

Friends of Mineralogy, Region 3

Fall Edition - 1975
Region 3 highlights;

Board of Directors Meeting;

Martin Anne', Chairman, Region 3, called a meeting for officers and committee chairmen to discuss regional business and the planning for our annual Pennsylvania Mineral Symposium.

Treasurer;

Thomas O'Neil, treasurer reports that all outstanding bills have been paid. The proceeds of our book sales and mineral auctions has put the treasury in excellent condition. However we are a long way from having the amount that will be needed to publish our next undertaking, "the Mineralogy of Pennsylvania, 1965-1975".

Locality Registration;

We see some activity in this area, however we feel that this program needs a great deal more attention. We need the combined efforts of all F/M members and the local clubs to help us in making the Locality Registration program a success. The data form has been revised. Remember -- a partially filled data form is better than no form at all, so please help us get the information we need.

Club Registration;

All Pennsylvania mineral clubs, please note this request. The club listing released over a year ago is going out of date because we are not notified of changes in club officers and editors. Please send an up to date list of your officers and newsletter editor to the F/M newsletter editor, address on cover page. This list is made for the benefit of all clubs within the Region, so help us to help you. I wish to take this opportunity to thank all the clubs who have been so generous in sharing their newsletter with me. It tells me about your club activities and what is happening in your area. Friends of Mineralogy sends a newsletter to all clubs within the region, if your club publishes a letter, put the F/M editor on your mailing list. Thank You..

Speaker Listing;

Educational Chairman, John Way, has put together an excellent speaker listing. The list outlines, speakers, address, contact, topics and other extraneous requirements. These speakers are willing to talk to clubs and organizations on a variety of subject. Club program chairmen are encouraged to use list whenever possible to obtain a good qualified speaker for a Club function or meeting night.

Museum Listing;

The release of a new museum listing will be delayed until the I.M.A. organizational list is published.

Slide Program;

Col. Thomas Myers reports that the slide program is progressing very well. More details regarding this activity will be reported in the next newsletter. The slide program when completed will be made available to Clubs, schools and other interested parties.

Fall Edition - 1975

New Publications;

"The Mineralogy of Pennsylvania, 1965-1975". The author of this new F/M sponsored publication is Dr. Robert Smith II, of the Pennsylvania Geological Survey, Harrisburg, Pa.. Dr. Smith is rapidly approaching the completion of the first draft. This draft will then go out for review and comments. The tentative publication date will be late summer 1976. This new publication will update Dr. Arthur Montgomery's "Mineralogy of Pennsylvania, 1922-1965". The format of the new book will follow the style of Dr. Montgomery's book. The book will feature historical data, pictures and other pertinent information relative to mineralogy. The new Mineralogy will bring up to date all the minerals of Pennsylvania, deletions and a special section for those minerals that are questionable.

Welcome ; New Members;
P.E. Fredrick Kraissl, Jr.
244 Kinderknack Rd.
Hackensack, New Jersey 07661

Alice Kraissl
P.O. Box 155
North Hackensack, New Jersey 07661

Ralph C. Bream
929 27th St.
Altoona, Pa. 16601

George Molner
528 Popular Ave.
Chambersburg, Pa. 17201

John Clark
Mineralogy Dept.
Morris Museum
Convent, New Jersey 07961

Charlotte Smith
R.D.#1, Box 23
Fort Matilda, Pa. 16870

Arnold Fainberg
311 Murray Dr.
Apt. D
King of Prussia, Pa. 19406

Howard Sherry
416 S. Crawford
Cherry Hill, New Jersey 08003

Address Changes;

Dr. Allen Heyl
P.O. Box 1052
Evergreen, Colorado 80439

Sharon Sherman
115 Autumn Horseshoe
Newark, Delaware 18711

Mineral Notes and News;;

Klein's quarry, Wrightsville, Pa.
Monazite, a rare earth phosphate, transparent to translucent, brown to yellow brown, mostly tabular and fairly well crystallized.

