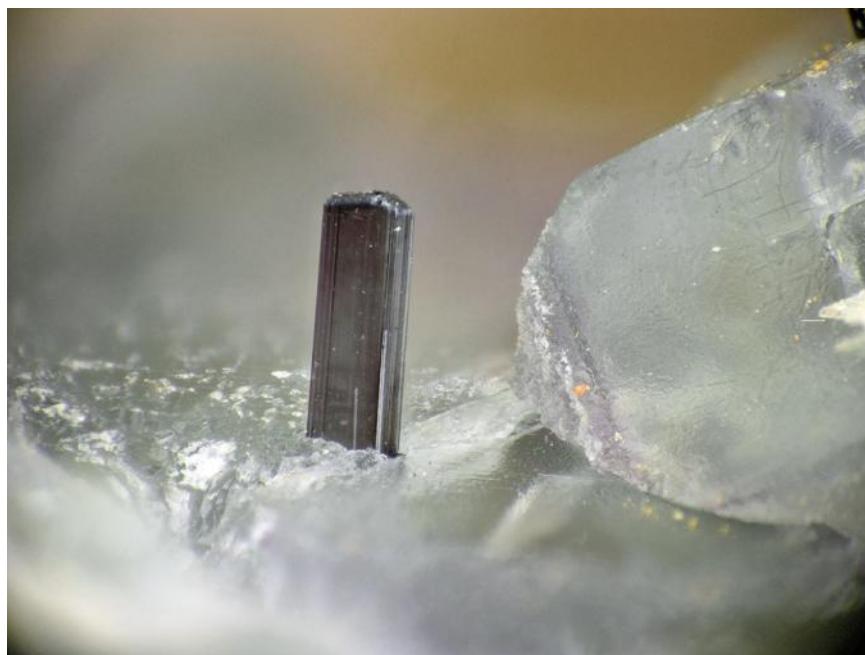
Chrysocolla pseudomorphous after Boleite from Santa Rosalía, Boleo District, Baja California Sur, Mexico. Another fairly recent discovery, these rare pseudomorphs started appearing on the market about two years ago. Obtained from Christensen Mineral Connection in May 2012. The FOV is 4.8 mm.



Köttigite/Parasymplesite—as zoned green-silvery bladed crystals forming rosettes from the Ojuela Mine, Mapimí, Durango, Mexico. The two species are visually indistinguishable, although the zoning is commonly thought to represent a boundary between the two different species. Such specimens were found in the same area of the Ojuela Mine as Legrandite and were highly prized by the Mexican miners, who referred to them as *legrandite azul*. The specimen was obtained in January 2012 from Bart Cannon. The FOV is 2.9mm.



Dawsonite—an exquisite silky compound crystal with Amesite (white) and Hisingerite (dark brown) from Cerro Sapo, Ayopaya Province, Cochabamba Department, Bolivia. A revisit to another favorite locale, known for its incredible star-shaped six-fold twins of Amesite and its historical significance as an ancient source of Sodalite found in Incan and pre-Incan jewelry. Obtained from Alfredo Petrov in October 2012. The FOV is 2.3mm.



