

of living Nature the Creator seems to have repeated, in our days, the organic arrangements which he had originally provided for the Ichthyosaurus.

In order that the animal should be able to move with rapidity in the water, both its anterior and posterior members were converted into fins or paddles. The anterior fins were half as large again as the posterior. In some species each paddle was made up of nearly a hundred bones, of polygonal form, and disposed in series representing the phalanges of the fingers. This hand, jointed at the arm, bears resemblance, in osteological construction, to the paddles, without distinct fingers, of the Porpoise and the Whale. A specimen of the posterior fin of *I. communis*, discovered at Barrow-on-Soar, in Leicestershire, in 1840, by Sir Philip Egerton, exhibited on its posterior margin the remains of cartilaginous rays, which bifurcated as they approached the edge, like those in the fins of a fish. "It had previously been supposed," says Professor Owen, "that the locomotive organs were enveloped, while living, in a smooth integument, like that of the turtle and porpoise, which has no other support than is afforded by the bones and ligaments within; but it now appears that the fin was much larger, expanding far beyond the osseous frame-work, and deviating widely in its fish-like rays from the ordinary reptilian type." The Professor believes that, besides the fore-paddles, these stiff-necked Saurians were furnished at the end of the tail with a fin to assist them in turning, not placed horizontally, as in the whale, but vertically, forming a powerful instrument of progression and motion. It is obvious that the Ichthyosaurus was an animal powerfully armed for offence and defence. We cannot say, with certainty, whether the skin was smooth, like that of the whale or lizard, or covered with scales, like the great reptiles of our own age. Nevertheless, as the scales of the Fishes and the cuirass and horny armour of other Reptiles of the Lias are preserved, and as no such defensive scales have been found belonging to the Ichthyosaurus, it is probable that the skin was naked and smooth. The tail, composed of from eighty to eighty-five vertebræ, was provided with large and long paddles, arranged vertically as in the Whale.

It is curious to see to what a degree of perfection has been carried, in our days, the knowledge of the antediluvian animals, their habits, and their economy. Fig. 98 represents the skeleton of an Ichthyosaurus found in the Lias of Lyme Regis, which still retains in its abdominal cavity coprolites, that is to say, the residue of digestion. The soft parts of the intestinal canal have disappeared, but the *fæces* themselves are preserved, and their examination informs us as to the