

Lyme Regis, presented to the Oxford Museum by Viscount Cole, enclosing within its ribs scales, and digested bones of Fishes, in the state of Coprolite. This coprolitic mass seems nearly to retain the form of the stomach of the animal. c, Coracoid bone. d, Scapula. e, Humerus. f, Radius. g, Ulna. (Scharf. Original.)

PLATE 14. V. I. p. 191.

Skeleton of the Trunk of a small Ichthyosaurus in the

Fig. 5. Nearly flat articular surface of (probably) the third cervical vertebra of the same large Individual as Fig. 3. This surface of the bone has only a small cylindrical depression at its centre, instead of the deep, conical cup of the more flexible vertebræ, C. B. E.

Near its upper margin is a wedge-shaped elevation (b) and near the inferior margin, a notch or furrow (a). These salient and re-entering portions articulated with corresponding depressions and projections on the surface of the adjacent vertebra, and acted as pivots, admitting a limited amount of lateral vibrations, and at the same time preventing any slip, or dislocation.

Fig. 6. Concave surface of Fig. 5.; the wedge-shaped projection near its lower margin (a) must have articulated with a corresponding groove or depression on the front of the vertebra adjacent to it, like that at (Fig. 5. a.) As one surface only of these vertebræ had a conical cavity, the intervertebral substance must have formed a single cone, admitting in the neck but half the amount of motion, that the double cones of intervertebral matter allowed to the dorsal and caudal vertebræ, (C. B. E.) where greater flexure was required, to effect progressive motion by vibrations of the body and tail.

These dispositions of the articulating facets of the cervical vertebræ, acting in conjunction with the three sub-vertebral wedges before described, afford an example of peculiar provisions in the neck of these gigantic Reptiles, to combine a diminished amount of flexure in this part, with an increased support to their enormous heads.

It is probable that every species of Ichthyosaurus had peculiar variations in the details of the cervical vertebræ, and subvertebral wedges, and that in each species these variations were modified by age.

In the Gavial Mr. Mantell has recently observed that the first caudal vertebra is *doubly convex*, like the last cervical vertebra in Turtles. These peculiar contrivances give to the animals in which they occur increased flexibility of the Tail and Neck.