tions. Curators are therefore strongly urged to examine this group of radiating white zeolites.[4]

While the external appearance of these zeolites is so close as to cause confusion, their optical properties are so distinctive as to rapidly differentiate them, as may be seen by the following table.

	α	β	γ	γ−α	System
Natrolite	1.480	1.482	1.493	.013	Orthorhombic
Thomsonite	1.529	1.531	1.541	.012	Orthorhombic
	1.517	1.520	1.530	.013	Orthorhombic
Faroelite[5]	1.512	1.513	1.518	.006	———
Mesolite	1.505	1.505	1.506	.001	Monoclinic?
Scolecite	1.512	1.519	1.519	.007	Monoclinic

An index liquid of n about 1.505 is the most serviceable one. Mesolite practically disappears in this liquid, while its extremely low birefrigence (.001), makes it appear isotropic. The presence of cleavage fragments showing inclined extinction would at once indicate scolecite. Natrolite and thomsonite both show parallel extinction, but may be promptly distinguished by the indices of refraction; the indices of natrolite are much lower, while those of thomsonite (and faroelite) are much higher, than the liquid used ($n=1.505$).

[4] Since preparing this paper, the writer has learned that Bøggild (*Danske Vidensk Selskab., Math.-fysiske*, 4 (8), 1922) had previously observed the existence of an error in the accepted optical data for thomsonite, and had also urged re-examination of radiating zeolites.

[5] Dr. Wherry's values for thomsonite given in the preceding paper lie between the extremes recorded in this table. The marked variability in refractive indices shown by thomsonite is noteworthy, and a correlation of the indices and composition of different specimens would seem very desirable.

NOTE ON THE FIRST DISCOVERY OF VANADINITE IN IDAHO[1]

HAROLD T. STEARNS, *U. S. Geological Survey*

Vanadinite was discovered by the writer in a small prospect near the tunnel of the Iron Mask Mine in the Spring Mountain Mining District, Lemhi County, Idaho. This is the first reported occurrence of vanadinite in Idaho. It occurs as yellow-brown tabular crystals 2 millimeters wide and ½ millimeter thick in clusters on manganiferous limonite. All of the crystals are hexa-

[1] Published by permission of the Director of the United States Geological Survey.

gonal prisms with base and first order pyramidal faces well developed. The mineral was identified by qualitative wet methods. The Iron Mask Mine is owned by William Clark, of Gilmore, Idaho, and was at one time in operation for its lead-silver values. The rocks of the Spring Mountain Mining District are described by Umpleby[2] as being late Devonian or early Carboniferous sedimentary rocks which were mineralized in late Cretaceous or early Eocene time. The vein of the Iron Mask Mine is in blue-gray limestone and is probably a contact phenomenon caused by one of the numerous quartz diorite intrusions.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of March 21, 1923

A regular meeting of the New York Mineralogical Club was held in the Assembly Room of the American Museum of Natural History on the evening of March 21, at 8 P.M. The President, Dr. George F. Kunz, presided. Because of the illness of the Recording Secretary a secretary *pro tem* was appointed by the Chairman.

Mr. Wintringham announced that the Recording Secretary proposed the following for membership: Dr. W. B. Short, 342 Madison Ave.; and Dr. C. A. Smith, 342 Madison Ave. Upon motion this was referred to the Membership Committee.

The President announced the appointment of Messrs. F. I. Allen, J. P. Wintringham, and P. Walther as a Nominating Committee to report at the April annual meeting.

Dr. Kunz then introduced Dr. J. Volney Lewis, who addressed the Club on "*The Copper Minerals of New Jersey.*" Dr. Lewis pointed out that the copper minerals were found in the trap, the shales and the sandstones of the State at many localities. In the trap, notably at Chimney Rock and Bound Brook, chalcocite was the most prevalent, with some native copper and a little bornite, chalcopyrite, cuprite and stains of chrysocolla. In the shales and sandstones north of Sommerville native copper, cuprite and hydrocuprite may be found in brecciated zones along fault planes. There is a resemblance, on a small scale, of this and other New Jersey occurrences with those of the Lake Superior region. With the secondary cuprite there is also a little chrysocolla, azurite and malachite. The intensely metamorphosed shale at Griggstown contains a great deal of chalcocite. At Rocky Hill mine the black shale is spotted with chlorite pseudomorphs after iolite. The slightly metamorphosed sandstone and shales, at Arlington and Flemington, contain ore in proximity to dikes and a limited amount also occurs near and under the first lava flow. At the Bridgewater Mine native copper and occasionally native silver are found at the bottom and under the trap sheet. At New Brunswick

[2] Umpleby, J. B., Geologic and ore deposits of Lemhi County, Idaho; *U. S. Geol. Survey, Bull.* **528**, p. 87.