THE PICKING TABLE

FRANKLIN OGDENSBURG MINERALOGICAL SOCIETY, INC.

P. O. BOX 146

FRANKLIN, N.J., 07416

VOLUME VIII FEBRUARY 1967 NUMBER 1

CLUB PROGRAM - SPRING 1967

All meetings will be held at the Hardyston School, intersection of Routes #23 and #517, Franklin, N. J. Pre meeting activities start at 1:00 P.M. Speaker will be announced at 2:30 P.M.

Sunday, March 19th.	Field trip, 9:00 A.M. to Noon - Buckwheat Dump, Franklin, N.J. Meeting, 2:30 P.M. Speaker, Paul Desautels Subject - Blood Relatives Among the Minerals.
Saturday, April 15th	Field trip, 9:00 A.M. to Noon - Buckwheat Dump, Franklin, N.J. Meeting, 2:30 P.M. Speaker - Dr. Paul Moore. Subject - The Mineralogy of Langban, Sweden.
Saturday, May 20th	Field trip, 9:00 A.M. to Noon - Open Cuts, Sterling Hill Mine, Ogdensburg, N. J. Meeting, 2:30 P.M. Speaker - Dr. Clifford Frondel Subject - Franklin Minerals, New and Old
Saturday, June 17th	Field trip, 9:00 A.M. to Noon - Farber Quarry, Cork Hill Road, Franklin, N.J. Meeting, 2:30 P.M. Speaker - Robert Metsger Subject - The Geology of Sterling Hill.

Special Events

April 22/23	1967 Earth Science and Gem Show Mineralogical Society of Pennsylvania, Route 30, Lancaster, Pa.
May 6/7th	3rd Annual Mineral and Gem Show Matawan Mineralogical Society, Matawan Regional High School, Matawan, N.J.
June 29/July 2nd	1967 National Gem and Mineral Show, Eastern Federation, Washington Hilton Hotel, Washington, D.C.

THE PICKING TABLE is issued twice per year; a February issue to reach members about March 1st with news and the Club Spring Program; an August issue to reach members about September 1st with news and the Fall program. THE PICKING TABLE is written and prepared by Frank Z. Edwards, the mimeo and typing by Louise W. Borgstrom.

F.O.M.S. OFFICERS FOR THE YEAR 1967

President	Dr. Harry E. Montero	Box 120, RD 1, 480 Glen Road, Sparta, N.J.
Vice President	John E. Sebastian, Jr.	36 Roxbury Drive, Kenville, N. J.
Treasurer	Julian M. Butler	712 Pemberton Avenue, Plainfield, N.J.
Secretary	Alice L. Kraissl	Box 51, North Hackensack, N. J.

TRUSTEES

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Muriel Starke '68 (alternate)

F.O.M.S. Notes

F.O.M.S. members attending Club events this spring will be well rewarded for their efforts. Therefore, a second look at our calendar page is recommended. For our meetings we have been extremely fortunate in obtaining an outstanding group of speakers to address us on subjects of major interest. An opportunity to hear such men, all of international stature and reputation is rare so please note the dates and plan to attend.

As usual, field trips to local areas are planned for our morning programs. Furthermore, in response to your wishes, Kenneth Sproson, field trip chairman, is arranging for additional field trips to other areas, including a fossil location and Cornwall, Pa. Dates and details for such events and the Swap Session will be given in our monthly mailings.

Please note that attendance at all Club events is limited to paid up members only. Please use the handy form on the last page to mail your 1967 dues now. Jack Butler has always been most agreeable about accepting dues at field trips and meetings. Somehow this has been misunderstood by some people and we have been accused of charging admission to our events. This is neither true nor fair, but it will save embarrassment for all if dues are paid up now.

Last fall the Limecrest Quarry was ordered closed to all collectors after a visit by another Club, which failed to police their members and children, resulting in property damage and extra costs for the quarry. The only reason the F.O.M.S. is welcome and can schedule field trips to desireable locations is the conduct of our members on visits. John Sebastian, chairman of the Safety Committee, thanks you for past cooperation and again requests your support this year. For your permanent file we are printing at the back of this issue a list of our Safety Rules and Regulations.

