

The Introduction (Chap. I) gives an excellent historical outline from the time of the beginning of the development of mineralogy in Pennsylvania to the present time, together with an outline of the scope of the present paper. Chapter II, on the Origin and Occurrence of Minerals, is a new and interesting departure; it deals with them as natural chemical compounds whose formation is governed by well known physico-chemical laws. The detailed classification is made on the basis of mineral assemblages, which are divided into two classes, i.e., those arising from magmatic phenomena, and those formed by sedimentary processes. The minerals forming the assemblages are classified as primary, metamorphic, or weathering products. Under igneous rocks are considered the silicic, alkalic, calcic, and magnesian types, with special attention to the pegmatites and hydrothermal deposits; among the sediments, the silicious, argillaceous, calcareous, magnesian, ferruginous, etc., and carbonaceous deposits are taken up, with detailed enumeration of the most typical minerals in each.

Chapter III gives a résumé of the general geology of Pennsylvania, by physiographic divisions, with further subdivision into counties for convenience. Chapter IV, the Descriptive Mineralogy of Pennsylvania, considers the minerals arranged by species in the Dana classification, with the Pennsylvania localities listed under each. A large number of figures gathered from the literature are given; chemical analyses are abundantly represented. Chapter V gives the list of mineral localities of Pennsylvania arranged alphabetically, with species reported from each, the authority and date, and the exact location of the occurrence, expressed numerically according to the Ninth Coördinate System of J. F. Kemp, explained on page 9 of the introduction. A bibliography and an index of localities and species close the volume.

This is a full and authoritative compilation of all available data on a classic area, and as such, as well as for the original methods of classification presented, it deserves an important place in any complete mineralogical library. A. C. H.

DAS FEINBAULICHE WESEN DER MATERIE NACH DEM VORBILDE DER KRISTALLE. FRIEDRICH RINNE. Second and third editions. 8-vo. 168 pages, with 9 plates and 203 figures. Borntraeger Brothers, Berlin, 1922.

The reception of the first edition of this volume, entitled *Die Kristalle als Vorbilder des feinbaulichen Wesens der Materie*, which was published in 1921 (*Am. Min.* 7, 161, 1922), was so enthusiastic and widespread as to call for a revised and enlarged edition within a year. Sixty-seven pages, including an index, four full-page plates, and 103 figures have been added. The book gives an excellent review of the great strides made in our knowledge of the structure of matter, especially from the standpoint of the crystallographer. While the treatment is on the whole the same as in the earlier edition, it is somewhat more historical. An English translation will undoubtedly be greatly welcomed by those who experience difficulty in reading German with ease. It has already been translated into several foreign languages.

EDWARD H. KRAUS

NOTES AND NEWS

On page 90 of Whitlock's List of New Crystal Forms of Minerals (*Am. Min.* 7, 193, 1922) occurs the remark "...the writer is keenly conscious of the possibility of omissions and errors, and will gratefully welcome additions and corrections."

Critical examination of the work indicates that as in all such compilations there are a certain number of errors. In order to warn crystallographers not to depend on the data too implicitly, it seems desirable that some indication as to their nature and frequency be published.

Some of the errors are mere typographical ones such as are almost unavoidable in technical matter and are too obvious to require separate mention; here we would include the misspelling of at least 16 mineral names, 50 locality names and 100 author's names.

There are, however, more serious errors in the transcribing of the crystallographic data. Thus, selecting at random 10 pages, (184-193) the original articles were consulted and at least 25 such errors noted as: omission of letters (pp. 184, 188); wrong letters, as *v* for 032 of lautite (p. 187), *x* for $\bar{2}21$ of leadhillite (p. 189) σ for $\bar{4}36$ of same; erroneous symbols, as for krennerite (p. 185) 58 581 instead of $5/2\ 4\ 582$, laurionite (p. 187) 2 221 instead of $\frac{1}{2}1\ 122$, lorandite (p. 192) 05/4 054 instead of 04/5 045, and several others; entire omission of new forms as for kröhnkite (p. 185) $m\ \infty\ 110$, for lautite (p. 187) $w\ \frac{1}{2}1\ 122$, and for lawsonite (p. 188) $b\ 0\ \infty\ 010$; insertion of several forms as new already in Goldschmidt's list, and errors in signs, and in other details. To be sure, crystallographers making an intensive study of a mineral are accustomed to look up the original in any case, and so can discover these errors; but most unfortunately, the references are at times erroneously given, making it hard to locate the articles wanted; on p. 194 an article is ascribed to vol. VII of this journal, whereas IV is meant; and on p. 222 a similar error is made in one of the author's own articles; while other journals fare no better.

