

body, for while in the youngest stage examined the fin is much shorter than the anterior cylindrical portion of the body, in the oldest it is considerably longer. This has a very important bearing on the use of the proportionate length of the fin as a specific character; Lafont¹ has given a table of the Loligos of the French coast in which they are subdivided according as the fins are greater or less than half the length of the body. A consideration of the development shows, however, that species are not comparable in this respect unless they have attained the same stage of growth.

Loligo japonica, Steenstrup, MS. (Pl. XXIV. figs. 7-15).

... *Loligo japonica*, Steenstrup, MS. in Mus. Havn.
 1885. " " Hoyle, Diagnoses II., p. 187.
 1885. " " Hoyle, Prelim Rep. II., p. 290.

Habitat.—Yokohama, Japan. Purchased in the market. One specimen, ♀.

The Body is only moderately elongated, being about three times as long as broad, and bluntly pointed behind. The *fin* is a little more than half the length of the body, about as long as broad, rhomboidal, rounded laterally, and very slightly notched at the anterior angles. The *mantle-margin* curves gradually forward to a projecting point in the dorsal median line, and is deeply emarginate ventrally. The *siphon* is short and of the usual form.

The Head is comparatively large and rounded; the *eyes* are swollen and prominent.

The Arms are unequal, the order of length being 3, 4, 2, 1, and on an average about half as long as the body; the first are very small, slender, and rounded; the second have a prominent ventro-lateral angle, not amounting to a keel; the third have a distinct web on the outer aspect of the distal portion, which is continued backwards as a faint ridge, which joins the web lying along the dorsal lateral edge of the fourth. The *suckers* are in two series, and vary in size in accordance with the arms on which they are situated; they are subglobular and oblique. The *horny ring* bears about ten broad, closely set, square-cut teeth (fig. 8). The *hectocotylus* was not present in the Challenger specimen, which was a female; but in some examples in the Copenhagen Museum, Professor Steenstrup pointed it out to me, as usual, on the left ventral arm; the distal suckers of the ventral series only are modified into conical papillæ, some of which bear a minute sucker at their tips (fig. 10). The *umbrella* is absent; the *buccal membrane* is well developed and has the usual seven points, each of which bears a few small suckers (occasionally only one). The *outer lip* is thick, thicker than the *inner*; both are cut up into papillæ along the edge.

¹ *Journ. de Conch.*, sér. 3, vol. xii. p. 25, 1872.