

ARTIFICIAL THERMONATRITE

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Crystals of $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ (artificial thermonatrite) were grown by James M. Bradford¹ from a water solution of Na_2CO_3 concentrated at 70°C and allowed to evaporate slowly at that temperature. Some of these were given to the writers for optical determinations.

The forms observed were: $\{001\}$, $\{110\}$, $\{100\}$, and one crystal showed a macrodome. The crystals are dominantly of two habits; $\{001\}$ tablets with elongation along the b -axis, and prismatic $\{110\}$ with the front pinacoid well developed. The former are first to appear, while growth along the c -direction progresses with time. The optical properties are in conformity with those obtained by Merwin ($X=b$), as cited by Winchell,² and not with those of Lacroix ($X=a$).

¹ Department of Physics, University of Chicago.

² Winchell, A. N., *The Microscopic Characters of Artificial Inorganic Solid Substances or Artificial Minerals*, 2nd. Ed., New York, 1931, p. 200.

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, June 3, 1932.

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Dr. Cajori, in the chair. Twenty-seven members and 33 visitors were present. Upon favorable recommendation of the council, Mr. George Vaux of Bryn Mawr, Penna., was elected a member. The chair announced the death of E. A. Groth in December, 1931.

Mr. Samuel G. Gordon addressed the society on "Greenland Minerals," largely descriptive of localities in southern Greenland visited in 1923, and illustrated by means of lantern slides.

Mr. Knabe exhibited specimens of pyrrhotite and limonite secured at Huntington Valley. Mr. Vanartsdalen described visits to Easton and Sayresville. Dr. Hawkins described white stilbite from the Long Island City water supply tunnels. Dr. Wherry exhibited a fossil pine cone from the black shales of Bucks County.

W. H. FLACK, *Secretary*

Academy of Natural Sciences of Philadelphia, September 8, 1932

Vice-president Toothaker presided at a stated meeting of the Society on the above date. Thirty-four members and twenty-two visitors were present. Mr. E. R.

Gudehus was proposed for membership. Upon favorable recommendation of the council Mr. Harold Philip was elected a junior member.

The following summer trips were reported by members: by Mr. William Knabe to the Gwyned Tunnel cut near North Wales, where he obtained pyrite, calcite, quartz, petrified wood, and a number of fossils. On a visit to the Mermaid Lane quarries he found tourmaline, garnet, torbernite, and muscovite. Mr. Vanartsdalen visited Lumberville, obtaining pyrite. Mr. Boyle and Mr. Arndt found limonite geodes and quartz crystals at Henderson Station. Mr. Morgan exhibited brown tourmaline from Sparta Junction, N. J., and quartz crystals from Newton, N. J.

Mr. Gordon described some collecting at a number of sodalite and cancrinite localities in the Bancroft area, Ontario, Canada. Sodalite of various colors, yellow, pink, and colorless cancrinite, black tourmaline in blue sodalite, garnet, natrolite, and corundum were among the finds. At Hybla ellsworthite, allanite, moonstone, amazonstone, and other minerals were obtained.

Mr. Toothaker exhibited a kunzite crystal from California purchased in Europe. Mr. Cienkowski described a trip to New England, New York and Ohio, exhibiting datolite from Westfield, quartz from Herkimer County, and fluorite from Clay Center.

Dr. Newcomet showed a new type of "micromount" which he had developed to permit examination of a specimen on both upper and lower sides.

W. H. FLACK, *Secretary*

BOOK REVIEW

A TEXTBOOK OF MINERALOGY, WITH AN EXTENDED TREATISE ON CRYSTALLOGRAPHY AND PHYSICAL MINERALOGY, Edward Salisbury Dana, fourth edition, revised and enlarged by William E. Ford, XI+851 pages, John Wiley & Sons, Inc., *New York, 1932*. Price \$5.50.

This new edition of "Dana's Textbook of Mineralogy" has been greatly enlarged as the text with appendices now covers 822 pages as compared with 693 pages in the third edition. While the main features of the previous edition have been retained there have been some notable changes and additions. Among these are a 17 page section on crystal structure. The usefulness of such a brief treatment of this important phase of crystallography seems very questionable to the reviewer.

The new part devoted to the origin, mode of occurrence and association of minerals is so condensed that even the most fundamental principles have been slighted. The few sketchy phase rule diagrams in this section are anything but illuminating. That for the binary system, $\text{SiO}_2\text{-Al}_2\text{O}_3$, is obsolete, apparently being based on the older work of Shepherd and Rankin which was revised in 1924 by Bowen and Greig. References to "The Data of Geochemistry," by F. W. Clarke, are to the third edition, 1916, although that work is now in its fifth edition.

The descriptive part has been enlarged to 385 pages, the arrangement and mode of presentation being kept the same as heretofore. It is stated in the preface that this part is intended to serve as a substitute for the "System of Mineralogy" pending its revision. At least a brief description of all known minerals is given and many doubtful species are also mentioned. The mineral index has been expanded to in-