

sides: they are highly arched, forming along the arm a longitudinal ridge. Side arm plates small, with a rather low spine ridge, not meeting below or above. Upper arm plates broader than long, slightly arched, four sided, broader without than within; inner and lateral sides straight, outer edge slightly curved. Disk flat, with interbrachial spaces somewhat contracted, covered above and below by very minute, thin, overlapping scales; three to five in the length of a millimetre, and somewhat larger near margin. In each brachial space there is a row of small rounded scattered plates radiating from the central primary plate; genital scales covered. Radial shields widely separated, long triangular, and small, with an angle within; length to breadth, 2 : 1. Four smooth, tapering, blunt, nearly cylindrical arm spines, placed high on the sides of side arm plates near the outer edge; lengths to that of an arm joint, 1·8, 1·8, 1·8, 2 : 1·3. Two tentacle scales on each pore, one large one on the interbrachial and a smaller one on the brachial side. Colour in alcohol, pale brown; upper disk inclining to olive.

A smaller specimen with a disk of 13 mm. had arms 70 mm. long. It was similar to the adult, except that there usually were but three arm spines, and the second and third mouth papillæ from corner of mouth slit were flat and blunt.

Station 232.—May 12, 1875; lat. 35° 11' N., long. 139° 28' E.; 345 fathoms; sandy mud.
Station 191.—September 23, 1874; lat. 5° 41' S., long. 134° 4' E.; 800 fathoms; mud.

Ophiochiton lentus, Lym. (Pl. XXIII. figs. 16–18).

Ophiochiton lentus, Lym., Bull. Mus. Comp. Zool., vol. vi. pt. 2, p. 55, pl. xiv. figs. 398–400, 1879.

Three stout arm spines. Under arm plates thickened, but not forming a distinct ridge. Scaling of disk smooth and uniform.

(Type specimen from Station 171.)—Diameter of disk 13 mm. Width of arm close to disk 2·5 mm. There are eleven short, sharp, stout, close-set mouth papillæ on each angle, the two outermost and the one at the apex being a little larger than the rest. Mouth shields about as broad as long, of a rounded heart shape. Side mouth shields extremely narrow, bent, wider without than within, where they meet. Under arm plates large, swollen but not ridged, wider without than within, with lateral sides re-enteringly curved. Side arm plates short and stout, with a low thick spine edge. Upper arm plates twice as broad as long, of a fan shape, with inner arm truncated, or a diamond shape with much rounded angles. Disk round, smooth and flat, covered with small, pretty, uniform, rounded, overlapping scales, two or three in the length of 1 mm. Radial shields small, twice as long as broad, with much rounded corners, separated their entire length by two large round scales; length to breadth, 2 : 1. Interbrachial spaces below covered with scaling similar to but finer than that above. Genital openings long, extending from outer corners of mouth shield, where there are a few minute papillæ, to margin of disk. Three stout, blunt, cylindrical, tapering, nearly equal arm spines, about as long as an arm joint. Two round, flat, tentacle scales on the side arm plate,