

promiscuously distributed: the upper beds of stone which compose the rock, contain fossils materially different from those in the under; the clusters of small oyster shells and the stems of the pentacrinus lie near together, and not many others are found near the bottom of the rock.

In the *Forest marble*, though its various beds are composed of little else but a mass of shells, loose and whole specimens are rare, and extracted with great difficulty. A few however are occasionally found in the clay between the stone; bones, teeth, and wood, firmly imbedded in the rock, are some of its most characteristic indications. Pickwick and Atford quarries, a few miles east of Bath, used to be most famous for these; but since it has been generally understood that the same stratum may uniformly be expected to produce the same organized fossils, other quarries of the same stone have been searched and found to contain them. Small turbinated shells are frequent in this rock: the univalves are more common in the thin, the bivalves in the thicker beds.

If the *Calcareous slate of Stonesfield* be correctly assigned to this part of the series (which is rendered still more probable by the occurrence of the same teeth and palates in both instances), we here find the only known instance in which the remains of birds and terrestrial animals have been found in beds of antiquity at all approaching to these; they here occur mingled with *winged* insects, amphibia, sea shells, and vegetables, presenting at once the most interesting and difficult of problems connected with the distribution of organic remains.

The *Clay above the great oolite* contains few fossils, except in its lowest bed, where in immediate contact with the upper surface of the subjacent oolites; but in this point it abounds with remains of the pear encrinus, with many small coralloids, and several peculiar terebratula.

The *Great oolite*. In the great mass of this rock, as has been before observed, perfect remains are rare, from the generally comminuted state in which they occur; in some of the upper beds however they are more easily distinguished. Many small turbinated shells, like those of the forest marble, here occur in the stone, and a bed containing numerous madrepores, several of which appear identical with those of the coral rag, is also found in part of the series. Most of the fossils of the subjacent clay are also common to the upper beds of the oolite.

We proceed to a more particular enumeration of the families of organic remains occurring in these beds.

VERTEBRAL ANIMALS.—*Mammalia*. The calcareous slate of Stonesfield presents bones, believed by Mr. Cuvier to belong to a species of Didelphys, one of the opossum tribe; they are