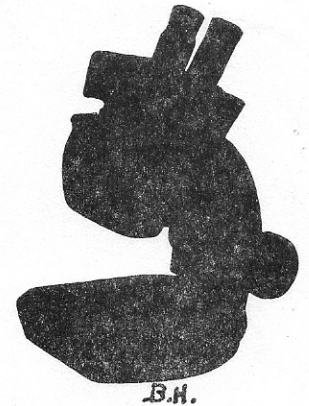




**Northwest
Micro - Mineral
Study Group**



The
Micro Probe



FALL, 1974 - VOL. I, NO. 3
THE FALL, 1974, MEETING - FOREST GROVE, OREGON.

All members of the Northwest Micro-Mineral Study Group will have received the confirmation notice for the Fall, 1974, meeting in Forest Grove, Oregon.

Since Don and Lee Kendall wanted to confirm the date of the meeting with the people at the college in Forest Grove and because they had the information about eating plans, etc., - and largely because they offered to make up the notice and mail it - all members will receive the correct information from that source; and I will sincerely thank Don and Lee for saving me the work. This will prove that I, too, am a very willing sort of a fellow; if they are willing to do it I am more that willing to let them do it!!!

A recent conversation with Rudy Tschernich allows the statement that he has some additional information concerning the material at the Yellow Lake, British Columbia, locality and will talk about that information at the meeting.

One page of this issue of "The Micro - Probe" is dedicated to the memory of our fellow member and friend Isabelle Mattison who passed away recently, a victim of heart failure. After contact with the other elective officers of our group a memorial contribution is sent to the AFMS Scholarship Fund.

Events of the past year seem to indicate that even tho the occasional publication of an information bulletin - "The Micro-Probe" - may have been a good idea, it was not well-timed; the membership is not yet "sold" on the idea. Possibly the venture will be successful at a later time and/or with another editor but this will be the final issue for the present.

Bob Hagglund

Isabelle Mattison

Friends and acquaintances of Isabelle Ruth Mattison were saddened by the news of her death at her home in Richland, Washington, on September 23, 1974. Our heartfelt sympathy goes out to her husband Frances, to her son James and to her mother Mrs. Emma Buckles.

Isabelle was born in Medicine Lodge, Kansas, and had lived in the Tri-Cities, Washington, area since 1951.

Isabelle taught school in Washington, Montana, and Kansas for nine years; was a laboratory assistant for General Electric in 1951; and was stenographer for the AEC Security Hanford Operations Office for ten years. She was in "Who's Who of American Women" and "Who's Who in the West".

Isabelle was an enthusiastic and talented worker for all programs of our Earth Science Hobby organization at both the local society and the Federation levels. She was a Past President of the Northwest Federation of Mineralogical Societies; she served on the NWFMS Rules & Awards Committee for three years - one year as chairman; three years on the AFMS Uniform Rules Committee; was Chairman of the NWFMS Nomenclature Committee for 2 years; served as President of the Three Rivers Mineralogical Society and was General Chairman when her Society hosted the Northwest Federation Annual Convention and Show in Richland.

Isabelle will be greatly missed by her many friends and all members of the Earth Science Hobby owe her a debt of gratitude for her many contributions to the educational and recreational progress of the hobby.

VANADINITE

(vā-NĀD-ī-nāit)

Norman Steele

- Chemical Formula: $Pb_5(VO_4)_3Cl$
- Color: red, orange-red, brown, yellow mostly shades of brown and red [arsenian variety ENDLICHITE tends to yellow]
- Transparency: subtransparent to nearly opaque, rarely transparent
- Luster: adamantine to resinous, fracture surface resinous
- Streak: white or yellowish
- Refractive Index: $n_D 2.37$ to 2.63 (2.416) ; $n_E 2.31$ to 5.50 (2.350)
Indices of refraction are lowered by substitution of As or P for V, and Ca, Cu, or Zn for Pb
- Birefringence: 0.055 to 0.066
- Crystal System: hexagonal. Commonest form is hexagonal prism and basal piracoid. Also hollow crystals. Base $c[0001]$ is sometimes truncated along prism intersection by the pyramid $y[20\bar{2}1]$
- Optic Character: uniaxial negative
- Specific Gravity: 6.5 to 7.1 (6.88 median)
- Hardness: 2 to 3 mho scale
- Fracture: brittle, uneven to flat conchoidal. Specimens are very fragile, easily broken and chipped.
- Structure Cell: isostructural with pyromorphite - mimetite. Cell contains $Pb_{10}(VO_4)_6Cl_2$
- Occurrences: Secondary product of lead ore bodies formed in the oxidizing zone. Often associated with pyromorphite, mimetite, wulfenite, descloizite, cerrusite, anglesite, quartz, and limonite.

