(Type specimen from Station 165.) Diameter of disk 4 mm. Length of arm about 6 mm. Width of arm close to disk, without spines, 1 mm. Mouth papillæ so closely soldered as to form an almost continuous narrow line from side mouth shields to apex; on either side is a long curved one, followed by two shorter, and by a narrow spine-like one at apex of angle. Mouth shield pentagonal, with an angle inward, longer than wide; inner lateral sides straight, outer lateral corners rounded; length to breadth '7: '5. mouth shields large, swollen; broadest and rounded within, where they meet, then tapering outward along the inner lateral sides of the mouth shields. Under arm plates long pentagonal, with an angle inward, lateral sides re-enteringly curved, outer side slightly Side arm plates large, thick, and swollen, meeting below and above; upper arm plates small; first one diamond-shaped, and second triangular with sharp angle inward and outer edge straight; the rest are similar, but grow rapidly smaller. Disk highly arched and rounded; in the centre a large hexagonal primary plate, surrounded by six others, much swollen, with inner and lateral sides nearly straight and outer edges rounded; these seven plates cover almost the entire upper surface of the disk; in the upper interbrachial space there is a rounded, much swollen marginal plate, and over the arm two small, joined, scale-like radial shields. On the under surface, outside the mouth shield, there are two large plates, the outer and larger one connected with the large marginal plate. Genital scale long and wide, and composed of three pieces. scales, long, narrow, and curved, the one on the interbrachial side being semicircular, while the other on the lateral side of the under arm plate is small and lip-like. very short, blunt arm spines, placed low on the outer edge of the side arm plate. Colour in alcohol, pale straw.

A smaller specimen, with a disk of 2 mm., showed no special variations, except that the radial shields were relatively larger and there were only six primary plates, which is doubtless the normal number.

Station 164.—June 12, 1874; lat. 34° 8′ S., long. 152° 0′ E.; 950 fathoms; grey ooze. Station 165.—June 17, 1874; lat. 34° 50′ S., long. 155° 28′ E.; 2600 fathoms; red clay. Station 166.—June 23, 1874; lat. 38° 50′ S., long. 169° 20′ E.; 275 fathoms; globigerina ooze. Station 218.—March 1, 1875; lat. 2° 33′ S., long. 144° 4′ E.; 1070 fathoms; globigerina ooze.

Species of Ophiomastus not herein described.

Ophiomastus secundus, Lym. (Pl. XXXIX. figs. 14).

Ophiomastus secundus, Lym., Bull. Mus. Comp. Zool., vol. v., part 9, p. 218, pl. ii. figs. 16-18, 1878.

West Indies. 339 fathoms.