



FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 43 No. 1

SPRING 2015

Gearing Up for Spring and Beyond

by President Joe Marchesani
with the Board of Directors

Field trips are planned!

• Tentatively **Saturday April 11** (pending owner's approval, date to be confirmed, might be pushed back a few weeks): Brinton's Quarry - no backhoe, we'll just see what has been washed off by the rain.

• **Saturday, April 18:** National Limestone Quarry, Mount Pleasant Mills, PA

• **Saturday May 9:** "The BIG Hill" at Cornwall, joint trip with Delaware Mineralogical Society, organized by Tom Pankratz. See the article on page 4.

These trips are open to **paid-up** chapter members only; if you haven't renewed for 2015, contact Treasurer & Membership Chair Ron Sloto. Dues are \$20.00 per year (\$15.00 per year for students and seniors over 62); this includes your National FM dues. Make checks out to "Friends of Mineralogy Pennsylvania Chapter."

RSVP for these trips to Joe Marchesani (see page 6). Default meet time is 9:00 a.m. for all trips unless noted otherwise.

We're looking for ideas for more collecting trips, and volunteers to coordinate trips. If you can help, please contact Joe Marchesani.

The Delaware Mineralogical Society's gem and fossil show was held March 7-8. It was not as packed as last year mainly due to weather, but there were some great deals and nice specimens. It seems that there are a lot of nice Mexico specimens lately... Naica perhaps?

Our Chapter's 2015 Symposium is being planned for the weekend of Saturday, Nov. 7. Does anyone have a theme idea? Would anyone enjoy giving a presentation?

We wanna get out and collect while we still can. Ain't gettin' any younger! We invite new members to participate in field trips.

That's all I've got for now. Keep the chisel down. -Joe

Newsletter Back Issues on Web Site

Ron Sloto is working on scanning back issues of the chapter newsletter and putting PDF files on the web site < www.rasloto.com/FM/ >. Watch for more issues being added soon. If anyone has issues that are not online, Ron would greatly appreciate the opportunity to borrow them to scan; contact information is on page 6.

Board Member Volunteers Needed

Our Board of Directors is understaffed! Can you help? If you could volunteer to stand for election to the Board of Directors, and in particular if you might be interested in being Vice President of the Chapter, please contact the President (see p. 6).

Brookmyer Collection at Carnegie Museum

Our Summer 2014 issue reported on the Carnegie Museum of Natural History acquiring the Bryon Brookmyer Collection of Pennsylvania minerals. Carnegie Magazine's Summer 2014 issue included a well-illustrated article (pages 20-25) on Brookmyer, his collecting history which started in childhood, and how he came to collaborate with Carnegie minerals section head Marc Wilson and eventually arrange for the museum to acquire his collection. It quotes Brookmyer as saying, "It means a lot that the collection is in a museum in Pennsylvania where people who live here can see it. And who knows, maybe it will light a fire in the next kid-collector."

To see the article, go to <http://www.carnegiemuseums.org/cmp/cmag/index.php?issue=42> and choose the "rockhound" article. At the bottom is a "download PDF" link - this will give you the article with some larger photos, exactly as it was laid out in the magazine.

-Editor

Mineral Hill, Elwyn, Pa. Field Trip Report

Delaware Mineralogical Society and
Friends of Mineralogy - Pa. Chapter
Sunday, Nov. 22, 2014

by Tom Pankratz

On Sunday, November 22, about 20 members of the Delaware Mineralogical Society and The Pennsylvania Friends of Mineralogy met and collected minerals at a construction site on Mineral Hill, near Elwyn, Pa.

Mary Ann Levan learned of this site from a friend who stopped to collect garnets (there aren't any) and set about trying to get mineralogical and geologic information about it. She found it surprisingly hard to find any hard information, especially for a place that so many people recognize by name. Through contact with Sandy Schenck (Delaware Geological Survey), Hal Bosbyshell (West Chester University) and Roger Mitchell (Delaware County Institute of Science, Media Pa), she learned that the Institute "has the original plates" from the book by Samuel Gordon (The Mineralogy of Pennsylvania: Academy of Natural Sciences of Philadelphia Special Publication no. 1), and was able to purchase a copy. This book is organized by county and township. Within a township, it lists farms, mines and quarries and the minerals found there. Mineral Hill is in Middletown Township, Delaware County. A few relevant entries include:

Mineral Hill: exposures along the road from Media to Blackhorse; just west of Ridley Creek; about a mile northeast of Elwyn. Wissahickon gneiss: sillimanite, cyanite, staurolite.

