

Starting from the Chalk of the north of France, the two observers succinctly indicate the leading characters of that deposit, its feeble stratification, chiefly marked by parallel layers of dark flints, the varying distances of these layers from each other, and the distinctive fossils. Putting together the organisms they had themselves collected, and those previously obtained by DeFrance, they could speak of fifty species of organic remains known to occur in the Chalk—a small number compared with what has since been found. The species had not all been determined, but some of them, such as the belemnites, had been noted as different from those found in the “compact limestone,” or Jurassic series.

From the platform of Chalk, Cuvier and Brongniart worked their way upward through the succession of Tertiary formations. At the base of these, and resting immediately on the Chalk, came the Plastic Clay—a deposit that in many respects presented strong contrasts to the white calcareous formation underneath it. It showed no passage into that formation, from which, on the contrary, it was always abruptly marked off, and it yielded no organic remains. The two geologists accordingly drew the sound inference that the clay and the chalk must have been laid down under very different conditions of water, and they believed that the animals which lived in the first period did not exist in the second. They likewise concluded that the abrupt line of junction between the two formations might indicate a long interval of time, and they inferred, from the occurrence of an occasional breccia of chalk fragments at the base of the clay,