

afterwards read . . . The author was evidently ignorant of my memoir, but he had arrived at conclusions identical with those which I had announced in May 1834.' The fact was that although a short summary of the first paper had been printed in the *Proceedings* of the Society, it was not uncommon to amalgamate two or more papers by one author in the *Transactions*, which were then published at irregular intervals.

Hunton, in describing the Upper Lias and Marlstone near Whitby, drew attention to the limited vertical range of many species, and remarked 'But of all organic remains, the Ammonites afford the most beautiful illustration of the subdivision of strata, for they appear to have been the least able, of all the Lias genera, to conform to a change of external circumstances.'¹

Hugh Edwin Strickland in 1840 came to somewhat similar conclusions with regard to the Lias on the borders of Worcestershire and Gloucestershire. Thus early we find indications of the zonal grouping which in Germany was established by Quenstedt in 1843 and subsequently developed by Opel.

About this period Edward Charlesworth (1813-93) appeared upon the scenes. The son of a clergyman, who for some years was rector of Flowton near Ipswich, he had been educated for the medical profession, but became so interested in Geology and especially in the Crag deposits of East Anglia, that he determined to devote himself to natural science. In May 1835 he read before the Society a paper 'On the Crag of part of Essex and Suffolk.' This was published only in abstract. It appeared elsewhere in full with the title: 'Observations on the Crag-formation and its Organic Remains; with a View to establish a Division of the Tertiary Strata overlying the London Clay in Suffolk.'² It is difficult to understand

¹ *Trans. Geol. Soc.* ser. 2, v. p. 215. Mr. C. Fox Strangways informs us that Louis Hunton was probably son of William Hunton, at that time manager of the Lofthouse Alum Works.

² *Phil. Mag.* ser. 3, vii. August 1835, p. 81.