This year members of the Safety Committee will wear distinctive hard hats, which can be readily seen and identified. Two additional men are needed as permanent members of the Safety Committee. If you would like to work with this select group, please contact John Sebastian.

We would also like to thank the members who completed and returned our questionnaire. The replies were varied, interesting and instructive. Many suggestions were useful and will be applied. This information will assist your officers in the operation of the Club.

The request most frequently made by members was for help in identification. To comply with this request, the F.O.M.S. will, on field trips, continue to set up a representative display of minerals for the locality. At meetings, we will ask some of our more knowledgeable members to man an identification table to examine specimen material. Finally, for help at home, the F.O.M.S. has ordered the printing of Alex Knoll's "Mineral Identification for the Amateur", which should be useful to collectors of all caliber. This booklet will be ready soon and available at meetings or by mail.

The Government Printing Office has just reprinted Palache's Professional Paper #180 - The Minerals of Franklin and Sterling Hill, Sussex County, N.J.; a volume which is a must for all Franklin collectors. Jack Butler has a supply of this work. It is available at meetings or by mail, as well as a number of other publications of interest to our members.

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Langban Mineral Study

Many Franklin collectors are interested in the minerals of Langban, Sweden, primarily because of the rare and unusual species shared by both localities. A first hand report on Langban minerals will be given to us at our April meeting by Dr. Paul Moore, University of Illinois. In June, 1966, Dr. Moore completed a year's study of the Langban minerals in the collection of the Natural History Museum, Stockholm, Sweden. While he was away, Dr. Moore corresponded with member John K. Nelson, an old friend and micro enthusiast. Both gentlemen have given me permission to quote from this correspondence, which would interest our members.

"The Museum is an enormous building, north of the city. The mineral collections are unbelievably huge. The Lnagban minerals number about 40,000 and about one third are unknown and will have to be run down by X ray. Most of the Langban collections were assembled by Dr. Flink (who is responsible for most of the knowledge about Langban) and by Messrs. Finneman and Warg, who were mine superintendents."

"The mineralogy of Langban, all in all, is much more complex than that of Franklin. So many minerals here look almost identical and in some specimens as many as 15 species can be found packed together. I am convinced that the variety here at Langban exceeds Franklin by a good margin. Sb, As, Pb, and Ba play a greater role here."

"In a couple of weeks I shall go to Langban. Unfortunately, most of the rare minerals are not found on the dumps as most of the waste was used as backfill as at Franklin. However, some material can still be found there. One of the collectors from Stockholm found a 6" (xls) roeblingite on the dumps several years ago."

"I now have a selection of twenty specimens to be Xrayed. They look interesting and come from the margarosanite, nasonite, roeblingite bearing veins. These veins were discovered about 35 years ago; some up to two feet thick, packed solid with huge masses of roeblingite and margarosanite, both in very long (up to 5") needle and plate like incomplete crystals."

"Gageite is a valid species and has the shortest edge along c of any silicate I know - only 3.27 Å, so its structure should be easily solved."

"Keep an eye out for Hyalotekite from Franklin. It looks, unfortunately, just like hardystonite and is a silicate of calcium, lead and boron. It should occur there, associated with pyroxenes and rhodonite."

"Many new developments have taken place and I will cite the most interesting -

1) A deep reddish black, very brittle, platy mineral with micaceous cleavage occuring with schefferite-rhodonite-tephroite skarns. It is the orthorhombic analogue of the Japanese mineral "yoshimuraite" (triclinic) which occurs in an identical paragenesis. This new mineral (ericsonnite) may occur at Franklin.