Crump's Quarry, on the grounds of the Pennsylvania Training School for the Feeble-Minded. Pyroxenite and metaperidotite: enstatite, actinolite, tremolite, hornblende, serpentine, talc, chlorite, vermiculite, deweylite, chromite, magnesite, ferruginous quartz.

Small abandoned feldspar quarry and exposures about 1/8 mile north of Crump's quarry. Pegmatite and metaperidotite. Orthoclase, microcline- amazonstone, albite- moonstone, oligoclase- sunstone, almandite, vermiculite, columbite.

Additionally, Bill Stephens found:

-- The Mineral Hill (Crump Serpentine mine at Mineral Hill) was well known for albite feldspar and

oligoclase feldspar, semiprecious gem varieties known as moonstone and sunstone, respectively. This is sodic plagioclase commonly found in association with recrystallized commonly serpentinized gabbroic rocks and dunites.

-- A mine north of Mineral Hill Crump's serpentine quarry was worked for feldspar including gemstones. Some research into the old maps, maybe the second Pennsylvania Geological Survey reports, may reveal its exact location, but suffice it to say the rocks, however weathered, were consistent with the ultramafic suite mapped across the Mineral Hill area and that includes Crump's Serpentine Quarry and the old feldspar mine.

The Institute's museum has a collection of local minerals, as well as other natural history objects. Some of the birds were collected by one of North America's foremost ornithologists (John Cassin, 1813-1869). This area was very active scientifically in the early history of the United States. Today, you can go to the Delaware County Institute of Science to see a great collection of minerals from the Mineral Hill area, and also to attend a monthly science talk.

The construction project covers about 30 acres of the upper part of Mineral Hill on the north side of US Route 1 (Baltimore Pike) about a mile west of Media, Pa. The construction project is primarily in the excavation phase though some roads, retaining walls and condominiums have been completed. Permission was obtained to visit and collect at the site. Natural Lands Trust recently acquired the lower part of Mineral Hill towards Ridley Creek and created a development plan which lays out trails and public use amenities.

The site contains an incredible mix of soil and rock types. The two main rock types are serpentine and gneiss, with some pegmatite veins. The serpentine and gneiss appear to be interlayered, both vertically and horizontally. It appears the serpentine was intruded by a granitic magma before the Taconic Orogeny, and subducted and metamorphosed during the orogeny. Later erosion and uplift created fractures allowing pegmatite formation in veins. Further erosion brought it to the surface where today we have weathering gradation (hydration/oxidation) from surface mud, through saprolite, to hard rock. Finally construction excavation has mixed and scattered everything and covered rocks with mud. Thankfully, many of the rocks on mounds and along the silt fence have been washed fairly clean by rains. Many of the exposed rocks, both gneisses and schists, are so weathered as to be easily

broken by hand. Many of the minerals found were weathered beyond suitability for collection and display.

There is a pile of 3'-5' boulders that were excavated by blasting, though the construction company crushed much of the rock creating a pile of 4-5" stones and another of 1" gravel. Most of this rock is gneiss. The upper half of the site appears to be a mix of serpentines and gneiss. There are many chlorite schist veins on the lower half creating green swaths where exposed by grading. Though hilly, most of the site is graded smooth. But there are a lot of different kinds of rocks up to 3' on several hillsides, mounds and particularly along an erosion fence on the east and south sides. I've never seen such a mix of different rock colors, compositions, textures in any one place before. Many of the rocks had sections of slickenside.

This site is clearly a rock collectors delight. Not so much so for mineral collectors.

Here's a summary of the minerals and rocks that were collected:

Clinochlore: The abundant chlorite schist seems to be mainly clinochlore, though perhaps some talc is mixed in. Virtually all of the chlorite schist is deep green, fine and easily crumbled by hand, even that still unexcavated. One chlorite schist vein was found that contained clinochlore 'books' up to 1/2" thick with faces to 2". This clinochlore is a stunning metallic green.

Vermiculite: Occasional books of metallic-coppery vermiculite were found. The largest was about 1".