Apache Mine, Gila County, Arizona...ore body is in Precambrian age Pioneer formation which is a hard, fine-grained quartzite overlain by diabase. Vanadinite occurs on the surface oxidized zone of a deposit containing galena and minor copper/zinc sulfides. It is common in crusts of 1mm to 3mm crystals. Some specimens up to 6mm or 7mm which are flat and lustrous on all sides. A few extremely rare crystals over 10mm and hopper crystals with pyramidal modifications are occasionally found.

Occurrences contd: Fairview Claim, Black Canyon district, Dona Ana County, New Mexico.

Georgetown District mines, Grant County, New Mexico

Sierra Grande Mine Hillsboro District, Sierra County, New Mexico

Dewey Mine, near Palomas Gap, Caballos Mountains, Sierra County, New Mexico

79 Mine, Globe District, Gila County, Arizona

Old Yuma Mine, Tucson Mountains, Pima County, Arizona

Mammoth Mine, Tiger, Pinal County, Arizona

Red Cloud Mine, Trigo Mountains, Yuma County, Arizona

El Dorado Mine, near Indio, Riverside County, California

Vanadium King Mine, Camp Signal, near Goffs, San Bernardino County, California

Villa Ahumada, Sierra Los Lamentos, and the Santa Eulalia district, Chihuahua Mexico noted for red-brown crystals of variety endlicheite on calcite matrix.

Zimapan, Hidalgo, Mexico

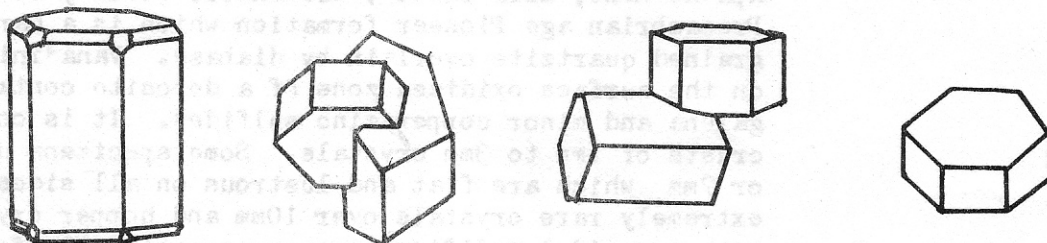
Djebel Mahseur, near Oudjda, Morocco noted for large crystals up to 13cm vanadinite coated with alteration crust.

Leadhills district, Scotland

Specimen Preparation: Vanadinite is soluble in nitric and hydrochloric acid. Unwanted calcite on specimens can be removed by soaking in acetic acid (followed by soaking in water to remove the acetic acid smell). Sodium dithionite is also good for removing calcite.

Specimens are brittle, very fragile; however ordinary ultrasonic cleaning in detergent/water is usually satisfactory.

Vanadinite tends to darken and lose luster after prolonged exposure to light.



TYPICAL VANADINITE CRYSTALS FROM APACHE MINE, GILA COUNTY, ARIZONA

The Micro Probe

FALL. 1974 - VOL. I, NO. 3

ZEOLITES OF THE NORTHWEST: Species - Location Listings.

by Rudy Tschernich

The following are lists of mineral species found at each important zeolite location in the Northwest - Washington - Oregon - Idaho - British Columbia.

The purpose of these lists is to aid in identification of minerals by knowing what has been found at each location.

If material is found that is not on these lists please let me know by either sending me a sample of the material for verification or bring the specimen to one of the Micro. Meetings for identification. Any additions found will be published so that we can keep up-to-date listings.

Many unusual species are found by someone looking at old locations and finding something odd or hard to identify. By knowing what is expected at each location we will be more aware of unusual material.

Symbols used in these listings are:

(C) COMMON (S) SCARCE (R) RARE (VR) VERY RARE; this refers to the particular location - not to world occurrence.