2) A mineral in green tabular warped crystals looking much like adamite $[Zn_2\ AsO_4(OH)]$ is the Mn Analogue of that mineral $Mn_3AsO_4\ (OH)$ - dimorphous with sarkinite. It shall be named eveite (pun intended)

3) The earliest member of the sarkinite paragenesis is a real odd ball $Mn_3\ (Si,W)\ O_8$ - the first mineral where tungsten appears to replace silicon (Welinite).

4) Two new Mn arsenates, one related to chlorophoenicite but with different structure cells.

"Of much interest to you is my work on tephroites. Many tephroites from Langban - especially associated with the not too rare sarkinite are of a beautiful resinous transparent, deep reddish brown color. This is sonolite - $4Mn_2SiO_4.Mn(OH)_2$. Associated is pink massive leucophoenicite - $3Mn_2SiO_4.Mn(OH)_2$ and pale rose alleghanyite - $2Mn_2SiO_4.Mn(OH)_2$. I am sure that alleghanyite and sonolite also occur at Franklin. Some Langban tephroite is glaucocroite.

The following minerals should occur at Franklin. If you present the list to F.O.M.S. members perhaps some keen eyes will spot possible material.

1) Sonolite - $4Mn_2SiO_4.Mn(OH)_2$ - resinous, transparent, reddish brown most likely with tephroite and leucophoenicite in hydrothermal veins.

2) Alleghanyite - $2Mn_2SiO_4.Mn(OH)_2$ - pale pink to colorless with fair cleavage - with tephroite and leucophoenicite.

3) Ericssonite - $Ba_2Mn(Si_2O_7)(OH)_2$ - deep brittle red brown plates in schefferite-rhodonite-tephroite skarn.

4) Braunite - Mn_7SiO_{12} - steely black like hematite with rhodonite skarns.

5) Synadelphite - $Mn_4(OH)_5(AsO_4)$ - deep brown orthorhombic prisms with allactite.

6) Hyalotekite - $BaPb_3BSi_6O_{17}(OH)$ greasy white masses. Skarn with schefferite, rhodonite, et.

7) Richterite - $NaCa_3MnMg_{10}(OH)_4Si$? yellowish to brownish amphibole with skarns.

8) Inesite - $Ca_2Mn_7H_2(SiO_3)_{10}.5H\ O$ - pink to red radial aggregates of prismatic crystals. A fissure mineral.

"I am planning to publish several papers on minerals of interest to you.

1) Roeblingite - structure cell studies and crystal drawings.

2) Leucophoenicite - there are at least four types of leucophoenicite. Palache's morphologicial studies shall be entirely revised. Leucophoenicite is a common hydrothermally reworked product of tephroite at Pajsberg and occurs also at Langban.

3) Chlorophoenicite and Gageite - gageite is shown to be a valid species with interesting properties."

Recently Dr. Moore advised your editor that he will describe 18 new minerals from Langban. His suggestions for possibles at Franklin should send all of us to our collections for a new look. If anything interesting does turn up, please advise Dr. Moore (and me too, please). Good hunting!

Brandtite

Abstract of paper by K. Bostrom - "The occurrence of senarmontite, stolzite, cuprite and brandtite at Langban." Arkiv Min. Geol.Stockholm, 1964.

"Four minerals have been found that are new for the famous Langban deposit, Sweden. (1) Senarmontite - Sb_2O_3 occurs together with nadorite and barite as fissure minerals in a granular hematite ore. It forms colorless octahedra with strong luster a few tenths of 1mm in size. (2) Stolzite, $PbWO_4$. A specimen of hematite ore containing calcite and garnet from the stope "America" is intersected by a small patch of corroded calcite in which small hematite crystals are present and probably also berzeliite. In the calcite mass there are several hitherto unidentified minerals one of which was shown to be stolzite. It occurs only as a few small crystals, the largest less than a fraction of 1 mm. The colour is pale yellow with a slight greenish tinge and bright subadamantine lustre. Stolzite appears to be younger than the calcite. (3) Cuprite, Cu_2O. On a specimen of carbonate rich hausmannite ore in the stope "America" brown crystals of cuprite occur on other minerals like calcite, barite, and native copper. It seems to be the last formed mineral. The crystals are only a few tenths of 1 mm in size and occur only in small quantity. (4) Brandtite, $Ca_2Mn(AsO_4)_2.2H_2O$. In specimens from the calcite manganophyllite bearing hausmannite ore in the stope "Skottland" a vein with arsenates occurs. The vein wall border consists of a thin greyish white sheet of amorphous material on which allactite, sarkinite, and brandtite have been deposited. Brandtite occurs as greyish white spherulites, diam. 0.5-1.5 mm. The general order of crystallization seems to be allactite (oldest) - sarkinite - brandtite (youngest)."

