
The popularity of this book as a text for students in petrology is clearly shown by the rapid succession in which new editions follow one another. The subject matter and presentation in the sixth edition conform very closely to that of the fifth edition which appeared in 1919. A few new figures have been added and some old ones have been withdrawn. Of the 300 pages, slightly more than two-thirds of the book is devoted to a discussion of igneous rocks, about 60 pages to sedimentary rocks and 40 pages to the effects produced by thermal and dynamic metamorphism.

Judged from an American standpoint, in the opinion of the reviewer, this edition, like the previous one, suffers from three minor weaknesses. (1) Not a single chemical analysis is recorded in the entire book. (2) As a text for the “English-speaking students” greater emphasis should have been given to the description and occurrence of rock types in America. (3) In recent years unusual progress has been made along the line of quantitative petrology. Not only has the chemical system (commonly referred to as the C. I. P. W. system) been firmly established in America, but more recently a rational mineralogical quantitative system (Johannsen) has been proposed as well. It would seem that a chapter or two devoted to this phase of petrology would have been quite appropriate and exceedingly helpful to both English and American students.

W. F. H.

NEW MINERALS: NEW SPECIES


Berthonite


NAME: In honor of M. Berthon, mining engineer.


PHYSICAL PROPERTIES: Fine granular without cleavage; metallic luster; color lead gray; streak black; density 5.49; hardness 4 - 5.

OCCURRENCE: Associated with galena in small, later veins in the iron mines of Slata, Tunisia.

DISCUSSION: This mineral has been examined minerographically by Mr. E. B. Samson. The material was found to be essentially homogeneous. A few minute veins, of what is apparently limonite, penetrate the mass and become abundant near the border of the veins. The mineral appears to be isotropic. No structure was developed by etching. With conc. HNO3 the mineral is strongly attacked with effervescence. Negative with HNO3, HCl, KOH, KCN, HgCl2, FeCl3. With
acid KMnO₄ (1 cc. conc. KMnO₄; 1 cc. H₂O with 1 drop H₂SO₄) quick tarnish, at first brown, then blue when heavier. After about 2 min. becomes persistent and will not rub off. HCl dissolves tarnish and leaves bright unattacked surface. Alk. KMnO₄ as with acid KMnO₄. Bournonite, in contrast with these reactions, is not attacked brown by HNO₃; is attacked brown by alk. KMnO₄, developing structure. Bournonite is distinctly anisotropic in polished section.

Berthonite is apparently distinct from bournonite, the only other lead copper sulf-antimonide. It is evidently a new species although its exact formula is in doubt.

W. F. F.

CLASS PHOSPHATES, ETC. DIVISION: R′ : R″ : Sb = 1:2:2.

Weslienite


NAME: From J. G. H. Weslien, manager of the Longban Mine.

CHEMICAL PROPERTIES: An antimonate of calcium, sodium and iron, Na₃FeCa₃Sb₄O₁₈. Analysis by Dr. G. Karl Almstrom: Sb₂O₅ 67.37, As₂O₅ tr., FeO 6.56, MnO tr., CaO 17.91, MgO 1.24, K₂O 0.62, Na₂O 5.40, ign. 1.03, sum 100.13. Theory Sb₂O₅ 68.0, CaO 17.8, FeO 7.6, Na₂O 6.6.

CRYSTALLOGRAPHIC PROPERTIES: Isometric, octahedral in habit. Forms: o (111), a (100), m (110), n (331), e (311). Crystals up to 2 mm. in size.


OCURRENCE: Found at the Hindenburg workings of the Longban Mine. Forms isolated individuals or druses in massive hematite associated with manganophyllite, richterite and a pale berzelite or adelite—like mineral. A later filling is partly hydysphane and partly calcite.

DISCUSSION: Weslienite is a mineral similar to atopite, romite or schneebergite but apparently differs from all of these. The relationships of these minerals, however, are not well understood. They may be compared as follows; Romeite, 5RO. 3Sb₂O₅. Atopite, 2RO.Sb₂O₅. Weslienite, 5RO.2Sb₂O₅. Schneebergite, 2RO.Sb₂O₅. It will be seen that atopite lies half way between romite and weslienite while schneebergite has antimony in two states of oxidation. Weslienite should therfore be classed as a distinct species until some definite relationship can be shown to exist between it and romite and atopite.

W. F. FOSHAG.