REFERENCES

[1] L. Leigh Fermor, On the composition of some Indian garnets. *Records Geol. Surv. India*, Vol. 59, Pt. 2, 191–207, 1926. This reference by Shannon is erroneously given as Vol. 49 instead of Vol. 59.

[2] Earl V. Shannon, "Blythite" and the manganese garnet from Amelia, Virginia. *Jour. Wash. Acad. Science*, Vol. **17**, No. 17, Oct. 19, 1927.

[3] Shannon and Gonyer, Almandite and spessartite garnet from Gwynns Falls, Baltimore, Md. *Jour. Wash. Acad. Science*, Vol. **17**, No. 21, Dec. 19, 1927.

[4] W. C. Robinson, Analysis of Spessartite Garnets. (An analysis was made by Robinson under the direction of Genth in 1887.) *Jour. Analyt. Chem.*, **1**, 251, 1887.

[5] Mineralogy of Pennsylvania, Samuel G. Gordon, **1922**, page 197.

[6] F. Bascom, Pre-Triassic metamorphic rocks (Granite Gneiss). *Philadelphia Folio, U. S. Geol. Surv.*, No. **162**, page 5, col. 4.

[7] H. S. Washington, *Analysis of Rocks*, 3rd ed., *New York*, (**1919**).

[8] W. E. Ford, A study of the relations existing between the chemical, optical and other physical properties of the members of the garnet group. *Amer. Jour. Science*, Vol. **XL**, page 33, 1915.

BOOK REVIEWS

PRECIOUS AND SEMI-PRECIOUS STONES. MICHAEL WEINSTEIN. VIII +138 pp., with a colored frontispiece and 16 full page illustrations. Sir Isaac Pitman & Sons, Ltd., *London*, **1929.**

This book aims to present the more important facts concerning gems in a concise, readable, and non-technical manner and should appeal to the general reader interested in precious and semi-precious stones.

The physical properties of gems, cutting of stones, artificial staining, and weight and prices are all considered briefly, as is also the subject of real, synthetic, and immitation stones. In the more general part most of the minerals used as gems, as well as pearl, amber, coral, and jet, are discussed. There is also a chapter entitled "Superstition and Gem Stones" and an appendix in which gem materials are arranged according to color, chemical composition, hardness, specific gravity, dichroism, indices of refraction, and locality.

While the material is on the whole well presented, there are a number of unpardonable errors. For example, the statements on pages 5 and 40 that nearly all synthetic stones are made in Germany and France and that "The term 'corundum' must not be confused with the abrasive material carborundum, which is corundum mixed with heavy minerals, such as magnetite and hematite, all of lower hardness," are incorrect and should be revised.

The frontispiece and the various half-tone illustrations are very good.

EDWARD H. KRAUS

DIAMOND—A DESCRIPTIVE TREATISE. J. R. SUTTON. XII+118, with 111 full page illustrations. Thomas Murby & Co., *London*, **1928.**

This book is based largely upon observations over a period of 35 years in the diamond fields of Africa, and is designed for the general reader and lover of gem stones. Although the author gives much general information concerning the various

properties of the diamond, as well as its occurrence and origin, the chief value of the book lies in the emphasis placed upon the characteristics of the stones from different localities. The many full page illustrations add materially to the attractiveness of the text, for the half-tone cuts are especially good.

EDWARD H. KRAUS

ORE DEPOSITS OF MAGMATIC ORIGIN. PAUL NIGGLI. Translated from the original German edition by H. C. Boydell. XI+93 pages, 11 figures. Thomas Murby & Co., *London*. D. Van Nostrand Co., New York, **1929.** Price $3.50.

This book is an adaptation of a series of lectures presented at the Swiss Federal Technical University of Zürich in 1923–24 and published as Volume I of Niggli's "Abhandlungen zur praktische Geologie und Bergwirtschaftslehre." The translation by Dr. Boydell has been revised and supplemented by Dr. Niggli and Dr. R. L. Parker.

In this altogether too brief treatise, Dr. Niggli attempts to develop a logical and consistent classification of ore deposits of magmatic origin. Such a classification he believes must hold good not only for ore deposits but also for igneous rocks and *visa versa*, since as he says: "Ore deposition is a part problem of magmatic differentiation in its widest sense."

He points out that a systematic classification of igneous rocks may be founded on any one of the three following bases: (1) Physical and geological conditions prevailing at the place of formation, (2) Chemical and (or) mineralogical composition and (3) Provincial relationships; and then he discusses each in turn in its application to ore deposits. The result is one classification combining (1) and (2) and a second classification combining (1) and (3).

The discussion as presented in the book is already so condensed that further condensation in the form of an abstract is impossible.

CHAS. W. COOK

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Minutes of the October Meeting

A regular monthly meeting of the New York Mineralogical Club, attended by 39 members, was held at the American Museum of Natural History on the evening of October 16, 1929, with President Herbert P. Whitlock in the chair.

Mr. James Collins and Miss Ellen M. Shattuck of New York City, Mr. Ralph Pastor of Brooklyn, N. Y., and Mr. M. H. Clark of Newark, N. J., were elected to membership.

Mr. Manchester reported a successful Club trip to the quarries at Bedford, N. Y., on Decoration Day, May 30th, which was attended by about 30 persons.

The program of the evening consisted of short accounts of their summer experiences by various members, with exhibits of specimens. Among the latter were spear-shaped casts of prehnite after an undetermined mineral, from Paterson, N. J.; also calcite from the same locality; garnet from Bedford, N. Y.; iridescent pyrite from South River, N. J.; and a rose coated with calcium carbonate from the springs of Carlsbad, Germany.