Send any information or material that should be added to these listings to:

Rudy W. Tschernich 206 - 568 - 5369
532 Avenue "A",
Snohomish, WA 98290

+ + + + +

BEECH CREEK, OREGON

Mesolite (C)	Thomsonite (C)	Unknown #1 ^{Cowlesite} (Goble) (VR)	Chabazite (C)
Analcime (C)	Heulandite (R)	Stilbite (R)	Copper (R)
Levyne (C)	Offretite (C)	Phillipsite (S)	Calcite (C)
Aragonite (S)			

RITTER, OREGON (Quarry)

Mesolite (C)	Natrolite (C)	Thomsonite (R)	Chabazite (C)
Analcime (C)	Heulandite (S)	Stilbite (S)	Levyne (R)
Offretite (R)	Phillipsite (C)	Calcite (C)	Tacharanite (R)
Gyrolite (S)	Apophyllite (C)	Laumontite (R)	Pyrite/Marcasite (R)
		(along the road)	

SPRAY (11 miles north) OREGON

Mesolite (C)	Thomsonite (C)	Chabazite (C)	Analcime (C)
Apophyllite (R)	Levyne (C)	Offretite (C)	Phillipsite (S)
Calcite (C)			Cowlesite

MONUMENT, OREGON

Natrolite (C)	Gyrolite (C)	Apophyllite (C)	Analcime (C)
---------------	--------------	-----------------	--------------

OWYHEE DAM - OREGON

Cavansite (S)	Pentagonite (VR)	Gmelinite (C)	Offretite (VR)
Analcime (S)	Stilbite (C)	Heulandite (C)	Calcite (C)
Apophyllite (S)			

(TURN PAGE, PLEASE)

*Cowlesite locations - Goble ✓
Beach Creek ✓
Spray ✓
Capital Peak, Wn.
Monte Lake, D.C.
Superior, Ariz. ✓
Table Mtn., Colorado*

Eastern Oregon zeolite locations, continued.

SUNBOR CREEK, OREGON

Clinoptilolite (C) Mordenite (S) Chalcedony (C)

EASTERN WASHINGTON ZEOLITE LOCATIONS

ROCK ISLAND DAM

Paulingite (R) Offretite (R) Erionite (S) Heulandite (C)
Calcite (S) Pyrite (S) Phillipsite (C) Chabazite(?) (VR)
~~Unknown, amber balls (C) - - Unknown, Garronite (??) (R)~~
Phillipsite

FIRST CREEK

Epistilbite (R) Laumontite Stilbite Chalcedony (C)

WESTERN OREGON ZEOLITE LOCATIONS

DRAIN

Mesolite (C) Thomsonite (C) Calcite (C) Laumontite (C)
Analcime (S) Pyrite (R) Hematite (S) Chlorite (S)
Unknown -amber needles (R)

SPRINGFIELD

*Harr*olite (C) Calcite (C) Chabazite (C) Gmelinite (R)
Pyrolusite (C) Heulandite (S) Thomsonite (S) Analcime (S)
Copper (S)

GREEN PETER DAM

Scolecite (S) Apophyllite (S) Gyrolite (S) Stilbite (C)
Heulandite (C) Levyne (C)

CAPE LOOKOUT

offretite
Natrolite (C) Mordenite (C) Heulandite (C) Phillipsite (S)
Chalcedony (C) Dachiardite (R) Calcite (C) Pyrite (S)
Chlorite (C)

GOBLE

Mesolite (C) Thomsonite (C) Mordenite (S) Heulandite (C)
Stilbite (C) Chabazite (C) Analcime (S) ~~Unknown #1~~ (S) *cowlesite*
Copper (R) Okenite (R) Pyrolusite (S) Chalcedony (S)
Celadonite (S) Cavansite (R) Phillipsite (S) Garronite (S)
Calcite (C) Levyne (S) Offretite (R) Apophyllite (C)

MILWAUKIE

Levyne (S) Offretite (R) *offretite*
Stilbite (C) Chabazite (S) Erionite (R) *stilbite*
Heulandite (R) Calcite (C) Stellerite (S)
Chlorite (C)

JUNCTION CITY

Datolite (C) Mordenite (C) ; Stilbite (S) Chlorite (S)
Calcite (C) Quartz (S)

SHOTGUN CREEK

Mesolite (C) Heulandite (C) Apophyllite (C) Chabazite (S)
Thomsonite (S)

CALAPOOYA RIVER

Stilbite (C) Heulandite (C) Chabazite (S) Stellerite (S)
Mordenite (C) Calcite (S) Quartz (C)

WESTERN WASHINGTON ZEOLITE LOCATIONS

SKOOKUMCHUCK DAM

Mesolite (S)	Stilbite (C)	Mordenite (C)	Quartz (C)
Heulandite (C)	Thomsonite (S)	Chabazite (S)	Analcime (S)
Apophyllite (S)	Calcite (C)	Stellerite (C)	Laumontite (S)
Okenite (R)	Chlorite (S)		

