generally common to this and the transition limestone, and many species are also common. In this, as in every other respect, its alliance is much more close with the older, than with the more recent deposits; and were it not preferable to constitute a distinct class for the reception of the carboniferous series, it ought undoubtedly rather to be referred to the transition suite than any more recent order.

Vertebral remains are very rare. Of *Testacea* though the species are many, the genera are comparatively few; while the *Zoophytal* families, particularly *Encrinites* and *Corallites* are in the greatest profusion.

To proceed to particulars.

Vertebræ of fish, *Sharks teeth*, and many singular *palatal tritores*, and the radius of a *Balistes*, exhibit proofs of the existence of vertebral animals in this formation.†

Of the *Crustaceous tribe*, *Trilobites* are found in this formation, as in the transition limestone; but the species are apparently distinct: one of these, Oniscites Derbiensis, is figured in Martin's Derbyshire Petrifactions, P. 45.* 1 & 2. P. 45. 1 & 2.; and another species, as yet undescribed, occurs in the carboniferous limestone near Bristol, whose transverse folds are tuberculated.

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Ammonites sphœricus. *T.* 53, fig. 2.
A. striatus. *T.* 53. fig. 1.
A. Luidii. Martin's Pet. Derb. *T.* 36, fig. 1.
Nautilus discus. *T.* 13.
N. pentagonus. *T.* 249, fig. 1.
N. bilobatus. *T.* 261.
N. complanatus. *T.* 60, fig. 5.
Orthocera Breynii. *T.* 60, fig. 5.
O. undulata. *T.* 59.
O. gigantea. *T.* 246.
O. cordiformis. *T.* 247.

Some of the Orthoceratites nearly resemble the alveoli of common belemnites; but the occurrence of true belemnites in this rock appears doubtful.

Conularia (a conical shell divided by imperfect septa) *C.* quadrisulcata. *T.* 260, fig. 3 to 6.
C. Teres. *T.* 260, fig. 1. 2.

* Mr. Whitehurst (Theory of the Earth) mentions the discovery of a crocodile in this formation in Derbyshire; having made enquiries in that county respecting the specimen alluded to, we have been informed that a mutilated orthoceratite had been mistaken for the scales of this animal.