

## PART IV. CAINOZOIC OR TERTIARY

The close of the Mesozoic periods was marked in the west of Europe by great geographical changes, during which the floor of the Cretaceous sea was raised partly into land and partly into shallow marine and estuarine waters. These events must have occupied a vast period, so that, when sedimentation once more became continuous in the region, the organisms of Mesozoic time (save low forms of life) had, as a whole, disappeared and given place to others of a distinctly more modern type. In England, the interval between the Cretaceous and the next geological period represented there by sedimentary formations is marked by the abrupt line which separates the top of the Chalk from all later accumulations, and by the evidence that the Chalk seems to have been in some places extensively denuded before even the oldest of what are called the Tertiary formations were deposited upon its surface. There is evidently here a considerable gap in the geological record. We have no data for ascertaining what was the general march of events in the south of England between the eras chronicled respectively by the Upper Chalk and the overlying Thanet beds. So marked is this hiatus, that the belief was long prevalent that between the records of Mesozoic and Cainozoic time one of the great breaks in the geological history of the globe intervenes.

Here and there, however, in the continental part of the Anglo-Parisian basin, traces of some of the missing evidence are obtainable. Thus, the Maestricht shelly and polyzoan limestones, with a conglomeratic base, contain a mingling of true Cretaceous organisms with others which are character-