Barium Feldspars

"Barium Feldspars from Franklin, N. J." by Clifford Frondel, Jun Ito and John G. Hendricks. Am. Min., Sept-Oct. 1966, Vol. 51, page 1388.

"Celsian, hyalophane and barian varieties of both microcline and anorthoclase have been identified in a silicate skarn zone at Franklin. Chemical analyses with optical and X ray powder data are given for hyalophanes with Cn 18 and Cn 32 and for celsian with Cn 52. The microcline and anorthoclase in general contain much less Ba and are formed earlier than the monoclinic hyalophane."

Clinohedrite

"The crystal structure of Clinohedrite" - A.V. Nikitin and N.V.Belov. Trans. from Dokl. Akad. Mauk SSSR, 1963. Min. Abst. June 1966, Vol. 17, No. 6, page 560.

"Analysis of the structure of Zn-silicate, clinohedrite, $Ca_2Zn_2(OH)_2Si_2O_7.H_2O$ = $2CaZn(SiO_4).H_2O$, shows that it has been assigned in error to the series containing hemimorphite because of similar chemical composition and lattice constants. The structure is described in detail and figured. 4-coordination of Zn is a characteristic feature; the silicate tetrahedra are discrete and play no major part in the structure. The coordinates of the basal atoms are listed and interatomic distances are given."

Desaulesite/Pimelite

"Desaulesite, a hydrous nickel magnesium silicate, was described by Koenig (1889) from the zinc deposits of Franklin, N.J. A specimen of desaulesite, selected for this study by the late Professor Harry Berman from the mineral collected at Harvard University, yielded an excellent pattern of pimelite when examined by x-ray powder diffraction methods."

Above quote is from page 291, Am. Min., March-April 1966, Vol. 51, Nos. 3/4, "The Hydrous Nickel-Magnesium Silicates - The Garnierite Group" by Geo. T. Faust, U.S. Geological Survey. Abstract of this article follows:

"The hydrous-nickel-magnesium silicates are one of the more poorly understood mineral groups. A principal member of this group was originally described by Professor Martin H. Klaproth in 1788 as "gruner Chrysopraserde". He found this clay mineral, now called pimelite, to be the coloring matter of the gem material chrysoprase from the famous locality at Kosemutz, near Frankenstein in Silesia, Germany. Nickel analogues of the polymorphs of the serprentine group, chrysotile, lizardite and antigorite are the most abundant members of the group. In addition, schuchardite, nickel chlorite; nickel-exchanged vermiculite; nickeloan talc; and nickeloan sepiolite have been observed in natural deposits. Other minerals described as hydrous nickel-magnesium silicates are shown by chemical, DTA, optical and x-ray powder diffraction studies to be either pimelite or nickel serpentine-group minerals or mixtures. Thus, genthite is a mixture of 20% pimelite and 80% nickeloan serpentine-group mineral; rottsite is pimelite; desaulesite is pimelite; revdanskite is chiefly pimelite; garnierite, nepouite, noumeite are mixtures of pimelite, nickel serpentine-group minerals and other minerals. The tie lines nickel serpentine group minerals- pimelite, and pimelite-quartz are established in this study."

