

## SHORT COMMUNICATIONS

*p*-Veatchite from Yorkshire.

CLARK *et al.* (1958 and 1959) have established that veatchite ( $\text{SrO} \cdot 3\text{B}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ ) is monoclinic and belongs to the space-group  $A2/a$  or, less likely,  $Aa$ . Braitsch (1959) has recorded a new mineral, whose properties and powder photograph are almost identical with those of veatchite, but which belongs to the space-group  $P2_1/m$  or  $P2_1$ . Since spectrographic work showed that boron and strontium were the principal constituents of this mineral, Braitsch assumed its chemical identity with veatchite and named the new mineral *p*-veatchite.

A mineral from the Permian lower evaporite bed of the Eskdale No. 2 boring in Yorkshire was described as veatchite by Stewart, Chalmers, and Phillips (1954), with a chemical analysis which agreed with the formula  $\text{SrO} \cdot 3\text{B}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ . Single-crystal X-ray work now proves that this mineral is *p*-veatchite, and the identity of chemical composition of the two minerals is therefore confirmed. The data for the Eskdale mineral are as follows:  $a$   $6.74 \pm 0.02 \text{ \AA}$ .,  $b$   $20.62 \pm 0.05 \text{ \AA}$ .,  $c$   $6.63 \pm 0.02 \text{ \AA}$ .,  $\beta$   $119^\circ 38' \pm 15'$ . Space-group  $P2_1/m$  or  $P2_1$ . Cell volume,  $797 \text{ \AA}^3$ . The presence of a centre of symmetry is suggested by the fact that a negative result was given for the Giebe and Scheibe test for piezoelectricity. These data show close agreement with those of Braitsch, although  $\beta$  is slightly greater.

The only two examples of *p*-veatchite so far described occur in evaporites of marine origin. The German material was found in water-insoluble residues from the Zechstein 'Ältere Steinsalz' below the Stassfurt Potash Zone, in the potash mine Königshall-Hindenburg, Meyershausen. Its associates are halite and anhydrite, with small quantities of clay, boracite, pyrite, quartz, and magnesite. The Yorkshire mineral has the same associates, with the exception of boracite. Veatchite, on the other hand, has been found in Californian localities associated with colemanite and howlite, partly in veins cutting limestone.

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- CLARK (J. R.), MROSE (M. E.), CHRIST (C. L.), BLOCK (S.), PERLOFF (A.), and BURLEY (G.), 1958. *Bull. Geol. Soc. Amer.*, vol. 69, p. 1547.
- CLARK (J. R.), MROSE (M. E.), PERLOFF (A.), and BURLEY (G.), 1959. *Amer. Min.*, vol. 44, p. 1141.
- STEWART (F. H.), CHALMERS (R. A.), and PHILLIPS (R.), 1954. *Min. Mag.*, vol. 30, p. 389.
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## BOOK REVIEWS

*Répertoire de Matériel Cristallographique*. Edited by A. J. ROSE. xxvi+126 pp. Paris: the Apparatus Commission of the International Union of Crystallography. 2nd edn, 1959. Price fr. 12.50; \$2.50 (incl. postage).

This is a second, greatly enlarged edition of the *Index of Manufacturers of Apparatus and Materials Used in Crystallography* first published in 1956. It tabulates equipment and services (with the names of suppliers), published crystallographic charts, nets, and tables, and textbooks. This matter should be very useful, and is well indexed. But a list of journals that include the words 'mineralogy' or 'crystallography' in their titles is almost valueless, for it omits journals, such as *Journ. Amer. Chem. Soc.*, that lack the keywords in their titles but often publish material of crystallographic interest, while including several journals of very minor importance. Nor are 23 pages of advertisements by manufacturers of much value, since they duplicate information already listed. Despite its failings, the work should be of value to crystallographers seeking sources of supply of apparatus and materials. No attempt has been made to assess the relative merits of the equipment listed. The text is in French, with indexes in French and English. Distribution will be free to crystallographers through the National Committees of countries adhering to the Union. Further copies may be purchased from the editor at 1 rue Victor-Cousin, Paris 5; remittances (with order) should be payable to 'Société française de Minéralogie et de Cristallographie (I. U. Cr.)'.

VON HIPPEL (Arthur R.). *Molecular Science and Molecular Engineering*. London (Chapman & Hall), New York (John Wiley & Sons Inc.), 1959, xv+446 pp. Price 148s.

Two previous volumes in this series, *Dielectrics and Waves* and *Dielectric Materials and Applications*, dealt with particular physical properties of materials and their practical applications. The theme of this