Anthophyllite: Three types of anthophyllite were found:

1. Light green and pseudomorphing into talc
2. White, asbestiform.
3. Red, possibly due to iron.

Actinolite: Many actinolite specimens were found. Some were deep green, others apple green and some weathered clear/white. Occasionally green and clear/white in the same specimen. Most of the crystals are 1/8 to 3/8", occasionally to 1".

Magnesite: veins of white magnesite were abundant. A few clumps were also found.

Deweylite: One interesting piece of deweylite slickenside. Much more is probably there.

Quartz: Four different forms of quartz were found, though three all are likely the same having formed from excess silica produced by the weathering of the serpentine:

1. The most abundant are rusty-red (hematite?) rocks and boulders that range from finger-sized to 3'

boulders, with highly irregular (rough) surfaces. When broken the cores appears to be jasper. They are particularly abundant along the erosion fence.

I broke a fist-sized piece from a boulder, washed it with a pressure washer, and treated it with Iron Out. Viewed under a microscope the surface was completely coated with small quartz crystals.

2. A few fist-sized pieces have a white and green coating. They have the same rough texture though the quartz crystals are more weathered.
3. A few 1 1/2" specimens were found with 1/8" to 1/4" clusters of quartz crystals. The crystal clusters appear to radiate from a single point, possibly a magnetite crystal (verbal communication from Roger Mitchell).
4. Massive grey quartz in pegmatite veins

Feldspar: Three types of feldspar were found:

1. White, massive albite in pegmatite veins and gneiss
2. Pink, perthitic, microcline. Some near-perfect cleavage rhombs (one nearly 5 lbs) were found in the creek just below the construction site.
3. Amazonite was also found in the creek just below the site, some mixed with microcline perthite, and some with albite.
4. Bill Stephens collected a large block of feldspar which contains megacrysts over 2" in diameter that may be both moonstone and perhaps sunstone, but the final determination as to whether they are gem grade or not remains to be proven. The block came from a spoil pile, but an in-place exposure was found on the west side of the site. A gentleman from another club worked this location intensely and recovered some nice feldspar megacrysts.

Granitic gneiss: There were a lot of interesting gneiss rocks that predominated in the lighter (white) feldspar and quartz veins with small, distinct layers of black biotite (heavily collected by some). There is also a lot of highly weathered gneiss with red bands, presumably an iron mineral. And also the piles of gneiss that was blasted and crushed.

Chromite: There are a few red rocks along the silt fence (with a black weathered exterior) that contained small octahedral crystals (up to 1mm) of chromite. Even when crushed to dust, the red rock remains weakly attracted to a rare earth magnet. There is a vein of this rock on the shoulder across the street and slightly uphill from the site.

Rocks and minerals from this site will be shown in the DMS Club Field Trip display case at the March 2015 Show.

Cornwall Tailings, the Big Hill

Friends of Mineralogy- PA Field Collecting Trip

May 9, 2015 (Saturday)

By Tom Pankratz and Bill Stephens

(edited by Joseph Marchesani)

The Cornwall iron mine is the largest iron deposit in the US east of the Minnesota Mesabi range. It was mined from 1732 to 1972 both as an open pit and underground mines with more than 100 million tons of ore recovered. The big pit was flooded by hurricane Agnes in 1972. The mines were subsequently closed and blasted, which formed several lakes on the golf course. There are many tailings piles in the area and we visited several over the past decade. This trip will be to a site known as the Big Hill which is generally considered to be the best collecting site in the area. The site overlooks the flooded 'big pit lake' and consists of several terraced benches and a long slope of tailings (see attached pictures by Bill Stephens). MinDat list 68 valid minerals for this site. We can expect to find many minerals and interesting rocks (see site geology and mineralogy below). For those interested in this trip I recommend spending a few minutes doing an internet search....many interesting and informative articles are available.

Logistics

The meet-up time and location details have not been set. They will be sent by email to registered participants about April 20th.

This trip is solely for members of the Delaware Mineralogical Society and Friends of Mineralogy, PA Chapter. Contact Joseph Marchesani Jmarch06@comcast.net or Tom Pankratz at tjpankrat@verizon.net if you are interested in joining this trip (if you do not get a return email confirming registration within 48 hours, try again).