Thanks to the sharp eyes of F/M member Fred Keidel, Bellefonte, Delaware a new mineral is being added to the list of minerals found in the Klein Brothers quarry. Monazite was reported in Gordon's and found in two localities in Delaware County, Pennsylvania. The monazite was identified by X-ray diffraction.

Region 3, Publications;

Books are available on order from Bryon Brookmyer, Box 19, Blue Ball, Pa., 17506, Make checks payable to Friends of Mineralogy, Region 3

| | |
|---|---------|
| Samuel G. Gordon -- Minerals of Pennsylvania - 1922 | \$ 5.50 |
| Dr. Arthur Montgomery - Minerals of Pennsylvania -1922-1965 | \$ 5.00 |
| William W. Jefferis - Mineralogy of Chester County - 1854 | \$ 2.00 |
| Patricia Shemella -- Mineral Pronunciation List - 1975 | \$ 1.00 |

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Pennsylvania Mineral Symposium

The third annual 'Pennsylvania Mineral Symposium' will be held at West Chester State College, West Chester, Pennsylvania, October 31, Nov. 1 and 2, 1975. The 1975 Symposium theme will be Metamorphic Rocks of Pennsylvania. The theme will be followed by various topics relative to collecting localities and their minerals. The Symposium will have as its featured speaker Mr. Neal Yedlin, New Haven, Conn., a wellknown personality in the field of Mineralogy. Mr. Yedlin has been very active in all phases of mineral collecting. An author and writer in Rocks and Minerals as well as the Mineralogical Record, he is well known for his ingenious and skilful methods employed in micro mounting.

Mr. Neal Yedlin's topic for the Symposium will be "micro mounting and its relationship to Pennsylvania mineral collectors of yesterday". We will hear more about Henry Garrett, Dr. J.C. Green, Geo. English and Geo. Ashby, men who in the late 1800 were active in accumulating micro minerals of fine quality. It will be a great opportunity to learn about micro mineral collecting and mounting.

The Symposium will begin Friday evening with a workshop on Metamorphic rocks, followed by a social hour and the exchange of mineral specimens. The laboratory facilities, scopes, X-ray and assistance in visual

identification will be available throughout the meeting.

The Pennsylvania Mineral Symposium will begin Saturday morning at 8:30 A.M. with a greeting and welcome by West Chester State College and F/M. The Symposium 'Theme' Metamorphic Rocks of Pennsylvania will take the entire morning. The afternoon session will start with our guest speaker Mr. Neal Yedlin who will talk on one of his favorite subjects micro minerals and mounting. The balance of the afternoon will be used for special topics of interest to the mineral collector.

There will be a short business meeting followed by the first of two mineral auctions. The second auction will be started shortly after dinner and prior to the social hours and exchange of mineral specimens by those who wish to swap.

We suggest that all those who plan to attend the Symposium fill out the advance registration application. This will help the planning and arrangements necessary to make the Symposium a success. For those who are undecided, registration can be done at the door Friday evening or Saturday morning between 8 and 8:30 A.M.

Please note, we have for the mineral auction a fine selection of Dr. Arthur Montgomery's mineral specimens. These specimens were donated to F/M, Region 3, for auction, with the proceeds to be used for publications and the promotion and encouragement of mineralogy.

We will be most grateful to anyone who wishes to donate a specimen or two that can be put up for auction, with the proceeds to be put in the Region 3 treasury for the publication fund.

Motels: Suggest early reservations:

Colonial Motor Court
3 miles south on U.S. 202 & 322
1201 Wilmington Pike
West Chester, Pa.
Phone- 215-399-0358
single rate \$9-\$13

Beechwood Motel
4 miles south on U.S. 202 & 322
1310 Wilmington Pike
West Chester, Pa.
Phone- 215-399-0970
single rate \$9-\$10

Mail your SYMPOSIUM registration EARLY and save money- deadline for registration is October 17, 1975.