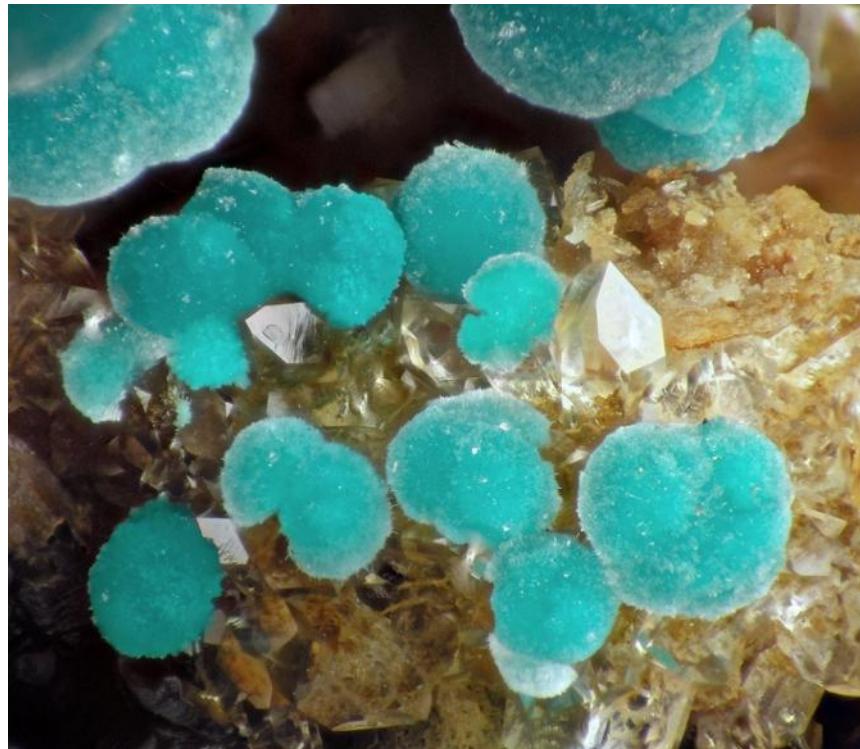
Tourmaline on Fluorite from the Erongo Region, Namibia. In an excellent example of studying otherwise non-micro minerals under the scope, I spotted this unusual flattened crystal of what is presumably tourmaline (labeled Schorl) on a piece that is loaded with tourmaline crystals of a more typical cross section for the mineral. The crystal is color-zoned, a bit darker at the termination, is transparent, and is a lovely brown-purple in coloration. Obtained from Christensen Mineral Connection in May 2012. The FOV is 5.0 mm.



Junitoite—freestanding crystals with pink Smectite from the Christmas Mine, Dripping Spring Mts, Gila Co., Arizona. Possibly the rarest of the type species at Christmas, it is certainly the hardest to photograph. The species typically occurs in transparent flat-lying crystals and intergrowths that blend in to the matrix except for their high degree of reflectivity. The species can turn violet with exposure to light. This photograph is a part of a very fine cabinet specimen that was a gift from Mr. Joe A Ruiz in May 2012. The FOV is 2.0 mm.



Copper—stacked dendritic crystals on Calcite with Dioptase from the Christmas Mine, Dripping Spring Mts, Gila Co., Arizona. Specimens of Copper are uncommon from the Christmas Mine, and the contrast with the brightly colored Dioptase results in a highly appealing specimen when viewed under the scope. Despite the lack of highly reflective surfaces, this specimen proved to be a difficult photographic subject. Obtained from Malcolm Alter in December 2012. The field of view is 3.0 mm.



Rosasite—crystallized balls on Quartz from the Christmas Mine, Dripping Spring Mts, Gila Co., Arizona. The Christmas Mine is a significant locality for Rosasite due to a 2 foot pocket of excellent quality found in 1976, but specimens are rarely seen these days. This specimen was obtained in January 2012 from Michael Cline.

The field of view is 3.0 mm.



Sperrylite—tin-white crystals from the Broken Hammer area, Wisner Township, Sudbury District, Ontario, Canada. The crystal on the right and detail below features an unusual face that is roughly the shape of a home plate in baseball and appears to be a thin laminated overgrowth of a distinctively different color than the main crystal. This is perhaps another species, and if intergrown with Sperrylite, it is likely quite rare. This is an excellent example of the sort of thing micro mineral collectors will notice at that can lead to discoveries. Collected by Brad Wilson in May 2011. Obtained from Mark Mauthner in October 2012.

The FOV is 7.5 mm above and 4.6 mm below.





**PACIFIC NORTHWEST
CHAPTER
FRIENDS OF
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Autunite; 12 cm tall.

Daybreak Mine, Mount Kit Carson, Spokane County, Washington, USA. (D1141)

Mark Mauthner photo; courtesy Heritage Auctions (ha.com).