

Sternum.

To a marine animal that breathed air, it was essential to possess an apparatus whereby its ascent and descent in the water may have been easily accomplished ; accordingly we find such an apparatus, constructed with prodigious strength, in the anterior paddles of the Ichthyosaurus ; and in the no less extraordinary combination of bones that formed the sternal arch, or that part of the chest, on which these paddles rested. Pl. 12, Fig. 1.

It is a curious fact, that the bones composing the sternal arch are combined nearly in the same manner as in the *Ornithorhynchus** of New Holland ; which seeks its food at the bottom of lakes and rivers, and is obliged, like the

the largest possible quantity of common air, by a succession of strong and rapid inspirations, and immediately compressing the lungs thus filled with air, by muscular exertion, and contraction of the chest, before he plunges into the water. By this compression of the lungs, the specific gravity of the body is also increased, and the descent is consequently much facilitated.

All these advantages were probably united in the mode of respiration of the *Ichthyosaurus*, and also in the *Plesiosaurus*.

* In this anomalous animal the *Ornithorhynchus* or *Platypus*, we have a quadruped clothed with fur, having a bill like a duck, with four webbed feet, suckling its young, and most probably ovo-viviparous : the male is furnished with spurs.—See Mr. R. Owen's Papers on the *Ornithorhynchus Paradoxus*, in the *Phil. Trans. London*, 1832, Part II. and 1834, Part II. See also Mr. Owen's Paper on the same subject in *Trans. Zool. Soc. London*. Part III. 1835, in which he points out many approximations in the generative and other systems of this animal to the organization of reptiles.