KOSMOS

Epistilbite (S)	Stilbite (C)	Stellerite (S)	Heulandite (C)
Scolecite (S)	Calcite (C)	Quartz (C)	Mordenite (C)
Laumontite (S)	Chabazite (S)		

KALAMA

Mesolite (C)	Thomsonite (C)	Phillipsite (R)	Calcite (C)
Quartz (C)	Mordenite (C)	Chabazite (C)	Analcime (C)
Stilbite (C)	Stellerite (S)	Celadonite (S)	Heulandite (C)
Aragonite (S)	<i>Laumontite</i>		

STEVENSON

Mordenite (C)	Heulandite (C)	Stilbite (R)	Calcite (S)
Clinochlore (S)	Chalcedony (C)		

ALTOONA

Ferrierite (C)	Dachiardite (S)	<i>clinoptilolite</i> Heulandite (C)	Mordenite (C)
Chalcedony (C)	Siderite (C)	Chlorite (C)	Pyrite (R)
Calcite (C)		<i>Nontronite</i>	

MT. SOLO

Natrolite (C)	Thomsonite (C)	Analcime (C)	Chabazite (C)
Gmelinite (S)	Calcite (C)	Pyrite (S)	Stilbite (R)
Chlorite (C)	Heulandite (R)		

ELK MOUNTAIN (Road 1440)

Scolecite (C)	Mesolite (C)	Levyne (C)	Offretite (R)
Calcite (C)	Stilbite (S)	Apophyllite (C)	

BRITISH COLUMBIA ZEOLITE LOCATIONS

DOUGLAS LAKE ROAD

Chabazite (C)	Heulandite (S)	Stilbite (C)	Thomsonite (C)
Levyne (C)	Offretite (C)	Calcite (S)	Mesolite (S)
Phillipsite (S)	<i>Garronite</i> (R)		
	<i>Phillipsite</i>		

MONTE LAKE

Ferrierite (R)	Calcite (C)	Chalcedony (C)	
----------------	-------------	----------------	--

KAMLOOPS LAKE

Ferrierite (C)	Calcite (C)	Chalcedony (C)	Quartz (S)
Goethite (R)	<i>Heulandite</i> (R)		
	<i>clinoptilolite</i>		

BLAKEBURN

Thomsonite (C)	Chabazite (C)	Phillipsite (C)	Garronite (S)
Levyne (S)	Calcite (C)	Gmelinite (R)	Offretite (S)
Unknown 1 (Goble) (R)			

YELLOW LAKE

Brewsterite (C)	Heulandite (C)	Laumontite (C)	Calcite (C)
Fluorite (S)	Scolecite (S)	Stilbite (R)	Thomsonite (R)
Analcime (C)	Goethite (?) (S)	Pyrite (R)	Chabazite (R)

The Micro Probe

FALL, 1974 - VOL. I, NO. 3

GET WHILE THE GETTING IS GOOD! ! !

by Ford E. Wilson

The following quotation, written by your reporter and published many years ago, merits repeating here.

"A suggestion which is very practical, even if not especially scientific, will conclude this month's story. Whenever a specimen of more than ordinary interest is observed through the microscope, no matter at what stage of treatment, processing or examination the material may be, it should be isolated, removed and preserved forthwith. The time to secure it is before it gets out of view. Otherwise, much time may be lost in seeking out an individual or it may never be seen again."

This was part of a discussion of methods for examination of marine debris for tiny shells, forams and such like items.

The advise is especially pertinent during the examination of siliceous residues obtained while recovering chalcedonic casts of Miocene insects from the Mojave desert. These bugs loved to crawl over the side of a picking tray and disappear "as quick as a wink".

For micromineral material the suggestion takes the form of urging each collector to mark suitably anything of special interest or value. Your reporter carries into the field the small spools of fluorescent tape with soft gum back. One spool is wild pink in color, the other is brilliant green. Manufacturer was Technical Corp., New Rochelle, N.Y. 10801. Item #1227, about a year ago. Only a moment is required to affix a small piece of tape adjacent to the important item. At home, when the specimens are being examined microscopically, tiny arrows of tape are affixed to point out the perched crystal, the rare face, the nearly invisible inclusion or what have you?

Ford E. Wilson

THE NORTHWEST MICRO-MINERAL STUDY GROUP

"The Micro - Probe"

Bob Hagglund

