

JOLY (John) [1857–1933], Professor of Geology and Mineralogy in the University of Dublin (Trinity College), was born at Hollywood, King's Co., Ireland, on November 1, 1857, his father being of French descent, and his mother a German countess of Greek, Italian, and English ancestry. The records of the date (1857 or 1858) of his

birth are contradictory, but John Joly himself 'after examining the matter carefully believed he was born in 1857'. Here are surely the materials for the making of a genius. He died in Dublin on December 8, 1933. Entering Trinity College in 1876 he graduated in engineering, and from 1882 to 1891 he was demonstrator in civil engineering, and afterwards in experimental physics. He was appointed Professor of Geology and Mineralogy in 1897. The versatility and energy of the man overflowing with bright ideas were astonishing. His published papers cover an extraordinarily wide range of subjects. Early papers (1884-6) recorded the occurrence of beryl, cordierite, and harmotome in County Wicklow, and described the microscopical characters of volcanic ash from Krakatoa and New Zealand. Ingenious yet simple pieces of apparatus were devised for determining the specific gravity, melting point (meldometer), volatility (apophorometer), specific heat, and the birefringence of minerals; the changes in volume of minerals and rocks on fusion; and the thermal expansion of diamond. He also studied the order of formation of silicates in igneous rocks, and was the first to examine paving and road stones by petrographical methods. In his specially designed electric furnace crystals of calcium oxide, magnesium oxide, platinum, and palladium were prepared artificially. Later came his important work in connexion with radioactivity. He was the first to give the correct explanation of the pleochroic haloes shown by certain minerals, and from measurements of these he was able to give an estimate of the age of the earth. (He had earlier given an estimate of the age of the earth from the amount of salt present in the sea.) The radium and thorium contents of different kinds of rocks were determined, and he elaborated a theory of the development of the earth's internal heat by radioactivity and the consequent changes in the crust, a subject on which he wrote many papers, and a book, 'Radioactivity and geology' (1909). The items mentioned above represent but a small part of his many-sided activities. He was elected a Fellow of the Royal Society in 1892, and was President of



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the Royal Dublin Society, in whose Proceedings most of the papers were published. His fine private collection of minerals was bequeathed to Trinity College. (Sir Oliver Lodge, *Phil. Mag. London*, 1934, ser. 7, vol. 17, pp. 198–200; H. H. Dixon and J. H. J. Poole, *Nature, London*, 1934, vol. 133, pp. 90–92. *Obituary Notices of Fellows of the Royal Society, London*, 1934, vol. 1, pp. 259–286, with portrait and bibliography; L. B. Smyth, *Quart. Journ. Geol. Soc. London*, 1934, vol. 90, pp. lv–lvii.)