

1. *Determination of v_0 by the use of the angles of the Winkeltabellen.* Figures 39 and 43 and Table 4

The symbols of the forms having been determined in the projection, the φ angle of each is found in the *Winkeltabellen*, suitably transformed for the inverted position of the crystal; from each is subtracted the reading on V and the resulting differences give a series of values of v_0 . $V - v_0 = \varphi$. Therefore $v_0 = \varphi - V$.

(To be concluded)

PROCEEDINGS OF SOCIETIES.

NEW YORK MINERALOGICAL CLUB

The regular monthly meeting of the New York Mineralogical Club was held in the Assembly Room of the American Museum of Natural History on the evening of May 19th, at 8.15 P.M. The President, Dr. George F. Kunz, presided and there was an attendance of 35 members and guests. The minutes of the last meeting were read and approved. On a suggestion by the Chair the report of the Committee on change of name was deferred.

Mr. Roy M. Allen read a paper on "Polarized Light and Its Application to the Study of Crystal Structure." In the course of his paper Mr. Allen took up the explanation of polarized light by analogies, explaining the nature of light and how it is transmitted thru crystalline structures. He took up the vibratory theory of light and pointed out the difference between ordinary light and polarized light. Using a diagram of a Nicol prism he illustrated the phenomena of refraction, reflection and absorption of light. By means of a blackboard demonstration he illustrated the molecular structure of crystalline bodies and showed how polarized light transmitted thru them produced the various effects which are used in determining minerals in thin section under the polarizing microscope.

In the second half of the program, Mr. George E. Ashby, using the polarizing microscope attached to the lantern, showed upon the screen a number of striking illustrations of the behavior of minerals in polarized light. After this exhibition a vote of thanks was tendered to Messrs Allen and Ashby.

Taking up the subject of the Decoration Day Excursion, Mr. Oppenheimer and Mr. Broadwell spoke of the Bronx locality at Burke Avenue as a possible objective. After some discussion this was adopted.

The New York Mineralogical Club and the Newark Mineralogical Society met for a joint field excursion on Decoration Day, May 31st, at the Lexington Avenue Subway Station at 180th Street, and proceeded to the recently opened locality at Burke Avenue, Bronx. Among the Club members attending this Field Excursion were: Miss Catherine Schroder, Messrs. George F. Black, W. H. Broadwell, Louis W. Dunham, Charles Francesconi, J. A. Grenzig, John Holzman, H. M. Lehman, Frank D. Tansley, George S. Scott, E. H. Wilson, J. P. Winttingham and H. P. Whitlock. Practically all the species reported from this locality were encountered and several members secured notable examples.

HERBERT P. WHITLOCK, *Recording Secretary*

PHILADELPHIA MINERALOGICAL SOCIETY

Wagner Free Institute of Science, September 9, 1920

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the vice-president, Mr. Trudell, in the chair. Thirteen members were present. Reports of summer trips constituted the program of the evening.

Mr. Gordon reported a trip to Brinton's quarry, Chester County, with Messrs. Frankenfield and Trudell, on June 20th. Specimens of *colerainite* from an albite pegmatite in the serpentine were exhibited, the first report of this mineral outside of the type localities, in the Black Lake District, Canada; it was identified optically.

Mr. Warford exhibited beryl crystals from Broad and Olney Avenue, large brown titanite crystals from O'Neill's quarry; pink microcline crystals from Holmesburg, and limonite pseudo pyrite from Camp Hill.

Mr. Biernbaum described a trip thru Virginia taken on July 3-10, by Messrs. Frankenfield, Gordon, and himself. The itinerary included Amelia, Natural Bridge, Midvale, Irish Creek, and Luray. Albite, amazonstone, columbite, microlite, and topaz were obtained at Amelia; dufrenite, strengite and pyrolusite at Midvale; arsenopyrite, and minute crystals of cassiterite and scheelite at the Irish Creek tin mines.

Mr. Gordon described a collecting trip thru Pennsylvania, which included localities in Chester, Lancaster, Cumberland, Huntingdon, Perry, Franklin, Lebanon, and Berks counties. A search thru Franklin County for the source of small pyrite diploids occurring in a black limestone, which had been received by the Academy, proved unsuccessful. Andradite crystals were obtained at Cornwall; beraunite and wavellite at Moore's Mill; and stilbite at Robeson.

Mr. Ford reported a trip to the French Creek mines with Mr. Oldach on August 21. Groups of brilliant magnetite crystals, combinations of (111) and (110), individual crystals of which measured 2 cm.; and pyrite crystals, combinations of (210) and (111) in equal development, were obtained.

Mr. Trudell presented an account of the trip of the society to the French Creek mines on September 4 to 6th; attended by Messrs. Frankenfield, Ford, Oldach, Gordon, Warford, and himself.

Mr. Ford exhibited strueverite, ampargobeite, betafite, columbite, euxenite, monazite, and spodumene, from Madagascar.

The death of Mr. Benjamin Smith Lyman, an honorary member, was announced.

The following nominations were made for officers for 1920-1921:

President: Dr. Alfred C. Hawkins
 Vice-President: Mr. Harry W. Trudell
 Treasurer: Mr. Harry A. Warford
 Secretary: Mr. Samuel G. Gordon.

The society then adjourned for an examination of the specimens.

SAMUEL G. GORDON, *Secretary*