

cited this as being responsible for the presence of pockets in the pegmatite and for the presence in these pockets of such minerals as tourmaline, beryl, etc. He spoke of visiting Newry and mentioned the tourmaline material from this locality as not of first gem quality. The quartz of Newry he found rich in spodumene, lepidolite and purpurite. He also referred to indigo blue tourmaline, caesium beryl and supposedly scheelite. He read a long list of the occurring minerals and discussed in detail the chemical composition of a characteristic group of these including autunite, bertrandite, cookeite, eosphorite, herderite, pollucite, triphylite, triplite, reddingite, fairfieldite, dickinsonite, fillowite and triploite. The speaker made free use of a fine suite of specimens to illustrate his address.

Dr. Finlay's paper was discussed at some length by Dr. Kunz and Messrs. Blank and Hoadley. A vote of thanks was tendered to the speaker for his highly valuable address. The meeting was adjourned at 9:30 P.M.

HERBERT P. WHITLOCK, *Secretary*

REVIEWS

PETROGRAPHISCHE UNTERSUCHUNG ÜBER DIE EIGNUNG VON GRANITEN ALS STRASSENBAUMATERIAL. (Petrographic investigation on the suitability of granite as paving material). ZELTER, W. 69 pages with tables and illustrations. Halle a/S., W. Knapp, 1927.

In Germany where stone is still extensively used for street-paving, granites have been found the most desirable for the purpose. But all granites are not equally suitable and this pamphlet discusses the various physical criteria with special reference to paving.

The first part treats of methods for determining specific gravity, crushing strength, wear-resistance, etc. Emphasis is placed on the importance of petrographic methods as applied to the quantitative determination of each mineral constituent, its form, and size.

The second part contains a discussion of the results obtained in the investigation of 42 samples of granites. Numerous measurements of the principal mineral constituents which were made by the author according to the Rosiwal method, yielded an average quartz content of 31%. This figure is only 0.69% less than the average of 31.69% which Tschirwinski, about 17 years ago, had computed for granites on the basis of chemical analyses. (*N. Jahrb. Min.*, 1913, 2, p. 241).

It may be suggested that the author would have saved himself a great deal of time and labor in his grain-measurements had he availed himself of the recording apparatus described by Hunt (*Am. Mineral.*, 9, p. 190) or Wentworth (*Jour. Geology*, 31, p. 228).

Another point worthy of note is his attempt to compute the actual size of the mineral particles from their linear measurements. Rosiwal (1898) had adopted the factor 1.620 by which the average diameter of the measured grains must be multiplied. Recent mathematical computations by Grengg and Mader (1925) have yielded a factor of 1.2337. As this discrepancy of 31.31% is too great for scientific purposes, the author has tried to determine the correct value experimentally. His procedure was briefly as follows: Lead shot of known diameter was imbedded in Wood's metal; constant shaking and rapid cooling prevented the shot from sinking to the bottom. Plates 1/2 cm. in thickness were then cut, ground and polished. The

sections of lead shot stand out clearly as dark spots in a lighter medium and can be easily measured. In this way a factor of 1.2721 was found, which is much closer to Grengg and Mader's value than to the original Rosiwal factor.

M. W. SENSTIUS

DIE ROLLE KOLLOIDER VORGÄNGE BEI DER ERZ- UND MINERAL-BILDUNG, INSBESONDERE AUF DEN LAGERSTÄTTEN DER HYDROSILIKATISCHEN NICKELERZE. (The rôle of colloidal processes in the formation of ores and minerals, with special reference to the hydro-silicate nickel-ores). SCHORNSTEIN, W. 87+IV pages with 25 tables. Halle a/S., W. Knapp, 1927.

This is a report on an extensive series of experiments, which were carried out during the years 1911—1914 to explain the origin of nickel-ore deposits derived from serpentinized basic igneous rocks, such as occur in New Caledonia, near Riddle, (Oregon), and Webster (N. Carolina). It was assumed that these hydro-silicate nickel-ores were due to the decomposition of Ni-bearing serpentines under the influence of meteoric or thermal waters containing CO₂. The mechanism of their possible deposition and concentration was studied on a large range of artificially prepared gels, such as might be present in the formation of hydrous Ni-Mg-silicates and Co-Mn gel minerals. These gel-minerals which do not represent definite chemical compounds but rather a more or less intimate mixture of different substances, may be formed; (a) by simultaneous precipitation from mixed or colloid-complex sols; (b) by precipitation of one sol upon the surface or within another gel; (c) by absorption of a molecularly dissolved substance by a gel of another substance; (d) by infiltration of the solution of one substance into the gel of another; (e) by chemical reactions between true solutions and colloiddally dispersed substances.

The experimental results and their discussion, while too extensive for an adequate review in these pages, are very suggestive and throw considerable light on many related problems of secondary enrichment by percolating waters.

M. W. S.

APPENDIX TO THE CATALOGUE OF METEORITES WITH SPECIAL REFERENCE TO THOSE REPRESENTED IN THE COLLECTION OF THE BRITISH MUSEUM (NATURAL HISTORY). G. T. PRIOR. Printed by order of the Trustees of the British Museum and sold at The British Museum, Cromwell Road, S. W. 7, London, 1927. Price two shillings.

This appendix of forty-eight pages contains an alphabetically arranged list of the names and descriptions of meteorites which have been found since 1922, together with the names of a few older falls which were omitted in the original Catalogue. The Catalogue and the Appendix now contain all the described meteorites up to the end of July 1927.

W. F. H.