

the lateral suspensory enlargements of the head is rather muscular. But the muscles become attenuated further behind, forming a thin band on each side of the vertebral column. A large abdominal bag, formed by the external integuments and the membranes of the stomach, is suspended from the trunk, and may be so much distended that the contents of the stomach are clearly visible through the walls of the bag.

The trunk passes into the compressed tail, on which the muscles form only a very thin layer. Gradually the depth of the tail diminishes, the last five inches being as thin as a thread, in which at first elongate vertebral centra are still distinguishable, whilst the last two and a half inches are a simple filament without segmentation.

Fishes with the organs of locomotion so feebly developed, and with a long caudal appendage which must be an impediment rather than a help in locomotion, may be justly supposed to be sluggish in their movements, habitually lying on the bottom of the sea, more or less concealed in the ooze. They patiently wait for the approach of their prey, the size of which will compensate for the rarity of the occasions on which a fish comes within their reach.

The rupture of the abdominal sac has afforded an opportunity of examining some of the vertebræ in the middle of the trunk. The fibrous ligaments connecting the vertebræ are extremely thin, and as easily ruptured as in a well-macerated skeleton. The centra of these vertebræ (fig. *v*) are  $5\frac{1}{2}$  mm. long, hour-glass-shaped, with deep and spacious concavities which are connected by a very narrow canal. A pair of short, acute divergent spines start from the neural surface of the most constricted portion of the centrum; they project at a right angle from the longitudinal axis of the vertebra. On the hæmal side another pair of spines project, but they are directed backwards, and start from behind the middle of the vertebra. The caudal vertebræ are shorter, as may be seen through the skin, and become elongate again towards the narrowest portion of the tail.

It is difficult in our specimen to fix the exact position and shape of the gill-openings. They are longitudinal slits, eight or nine lines long, close together at the lower side of the abdominal bag, and about one inch behind the angle of the lower jaw. There is no separate gill-cavity; a large body passing through the pharynx can be seen through the gill-opening, which in consequence of the distension of these parts, would be a wide open aperture. Three of the branchial arches stretch across the gill-opening, and are more or less visible from the outside; they are extremely slender, merely thin cartilaginous rods with an indistinct knee-shaped bend, and with the gill-laminæ less developed than I have seen in any fish. The second branchial arch is hidden below the skin, and still smaller than the posterior, the first being quite rudimentary, without any gill.

The dorsal and anal fins are in a rudimentary condition. The former commences in front of the vent, but its anterior rays become visible only by dissection, and with