# PROCEEDINGS OF SOCIETIES

## PHILADELPHIA MINERALOGICAL SOCIETY

*Academy of Natural Sciences of Philadelphia, September 7, 1944*

The vice-president, Mr. Charles R. Toothaker, was in the chair, with 62 members and visitors present.

Dr. Richard E. Stoiber of the Quartz Crystal Section of the OCSigO, War Dept., addressed the society on "Quartz Crystals in Brazil." The quartz belt extends from northern Bahia to central Minas Geraes and covers hundreds of square miles. The typical mode of occurrence is at the contact of granite and red shale, where crystals are found locally in pockets associated with milky quartz and black manganese oxide. Geological features of the deposits and mining methods were illustrated with kodachrome slides.

Mr. Samuel G. Gordon exhibited an etched X-section of quartz which showed the rare case of "Combined" twinning, in which the right and left individuals are reversed, rather than the usual case of an intergrowth of an enantiomorphous pair ("Brazil twinning"). He pointed out that the latter type of twinning is as common in quartz as polysynthetic twinning in plagioclase.

*October 5, 1944*

Dr. W. Hersey Thomas presided, with 48 members and visitors present. The present officers were reelected.

Dr. Earl Ingerson of the Geophysical Laboratory spoke on "Interpretation of Preferred Orientation of Minerals in Rocks." Methods of plotting preferred orientations in thin sections of rocks were described, and geological applications were illustrated.

Mr. Gordon reported on a trip with Mr. Horace Hallowell to the quarry at Branchville, now being worked for mica, but only albite and tourmaline were collected. Mr. Harold Evans exhibited four trays of cut stones.

*November 2, 1944*

Dr. W. Hersey Thomas presided, with 100 persons present, following a dinner in honor of the guest, Dr. Charles Palache.

Professor Palache addressed the society on "The Genesis of the Zinc Deposits of Franklin, N. J." He described his first trip to that locality in 1896, as well as his impressions of the collections of Canfield and Hancock. The main deposits are considered to represent zinc sulfides which have been thoroughly oxidized to hemimorphite, and then subjected to metamorphism. The local effects of pegmatites and hydrothermal solutions in the development of rare minerals (many of which had been placed on exhibition) was alluded to. The talk was illustrated with maps and photographs reproduced as lantern slides.

*December 7, 1944*

Dr. W. Hersey Thomas was in the chair, with 63 persons present.

Dr. Hugh Miser of the U. S. Geological Survey addressed the society on "Quartz Crystals and Veins in Arkansas." While veins of quartz occur in a belt 30 to 40 miles wide, and 150 miles long from Little Rock, Arkansas, to Broken Bow, Oklahoma, the quartz crystal producing area is limited to the main anticlinorial axis of the Ouachita Mountains, where upwarping developed cracks in the crest of the anticlinorium. Through these cracks flowed hot hydrothermal solutions of magmatic origin which deposited the quartz crystals. The hydrothermal origin of the quartz crystals is proven by the associated dickite, calcite, and adularia. The late Paleozoic age of the quartz veins is shown by the entire absence of any veins in the Cretaceous rocks (in fact quartz veins are cut by Cretaceous igneous dikes),

and also by the great quantity of rolled quartz pebbles found in the Cretaceous sedimentary beds.

The relation of the quartz veins to the veins of lead, copper, zinc, and mercury in the Ouachita and Ozark Mountains was described, and a Pennsylvanian age was shown for these, and a similar age was suggested for the lead-zinc deposits of the Tri-State area and similar deposits in the Mississippi Valley.

A remarkable group of milky quartz crystals from Berkeley Springs, West Virginia, and weighing several hundred pounds, had been presented to the Academy by Mr. George D. Cope, and was exhibited.

Dr. Joseph D. H. Donnay suggested that a committee be appointed to help replace the collection of minerals destroyed at the University of Liége by the retreating Germans.

J. S. FRANKENFIELD, *Secretary*

## ABSTRACTS OF THE MINUTES OF THE NEW YORK MINERALOGICAL CLUB

### *Meeting of October 19, 1944*

The president, Mr. Taylor, announced the appointment of the curators' committee and committees in charge of excursions, membership, auditing, programs, education and publications. The meeting was open for accounts of summer collecting by the members. A five-inch scalenohedral calcite crystal from the Prospect Park quarry at Paterson, N. J., was exhibited by Mr. Leonard Morgan who had collected it. Other exhibits included agates from the north shore of Long Island and from streams near Summit, N. J., and corundum sent by a member of the armed forces on duty in South Africa.

### *Meeting of November 15, 1944*

The Vice-president, Dr. R. B. Sosman, reviewed the first volume of the new edition of Dana's *System of Mineralogy* and the president called attention to *Bulletins* **50** and **57** of the New Jersey State Department of Conservation. Mr. George Ashby presented to the club a volume representing his work on the inclusions in mica found on Manhattan Island from 1900 to 1925. Dr. William Parrish addressed the club on "Isomorphism and Polymorphism," illustrating his talk with numerous specific examples among minerals.

ELIZABETH ARMSTRONG, *Secretary*.

## NEW MINERAL NAMES

### Banalsite

W. CAMPBELL SMITH, F. A. BANNISTER, AND M. H. HEY: A new barium-feldspar from Wales. *Nature*, **154**, No. 3906, 336–337 (1944).

NAME: From the formula.

CRYSTALLOGRAPHY: Orthorhombic, with unit cell dimensions $a$ 8.50, $b$ 9.97, $c$ 16.73 Å., space group $I\,b\,a$ or $I\,b\,a\,m$. The unit cell contains 4 $BaNa_2Al_4Si_4O_{16}$. No crystal forms were visible on hand specimens but thin sections showed indications of a few faces of simple indexes including {110} and {001}, both parallel to good cleavage directions. The unit cell has dimensions similar to those of sanidine.

CHEMICAL PROPERTIES: Microchemical analysis (not given) gives the formula $BaNa_2Al_4Si_4O_{16}$

PHYSICAL PROPERTIES: White. $D_4^{16}=3.06$. Optically positive, $\alpha=1.5695$, $\beta=1.5710$, $\gamma=1.5775\pm.005$ (Na light); $2V=41°$, $\alpha=c$, optic axial plane parallel to {100}

OCCURRENCE: Banalsite occurs massive, associated with tephroite, alleghanyite, jacobsite, barite and calcite in certain rare veinlets and narrow bands in dark purple manganese ore from the Benallt mine near Rhiw, Carnarvonshire, Wales.

MICHAEL FLEISCHER