FRIENDS OF MINERALOGY -- REGION III - SPEAKER LIST

The following people have kindly returned a card indicating their desire to aid FM in its goal of advancing knowledge in mineralogy and its associated fields. We appreciate their offer of help and ask that anyone who would be willing to have his or her name added to this list, which will be circulated to all interested groups and clubs, contact John H. Way, Jr.

| <u>SPEAKER, ADDRESS & PHONE</u> | <u>TOPICS // REQUIREMENTS</u> |
|---|--|
| Doris Biggs, 2050 Lititz Pike, Lancaster, Pa. 17601 (717) 569-2179 | Minerals of Cornog, Pa. - An alpine-like occurrence // travel expenses / accommodations if necessary |
| Carl R. Carnein, Dept. Geology, Wayne burg College, Waynesburg, Pa. 15370 (412) 627-6191 ext. 287 of. 627-8455 hm. | Crystals & crystal structure / fluorescent minerals, Franklin, N.J. / sea floor spreading & continental drift / any mineral or mineral group / travel expenses |
| Prof. William A. Cassidy, 506 Langley Hall Earth & Planetary Sci. Dept. Univ. Pittsburgh, Pbg, Pa. 15260 (412) 624-4714 of. 373-0457 hm. | Meteorites & meteorite craters in Argentina // 15¢ / mile over 20 mi. / \$25-50 fee to be donated to underprivileged family in Argentina |
| W.A. and M.L. Crawford, Dept. Geol- ogy, Bryn Mawr College, Bryn Mawr, Pa. 19010 (215) 525-1000 ext. 354 of. | Calcite-aragonite equilibrium / volcanism in western U.S. / lunar rocks & minerals / metamorphism in S.E. Pa. // travel expenses / meals |
| Dr. Arnold H. Fainberg, 311 Murray Drive, Apt. D, King of Prussia, Pa. 19406 (215) 265-3200 ext. 442 of. 265-5318 hm. | Use of infrared spectroscopy in mineral identification / prospecting for minerals in the laboratory // travel & other expenses / 500 mi. max. distance |
| Jacob Freedman, Dept. Geology, Franklin & Marshall College, Lancaster, Pa. 17604 (717) 393-3621 ext. 236 of. | Mineral localities in Lancaster Co. / the energy crisis // travel expenses etc. for long distances / fee for long distance |
| Robert M. Goodspeed, Dept. of Geol. Sciences, Susquehanna Univ. Selinsgrove, Pa. (717) 374- 2345 ext. 364 of. | Crystallography & crystal growth / energy sources vs. demands / mineral properties and testing / open to suggestions // travel & other expenses / reasonable distance. |
| Seymour S. Greenberg, Earth Sci. Dept., West Chester State Coll., West Chester, Pa. 19380 (215) 436-2788 of. | General geology of S.E. Pa. / identification of minerals / formation of minerals // travel & other expenses if long distances. |
| Richard Haefner, Ph.D., F.G.A., 217 Nevin St., Lancaster, Pa. 17603 (717) 392-6825 | Mineral collecting & gemstones, 5 or 6 talks/year; see list of currently available talks // expenses must be paid / honorarium is optional |
| George H. Hayfield, Dept. of Geo- sciences, Lock Haven St. College, Lock Haven, Pa. 17745 (717) 748-5351 of. | Pleistocene geology / general crystallography / fossils // travel expenses / less than 50 miles |

SPEAKER, ADDRESS & PHONE

TOPICS // REQUIREMENTS

Wm. A. Henderson, Jr., Ph.D., 174
East Hunting Ridge Rd., Stamford,
Conn. 06903 (203) 322-2723 hm.

Geological history of Conn./glacial
geol. of Conn./Alpine (Swiss) min-
erals/liquid inclusions in xls./
bertrandites of Conn.// travel ex-
penses + meals/one hr. drive max./
donation to Min. Rec. if OK

Prof. Philip S. Justus, Dept. of
Earth Sci., Fairleigh Dickinson
Univ., Madison, N.J. 07940 (201)
377-4700 ext. 430 of.

