

The scales are rather small, thin, cycloid, and rather deciduous; if a lateral line is present, it is confined to the trunk.

Upper parts of a uniform light brownish colour; the lower parts and the fins colourless.

*Habitat*.—Off Pernambuco, coast of Brazil, Station 122; depth, 350 fathoms. One specimen,  $4\frac{1}{2}$  inches long.

### *Acanthonus*.

*Acanthonus*, Günth., Ann. and Mag. Nat. Hist., 1878, vol. ii. p. 22.

Head excessively large and thick, armed in front and on the opercles with strong spines; trunk very short, the vent being below the pectoral; tail thin, strongly compressed, tapering, with the caudal distinct. Eye small. Mouth very wide, with the teeth in villiform bands in the jaws, on the vomer and palatine bones, and along the hyoid. Barbel none. Ventrals each reduced to a bifid filament, placed close together on the humeral symphysis. Gill-membranes not united. The gill-laminæ are remarkably short; the gill-rakers long, lanceolate, stiff. Scales extremely small. Bones of the head soft, the superficial supporting large cavities.

A true deep-sea form of extraordinary shape, but otherwise not differing from the typical Ophidiidæ.

The gills are four in number, a long slit being behind the fourth. The long gill-rakers (Pl. XXIV. figs.  $\alpha$ ,  $\alpha'$ ) are confined to the middle piece of the first branchial arch, about twenty in number, of which the hindmost are nearly  $\frac{1}{2}$  inch long. The gill-laminæ are very short, but it is possible that they were longer during life, and have shrunk by the action of the spirit; they are slender, like tentacles, free at their extremity. The air-bladder is lodged in a spacious cavity below the abdominal portion of the vertebral column; its membranes are thin where they are attached to the walls of the abdominal cavity, only that portion which separates the organ from the intestines being of a firmer texture. Its posterior portion does not extend to between the muscles of the tail, and is subdivided into several smaller cells by trabeculæ.

The stomach is elongate, externally distinguished from the intestine by a covering of black-coloured peritoneum; the peritoneal lamina, which covers the intestine, being colourless. It is, in the specimen examined, contracted, and does not appear to have been capable of that extraordinary degree of distension which is observed in other deep-sea forms. The intestine makes one and a half convolutions and is short. Liver small. Urinary bladder large; kidneys limited to the posterior part of the abdominal cavity. Testicles oblong.

The specimen dissected had two gland-like masses attached to the posterior edge of