

OBITUARY.

John Horne.

BORN 1ST JANUARY, 1848.

DIED 30TH MAY, 1928.

The little Stirlingshire village of Campsie where John Horne was born lies about 12 miles north of Glasgow, and it was in the High School and the University of that city that he received his education.¹ A natural bent towards geology led him at the age of nineteen to accept a post on the Scottish branch of the Geological Survey, and in this service he laboured for the long period of forty-four years. He retired in 1911 with a magnificent record of achievement and with a world-wide reputation as one of the foremost geologists of his day.

His active life falls roughly into three periods. The first of these covers the years up to 1883, during which he was proving his powers as a geologist furnished with rare gifts of observation and deduction, endowed with the still rarer faculty for seizing on and emphasizing the significant details of a problem, and equipped in addition with a terse and lucid style. He was largely engaged during these years in routine field-work, mapping large areas of country mainly in the southern and north-eastern counties of Scotland, while his well-earned vacations were spent in carrying out, in conjunction with his colleague, B. N. Peach, many important pieces of private research. It must always be reckoned one of the happiest chances that brought together in the service of Scottish geology two such alert and inquiring minds as those of Peach and Horne. Peach was the senior in age by six years and in service by five, and when in 1867 Horne was placed under him to be trained there began a partnership that went from triumph to triumph, a companionship in research that knew nothing of rivalry, a friendship that was to be interrupted only by death. In 1873 Horne spent his leave examining the rocks and glacial deposits of the Isle of Man and in 1874 summarized his results in a paper contributed to the *Transactions of the Edinburgh Geological Society*; perhaps the most striking feature of this paper is his insistence on the glaciation of the island by land ice filling the Irish Sea. In 1874 we find him and his colleague, R. L. Jack, investigating the glacial phenomena of the valleys of the Theiss and the Pruth, and the results of their observations were given in a paper ("Glacial Drift in the North-Eastern Carpathians") published in 1877 in the *Quarterly Journal of the Geological Society*. In 1876 he embarked along with Peach on a series of important researches on the glacial phenomena of the North of Scotland; their "Glaciation of the Shetland Islands" appeared in 1879, the "Glaciation of the Orkney

¹ It is of interest to note that the first part of the *Transactions of the Geological Society of Glasgow*, published in 1860, was a valuable monograph on the "Geology of the Campsie District" by John Young, himself a native of the parish.



Islands" in 1880 (*Quarterly Journal*), and the "Glaciation of Caithness" in 1881 (*Proceedings Royal Physical Society, Edinburgh*). Of supreme interest in this series of researches is the demonstration of how the Scandinavian ice-sheet had overridden the Shetlands, coalesced with Scottish ice on the floor on the North Sea, and deflected the latter north-westwards over the Orkney Islands and the Caithness plain. The Old Red Sandstone and associated volcanic rocks of these northern islands also received full description at their hands in two valuable papers, "The Old Red Sandstone of Shetland" (1879) and "The Old Red Sandstone of Orkney" (1880), contributed to the *Proceedings of the Royal Physical Society of Edinburgh*. For his share in this work Horne was awarded in 1888 the Wollaston Fund of the Geological Society.

The second period may be dated as extending from 1883 to about 1901 and during this period the two friends carried through those brilliant investigations which were to win for them the homage of the whole geological world. It was in 1883 that Horne and Peach were sent to map in detail the Durness-Eireboll district of the North-West Highlands. The communication to *Nature* in 1884, in which they arrived independently at the same conclusions as Lapworth, definitely showed that Murchison and Geikie's views as to the structure of the North-West Highlands were untenable, that the quartzites and limestones of Durness were *not* conformably overlain by the eastern schists, and that there was the clearest evidence for repeated overfolds, powerful reversed faults and gigantic thrusts. The results of this preliminary work were startling, and it now became the task of Horne and his colleagues to follow the structures mapped in Durness south-westwards along the whole belt of complication. In 1888 came the carefully-drafted and confirmatory "Report on the Recent Work of the Geological Survey in the North-West Highlands of Scotland", in 1891 the discovery of the *Olenellus* fauna, in 1892 the classical paper by Peach and Horne in the *Quarterly Journal* in which the limestones and quartzites were assigned to the Cambrian, and the pre-Cambrian age of the great series of red sandstones and arkoses (given the formational name of Torridonian) definitely established. The great part that Horne played in these investigations brought him the award in 1892 of the Neill Prize of the Royal Society of Edinburgh and in 1899 the Murchison Medal of the Geological Society. During this period Horne was in addition supervising, and taking part in, the Survey work in North-East Scotland with his headquarters at Inverness, and in 1896 he collaborated with Mr. (now Dr.) E. Greenly in an important paper on the foliated granites of Strath Halladale in East Sutherland in which it was shown that the "foliation" was in this case due to the intimate penetration of a schistose rock by a granitic magma (*Quarterly Journal*). At intervals also between 1888 and 1896 he carried out with Peach and Macconochie a careful revision of the critical areas in the Southern Uplands, following up the classical

researches of Lapworth, and the results of this work were embodied in the great memoir on the Silurian rocks of Scotland published in 1899.