Continental drift & origin of the
continents, mountains, oceans/ vol-
canoes-origin, composition, distri-
bution (Surtsey film & slides)/
identification of igneous & metamor-
phic rocks in the field (discussion
of origin)/ earthquakes--origin,
prediction & control (movie + slides)
/ field trips, northern N.J. on geol.
+ mineralogy// travel expenses +
other exp./ honorarium/ eastern Pa.
& N.J.

George H. Myer, Dept. of Geol.,
Temple Univ., Phila., Pa. 19122
(215) 787-7173

Environmental geological analysis/
beginning crystallography/ optical
properties of minerals// travel
expenses/ distance less than 100 mi.
/ 2x2 slide projector

Delbert L. Oswald, Carnegie Museum, 4400
Dept. of the Carnegie Inst.,
Forbes Ave., Pbg., Pa. 15213
(412) 364-8523 hm. 622-3269 of.

Minerals of western Pa./ minerals at
Carnegie Museum/ why a microscope
(or things you can't see)/ the W.W.
Jefferis micromount collection//
travel expenses 12¢/mi. for car or
actual travel cost + meals + lodging

Frederick Park, Geoscience Dept.,
Indiana Univ. of Pa., Indiana, Pa.
15701 (412) 357-2379

Minerals not on the earth/ terres-
trial compared with extraterrestrial
minerals// must fit teaching schedule

Mrs. Juliet C. Reed, 336 Rockland
Rd., Wayne, Pa. 19087 (215)
MU8-6180

Alaska/ Colorado, Arizona, etc./
National Parks of the west/ how to
get started mineral collecting//
travel expenses (gas)/ honorarium
according to club custom/ 1-1½ hr.
travel distance or accommodations
at member's home

William Reitenbaugh, 457 Spruce St.
Pottstown, Pa. 19464 (215)
326-1743

Fluorescence/ will entertain groups
in private museum in p.m.// dona-
tion to keep lights in repair

Robert C. Smith II, R.D.#5, Long-
view Rd., Mechanicsburg, Pa.
(717) 697-3683

Pb-Zn occurrences in Pa./ travelogue
of Iceland// travel expenses includ-
ing 12¢/mi./max. distance 60 miles
one way/ \$25 paid directly to geol-
ogy scholarship of my choice

Dr. F.K. Szucs, Prof., Dept. of
Geol., Slippery Rock St. Coll.,
Slippery Rock, Pa. 16057 (412)
794-7305 of.

Art in minerals/ minerals under the
microscope/ mineral resources/ min-
erals of the moon// travel distance
within 60 mi., longer by arrangement

SPEAKER, ADDRESS & PHONE

TOPICS // REQUIREMENTS

Glenn Thompson, Dept. of Physics
& Earth Science, Elizabethtown
College, Elizabethtown, Pa.
17022 (717) 367-1151

Cave science// travel expenses +
meals/ distance of 50 mi.

John H. Way, Jr., Box 991, Diane
Dr., R.D.#1, Etters, Pa. 17319
(717) 938-3592 hm. 787-8162 of.

Geology of Pennsylvania/ making
geology useful to mineral collecting
/ producing a geologic map// travel
expenses/ donation to FM Region III

Neal Yedlin, 129 Englewood Dr.,
New Haven, Conn. 06515 (203)
387-3622

Micromounts/ Laurium Greece/ Frank-
lin, N.J./ ancient copper mining in
Michigan// all expenses, mileage,
accommodations, etc./ 200 mi. max.
distance/ not during Dec., Jan.,
Feb., Mar. as travel too uncertain/
\$25 to Min. Rec.

