

OBITUARY.**Wheulton Hind, M.D., B.S., F.R.C.S., F.G.S.**

BORN 1860.

DIED JUNE 21, 1920.

DR. WHEELTON HIND was born at Roxeth, near Harrow, in 1860, and died after a comparatively short illness at Ashley, near Stoke-on-Trent, on June 21 of this year. He received his medical training at Guy's Hospital and London University, where he graduated M.D., and also gained the Fellowship of the Royal College of Surgeons. In 1884 he began practice in Stoke-on-Trent, and during the following thirty years established a reputation as one of the foremost surgeons in the district, being at the time of his death the senior member of the surgical staff of the North Staffordshire Infirmary.

So far as research work is concerned, Hind's interest in geology practically dates from his arrival in Stoke, for very shortly thereafter he made the first of a long series of contributions on local geology to the Transactions of the North Staffordshire Naturalists' Field Club. Amongst his earliest papers was one on the geology of Suffolk, which was incorporated in his father's book on the flora of that county. As might be expected from his location in a coal-mining district, most of his work related to the stratigraphy and palæontology of the Carboniferous rocks, especially of the lower members of that series. In an endeavour to find some key to the succession of these strata he soon extended his investigations to the corresponding rocks of Derbyshire, Lancashire, and Yorkshire, where he collaborated with Mr. J. A. Howe in a detailed examination of the Lower Carboniferous sequence of the Pendle Hill area. As a result of this work the hitherto recognized classification of this series underwent considerable modification by the recognition of the "Pendleside Series" of shales and thin limestones, with a characteristic fauna, as a group intermediate between the Carboniferous Limestone and the Millstone Grit and differing essentially, both in lithology and fossils, from the Yoredale Series. The development of this series in Derbyshire and Staffordshire was recognized, and it was also traced to the Isle of Man and Ireland.

The basis of Hind's stratigraphical work was the attempt to discover a series of life-zones by means of which the Carboniferous rocks could be subdivided and those in different districts correlated. For several years he acted as secretary of the British Association Committee on "Life-zones in the British Carboniferous Rocks", and not only collected assiduously himself but also identified much of the material obtained by others. The comparative lack of success in this work, so far as the Carboniferous Limestone is concerned, was possibly due to the fact that most of the collecting was done in the North Midland area, where continuous sequences are conspicuously absent. Even the results of Vaughan's brilliant researches

in the Bristol district have not been found easy of application to the northern series, although much of Hind's subsequent work was directed towards that end.

By the discovery of Pendleside zone-fossils in the Culm measures of Devonshire, Hind was able to show that the lower portion of the latter was homotaxially equivalent to the former, while the goniatite fauna of the higher Culm strata confirms Arber's conclusion that they are of Middle Coal-measures age. Despite military duties entailed by the War—Hind went to France as Lieut.-Colonel in command of the North Midland Territorial R.G.A., and later occupied responsible hospital posts in various districts—he found time to elaborate the series of goniatite zones, ranging from the *Posidonomya Becheri* zone of the Pendleside up to the Middle Coal-measures, which he had formulated in 1909, and, in conjunction with Dr. A. Wilmore, to apply them in a detailed re-examination of the Clitheroe district.

At an early stage in his work he recognized the necessity for a reinvestigation of the Carboniferous mollusca, and the fruits of this appeared in the form of three monographs on the lamelli-branches. In conjunction with Mr. J. T. Stobbs a chart was drawn up in which these fossils, especially the freshwater species, were utilized in the establishment of horizons in the North Staffordshire Coalfield. Hind also published an important paper on the molluscan fauna of the Scottish Millstone Grit, and recognized the relationship to the fauna of homotaxially higher beds in America and Russia. His most important palæontological work relating to rocks other than the Carboniferous was his description of the Silurian Lamelli-branches in Mrs. Gray's Girvan collection.

Elected a member of the Geological Society of London in 1891, he received the Lyell award in 1902 and the Lyell medal in 1917. He was also an honorary member of the Société Géologique de Belgique, as well as of several British Societies. When it is remembered that his geological work was done in such time as could be snatched from a busy professional life, one marvels that so much was achieved. In a period of thirty years, some four of which were spent on war service, his published papers numbered over eighty, while in addition his services in the identification of fossils were largely utilized by the Geological Survey as well as by private workers. Such an output was only rendered possible by his wonderful vigour and enthusiasm. Whatever the verdict of the future regarding the details of his work, Hind will be remembered as one of the pioneers in the elucidation of the relationships of the Carboniferous rocks.

A. S.

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