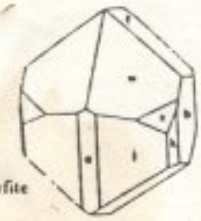

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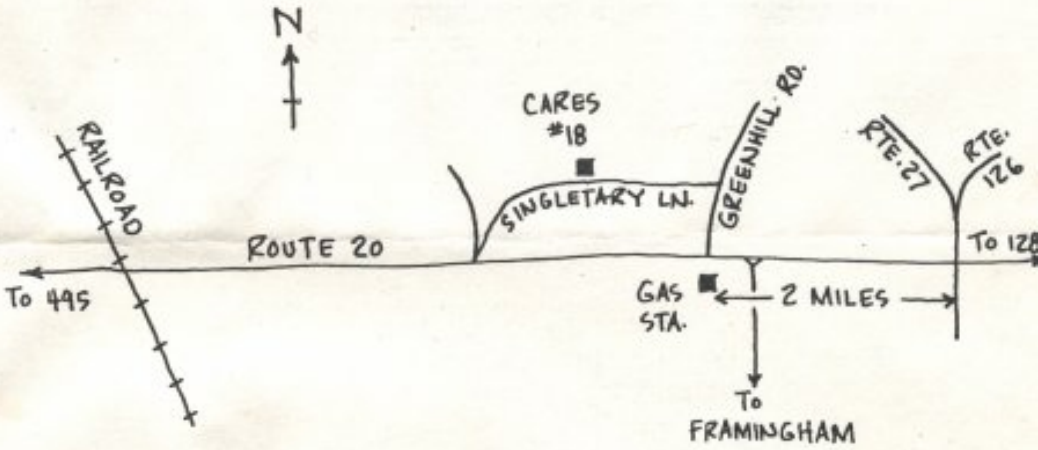
Dues are $3.00 per year and are due on January 1, payable to the treasurer.

Contributions of news items for the Bulletin are welcome and should be sent to the Bulletin Editor.

MICROMOUNTERS OF NEW ENGLAND

The next regular meeting will be held at the home of Steve and Janet Cares, on Saturday-November 20, 198



Janet will take orders for heavy liquids sets.

We have give away micros for this meeting from Ray Denicourt, from Florida, and from the Downing's, of California. Ray was our previous Club President before moving to Florida, and the Downing's were members about 10 years ago.

Back issues of the Palermo issue of Rocks and Minerals will be available at the cover price of $2. This may be your last chance to get a copy as the publisher has none left.

Rumor has it that the Upper New Street Quarry, in Paterson, NJ is open to collectors while a construction company blasts rock for the construction of condos. This may be a worthwhile trip but you should attempt to confirm that it is in fact open before making plans.

Some of our members have said that the quarry in Acushnet, MA is also open. However, inquiry made on a recent Saturday proved the opposite. The security guard on duty told me that the quarry was not open to mineral collectors at any time. Something else to check

UPCOMING MEETINGS

Sun. -Jan. 23 at Boston University

Sat. -Feb. 26 at the Anderson's (Walpole, MA)

NEW MEMBER

Kenneth Young, Jr.
125 Allston Street
Lawrence, MA 01841
(617)-682-9823

NON PEGMATITE PHOSPHATES - Part 3

This is a continuation of the summary of the lecture given by Bill Henderson at our May 1, 1982 meeting.

Returning to the east coast of the United States, Bill discussed the low temperature unmetamorphosed phosphates, which are sedimentary in nature. The primary mineral in these deposits is Apatite, formed from bone breccias or by chemical precipitation by Wavellite, an aluminum phosphate; or by Vivianite.

Minerals from these deposits shown were:

1. Vivianite from Mullica Hill, NJ
2. Strengite and orange Strunzite from Mullica Hill
3. Phosphosiderite, a polymorph of Strengite, from Mullica Hill
4. Red Beraunite from Mullica Hill
5. Cacoxenite on altering blue Vivianite from Mullica Hill
6. Strunzite on Rockbridgeite from Mullica Hill
7. Vivianite from Mt. Laurel Township, NJ
8. Vivianite from Florida
9. Vivianite from Mexico

The above nine slides being all iron phosphates.