Roeblingite

"New Data on Roeblingite" - Franklin F. Foit, Jr., Un. of Michigan; reported in the American Mineralogist, March April 1966; Vol.51, Nos. 3 and 3, pages 504-508.

Roeblingite specimens from Franklin and Langban were investigated by both powder diffraction and single crystal methods. The investigation confirmed that roeblingite found at Langban is structurally identical to the Franklin material. X ray fluorescence analyses were performed on both samples. Results indicated that the samples were chemically similar and contained all of the major elements listed in the chemical analyses of Penfield and Foote (1897) and Blix (1931). Space group was determined as Cc or C2/c, corresponding to the diffraction symmetry 2/mC-/c. Unit cell a = 13.27± 0.03 b = 8.38 ± 0.02 c = 13.09 ± 0.03Å β = 103.86 ± 0.1°

A tentative formula, $(Pb_4 S_4O_{16})R_{16}Si_{12}O_{44}H_{20}$ is given.

Jeffersonite

"Zincian Aegirine-Augite and Jeffersonite from Franklin, New Jersey" - Clifford Frondel, and Jun Ito, Harvard University. The Am. Min., Sept-Oct 1966, Vol. 51, Nos. 9/10, pages 1406-13.

"A coarsely crystallized dark colored monoclinic pyroxene found abundantly in skarn zones at Franklin and Sterling Hill, N. J. has long been known under the name jeffersonite. It has been classed as a dopsidic pyroxene, but four new chemical analyses (with accompanying x ray and optical data) establish that it comprises highly zincian and manganoan members of a series from aegirine-augite to sodian and ferrian augite. Both Mn^{2+} and Zn are much in excess of Fe^{2+}, with almost 40 atomic per cent Mn in the B position in one analysis. As Fe^{3+} and Na decrease the color changes from reddish brown and mahogany brown to dark olive green and greenish black. The original jeffersonite of Vanuxem and Keating (1822) probably referred to the latter material; the name lacks species or varietal significance and may be set aside."

Rhodonite

"Mineralogical study of rhodonites in Japan, with special reference to contact metamorphism" by H. Momoi, Mem. Fac. Sci., Kyushu Univ. Min. Abst., Sept. 1966, Volume 17, No. 7, pages 690-1

"It is shown by this study of rhodonites (including 16 new chemical analyses) and pyroxmangites that the chemical composition, especially the relationship of the Ca content to the Mn, Fe, Mg contents, of the two minerals differs in most cases. The differences of the spacings of the three pairs of the strongest x ray diffraction lines have linear relation with the Ca content. They also change on heating to 1000°C. in air, but the variation

Rhodonite (Cont.)

for the samples with low Ca content is small whereas for high Ca content it is large and becomes similar in value to that of samples containing low Ca. Rhodonites containing high Ca occur mostly in replacement and vein deposits, whereas those low in Ca are found in contact-metamorphosed deposits."

Hendricksite/Manganophyllite

"Hendricksite, A New Species of Mica" Clifford Frondel and Jun Ito, Harvard University - Am. Min., July 1966, Vol. 51, No. 7, pages 1107-1123.

"Hendricksite is a new species of trioctahedral mica, representing the Zn member of the group. It occurs abundantly at Franklin, N.J., where it has earlier been called biotite or manganophyllite, as rough crystals and anhedral plates up to a foot in size.

Two complete and seven partial analyses are given. The studied material represents a solid solution extending from slightly zincian and manganoan varieties of phlogopite up to material in which the octahedral positions are occupied by Zn 50 and Mn 40 in atomic percent with the balance Mg, Fe^{2+} and Fe^{3+}. Ba is generally present in the interlayer positions to the extent of 0.6 to 1.6 weight per cent BaO. Synthetic micas of the end compositions $KZn_3(Si_3Al)\ O_{10}(OH)_2$ and $KMn_3(Si_3Al)\ O_{10}(OH)_2$ were prepared by the hydrothermal crystallization of stoichiometric gels at 350° and 2000 bars to 650° and 3000 bars.

