

sub-cylindrical form, with a few annular membranous constrictions or folds. It has so much the appearance of the *air-bladder*, that I described it as such, *Foss. South D.* M. Agassiz first discovered its true character.

COPROLITES. *Lign.* 99, figs. 1, 2.—In more than one example the solid, earthy residue of digestion, in small lumps, of a conical form, and spirally convoluted, lies in the abdomen. Fossil excrementitious remains of this kind are termed *Coprolites* (*Bd.* p. 198, pl. 15.), and are found in many deposits; belonging not only to fishes, but to large reptiles, and other animals. *Lign.* 99, p. 432, fig. 1, represents the coprolite of a *Macropoma*; and fig. 2, of a species of *Shark*, from Hamsey. The convoluted appearance of these bodies arises from the peculiar organization of the intestinal canal of the original fishes; in which, as in the recent Dog-fish, a portion of the intestine was spirally twisted, the tube forming several gyrations; and the passage of the calcareous substance through this constricted canal, gave rise to the structure observable in the coprolites. In the *Macropoma* the gyrations appear to have been few; seldom more than five or six turns being apparent. In the fossil Sharks the convolutions are more numerous, ten or twelve occurring in the length of an inch. In many of the coprolites, the microscope detects the impression of the mucous or lining membrane of the intestinal canal. Some of the coprolites of the *Macropoma* are not convo-