The third period of Horne's active life may be said to begin when in 1901 he became Assistant Director in charge of the Survey work in Scotland. Mainly occupied as he now was with administrative and supervision duties he yet found time to carry on research. In 1903 he contributed in conjunction with Peach an important monograph on the Canonbie coalfield to the *Transactions of the Royal Society of Edinburgh*, while the two collaborated in an extraordinarily valuable contribution on "Scottish Lakes in relation to the Geological Features of the Country" to Murray and Pullar's "Bathymetrical Survey of the Scottish Fresh-Water Lochs" issued in 1910. It was during these years also that he saw much of his earlier work published. The classic memoir on the North-West Highlands of Scotland appeared in 1907 and every student of this volume must feel deeply grateful for the masterly summary which Horne supplied by way of introduction. In addition he contributed to various other important Survey memoirs—"The Neighbourhood of Edinburgh" (1910), "Glenelg, Lochalsh. and South-East Skye" (1910), "Central Ross-shire" (1913), "The Fannich Mountains and Upper Loch Maree" (1913), "Beaully and Inverness" (1914), "Caithness" (1914), "Mid Strathspey" (1915), "Lower Findhorn and Lower Strath Nairn" (1923). Fresh honours came to him: the Fellowship of the Royal Society conferred in 1900 was followed by his selection as President of the Geological Section of the British Association for the Glasgow meeting in 1901 ("Recent Advances in Scottish Geology"); in 1902 he received the LL.D. of Aberdeen University and in 1911 that of St. Andrews. In the latter year he retired from the Survey but freedom from official duties meant to him merely fresh opportunities for study and service. In 1912 he and Peach conducted a British Association excursion to the North-West Highlands¹; it was the last time they were to visit the mountains they knew and loved so well, the mountains that, in Suess' fine phrase, they had made *transparent*. From 1915 to 1919 he was President of the Royal Society of Edinburgh and in 1917 he communicated to its *Proceedings* the results of the investigations made by Peach and himself on the well-known bone-caves of the Allt nan Uamh, near Inchnadamff; in 1921 he received the LL.D. of Edinburgh University, and in the same year was awarded (jointly with Peach) the Wollaston Medal of the Geological Society, the highest award that the Society has to bestow. His last years were active enough; he took a great part in the scientific life of Edinburgh; he was still busy on Survey work, and one of his greatest pleasures was

¹ A photograph of them outside the hotel at Inchnadamff, taken on this occasion by Professor S. H. Reynolds, appears in the GEOLOGICAL MAGAZINE for April, 1926.

to welcome the many distinguished geologists who came from all parts of the world to visit the North-West Highlands and who never failed to call on him to express their gratitude and their delight at what they had seen. He was also engaged on the preparation of a book on Scottish geology, undertaken in collaboration with Peach and intended as their last great gift to the science they had served so long and so faithfully. He lost Peach in January, 1926 (what the loss meant to him is beyond understanding), and carried on at this task alone, but the end came before it was complete.

Knowledge and service were the lodestars of Horne's life, and the brief account of his work that has been given shows how steadfastly and faithfully he pursued them. His generous nature, his wide sympathies, and his inspiring enthusiasm endeared him to all who were brought into contact with him. He loved to meet and mix with his fellow-workers both at home and abroad, to discuss their problems, and out of his own great store of experience and knowledge to suggest new viewpoints or fresh lines of attack. But still more did he love to have the young and the untried bringing to him their difficulties; he was never too busy to welcome them and those who so sought him never failed to find encouragement and help. None knew better than he the pitfalls that beset the beginner, none knew better than he how to advise, to warn, and to praise. The world of geology is infinitely the poorer by his death but to all who had the privilege of knowing him he has left an imperishable and fragrant memory. And his friends the world over, thinking to-day of his untiring devotion to the pursuit of truth, of his patience, his sincerity, and his selflessness, of his unfailing courtesy and unwearying kindness to all, will be ready to say with the writer: A great gentleman and a great geologist has passed.

M. MACGREGOR.