1975 Glossary of Mineral Species

Here it is at last ! the long awaited second edition of Fleischer's
Glossary of Mineral Species. single copy \$4.00 post paid with
prepaid order

Improved
Crystal systems added
References

10 or more \$3.00 each

Wire bound book

Glossary of Mineral Species

P.O. Box 10404

Alexandria, Virginia 22310

Dates to Remember;

September 20 & 21

Tuscarora Lapidary Society, annual shpw, Holiday Inn

2 miles west of Media, Pa. on Rt.#1

Sat. 10 AM to 10 PM Sunday 10 AM to 6 PM

September 26, 27 & 28

Chemung Valley Gem & Mineral Society

Swap & campout

Hickory Hill campground, Bath New York

September 26, 27 & 28

Baltimore Mineral Society

19th Annual Micromount Symposium

Stemmers Run junior High School

Towson, Maryland

October 4 & 5 Central Pennsylvania Rock & Mineral Club

10 th annual show, Blue room Hershey Comm. building, Hershey, Pa.

November 1 & 2 Moraine Rock Busters Gem & Mineral Society

Highland and Lincoln Ave., New Castle, Pa.

Friends of Mineralogy;

Second biennial MSA-FM meeting

Tucson, Arizona Feb.14-15,1976

CLUES TO MINERAL OCCURRENCES FROM THE GEOLOGICAL LITERATURE, continued.

6) Anatase, Cordierite, Dravite, and Pectolite from the Safe Harbor quarry, Lancaster County (39°55'48", 76°22'33"): Tomlinson (1942, p.646-648) described cordierite crystals forming up to 25% of the rock in a NE-SW trending breccia zone in the Safe Harbor quarry. The host for the cordierite was at an intersection of a breccia zone in the Cambrian Antietam-Harpers schists with a Triassic diabase dike. According to Tomlinson, the order of geologic events was a) formation of the schist minerals, b) brecciation accompanying granitic intrusion and tourmalinization of the schist yielding coarse-grained minerals, c) north-south fissuring accompanied by intrusion of the diabase dike (thermal (contact) metamorphism by the dike altered both the schist and granite in the brecciated zone. The micas of the schist were reportedly baked forming metamorphic aureole minerals orthoclase, cordierite, biotite, hercynite (?), rutile, and sillimanite, in this case all mostly fine-grained), d) hydrothermal solutions from the cooling dike reacted with the minerals in the breccia zone and formed crystal-lined vugs with albite, chlorite, calcite, titanite, and pyrite. Unfortunately, Tomlinson notes that the cordierite crystals are only 0.002 to 0.004 mm across the prism face and that the crystals were very unstable and altered to various chlorite group minerals. Thus, it is likely that cordierite could be seen only in thin sections. We shall return, however, to Tomlinson's clues.

Chapman (1950) also described the contact-metamorphic effects of the Triassic diabase dike at Safe Harbor. His 29-page article, paraphrased below, contains a wealth of information and includes a map with 62 numbered locations within the quarry for geologic features and for several minerals. Chapman separately described the contact metamorphism of the schistose Antietam Formation as well as that of the Vintage Formation dolomite. He divided the contact metamorphic aureole in the schist into an inner zone 5 to 8 feet wide, of dark hornfels containing orthoclase, plagioclase, cordierite, quartz, and chlorite; and an outer zone of variable width of coarser and lighter-colored rock containing mainly plagioclase, quartz, muscovite, biotite, chlorite, and clinozoisite. Chapman attributed the metamorphism in the inner Antietam zone mainly to heat with a later, hydrothermal influence. In the outer zone, hydrothermal solutions were chiefly responsible for the alteration. Contact metamorphism in the Vintage dolomite produced an inner zone, some 20 feet wide, where the rock is a dense, black, nonfoliated limestone made up of calcite, dolomite, phlogopite, antigorite (from forsterite), tremolite, diopside, talc, magnetite, and sphalerite. The outer metamorphic zone in the Vintage is a sugary rock composed of dolomite, calcite, antigorite, phlogopite, and talc (?). The inner zone resulted from strong thermal metamorphism followed by strong hydrothermal solutions. The outer zone operated from the same, but less intense, processes.

