

in the modern voracious tribes of Sharks and Dog-fish.\*

As the peculiar voracity of all these animals required the stomach to be both large and long, there would remain but little space for the smaller viscera; these are therefore reduced, as we have seen, nearly to the state of a flattened tube, coiled like a corkscrew around itself; their bulk is thus materially diminished, whilst the amount of absorbing surface remains almost the same, as if they had been circular. Had a large expansion of intestines been superadded to the enormous stomach and lungs of the Ichthyosaurus, the consequent enlargement of the body would have diminished the power of progressive motion, to the great detriment of an

\* Paley, in his chapter on mechanical compensations in the structure of animals, mentions a contrivance similar to that which we attribute to the Ichthyosaurus, as existing in a species of Shark, (the Alopecias, *Squalus Vulpes*, or Sea Fox). "In this animal, he says, 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."

Dr. Fitton has called my attention to a passage in Lord King's Life of Locke, 4<sup>o</sup>. p. 166, 167, from which it appears that the importance of a spiral disposition within the intestinal canal, which he observed in many preparations in the collection of anatomy at Leyden, was duly appreciated by that profound philosopher.