NOTES.

The following deaths of well-known mineralogists have to be recorded:

GEORGE JARVIS BRUSH (1831–1912), who was elected an honorary member of the Mineralogical Society so long ago as 1879, was best known from his close association with the Sheffield Scientific School of Yale University, New Haven. Entering there in 1848 and graduating in 1852, he for a time acted as assistant in chemistry to Benjamin Silliman, junior, at Louisville, Kentucky, and to J. Lawrence Smith at the University of Virginia. Afterwards, he spent some years studying abroad, at Munich under Liebig and Kobell (1853–4), Freiberg (1854–5), and at the Royal School of Mines in London (1855–6). In 1857 he entered on his duties as Professor of Metallurgy at New Haven, and later this post included also mineralogy. In 1872 he became also Director of the school, retiring as Emeritus Professor in 1898, although still remaining President of the Sheffield Trustees until his death on February 6, 1912. As Professor of Mineralogy he was succeeded by S. L. Penfield. From his boyhood he had collected minerals, and the famous 'Brush Mineral Collection' of about 15,000 specimens was presented, together with a large mineralogical library, to the Sheffield Scientific School in 1904.

Professor Brush's published scientific work had reference mainly to the chemical composition of American minerals. His first paper, giving analyses of albite and indianite, appeared in 1849. The remarkable series of new mineral-species discovered at Branchville, Connecticut, were described in conjunction with E. S. Dana in five papers during the years 1878–1890. He wrote several of the supplements (1860–1872) of J. D. Dana's 'System of Mineralogy', and as a collaborator his name appears on the title-page of the fifth edition (1868) of this indispensable work. His well-known 'Manual of Determinative Mineralogy', which has passed through fifteen editions, first appeared in 1874.

For further biographical details reference may be made to E. S. Dana, Amer. Journ. Sci., 1912, vol. xxxiii, pp. 389–396 (with portrait and bibliography), and W. E. Ford, Science, New York, 1912, vol. xxxv, pp. 409–411.

KONSTANTIN DMITRIEVICH KHRUSHCHOV (C. DE CHRUSTSCHOFF) (–1912) was successful in the artificial preparation of a number of mineral-species, including quartz, tridymite, cristobalite, spinel, zircon, orthoclase, amphibole, diopside, biotite, analcite, and diamond. This work was commenced in Breslau, continued for a time in 1872 at the School of Mines in New York, and again in Breslau until 1890. He had studied also at Leipzig and Heidelberg, but he took his degree of doctor at Breslau; and he had travelled extensively in America. On his return to Russia in 1890 he was attached to the Chemical Laboratory, and afterwards to the Mineralogical Museum of the Imperial Academy of Sciences of St. Petersburg. From 1895 onwards he was Professor of Geology and Mineralogy in the Military-Medical Academy at St. Petersburg.

See Quart. Journ. Geol. Soc., 1913, vol. lxix, pp. lxi–lxii. A detailed summary of his work on artificial minerals (and his portrait, on p. 369) is given by P. Tchirwinsky, 'Reproduction artificielle de minéraux au XIX^e siècle'. Kieff, 1903–6.

GEORGE AUGUSTUS KOENIG (1844–1913) was born at Willstätt, Baden, and studied at Karlsruhe, Berlin, and Freiberg, graduating at Heidelberg in 1867. In 1869 he migrated to America as a chemist in some chemical works at Philadelphia. In 1872 he became assistant, and in 1875 Professor of Chemistry in the University of Pennsylvania at Philadelphia, and, later, also of Geology and Mineralogy. Since 1892 he was Professor of Chemistry in the Michigan College of Mines at Houghton. His first paper, on a petrographical subject ('Ueber einige Diorite'), was published in Germany in 1868, and he later wrote several papers on American minerals, several of which he described as new species (e.g. bementite).

JÓZSEF LOCZKA died on March 8, 1912, at the age of 57. For many years he was chemist in the mineral department of the Hungarian National Museum at Budapest. He published the results of many analyses, more especially of minerals from Hungarian localities.

JOHN WILLIAM MALLET (1832–1912) was born in Dublin, and he took his degree at Trinity College in 1853. He had also studied chemistry at Göttingen under Wöhler, and graduated there in 1852. In 1854 he migrated to America, where he remained for the rest of his life, although he never became a naturalized American citizen. For a time he was chemist on the Geological Survey of Alabama, and afterwards Professor of Chemistry in the University of Alabama. From 1868 until his retirement in 1908 he was Professor of Chemistry in the

University of Virginia, but during that period he held for brief intervals similar posts in the University of Texas and in the Jefferson Medical College at Philadelphia. During the Civil War he was a lieutenant-colonel and superintendent of the ordnance laboratories of the Southern States. He was elected a Fellow of the Royal Society of London in 1877.

Mallet's scientific work related mainly to inorganic chemistry, for example, water analysis and atomic weight determinations of lithium, aluminium, and gold; but he also analysed and described a number of American minerals and meteorites. His first papers, in 1849 and 1850, dealt with Irish minerals, giving an analysis of killinite from near Dublin, and recording the presence of platinum, sapphire, spinel, &c., in the auriferous sands of County Wicklow. He is referred to in many places in Greg and Lettsom's 'Manual of the Mineralogy of Great Britain and Ireland' (1858). See Journ. Chem. Soc., 1913, vol. ciii, pp. 760–763, with portrait.

