

the "General Committee" in 1862. During this period he communicated several papers: (1) "On the Action of Heat on certain Sandstones of Yorkshire" (*Proc. Geol. Assoc.*, vol. i, p. 50), when he drew attention to the road-metal used near Huddersfield, and to the custom of hardening the stone by the action of fire; (2) "On the Efflorescence which succeeds the action of Heat on certain Sandstones of Yorkshire" (*ibid.*, p. 158); (3) "On the Plasticity and Odour of Clay" (*ibid.*, p. 237), in which he observed that clay ceased to be plastic when deprived of its chemically combined water, and that plasticity and other properties depend upon variations in the attractive force of the molecules of matter according to the distances apart of such molecules. The peculiar odour of clay belonged only to impure clays, and chiefly to those containing oxide of iron.

H. B. W.

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THE REV. JOHN EDWARD CROSS., M.A., F.G.S.

(*Prebendary of Lincoln*).

BORN 1821.

DIED FEBRUARY 28, 1897.

THE Rev. J. E. Cross (brother of Viscount Cross) was educated at Christ Church, Oxford, and was appointed to the curacy of Bolton-le-Moors in 1846. Three years later he became curate of Appleby, near Brigg, in Lincolnshire, and he was presented to the vicarage in 1856. In this quiet village he lived and laboured for thirty-five years, retiring in 1891 to Grange-over-Sands.

To geologists Mr. Cross is known as the author of an excellent paper on "The Geology of North-West Lincolnshire" (*Quart. Journ. Geol. Soc.*, vol. xxxi, pp. 115-130. Appendix by R. Etheridge). In this work he described, for the first time in detail, the Jurassic formations from the Lower Lias to the Cornbrash, in the area bordering the south shore of the Humber between the rivers Trent and Ancholme. It was, as he remarked, "a corner of the land unknown to fame" until the discovery of the valuable iron-ore in the Lower Lias at Frodingham. Long and diligently had Mr. Cross worked, as shown by his careful record of facts, and the numerous fossils he had collected. Several new species of Mollusca were described by Mr. Etheridge.

H. B. W.

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MISCELLANEOUS.

NEW GEOLOGICAL SURVEY MAPS.—Attention was drawn in the GEOLOGICAL MAGAZINE for February, 1896, p. 96, to the General Map of England and Wales (on the scale of four-miles to one inch), which was in course of publication by the Geological Survey. We now learn that the hand-coloured edition of this useful map is complete, the fifteen sheets, including title and index of colours, all being published. We called attention to the fact that Sheet 12 of this map (London Basin and Wealden area) was issued last year at the greatly reduced price of 2s. 6d., *printed in colours*. We are glad to announce that three other sheets have now been similarly published, viz.: Sheet 6 (East Yorkshire), Sheet 9 (Eastern Counties), and Sheet 15 (Sussex Coast). The price is uniformly 2s. 6d.