

that the whole series of marine accumulations of every age, from the cretaceous period to the present day, will be grouped together, but distinguished from another equally extended series of lacustrine and fluviatile sediments; the principle of investigation in each case being founded on a rigorous study of the characters of mineral structure, and the organic exuviæ, which are characteristic of the sea, the streams, and the land.

At present, however, not to deviate too far from the method now familiar to geologists, we shall assume that, in spite of the difficulties above noticed, the tertiary strata and modern deposits can be distinguished in particular cases, though not in conformity with any general definition. If the account of the modern deposits be in like manner arranged with reference to the same really influential conditions, — their marine or fresh-water origin, — no confusion will, under any circumstances, be caused.

The English series of marine tertiaries is principally exhibited in the basin of Hampshire and the Isle of Wight, in the basin of London, and on the eastern coast, from the mouth of the Thames to that of the Yare; and each of these districts exhibits peculiarities of the component terms. The section of the Isle of Wight, at Alum Bay, one of the most remarkable known in the world, exhibits a great and varied mass of sands and clays, whose planes of stratification, originally horizontal, are now vertical. The whole may be considered as one formation; for, in the lower part, which is principally sandy, argillaceous beds occur, with fossils the same or very similar to those in the upper part. The following is a synopsis of these vertical beds: —

Freshwater Formations above.

Upper group, or London clay.	{	Yellow and white sands. Dark clay with green earth and septaria, rich in fossil shells. 250 feet thick.
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