Hendricksite varies in color from coppery red to reddish black. The indices of refraction and the specific gravity are very high for a mica, with up to 1.697 and specific gravity to 3.4. The interplanar spacings also are relatively large as compared to those of biotite. The gamma refractive index and d (060) decrease in a roughly linear manner with decreasing content of Zn or (Zn+Mn) in the octahedral positions. The intensity ration, I (004) / I (005), decreases with increasing content of Mg.

Most of the material represents the I M polytype. A few examples of the $2M_1$ and 3T polytypes and of unidentified polytypes and interstratifications, in part random, were recognized. The optic plane usually has the normal position parallel (010) in the IM polytypes, but in a few instances it is perpendicular (010). In the $2M_1$ polytypes the orientation also is abnormal parallel (010).

Hendricksite occurs in the skarn zones at Franklin associated chiefly with adradite, rhodonite, bustamite, barium feldspars, axinite, vesuvianite, hancockite, hardystonite, members of the aegirine-augite to augite series, members of the diopside-hedenbergite, johannsenite series, and cummingtonite. Most of the skarn silicates contain both Zn and Mn in solid solution and the crystallochemical distribution of these elements is described.

The name hendricksite is proposed in honor of Dr. Sterling B. Hendricks, American crystallographer and chemist, who with M. E. Jefferson in 1938 first recognized and described polymorphism in the micas."

Micromounts

Interest in Franklin micromounts continues to grow. A number of our members interested in this phase of our hobby have requested an article on this subject. This request has been answered by member Dr. W.B. Thomas, recognized by all as a leader in this field. We thank Dr. Thomas for preparing this article for us.

FRANKLIN MICROMOUNTS

Dr. W. B. Thomas

For years people have collected Franklin minerals with a single interest in mind such as fluorescence. But there are other interesting specialties such as micromounting, and this article is intended as an elementary approach to the subject.

Most of the time a micromounter works in a range that requires a 10 to 45 power glass. It must be realized that while there are pictures of crystals in Palache's Bulletin #180, there is no mention of relative size. So a collector working in the Buckwheat Dump and thinking of loseyite expects to stumble over a fist size crystal. It is nice to dream about but most of the minerals in Bulletin #180 are microscopic in size and even sub microscopic. Loseyite is one of them - it is a hairlike crystal in another hairlike crystal. Zincite is another example. Large crude crystals are found but one perfect pyramid with 1/4" faces is worth it's weight in gold. The best crystals are tiny and nearly perfect in form. One of the handsomest specimens is a layer of zincite with vugs in which the tiny recrystallized zincite pyramids are lined up like rows of glasses on a shelf, with a little magnesium chlorophoenicite or smithsonite providing a contrast.

The collecting for a crystal fan on the Buckwheat Dump can be very rewarding. Look for dolomite - it is all over the dump - but look for a certain kind. This is vuggy and a little darker than most of the weathered and bleached material. On a cold day, Steve Kiss pointed out an area in the middle of the dump and said that it contained sugary material. This area yielded several fine pieces and finally a piece that needed two men to move. It was a gray to black mass and very vuggy. It was rolled into a car trunk, "spalled" by a local miner into smaller pieces and then taken apart inch by inch, until most of the 200 lb. piece was reduced to 1/4" cubes for mounting. This was some time ago but the Buckwheat Dump still contains hundreds of pounds of the same material. Only lastweek I took apart a 30 lb. chunk of material that yielded thirty species of minerals, some common and some rare. A list of these follows:

1) Quartz. This species is not common in the ore body but in the Dump it may be found in brilliant crystals resembling Herkimer diamonds. A good many crystals have inclusions, often of rutile, which was formerly mistaken for millerite. Rutilated quartz is a possible find and in this last lot there were more than 30 specimens, disproving the old saw that rutilated quartz is not found north of the Mason Dixon line. It does occur at Franklin. These crystals are also unusual for many "S" faces in addition to the normal A, B and C faces.