Site Geology & Mineralogy

The minerals at Cornwall are associated with two major rock types: diabase and limestone. The Triassic diabase is an igneous rock of dark green to black color containing feldspars and pyroxenes, with minor amounts of biotite, ilmenite and hornblende. The diabase formed by crystallization of these minerals from a molten rock that cut upward through surrounding Cambrian and Ordovician limestone. This diabase, as it cooled and solidified, recrystallized some of the limestone into marble. Several minerals, such as diopside, actinolite, epidote, and garnet, also formed in the limestone partly as a result of the heat from the diabase and partly as a result of the addition of some chemical elements from the final crystallization of the diabase. Later, additional solutions spread outward

along the top of the diabase into the limestone. The magnetite, hematite, pyrite, chalcopyrite, actinolite and chlorite formed at this stage. Sometimes they replaced the limestone, and sometimes they replaced the previously formed diopside and actinolite. The zeolites, sulfated, hydroxides, and copper carbonates crystallized last, filling open fractures and cavities. The consequence of this series of geologic events has resulted in certain minerals occurring together. Three such examples are the associations 1) magnetite-chalcopyrite-actinolite, 2) zeolites-calorie-magnetite, and 3) garnet-tremolite-calcite-serpentine. The age of the ore deposit is approximately 190 mya, which is within the Triassic period. (cite: Mineral Collecting in Pennsylvania by Lapham, D.M., and Geyer, A.R., 1965)

Collecting

The mines at Cornwall have been closed for some time, and are now imploded and/or flooded. However extensive tailing piles remain. We will be collecting at one such site: the Big Hill, which is owned by the mining company Haines & Kibblehouse. The site consists of several benches on the hill top and a large (100yds x 100yds) 'scree' slope. We may have to walk up to ½ mi. to reach the collecting site. The tailings range from gravel to football-size. Collecting will entail mostly turning over, breaking and examining loose rocks.

Equipment:

Required: Leather boots, safety glasses and hard hat.

Recommended: Gloves, rock hammers, chisels and small sledges (2-5 lb range), wrapping material, backpack, cart or wagon, buckets and flats (I don't think a big sledge is necessary, nor are shovels or screens). Other: magnet, hand lens and 0.1M hydrochloric acid. Wear clothing consistent with the season.

Bring lunch, snacks and drinks; there are no food sources nearby.



Cornwall, Pennsylvania: The Big Hill, lower slope.



Cornwall, Pennsylvania: The Big Hill, upper slope.



Cornwall, Pennsylvania: The Big Hill, terraces.

From the Editor

David Glick

THANK YOU to everyone who has been providing material for the Newsletter! Everyone else - join the fun! **Please provide materials for the next issue by June 1, 2015.** Feel free to contact me at xidg@verizon.net, or 814-237-1094 days and evenings (especially Thurs-Sat., otherwise leave a message).

Materials related to Pennsylvania mineralogy, collecting or collectors are invited for this newsletter: articles, long or short; announcements from FM-PA committees; photographs of specimens, field localities, collections, etc.; reports on publications about PA minerals or by PA authors, or actual book reviews; or other items within the mineralogy and mineral collecting areas of interest. Photographs should be of good resolution (1000 pixels across) without much JPEG compression, so that they will look good in print. Please provide captions including photographers' names.

We are producing four issues each year; **your material is needed** to make them worthwhile!. If you know people who have interesting material, please encourage them to submit it.

2015 Friends of Mineralogy Award Winners

reported by

Alexander G. Schauss, PhD

President, Friends of Mineralogy (FM)

The winners of various Friends of Mineralogy awards at the 2015 Tucson Gem & Mineral Show are:

Best Educational Exhibit by an Individual

Eric Asselborn

Sucres: Crystals with the habit called sucre or sugar are also *geschlossen* gwindel or closed gwindel.

Best Educational Exhibit by an Institution

Lead Minerals.

Rice Northwest Museum of Rocks and Minerals,
Portland, Oregon

Best Article published in 2014 in *The Mineralogical Record*

Thomas P. Moore and Rob M. Woodside

The Sar-e-Sang Lapis Mines

Best Article published in 2014 in *Rocks & Minerals*

John I. Koivula and Elise A. Skalwold

Microworld of Diamonds: Images from Earth's Mantle

Best Article published in 2014 in *Mineral News*

Frank Lutwerk-Dudas

Tin and Tungsten Minerals from Butte, Montana

In addition, Friends of Mineralogy awards \$200 to each publication.

