

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-

clude a great number of foreign names. Notes on the structure and stability relations have been added to the descriptions of some minerals but these are for the most part concealed in paragraphs in small type and are not given the proper emphasis.

Full use has not been made always of modern research bearing on the formulas of minerals or the interpretation of mix-crystal series. This is particularly regrettable in the case of the amphiboles. Though the new amphibole formula is mentioned in the introduction to this group the old misleading metasilicate formulas are given with the descriptions of the individual species.

Throughout the remainder of the book there are few changes. Though an effort has been made to eliminate errors a number have been carried over from the previous edition. Whereas the description of the symmetry elements has been amplified by a mention (in small type) of alternating symmetry, the faulty statement of symmetry of the tetragonal tetartohedral class in the third edition, recently criticized by Tunell and Morey, has been copied without change.

On page 62 the following statement is taken from the previous edition. "The three figures [uvw] are said to be the symbol of the zone in question. They represent the reciprocals of the values of the three coordinates, or in other words are the indices of a point, P, on the zonal axis." The statement in the second sentence is not true. It may be corrected by omitting the words "the reciprocals of."

In spite of the errors and deficiencies "Dana's Textbook of Mineralogy" must still be considered without question as the outstanding text among English books in its field. It will doubtless continue to be the standard work of reference.

ADOLF PABST