wall; the wall covered with a tough cuticle; no circular muscle; tentacles fourteen in number, of medium size, arranged in a single circle.

Habitat.—Station 150. February 2, 1874. Lat. 52° 4′ S., long. 71° 22′ E. Depth, 150 fathoms. Two specimens.

Dimensions.—Height, 2·7 cm.; breadth, 0·8 cm.

Colour.—(Determined from the spirit material) brownish-yellow.

The Actiniæ without pedal disk and with rounded, aboral end mostly vary in the arrangement of their septa from the type predominating in the whole section, as was explained in the Introduction, but this is rarely the case with the sessile forms. *Scytophorus striatus*, which represents a new species, furnishes one of the few examples of this variation which have come under my observation. I found two specimens of it in the Challenger material, so that I was able to examine one of them thoroughly.

The body is very much elongated, and even in a state of contraction measures 2·7 cm. in length, whilst it is only 0·8 cm. in breadth (Pl. III. fig. 6). The upper part of the body is also inverted considerably (more than 0·5 cm.), as we see from the longitudinal sections, a formation recalling *Phellia pectinata*, which has, however, an entirely different structure. The surface is deeply incised by fourteen longitudinal furrows, which are the more distinct because the surface is not soft as in the majority of Actiniæ, but of a leather-like consistency. This is owing to the presence of a strong cuticle, whose structure and relation to the underlying epithelium are best understood by transverse sections (Pl. XIII. fig. 1).

The cuticle consists of two layers; (1), a superficial layer, which hardly stains at all in carmine, but keeps its natural tint, to which is due the yellowish colour of the entire animal; and (2), a deeper layer which becomes an intense red when treated with this reagent. The two layers are tolerably well defined, at some points even by a smooth line. The stratification parallel to the surface, usually found in cuticular secretions, can be recognised in the lower deposit, and striation perpendicular to the surface is also present at many points.

As the cuticle is of nearly equal thickness throughout, the longitudinal furrows of the body, which show in transverse sections as deep indentations, are caused entirely by the underlying epithelium and the supporting lamella. Both of these have an equal share in causing the difference of level. The supporting lamella, a homogeneous fundamental substance with scattered fusiform and branched cells, is very thick between each two furrows, and becomes thin below the indentations, and in the same way the epithelium is unusually high between the furrows, but reduced to an almost imperceptible layer below them. Where the epithelial cells are elongated they are separated from one another by interspaces; they are easily torn in preparing transverse sections, so that an artificial hollow space arises between the cuticle and the supporting lamella.

The whole integument undergoes modification at numerous small, sharply defined