

however, be owing to the smaller size and presumably less complete development of the latter, which had unfortunately lost the horny rings of its suckers, so that comparison of these parts was impossible.

The two specimens of the present species furnish an admirable illustration of the sexual differences in the genus *Sepia*; the structure of the hectocotylised arm has been described above, but in addition to that it is seen that the proportions of the body are very different; the breadth being 52 per cent. of the length in the male and 57 per cent. in the female. This difference is still more pronounced in the shells, the breadth of the male shell being only 32 per cent. of the length, while in the female it is 37 per cent.

Appellöf has had the good fortune to examine specimens of this species in which the tentacles were present, and I have inserted above a translation of his description of those organs. He adds also some interesting and valuable remarks on the gradual development of teeth in the suckers and on the relations of the species.

Sepia elliptica,¹ Hoyle (Pl. XIX. figs. 14–24).

1885. *Sepia elliptica*, Hoyle, Diagnoses II., p. 189.

1885. „ „ Hoyle, Prelim. Rep. II., p. 293.

Habitat.—Station 188, Arafura Sea, south of Papua, September 10, 1874; lat. 9° 59' S., long. 139° 42' E.; 28 fathoms; green mud. Four specimens, one ♂, three ♀.

Station 190, Arafura Sea, south of Papua, September 12, 1874; lat. 8° 56' S., long. 136° 5' E.; 49 fathoms; green mud. Four specimens, one ♂, three ♀.

The Body is ovoid, broadest one-third from the anterior margin, pointed behind. The *fins* are one-third the width of the body, broadest in the middle, extending the whole length of the body, and approaching within 2 mm. of each other posteriorly. The *mantle-margin* is not very prominent over the head dorsally. The *mantle-connective* is rather short and deep, but otherwise normal. The *siphon* is conical, reaching to within 1 mm. of, or quite up to the space between the ventral arms.

The Head is very short and broad, the *eyes* prominent.

The Arms are subequal, the order of length being 4, 3, 2, 1, or 4, 2, 3, 1; they are nearly half the length of the body, and taper evenly to fine points; there is a distinct but narrow ridge along the fourth arm, and a delicate web along each side of the oral aspect of the arms. The *suckers* are in four series throughout, and of moderate size, marked with inconstant meridional grooves (fig. 17), and there is a large notch proximally and distally in the rim (fig. 19). The *horny ring* has for the most part no distinct teeth, but is marked in the distal half with shallow irregular notches, which are occasionally more regular (figs. 17, 19). A papillary area surrounds the horny ring (fig. 18). The *hectocotylus* is developed in about the middle third of the left ventral arm (fig. 16); beyond

¹ So named from the form of the shell.