2) Rutile. There are collectors who are still looking for the brassy hairs of millerite which, if it occurs, is very rare. There are yellow or golden rutiles, but these are not millerite as described by Prof. Palache. Seen through a high power glass (at least 45x) they appear velvety. That velvet is goethite which occurs both on the dolomite and scattered all over the specimen with some really long bright golden crystals hung on black rutile and with little beads of dolomite crystals. One specimen was called "Icarus" because it had the long rutile crystals terminated with a pair of golden wings of goethite. So Goethite is #3.

4) Calcite occurs in the vugs as prisms and rhombs with many forms. One vug had peanut like "undecided" odd crystals which made very handsome micromounts.

5) Brookite found in crystals with brilliant black faces and striated is a doubtful identification. X ray analysis might show these to be rutiles but most collectors call them "brookite".

6) Zircon which is rare on the Buckwheat. The largest crystal I have seen did occur in a vug from the material here. A better place to find zircon is in the pectolite of the Parker Shaft.

7) Ilmenite which may be found in good crystals.

8) Sphalerite of many types and varying composition. There are simple single crystals, complex twins of all sorts; some are jet black, some ruby red and recently the pale "oil" yellow of the old time type was found. One must study the Palache report for the various types and analyses to understand the alterations that may be found with this species.

9) Siderite crystals - some irridescent crystals occur where pyrite has altered and calcite contributes to form siderite.

10) Pyrite is found as pyritohedrons with singles and twins both common. There are also some cubic pyrites and elongated pyrites that look like millerite and strange cruciform twins that appear to be composed of irridescent blue crosses of triangular crystals.

11) Celesitite is often found with the quartz. These crystals are flat and lack the blue color of most celestite. Study the crystallography before deciding.

12) Manganite. Manganese is present throughout the magma so expect black needles in a vug to be manganite. They are minute but under high power can be seen to be manganite - often radiated. These are rare.

13) Nacrite is a variety of talc that is common in dessminated scales.

(14) Limonite which is usually found massive and as ocherous coatings on crystals of dolomite.

(15) Graphite which occurs in almost perfect hexagonal plates. The surfaces are often cut across with triangles suggesting hexagonal crystallization.

(16) Hematite as specular fine lustrous plates and in globules.The crystals are sometimes irridescent and may be confused with covellite, which has not been found on the Buckwheat.

17) Barite which is relatively rare but can be found in small crystals.

(18) Anglesite another rarity found in brilliant transparent crystals.

(19) Apatite as small greenish crystals.

(20) Chlorite as delicate green silvery scales or round ball like aggregates.

(21) Albite also rare, found sparsely in cavities, usually twinned, glassy white.

22) Byssolite which has never been authenticated or even listed. It occurs in the dolomite but may be mistaken for a hornblende that resembles it. Some testing should be done on this material to determine if it is actually byssolite.

23) Greenockite usually associated with pyrite and sphalerite and some calcite with dolomite. It is a characteristic yellow powder.

24) Pyrrhotite as blebs and with it some blue bornite (#25) granules.

26) Hemimorphite - at times the breakdown of iron compounds will cause the dolomite to be covered with an orange tint and hemimorphite (or calamine) crystals grow in the vug which bear a surprising resemblance to stilbite. However, stilbite (#27) as well as other zeolites may be found. Heulandite (#28) is rather rare.

29) Selenite crystals which are infrequently found.

30) Stilpnomelane found in the vugs with talc or nacrite.

In short expect anything but diamonds on the Buckwheat Dump. One rather ugly rock recently turned up in the Dump. It was first thought to be gahnite but soon a brown to purple crystal was seen, which turned out to be a beautiful zircon. Others were then found and the ugly specimen, fist sized, contained thirty of these beautiful crystals. In another piece we found a small radiating brown tuft which we think is piedmontite. It needs analysis.