Friends of Mineralogy - Pennsylvania Chapter Summary Financial Report 2014

Submitted by Treasurer Ron Sloto

INCOME

| | |
|--------------------|----------|
| Dues | 1,129.00 |
| Symposium | 1,060.00 |
| Book sales | 15.00 |
| Brinton field trip | 60.00 |
| Donation | 35.00 |

EXPENSES

| | |
|--------------------------------|--------|
| Office supplies | 91.04 |
| Symposium lanyards | 104.00 |
| Newsletter expenses 2013 | 65.95 |
| National dues | 256.00 |
| PA sales tax - books sold 2013 | 4.39 |
| Donation St Judes Hospital | 50.00 |
| Symposium expenses | 750.00 |
| Insurance | 500.00 |

| | | |
|-------|------------|----------|
| TOTAL | \$2,299.00 | 1,821.38 |
|-------|------------|----------|

UPCOMING EVENTS

March 28-29, 2015: Philadelphia Mineral Treasures and Fossil Fair, by Phila. Mineral. Soc. & Delaware Valley Paleo. Soc. Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA

March 28-29, 2015: Rock & Mineral Show by Che-Hanna Rock & Mineral Club. Athens Township Vol. Fire Hall, 211 Herrick Ave., Athens PA.
<http://www.chehannarocks.com/show.html>

April 18-19, 2015: North Museum Rock, Mineral & Fossil Show, by North Museum of Natural History & Science. Farm & Home Center, 1383 Arcadia Rd. Lancaster PA

May 2-3, 2015: Treasures of the Earth 2015, Annual Show & Sale by The Mineralogical Society of Northeastern Pennsylvania. Oblates of St. Joseph, 1880 Hwy 315, Pittston PA 18640. Sat 10-5, Sun 10-4.

May 9, 2015: South Penn Spring Swap & Sale sponsored by Central Penn and Franklin County Rock & Mineral Clubs. Outdoor pavilion at South Mountain Fairgrounds, 1.5 miles west of Arendtsville, PA on route 234. 8 a.m. to 3 p.m. Admission Adults \$1.00; Children free. \$5 per table for as many tables as you need; first come basis to set up. Address for GPS: 615 Narrows Road, Biglerville 17307. Contact Tom Smith, tsmith1012@comcast.net

November 7-8, 2015: Friends of Mineralogy - PA Chapter Symposium (Nov. 7, Lancaster, PA) & Field Trip (Nov. 8).

CLASSIFIED ADS

FOR SALE: Long-time Pennsylvania collector John 'Pen' Ambler in Hollidaysburg has books, specimens and more for sale. Pen reports: "I have some 10 – 15 cartons of books on mineral and mineral related subjects. My cataloged collection consist of upwards of 6,000 specimens some of which were the Ed Carper collection. The specimens are cabinet, small cabinet, hand-sized, miniature, thumbnail and micro minerals. Many of the minerals are PA and eastern U.S.; however, it is a varied collection. There are lapidary materials (slabs and some bulk); limited fossils; tumbled stones including PA amethyst; UV materials and equipment; supplies (boxes, etc.)." Please contact Pen by email: bridger@atlanticbb.net

FOR SALE: Collection, Microscope & Accessories, Crystal Models - Avid collector wants these to be purchased by someone who would appreciate them. Contact Frank & Gail Beall, 724-789-7290. Western PA. **See much more complete listing** at www.nittanymineral.org/beall.pdf

DONATIONS WELCOMED

The FM-PA Chapter is a 501(c)(3) nonprofit organization; donations are gratefully accepted and may be deducted from your federal income tax. Donations of any size help to offset the general operating costs of the Society, helping to keep dues low.

FM on the WWW

Please explore the FM-PA web site at
www.rasloto.com/FM/

National News

National FM newsletters, links to other chapters, and much more can be found on their web site:
www.friendsofmineralogy.org

Friends of Mineralogy Pennsylvania Chapter Directory of Officers**OFFICERS and BOARD OF DIRECTORS members**

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| Treasurer | Ron Sloto | rasloto@aol.com | (610) 469-0626 |
| Secretary | | | |

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Friends of Mineralogy Pennsylvania Chapter Web Site: <http://www.rasloto.com/FM>