nearly fifty years on Mesozoic and Tertiary Invertebrata, and especially distinguished for his researches on the Jurassic echinoidea and crinoidea. As early as 1861 he published "Description des animaux invertébrés fossiles contenus dans l'étage néocomien moyen de Mont Salève". Soon afterwards he was at work with E. Pellat on the Upper Jurassic fossils of Boulogne-sur-Mer, on which they issued a series of joint He aided Pictet with his Matériaux pour la monographs. Paléontologie Suisse, and later (1882-9) he described the Jurassic crinoids in the continuation of d'Orbigny's Paléontologie Française. He was associated also in joint memoirs with other workers: Cotteau. Choffat, Desor, Ernest Favre, Gilliéron, Girardot, Royer, Schardt, and Tombeck. Of independent works may be mentioned his Echinologie Helvétique, Monographie des Crinoides fossiles de la Suisse, and descriptions of Tertiary echinoids from Egypt and Portugal. He wrote also a monograph on the fossils of the zone of Ammonites tenuilobatus (to which attention was drawn in the Geological Magazine for 1878, p. 354, and 1882, p. 279). Some of these memoirs were contributed to the Physical and Natural History Society of Geneva, the Society of Natural Science of Neûchatel, and the Swiss Zoological Review, while others in later years were published by the Swiss Palæontological Society. De Loriol was elected a Foreign Correspondent of the Geological Society of London in 1894.

## HUGH LEONARD.

BORN 1841.

DIED FEBRUARY 16, 1909.

THE death of Mr. Hugh Leonard, following close upon that of Mr. G. H. Kinahan, removes another link with the Irish Geological Survey as it stood up to the time of its severance from that of Great Britain in 1905.

Mr. Leonard was appointed Assistant Geologist in August, 1867, and, under the guidance of Mr. Kinahan, surveyed large tracts of the complicated areas of Mayo and Galway in the west of Ireland, subsequently mapping a considerable portion of county Cavan, and finally revising the survey of the interesting district about Enniscorthy, in co. Wexford. His mapping, always careful and accurate, has withstood the brunt of latter-day revisions, while his accompanying memoirs are clear and explicit. Possessed of a firstclass knowledge of chemistry, he made good use of this science as an aid to his geological researches. Unfortunately an accident, sustained in the course of field-duties, deprived the Survey of Mr. Leonard's services in the year 1881, when he retired on a specially granted superannuation. He was for many years a Fellow of the Geological Society, an active Member of the Royal Irish Academy, and, up to the time of its dissolution in 1889, he acted as Honorary Secretary of the Royal Geological Society of Ireland. Of a kind, helpful, and cheerful disposition, he was greatly esteemed by the many who enjoyed his friendship. He passed away after a brief illness at his residence, Blackrock, co. Dublin.

R. CLARK.