Slides of aluminum phosphates shown were:

1. Wavellite from Mount Holly Springs, PA
2. Cacoxenite from Mount Holly Springs, PA
3. Wavellite from Slate Mountain, CA

Micromounters collecting the wedge shaped Wavellite specimens in the Atlantic Coastal Plain should keep a sharp eye out for the possibility of its association with Minyulite, which forms crystals with a square cross section, perhaps terminated. Minyulite is found in the bone phosphate localities of Australia, but has yet to be found anywhere along the east coast. Also, keep an eye open for Fluellite.

From South America and England non-pegmatite phosphates are found in high temperature tin veins. At Llallagua, in Bolivia, the tin veins are situated high above a granite batholith, which is the source of the phosphate from which the phosphate minerals are formed. At Tavistock, England we find the same types of high temperature tin veins but in this case they are in and with the granite batholith.

Slides of minerals from these localities were:

1. Sigolite, an iron aluminum phosphate, on Vauxite, an iron aluminum phosphate, from Llallagua
2. Paravauxite, a polymorph of vauxite, on Childrenite, from Llallagua.
3. Blue Vauxite from Llallagua
4. Pink Monazite twin from Llallagua
5. Childrenite on blue Vauxite, from Llallagua
6. Brown Childrenite, from Tavistock
7. Monazite, from Switzerland

Primary minerals from Llallagua are apatite, xenotime, and monazite while the secondary minerals are childrenite, vauxite, metavauxite, paravauxite, wavellite, and sigolite.

TO BE CONTINUED.

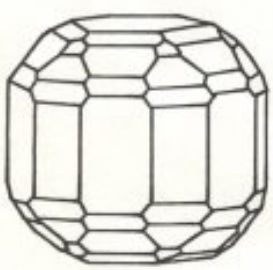
The Apatite Group

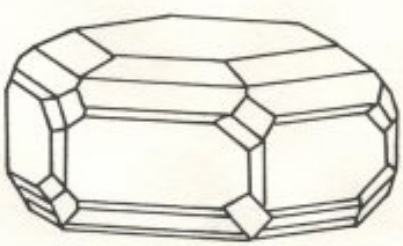
by John Anderson

Until the spring of 1977, we had minerals in our collections that were correctly labelled "apatite". An article by Pete Dunn in the Mineralogical Record explained that apatite is the name of a group of minerals, not a species, with the general formula: $Ca_5(PO_4)_3(F, Cl, OH)$. The calcium and the phosphate radical remain more or less stable. It is the changing prescence of fluorine, chlorine, and the hydroxyl radical that create the series containing the apatites correctly referred to as: fluorapatite, chlorapatite, and hydroxylapatite. Most apatite encountered by the collector is fluorapatite; however, many collections contain a white chalky looking variety, from Norway, called chlorapatite. Hydroxylapatite is quite uncommon occuring mostly in Switzerland and Italy. We in New England can easily collect a variety of fluorapatites, in micro and larger sizes, as well as carbonate-apatite -- $Ca_5(PO_4, CO_3)_3(OH)$-- at the Palermo Quarry in North Groton, NH. Apatite group minerals are readily available to the micromounter from worldwide locations in many colors. Some of the give away material, from Ray Denicourt, to be at the November meeting contains pink to lilac colored fluorapatite from the Foote Mine, in North Carolina, Apatites are remarkable for their crystal form, occuring as simple hexagonal crystals or as very complex crystals and groups modified by numerous prism faces. Some of the fluorapatites, from New England, in my collection are:

Strickland Quarry-Portland, CT	lilac-violet
Harvard Mine-Greenwood, ME	" "
Pulsifer Quarry-Auburn, ME	deep violet
Bennett Mine-Buckfield, ME	olive green
Orchard Pit-Buckfield, ME	light green
Lord Hill-Stoneham, ME	colorless-light blue
Tiger Bill Mine-Greenwood, ME	light green
Newry, ME	" "
Acushnet, MA	colorless-yellow
Marlborough, MA	yellow
Smith Mine-Alexandria, NH	light blue
Keyes Mine-Orange, NH	" "

For both the experienced and beginning micromounter a suite of fluorapatites makes a beautiful and morphologically interesting display, many of which can still be self collected.





