

channel for itself through the boulder-clay that partially blocked up the original valley in which it ran. *When* that original valley was formed through which the older Severn ran is the point that I shall now attempt to discover. This subject is intimately connected with the origin and geological dates of the channels of many of the other large rivers of England, most of which, unlike the Severn, flow eastward to the English Channel and the German Ocean.

I must begin the subject by a rapid summary of certain physical changes that affected the English Secondary and Eocene strata long before the Severn, after leaving the mountains of Wales, took its present southern and south-western course along the eastern side of the Palæozoic rocks that border that old land.

About the close of the Oolitic epoch the Oolitic formations were raised above the sea, and remained a long time out of water ; and, during that period, those atmospheric influences that produced the sediment of the great Purbeck and Wealden delta were slowly wearing away and lowering the land, and reducing it to the state of a broad undulating plain. At this time the Oolitic strata still abutted on the mountain country now forming Wales and parts of the adjacent counties. They also completely covered the Mendip Hills, and passed westward as far as the mountains of Devon passing out between Wales and Devonshire through what is now the Bristol Channel. The whole of the middle of England was likewise covered by the same deposits, overlying the rocks that now form the plains of Shropshire, Cheshire, Lancashire, and the adjoining areas, so that the Lias and Oolites passed out to the area now occupied by the Irish Sea, over and beyond the present estuaries of the Dee and the Mersey,