

*Sepia esculenta*, Hoyle (Pl. XVII. figs. 1-5; Pl. XVIII. figs. 1-6).

1885. *Sepia esculenta*, Hoyle, Diagnoses II., p. 188.

1885. " " Hoyle, Prelim. Rep. II., p. 291.

1886. " " Appellöf, Japanska Ceph., p. 28, pl. iii. figs. 1-6, 24.

*Habitat.*—Japan, purchased in the market, Yokohama. Two specimens, ♂, ♀.  
Japan (Appellöf).

*The Body* is broad, stout, and semielliptical posteriorly. The *fins* are about one-fourth of the body in breadth and commence within 6 mm. of the anterior margin, and end within 5 mm. of each other; the *mantle margin* is produced far over the head dorsally, and evenly truncated below. The *siphon* just reaches the gap between the ventral arms.

*The Head* is broad, and the *eyes* laterally prominent.

*The Arms* are subequal, the order of length being 4, 1, 2, 3, and nearly half as long as the body; they are all more or less compressed, especially the ventral ones; they have a distinct web along the outer margin, and a rather broad membrane runs up either side of the sucker-bearing face. The *suckers* are in four series throughout (Pl. XVII. fig. 2), not very obliquely set; they are large and spheroidal, and have meridional markings on the outer surface; the *horny ring* is smooth and surrounded by a narrow papillary area. In the *hectocotylised* arm of the male (Pl. XVIII. fig. 6) the first four rows of suckers are normal, then come two rows of gradually diminishing suckers, succeeded by four rows of minute ones, after which they again regain their normal dimensions. The *umbrella* is narrow, widest between the second and third arms, where it reaches up to the fifth row of suckers. The *buccal membrane* has the usual seven points in the male; in the female the two ventral ones are rounded off; the *spermatid pad* is exceedingly well developed, and has four deep transverse grooves. The *outer lip* is thin and longitudinally corrugated; the *inner* is thick and bears numerous very long papillæ.

*The Tentacles* are "about as long as or somewhat longer than the body; their *suckers* are small and of equal size, stand in about ten series and are somewhat oblique. The *horny rings* are provided on the distal margin with from twelve to fourteen very long but blunt teeth, which, on the proximal margin pass over into similar shorter ones."<sup>1</sup>

*The Surface* is smooth throughout.

*The Colour* is dull grey, mottled with black above, yellowish below.

*The Jaws* are shown on Pl. XVII. figs. 4, 5.

*The Shell* (Pl. XVII. fig. 3; Pl. XVIII. figs. 1, 2, 3) is elliptical in *outline*, somewhat broader behind (especially in the female); the *chitinous margin* is narrow and does not form a complete ridge across the shell below the spine; it forms two slightly expanded wings behind, and its uncovered marginal part is narrow; the *dorsal surface* is marked

<sup>1</sup> Appellöf, *loc. cit.* The tentacles had been removed from both the Challenger specimens.