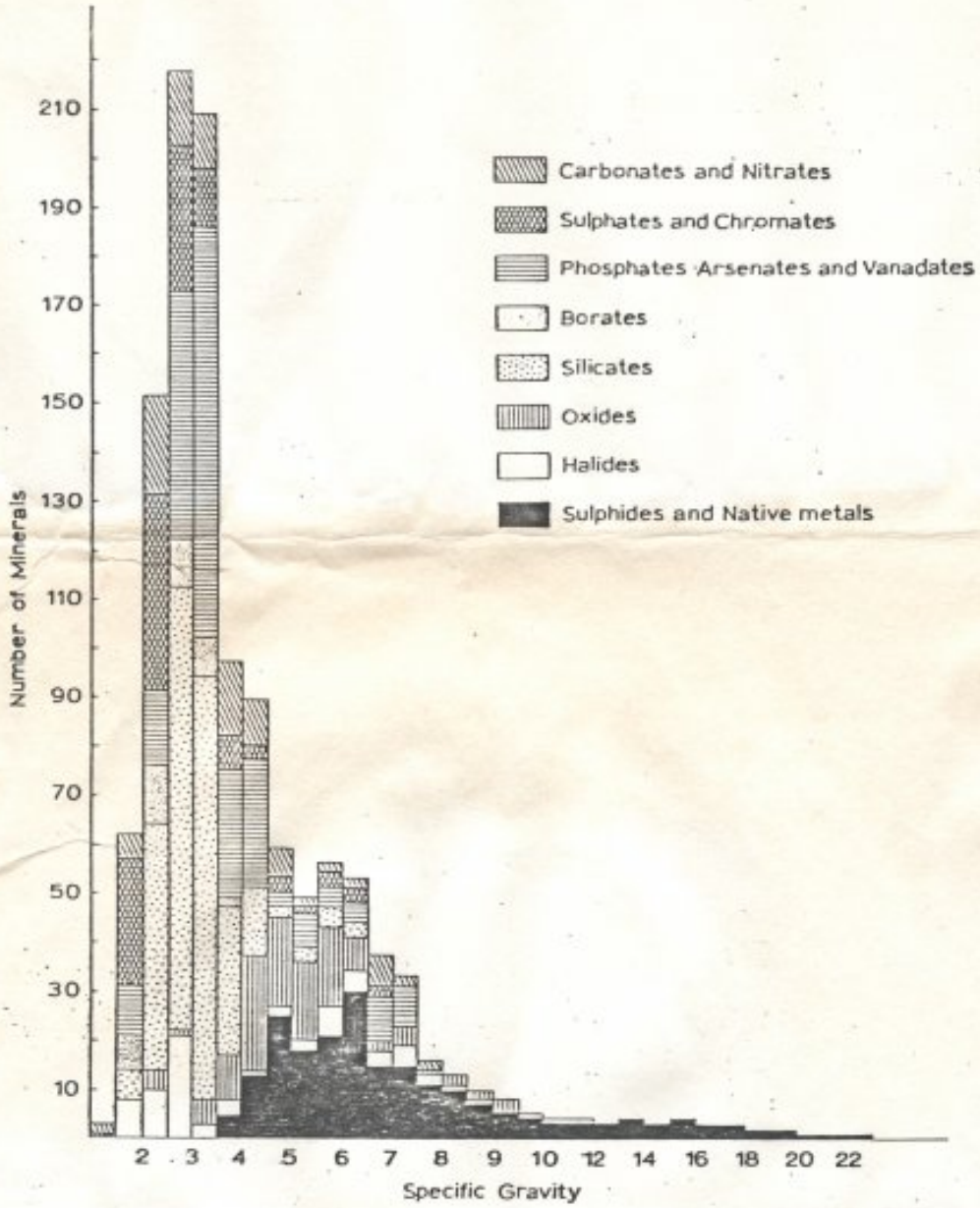


FIG. 28. Distribution of minerals according to their specific gravities.

Taken from a book entitled "Mineralogy", by Ivan Kostov, Professor of Mineralogy at the University of Sofia, Bulgaria.

This chart is as of 1966 but gives you an idea of the range of species according to their specific gravity.