

Oxfordshire, these beds get still more sandy, the limestone of the Inferior Oolite disappears by degrees, sandy beds replace them, which are overlaid directly by the sands of the Great Oolite, the two forming together what are generally known as the Northampton Sands. By-and-by, in the district of Rockingham near Geddington, the Inferior Oolite Limestone begins to reappear, overlying the lower part of the Northampton Sands, and lying flat, and thickening by degrees, it forms the surface of a great tract of country towards Stamford and Thistleton, in Northamptonshire and Rutlandshire, also towards Grantham, and in Lincolnshire, being always underlaid by the Northamptonshire Sand. The Inferior Oolite of this district is well known as the Lincolnshire Oolite Limestone. The sands beneath it have been largely worked in Northamptonshire for ironstone, and their upper part is occasionally white, 'with remains of plants, sometimes vertical, also thin seams of lignite, and miniature *underclays*,' while 'thin seams containing *Cyrena* (a fresh-water bivalve shell) occur in this part of the series. These beds have been distinguished by Mr. Judd as the *Lower Estuarine Series*.<sup>1</sup>

Above the Lincolnshire Oolite Limestone there lie certain strata, named by Mr. Judd the *Upper Estuarine Series*, forming, in his opinion, the lowest part of the Great Oolite of this area. They are well seen in some of the cuttings of the Great Northern Railway, and on the top of the Inferior Oolite Limestone quarries at Ketton, Clipsham, and Casterton. As described by Mr. Judd, there are in these strata 'bands of sandy stone with vertical plant markings and layers of shells,

<sup>1</sup> 'Geology of Rutland,' &c. J. W. Judd, p. 92, 'Memoirs of the Geological Survey.'