This past year, Karl and Brian Brubaker began visiting the quarry and turned up prehnite of fair quality and pectolite of good quality. The pectolite occurs as white, splintery, radial clusters up to 1 inch across on fracture surfaces in diabase. The Brubakers' visual identification appeared correct, and verification was first made by the author via density determinations, and then by John H. Barnes of the Pennsylvania Geological Survey using x-ray diffraction. At present, this is the only pectolite locality in Pennsylvania known to the author. At the invitation of Karl Brubaker; Martin Anne', Karl Jones, Don Schmerling, John Way and the author made a quick examination of the east wall of the Safe Harbor quarry. Don Schmerling made the first

find of the day in a metamorphosed block of Antietam. At the time, samples were collected only for the flesh-colored orthoclase crystals they contained. Later, Don examined these vugs and found gemmy blue micro-crystals of anatase and clear, glassy, micro hexagonal prisms of apatite. (Rather interestingly, this is the same host rock (Antietam) from which Don collected anatase at Kline's quarry, Wrightsville.) Near this boulder, the rest of the group collected beautiful sections of the diabase dikes and milky quartz with specular hematite flakes and grossular or andradite garnet crystals. The 4-inch thick diabase dikes had 2 glassy, obsidian surfaces showing the quick cooling which occurred when the magma penetrated the host rock and quickly cooled to glass. The second find of the day was made by John Way in the metamorphosed Vintage dolomite. In addition to traces of black sphalerite in dolomite and galena in quartz, John found rather plentiful, clear, brown prisms laying on the phlogopitic bedding or cleavage surfaces of the Vintage. Tourmaline was suspected because of the triangular cross section and Tomlinson's mention of tourmalinization. Following a most-needed refresher course in optical mineralogy from Arthur Montgomery this past spring, the author identified the brown crystals as dravite ($\omega=1.636 \pm .002$ $\epsilon=1.614$). It was indeed gratifying that the magnesian specie of the tourmaline group was found associated with phlogopite (magnesian mica) and dolomite (magnesium-calcium carbonate). This is one of only two verified dravite occurrences the author has found and should provide good collecting of this material.

The quarry was opened to provide diabase for the Safe Harbor dam, and is still owned and patrolled by the Pennsylvania Power and Light Company. One must seek permission to collect at the office on the dam.

References:

- Chapman, R. W. (1950) Contact metamorphic effects of Triassic diabase at Safe Harbor, Pennsylvania, Bull. Geol. Soc. Am., vol. 61, pp. 191-220.
- Tomlinson, W. H. (1942) Idiomorphic cordierite from Safe Harbor, Pennsylvania, Am. Mineral., vol. 27, no. 9, p. 646-648.

The minerals listed below are still collectable from the quarry and storage piles of crushed rock:

| | | |
|-------------------------|------------|----------------------|
| Adularia (pink & clear) | Garnet | Pyrite |
| Albite | Galena | Phrenite |
| Anatase | Hematite | Quartz |
| Calcite | Hornblende | Sphalerite |
| Chlorite | Orthoclase | Tourmaline (dravite) |
| Datölite | Pectolite | |
| Dolomite | Phlogopite | Apatite |

Anatase, found in the Safe Harbor quarry occurs in metamorphosed Antietam rock. The paragenesis of anatase by microscopic examination indicated that the cavities in the host rock were lined with quartz, albite and orthoclase crystals. Anatase can be found growing on the quartz, orthoclase and albite. The anatase is usually surrounded or has nearby Chlorite of two different varieties (by visual examination). At some later date pyrite was formed in octahedrons, cubes, and acicular shapes within the cavities. The Albite crystals (pink and white, diamond shapes) found in the cavities deserves some attention because of its various unusual crystal habits. Credit for identification (x-ray) and comments on the albite crystals goes to Dr. Allen Heyl who examined some of the Safe Harbor material.