Latley is has been the custom to call all the black or golden metallic hairs in the vugs as rutile. Recently I sent a specimen to Dr. Frondel labeled "rutilated quartz". This specimen caused Dr. Frondel to say that it seemed to be millerite and "will check" were his next words. Perhaps we have been too hasty in discarding millerite altogether.

At the same time Dr. Frondel said that the tiny hexagonal plates or crystals found in some rich brown hancockite was not hendricksite but seemed to belong to the friedelite series. Again he added "will check".

FRANKLIN OGDENSBURG MINERALOGICAL SOCIETY

SAFETY RULES AND REGULATIONS

1. RELEASE SHEET

   It is the responsibility of all members to sign the Release Sheet BEFORE entering the mineral collecting area. The collecting privilege is inherent on this requirement being fulfilled. The Release Sheet absolves the owner, the F.O.M.S. and its officers of any responsibility for injury, loss of life, loss or damage to property. Members must personally sign the release.

2. Collecting commences at the time indicated on the printed Club notice and not before.

3. Always obey Danger signs, roped off areas and instructions from the Safety men.

4. Wear Goggles or Safety Glasses when breaking rock, and when near others who are doing likewise.

5. SAFETY SHOES: Strong, rugged boots or shoes, preferably with "Safety Toes" should be worn. Sneakers do not offer suitable protection in collecting areas.

6. Gloves should be worn to protect the hands when breaking rock.

7. Hard hats should be worn on all collecting trips.

8. TOOLS: Use the proper tools - Hammer, Picks and Chisels. (Grind those mushroom heads on the chisel; metal chips can cause injury to a person 20 yards aways.)

9. Stay clear of Quarry walls that are high, full of loose rock and overhang.

10. Carefully move rocks when collecting above others. Do not climb over mine entrances.

11. Be careful when reaching between rocks - you may be surprised by a snake.

12. Respect Quarry Rules

13. Carry a small first aid kit.

14. Respect property rights and off limits areas.

15. Do not leave litter - clean up before you leave.

16. Watch those cigarettes and matches.

17. Always try to have a companion along in case of any emergency.

DON'T BE A LONER

REMEMBER !

ACCIDENTS ARE CAUSED, THEY JUST DON'T HAPPEN !

MEMBERSHIP RENEWAL

I would like to renew my membership in the Franklin-Ogdensburg Mineralogical Society for the year Dues of $2.00 attached.*

Name (Mr. Mrs. Miss)_____

Address_____

Tel. No._____ Zip Code_____

(Please show your name and mailing address exactly as you wish it to appear on our mailing list)

LITERATURE ORDER

Will you please send me the following literature -

Golden Series	Rocks and Minerals	____copies @ $1.00 =	
Jones	Nature's Hidden Rainbows-Fluoresent Minerals of Franklin, N.J.	____copies @ $2.95 =	
Knoll	Mineral Identification for the Amateur	____copies @ $1.00 =	
Mason	Trap Rock Minerals of New Jersey	____copies @ $1.50 =	
Palache	The Minerals of Franklin and Sterling Hill, N.J.	____copies @ $2.00 =	
Pepper	Historic New Jersey	____copies @ $4.95 =	
Widmer	Geology and Geography of N.J.	____copies @ $3.95 =	
Wilkerson	The Minerals of Franklin and Sterling Hill, N.J.	____copies @ $1.50 =	
Yolton	Fossils of New Jersey	____copies $1.50 =	
	Back Issues of PICKING TABLE	____copies @ .25 =	_____
	Total - (check enclosed)*		═══

APPLICATION FOR MEMBERSHIP

I am interested in the Franklin Ogdensburg Mineralogical Society and would like to apply for admission as a member. $2.00 in payment of 1967 dues, and registration fee of $1.00 is enclosed.*

Name (Mr. Mrs. or Miss) _____

Address_____

Telephone Number _____ Zip Code_____

(Please give your name and mailing address exactly as you wish it to appear on our mailing list.)

*Please mail checks to Julian M. Butler, 712 Pemberton Ave. Plainfield, N.J. 07060