

The preservation of such foecal matter, and its conversion to the state of stone, result from the imperishable nature of the phosphate of lime, of which both bones, and the products of digested bones are equally composed.

The skeleton of another Ichthyosaurus in the Oxford Museum, from the lias at Lyme Regis, (Pl. 14) shows a large mass of fish scales, chiefly referrible to the *Pholidophorus limbatus*,\* intermixt with coprolite throughout the entire region of the ribs; this mass is overlaid by many ribs, and although, in some degree perhaps, extended by pressure, it shows that the length

\* According to Professor Agassiz, the scales of *Pholidophorus limbatus*, a species very frequent among the fossils of the lias, are more abundant than those of any other fish in the Coprolites found in that formation at Lyme Regis; and show that this species was the principal food of these reptiles. In Coprolites from the coal formation, near Edinburgh, he has also recognized the scales of *Palæoniscus*, and of other fishes that are often found entire in strata that accompany the coal of that neighbourhood. Scales of the *Zeus Lewisiensis*, a fish discovered by Mr. Mantell, in the chalk, occur in Coprolites derived from voracious fishes during the deposition of this formation.

A Coprolite from the lias, (Pl. 15, Fig. 3), remarkable for its spiral convolutions, and vascular impressions, affords a striking example of the minute accuracy with which investigations are now conducted by naturalists, and of the kind of evidence which comparative anatomy contributes in aid of geological enquiry. On one side of this Coprolite, there is a small scale, (Fig. 3, *a*), which I could only refer to some unknown fish, of the numerous species that occur in the lias. The instant I showed it to M. Agassiz, he not only pronounced its species to be the *Pholidophorus limbatus*; but at once declared the precise place which this scale had occupied upon the body of the fish. A minute