

*The Fossils of the South Downs, or Illustrations of the Geology of Sussex.* Like Conybeare, he distinguished two formations, Greensand and Chalk, each of which was divided into sub-groups. The Blue Marl (Gault or Malm) in Mantell's system forms the lowest horizon of the Chalk deposits, and is said to be superposed upon the Greensand formation; in the latter Mantell includes the various horizons of the true Greensand, the Wealden or Oak-tree Clays, the Tilgate beds, and the ferruginous sand. An atlas, with forty-two plates, contains a geological map of Eastern Sussex and several geological sections, also sketches of characteristic landscapes in the Cretaceous area and illustrations of the fossils belonging to the successive horizons. The best portion of the work is Mantell's description of the three lower horizons of the Greensand formation, which had been in 1828 designated as "Wealden formation" by Martin and Fitton. Mantell afterwards discovered skeletal remains of *Iguanodon*, *Hylæosaurus*, and other reptiles in the Tilgate strata, and otherwise contributed very greatly to our knowledge of the fauna and flora of the fluviatile Wealden formation.

In Yorkshire the lower greensand, and perhaps also the Wealden horizon, is replaced by clays and oolitic ironstones, to which J. Phillips gave the name of *Speeton Clay*. The parallelism of the argillaceous and ferruginous series of Yorkshire with a similar marine facies of Neocomian deposits in Russia, has recently been made the subject of combined investigations by Lamplugh and Pavlow.

W. H. Fitton was the first to arrive at definite results regarding the stratigraphy of the older Cretaceous deposits in England. His paper, entitled "Observations on some of the Strata between the Chalk and the Oxford Clay," was read at the Geological Society in 1827, but not published until 1836 in the *Transactions*. In it Fitton retained both sub-divisions, Chalk and Greensand, but assigned the *Upper Greensand* layers of Blackdorn, etc., to their correct stratigraphical position, and recognised the *Lower Greensand* as the basement beds below the *Gault*. Numerous sections, a geological map, and lists of fossils accompany the accurate and fundamental observations of this geologist. A combined work, published by Buckland and De la Beche in 1830, contains valuable information regarding the stratigraphy of the Cretaceous formation in Dorsetshire.