

to the comparative anatomist and botanist, but particularly to the former, a rich fund of new materials, and adds to the several departments of natural history supplements, the knowledge of which is indispensable to complete our views of them: indeed, in many instances, important peculiarities of organisation, and remarkable links in the chain of animated beings are presented in these fossil remains, and many chasms which must otherwise have existed, are filled up in a satisfactory manner.

But the principal concern of the geologist is with the manner in which these remains are distributed in the strata forming the present crust of the earth; we have before noticed that they are confined to the secondary formation, and have now to add that they are not irregularly dispersed throughout the whole series of these formations, but disposed as it were in families, each formation containing an association of species peculiar in many instances to itself, widely differing from those of other formations, and accompanying it throughout its whole course; so that at two distinct points on the line of the same formation, we are sure of meeting the same general assemblage of fossil remains. It will serve to exemplify the laws which have been stated, if the observer's attention is directed to two of the most prominent formations of this island; namely, the chalk, and the limestone which underlies the coal in Northumberland, Derbyshire, South Wales, and Somerset. Now, if he examines a collection of fossils from the chalk of Flamborough head or from that of Dover cliffs, or, it may be added, from Poland or Paris, he will find eight or nine species out of ten the same;

roborative presumption that they are, *a fortiori*, different from those of the present ocean. The nearest approach to recent species appears to exist in some of the coralline and madreporal remains; but these classes have not as yet undergone an examination sufficiently rigorous, either in a recent or fossil state, to enable us to pronounce with certainty.

The remains of marine oviparous quadrupeds (Ichthyosaurus, Plesiosaurus, Maestricht animal, &c.) are referable to new genera widely different from any thing with which we are acquainted, and the fossil species of crocodile are strongly distinguished from the recent. These enormous and singular animals (sometimes almost rivalling the whale in size) which must often come to the surface to breathe, cannot surely have eluded the observation of all our voyagers. The land quadrupeds found in some of the most recent strata, and many of those even mingled in the diluvial detritus with the bones of animals still existing in the same countries, are often of genera widely distinct from any with which we are acquainted (c. g. Palæotherium, Megatherium, Mastodon, &c.) or of distinct species, as the fossil bear, rhinoceros, and elephant; and M. Cuvier has shewn at large the little probability there is that any of them exist in an unknown condition. It must be carefully remembered that an accurate and rigorous knowledge of Zoology is requisite in any one who ventures to discuss this subject; a superficial acquaintance with it can only lead into confusion and error.