August Benjamin *Friherre af* (*Baron de*) Schultén (1856–1912) was born at Viborg in Finland. He was an assistant, and since 1881 docent, in chemistry in the university at Helsingfors; and here, in 1881, he presented his inaugural dissertation on the synthesis of analcite. He, however, spent many years abroad, studying at Paris and Heidelberg, and during later years he worked in the laboratories of the Sorbonne at Paris. He prepared artificially a large number of minerals, and also many crystallized compounds of analogous chemical composition to these minerals (e.g. bromo-phosgenite, strontium-apatite, &c.). These were carefully determined crystallographically and their isomorphous relations noted. A small set of these crystallized products was presented by Baron de Schultén to the mineral collection of the British Museum in 1898. A summary of his work (with his portrait on p. 403) has been given by P. Tchirwinsky, 'Reproduction artificielle de minéraux au xix^{e} siècle'. Kieff, 1903–6.

Ferdinand Zirkel (1838–1912), the eminent petrographer, was born and educated at Bonn, where was always his home, and he died there on June 11, 1912. He was Professor of Mineralogy and Geology successively at Lemberg (1863), Kiel (1868), and Leipzig (1870–1909). Although trained as a mining engineer, a trip to Iceland, the Faroe Islands, Scotland, and England, and his meeting with H. C. Sorby, diverted his attention to microscopical petrography, a then new subject which he did so much to develop. His 'Lehrbuch der Petrographie', which first

appeared in 1866 and a second edition in three volumes in 1893–4, is a standard work. Another well-known work is C. F. Naumann's 'Elemente der Mineralogie', of which Zirkel prepared the eleventh to fifteenth editions (1877–1907). He was an honorary D.Sc. of Oxford and a Foreign Member of the Royal Society, and he was elected an honorary member of the Mineralogical Society in 1879. Of the several obituary notices that have appeared, reference may be made to that by Professor R. Brauns, Centralblatt Min., 1912, pp. 513–521, with portrait and bibliography.

The following is the text of the address which was presented by the President of the Mineralogical Society on the occasion of the 250th anniversary of the Royal Society, celebrated in July of last year:

SOCIETAS MINERALOGICA
SOCIETATI REGALI
S.P.D.

GRATULAMUR SOCIETATI vestrae quod annos ducentos et quinquaginta ab origine vestra feliciter peractos mox estis celebraturi. Simul maximas gratias agimus quod scientias illas quae ad terrae structuram mineralem pertinent auxilio vestro et hortatione semper fovistis.

(*Signed*) *W. J. Lewis*
Praeses

Datum LONDINI
die xviii mensis Junii
MCMXII

W. P. Beale
Thesaurensis

George T. Prior
Secretarius

Amongst noteworthy recent additions to the Mineral Collection of the British Museum is the collection of minerals formed by the British naturalist Thomas Pennant (1726–1798), which has been presented in 1913 by the Earl of Denbigh, and described in some detail in the preceding pages by Mr. W. Campbell Smith. A few of the better specimens of more general interest have been selected for incorporation in the general collection of minerals; these are at present displayed in the recent addition case in the Mineral Gallery at South Kensington. The bulk of the collection has, however, been preserved intact in the original oak cabinet and arranged in the same order as it was left by Pennant. In this form it is of considerable historic interest, as illustrating a natural history system of classification in vogue in the eighteenth century, before the development of the sciences of crystallography and chemistry.

Another collection, also of interest partly on account of its historic associations, is the extensive collection of foreign and colonial rocks and minerals which, together with that of fossils, has been presented by the Geological Society of London to the Trustees of the British Museum. These were transferred in June 1911, and are now available for reference at South Kensington. By far the larger part of the collection consists of rock-specimens, about 17,000 in number, and belonging to some 400 different topographical collections. These topographical collections are in many cases illustrative of papers published in the Society's Transactions and Quarterly Journal, and having been collected and described by Lyell, Scrope, De la Beche, Murchison, and other pioneers in the study of geology, they are of considerable historic interest. Of these older collections, the following may be mentioned: specimens from the Faroe Islands described in 1821 by Sir W. C. Trevelyan, Bart.; a collection from Normandy described in 1824 by Sir H. T. De la Beche; a large series from Auvergne collected and described in 1827 by G. P. Scrope; and another collection from the same region collected and described in 1828 by Sir C. Lyell and Sir R. I. Murchison; collections from the Italian volcanic districts made by Scrope in 1823–4; a series from Greenland collected by C. L. Giesecke.

The time of the meetings of the Society was altered some few years ago (in 1909) from 8 o'clock in the evening to 5.30 o'clock in the afternoon. That this change has been an advantage is shown by the increased attendance; the average number of members and visitors present at the ten meetings preceding the change being 24·5, and at the ten meetings

after the change 30·6. At the conclusion of these earlier meetings it has become the custom for the members and their friends to dine together at some neighbouring restaurant, where matters, mineralogical or otherwise, can be discussed in an informal manner, and mineralogists are afforded an opportunity of becoming more closely personally acquainted. There has been no tendency for this arrangement to develop into an exclusive dining-club; every member, whether a new member or from a distance, is welcome. This note in the Magazine may help to make this more generally known, and inquiry at the meeting will elicit what arrangements have been made for dining together on the particular evening.

Professor Victor Goldschmidt holds a unique position in our Society, being an ordinary life member and also an honorary member. His sixtieth birthday (on February 10, 1913) and the jubilee (25 years) of his Dozentship were made the occasion of a festive gathering at Heidelberg on February 8 and 9 last, when he was presented with an album of the portraits of his old pupils and mineralogical friends. Our congratulations may also be extended to Professor Goldschmidt on the appearance of the first volume of his important work 'Atlas der Krystallformen', an elaborate prospectus of which has been circulated by the publishers.
