

authigenic. Comparisons are instituted with similar occurrences of felspars in limestones from various European localities.

Dr. Robert Campbell and J. W. Lunn: Chlorophaeite in the Dolerites (Tholeiites) of Dalmahoy and Kaimes Hill, Edinburgh. The dolerites of Dalmahoy and Kaimes Hills are exceptionally rich (up to 15 per cent. or more) in chlorophaeite which occurs as a vesicle mineral, as veins, and as pseudomorphs after fayalite. The mineral has a refractive index 1.498, hardness 1.5, and density 1.81; it has no cleavage and is isotropic. It shows on exposure a striking colour change from bright olive-green to black, due to rapid oxidation. From its physical and chemical characters the mineral is regarded as of a colloidal nature.

Dr. L. J. Spencer: Tenth List of new Mineral Names; with an Index of Authors.

MANCHESTER GEOLOGICAL ASSOCIATION.

12th May, 1925.

The Rev. Father G. Waddington, S.J.: The Carboniferous Succession in the Stonyhurst District.

This district has for the past 25 years or more had the somewhat doubtful distinction of being the centre of a controversy concerning the rocks lying between the white limestone of Clitheroe and the Pendle-top Grit. These rocks were grouped together by Dr. Wheelton Hind and J. Allen Howe in 1901, under the name of the Pendleside Series. The district comprises the country lying between Clitheroe to the north, Whalley to the south, Pendle Hill to the east, and Longridge to the west. The series, originally described as occurring typically on the west flanks of Pendle Hill, is found almost in its completeness in the banks of the Hodder and of the Ribble respectively. The section on the Hodder occurs near Hodder Place, the preparatory school belonging to Stonyhurst College, and shows most of the lower portion of the so-called Pendleside Series. The Ribble section is found at Dinckley Ferry, and it can be demonstrated that this section is complementary to the section at Hodder Place, giving an exposure of the upper beds as far as the Pendle-top Grit. According to the author the Hodder section represents the true Yoredale Series of Wensleydale and the upper limestones of the Avon Gorge, Bristol, as described by Dr. A. Vaughan. The Dinckley section represents the Bowland Shales of Phillips, and contains the fossils characteristic of those shales wherever they occur.

OBITUARY.

F. W. Moon.

All those interested in the study of Egyptian geology will have heard with deep regret of the sudden death of Mr. F. W. Moon

on 21st February, 1925. He was returning from an expedition to the Red Sea, where he had been examining the distribution of the diatomaceous deposits (originally discovered by him when examining the samples from the Egyptian Government petroleum bore at Abu Sha'ar), and died in the train between Benha and Cairo as the result of heart failure.

Frederick William Moon was born in Galway, Ireland, of Scotch parents, and was educated first at Queen's College, Galway, and later at the Royal University, Dublin, where he took his B.E. degree.

He subsequently went as a civil engineer to the North-Eastern Railway in York, where he remained until 1906. He then received an appointment as Oil-field Geologist with Sir Weetman Pearson's Company, working in this capacity till 1910. During this period he visited the north and south of Mexico and Mexico City. He was due to go on leave in 1910, and the troublous period in Mexico having then begun, he and the other geologists were unable to return.

At the beginning of 1911 he was engaged as head Oil-field Geologist by the Langhat Oil Company of Sumatra, going there via trans-Siberian Railway. During the time he was with this company he visited practically every part of the Dutch East Indies, including Atyeh, Djambi, and all parts of Borneo. Also Kelantan and Siam. He spent many months in Java, visited the island of Timor, and also the Burma oil-fields. He further widened his experience by going to Shanghai to see his chief, and then to Japan for a holiday.

Finally, before leaving for Egypt, he went to Australia, visiting New Guinea on the way.

In 1917 he was appointed under contract through Mr. Beeby Thompson to take part in the geological examination of those areas of Egypt which were included in the Petroleum Research plan of the Egyptian Government. For this purpose he was attached to the Geological Survey, and for the next eight years worked in association with the writer, Mr. T. G. Madgwick and Dr. H. Sadek. He was a part author of nearly all the Petroleum Research Bulletins issued from 1917 onwards, and owing to his neatness in manipulation and accuracy had as his special portion of the work the drawing of the field maps and sections which were subsequently issued with the bulletins. This period was a happy one both for Mr. Moon and his co-workers, the pleasant atmosphere being in no small measure contributed to by his friendly disposition and enthusiasm. Later he and Dr. Sadek continued the studies together in North Sinai, obtaining valuable results which have been recorded in a series of Petroleum Research Bulletins. Mr. Moon was due to leave the Egyptian Government service in 1925 under the arrangements made between the British and Egyptian Governments for the reduction of the foreign staff, but there was a hope that his services might still be retained, there being no one on the spot competent

to take his place. Mr. Moon was also deeply interested in the microscopic study of rocks, and a plan was being elaborated with the writer for the photographing of some of the rock-slides contained in the Geological Survey collections. The description of St. John's Island, in valued collaboration with Mr. Campbell Smith and Dr. Spencer, was a first visible result of his interest in petrography. But his greatest interest was aroused by his discovery of the Diatomaceae in the Miocene of the Egyptian Oilfields region. He at once re-examined the series of Oilfield samples kept in the Geological Museum at Cairo, and found that they were of widespread distribution. Keenly anxious for the fullest information he was in continuous communication with Dr. Rendle and Messrs. Payne and Taylor at the time of his death. It was one of the pleasures of my own official life to have this enthusiastic author bringing me the latest letters he had received, or showing me many of the beautiful objects which, with the delicate sense of touch possessed by him, he had mounted with great skill and care.

The presence at the funeral of the chief representatives of the Egyptian scientific services and societies indicated in what high personal esteem he was held and the deep sympathy felt for Mrs. Moon in her sudden bereavement. His colleagues (especially those in the Department of Mines and in the Geological Museum at Cairo, with whom he was most brought in contact) deeply feel the loss of one who was both a valued colleague and a friend.

CORRESPONDENCE.

ZONES AND PHASES IN THE UPPER PART OF THE AVONIAN.

SIR,—Workers in the Carboniferous Limestone of the North of England are under a debt of gratitude to Mr. Hudson for the important paper on faunal horizons in the Lower Carboniferous of North-West Yorkshire, published in your issue of April (p. 181). It will greatly facilitate correlation with other areas and, in conjunction with Bisat's invaluable work on the goniatites, goes far towards settling the long-standing questions of the positions or position, in terms of the Yoredale sequence, of the Pendleside Limestone and the reef-limestones of the Craven knolls.

In comparison with accurate correlation it matters little what labels we give to the pigeon-holes of our systems of classification, and the following remarks, therefore, are intended in no way to detract from the value of Mr. Hudson's work.

He seems to be under a misapprehension as to the meaning given by Vaughan to the terms "standard" and "phasal", a misapprehension apparently due to the heading of a table in one of the brief papers¹ in which this worker compressed so many ideas.

¹ "Faunal Succession in the Lower Carboniferous (Avonian) of the British Isles," *Rep. Brit. Assoc. for 1909* (Winnipeg), 1910, table ii.