

OBITUARY.

**William Hewitt, Hon. M.Sc. (Liverpool), B.Sc.
(London), Assoc. R.S.M.**

BORN, 30TH AUGUST, 1851.

DIED, 27TH NOVEMBER, 1929.

The death took place on 27th November, 1929, in his 79th year, of Mr. William Hewitt, who was widely known in educational and scientific circles. He was born at Keighley, Yorkshire, on 30th August, 1851, and was educated at the Royal School of Mines, where he had among his teachers, T. H. Huxley and (Sir) A. C. Ramsay. He took his B.Sc. degree at London University in 1876, with first class honours in Zoology, and also in Geology and Palaeontology. In 1877 he went to Liverpool as Science Demonstrator for the School Board, a position he held until 1892, when he was appointed to the newly created post of Director of Technical Education, retiring on superannuation under the age limit in 1916. In that capacity his chief life-work was accomplished, and to his untiring zeal and organizing abilities the high standard of efficiency of technical instruction in the City at the present day is largely due.

In spite of the onerous nature of his official duties, he found time to interest himself in the Learned Societies of the district, and since his retirement had devoted himself more than ever to their work and welfare. He was especially interested in geology, and at his death had completed 52 years' membership of the Liverpool Geological Society. He served it as hon. secretary for five years, as hon. treasurer for four years, and was President for the sessions 1891-2, 1892-3, 1910-11, and 1911-12. Two of his presidential addresses to the Society, viz. "The Physical Conditions of the Aralo-Caspian Region as bearing on the Conditions under which the local Triassic Rocks were formed" (1892) and "The Physical Conditions under which the local Triassic Rocks were formed" (1910), are valuable contributions which have been frequently referred to by succeeding workers. Among many other papers one entitled "Notes on Pebbles in their Geological Associations" (1918) may be mentioned, in which much useful information, partly based on original investigation, is recorded. On the celebration of the Society's jubilee in December, 1909, he published "A Retrospect of Fifty Years' Existence and Work", which, in addition to much interesting historical matter, contains a valuable discussion of local geological problems and investigations. His work was recognized by the award to him of the Society's medal in 1921.

On the occasion of the meeting of the British Association in Liverpool in September, 1923, he acted as local secretary of Section C (Geology), and also contributed to the handbook "Merseyside", in addition to other chapters, that on "The Geology of the Country around Liverpool". He took a constant interest

in the Geological Department of Liverpool University from the time of its establishment in 1916, and for a brief period during the War lectured there in the absence of the Professor. In July, 1929, the honorary degree of M.Sc. was conferred upon him by the University. Towards the equipment of the new departmental building of Geology opened in October last, he made a generous contribution.

For some years he acted as honorary director of the Liverpool and District Regional Survey Association, and his interest in its work led him to compile his well-known book on "The Wirral Peninsula—an Outline Regional Survey", as well as to write many papers of value to the student of the history and progress of Wirral. All his work was characterized by painstaking care and high conscientiousness, and he was esteemed by all who knew him.

T. A. JONES.

CORRESPONDENCE.

IRON-RICH CORDIERITE.

SIR,—Now that the composition of cordierite is once more the subject of discussion (H. H. Read, *GEOL. MAG.*, Vol. LXVI, 1929, p. 547) it may not be out of place to refer to a recent study by Ramdohr of the iron-rich contact rocks around the Brocken massif (*Neues Jahrbuch für Min., etc.*, 1927, A. p. 333). Ramdohr describes cordierite rocks resulting from the thermal metamorphism of iron-ore rocks, particularly mineralized tuffs, the cordierite being associated with an iron-olivine and a hercynite spinel. The bulk analysis of the rocks (e.g., one from Spitzenberg-Klippen, *op. cit.*, p. 377) is sufficient to show that these cordierites may be added to the list of iron-rich cordierites compiled by Dr. Read. The interest of the contact-altered iron-ore rocks of the Harz, however, lies rather in the nature of the assemblages developed. A fayalite-hercynite-cordierite hornfels is an assemblage described for the first time. This assemblage is one of especial interest. In a note on the paragenesis of the minerals of the system $MgO-Al_2O_3-SiO_2$ (*GEOL. MAG.*, Vol. LX, 1923, p. 101), I observed that whilst in artificial melts the association cordierite-forsterite occurred, amongst natural rocks the pair was represented by a spinel-enstatite assemblage. A reversible transformation $spinel + enstatite \rightleftharpoons cordierite + forsterite$ was suggested, the left hand pair representing the low-temperature association under the conditions of metamorphism. In the corresponding system $FeO-Al_2O_3-SiO_2$, however, it seems clear that the cordierite-fayalite assemblage is the stable association under similar conditions. The field of existence of iron-orthopyroxene is unknown and is clearly not realized among the contact rocks of the Harz, for fayalite-quartz assemblages are recorded by Ramdohr. At lower temperatures in the presence of water these latter minerals react to give an amphibole (iron-anthophyllite or