

certain amphibious animal described in the Memoirs of the French Academy. "The reader will remember," he says, "what we have already observed concerning the *intestinal* canal,—that its length, so many times exceeding that of the body, promotes the extraction of the chyle from the aliment, by giving room for the lacteal vessels to act upon it through a greater space. This long intestine, whenever it occurs, is in other animals disposed in the abdomen from side to side, in returning folds. But in the animal now under our notice, the matter is managed otherwise. The same intention is mechanically effectuated, but by a mechanism of a different kind. The animal of which I speak is an amphibious quadruped, which our authors call the *Alopecias* or sea-fox. The intestine is straight from one end to the other, but in this straight, and consequently short intestine, is a winding, cork-screw, spiral passage, through which the food, not without several circumvolutions, and, in fact, by a long route, is conducted to its exit. Here the shortness of the gut is *compensated* by the obliquity of the perforation." This structure of intestine, which all the true Placoids possess, and at least the Sturiones among existing Ganoids, seems to have been an exceedingly common one during both the Palæozoic and Secondary periods. It has left its impress on all the better preserved coprolites of the Coal Measures, so abundant in the shales of Newhaven and Burdie House, and on those of the Lias and Chalk. It seems to be equally a characteristic of well nigh all the bulkier coprolites of the Lower Old Red Sandstone.* In these, however, it manifests

* In two of these, in a collection of several score, I have failed to detect the spiral markings, though their state of keeping is decidedly good. There are other appearances which lead me to