Finally there are a considerable number of minerals omitted, altho their crystallographic data were published during the period covered. The following twenty were noted: barylite, betafite, bischofite, cabrerite, catoptrite, chalcolamprite, derbylite, flokite, (=ptilolite), samarskite, sarkinite, lacroixite, loranskite, losenite, mesolite, neotantalite, orientite, otavite, rhodizite, tephroite, and tantalum.

W. T. S., H. W. T., E. T. W.

At the anniversary meeting of the Royal Society, the Copley medal was awarded to Sir Ernest Rutherford for his researches in radioactivity and atomic structure.

It is announced by the United States Geological Survey that the price of radium has decreased owing to the discovery of radium bearing ores in Africa, which are easily worked at a much lower cost than the American mines. This caused a drop from \$120,000 a gram to \$70,000, which is the lowest price at any time since radium has been used.

Joseph W. Grieg, formerly assistant in the department of mineralogy at Columbia University, has been added to the staff of the Geophysical Laboratory, Carnegie Institution of Washington, as a petrologist.

The Academy of Natural Sciences of Philadelphia announces the selection of Professor Alfred Lacroix, president of the Geological Society of France, as the recipient of the "Hayden Memorial Geological Award" for 1923. This award was created by a deed of trust made with the academy, on April 11, 1888, by Mrs. Emma W. Hayden, "as a reward for the best publication, exploration, discovery or research in the sciences of geology and paleontology."

The next annual meeting of the Mineralogical Society of America will be held at Washington, D. C., December 27-29, in conjunction with that of the Geological Society of America.

We regret to note the death of Dr. William S. Disbrow of Newark, New Jersey. He was one of the founders of the Academy of Medicine of Northern New Jersey and a collector of minerals and antiques.

NEW MINERALS

Larsen's "Microscopic identification of the non-opaque minerals," reviewed in this Journal, *Am. Min.*, 7, 69, 1922, contains a considerable amount of data on mineral species, near-species, and varieties which seems likely to introduce changes in ranking in a number of cases. While final action on these may have to await consideration by the Committee on Nomenclature and Classification of the Mineralogical Society of America, important changes not already published or abstracted in our pages may be enumerated here.

In Larsen's "New Data," pages 34 to 160, there are 32 cases where the optical properties of supposed varietal minerals seem sufficiently distinct from those of the related species to suggest the desirability of raising these to sub-species, and in some cases to full species, rank. These comprise:

Alurgite	Jeffersonite
Antlerite	Kalinite (fibrous form)
Auerlite	Mariposite
Brandisite	Melanophlogite
Coeruleolactite	Paraffin
Cookeite	Picotite
Corkite	Pleonaste
Cuprodescloizite	Ripidolite
Destinezite	Salmoite (entirely new)
Endlichite	Schneebergite
Ferberite	Schroeckingerite
Ferrocolumbite	Serpentine (chrysotile form)
Fuchsite	Uraconite
Griphite	Uranochalcite
Heterolite	Voelckerite
Heterosite	Zippeite

On the other hand, specimens labeled as representing supposed species show features which in a number of cases suggest other interpretations, as follows:

Castanite, apparently identical with quetenite.

Cervantite, varies widely and is evidently made up of more than one species.

Dawsonite, comprises more than one species.

Dufrenite, shows wide variation, and may be composite.

Guarinite, does not agree with previous data, and shows peculiar features.

Hibbenite, seems optically identical with alpha-hopeite.

Ihleite, seems essentially identical with copiapite.

Janosite, seems also identical with copiapite.