

angle; the two lowest are smallest and are less flattened. Arm joints obscurely indicated by the arm bones, whose outlines are seen through the skin. Arms broader above than below; covered with a thick skin, which, when partly dry, presents under the microscope a minutely tuberculous surface. No tentacle scale on first arm joint; beyond this there is only one, short and peg like for some distance, sometimes as far as the thirteenth joint; after which there are two, still short, and cased in very thick bags of skin; on last third of arm the scale of the brachial side has become stout, thorny ended, and much the longer (3 mm). Disk thick and angular, covered with thick skin similar to that of the arms, and having interbrachial spaces re-enteringly curved. Radial shields high and narrow, diverging from the centre of disk to sides of the arms. The genital openings are long, extending from upper edge of disk to mouth ring. Colour in alcohol, uniform pinkish-brown.

Station 232.—May 12, 1875; off Enosima; lat.  $35^{\circ} 11' N.$ , long.  $139^{\circ} 28' E.$ ; 345 fathoms; sandy mud.

Another somewhat smaller specimen had already two tentacle scales on the fifth joint.

*Ophiocreas abyssicola*, Lym. (Pl. XXXII. figs. 1-4).

*Ophiocreas abyssicola*, Lym., Bull. Mus. Comp. Zool., vol. vi., part 2, p. 64, pl. xvii. figs. 470-473, 1879.

Arms scarcely as high as wide, about eight times the diameter of the disk. Skin quite smooth, with radial shields scarcely indicated externally. Genital openings very short, and situated near the inner interbrachial angle.

(Type specimen from Station 241.) Diameter of disk 7 mm. Length of arm about 60 mm. Width of arm close to disk 1.7 mm.; height of same 1.2 mm. Four or five short, flat grains above the second mouth tentacle, on the sides of each mouth angle. Seven stout, nearly equal teeth, shaped like a blunt spear head. On removing the skin the small, irregular, rounded mouth shield, and large, longer than broad side mouth shields, can be seen; the latter are often broken. Under arm plates rather large, rounded, as broad as long, closely soldered, and with vague outlines. Side arm plates small, rounded, and swollen, closely joined with the under arm plates. Arm joints recognisable through the skin. Arms rounded and slender, tapering very gradually to the end. Disk flat and somewhat angular, not rising above level of arms, covered with soft, moderately thick skin. Radial shields shorter and wider than in other species, separated their entire length, and very thin and flat; from the outside they are scarcely indicated, and they do not meet in the centre. Two short, stout, bluntly pointed tentacle scales, the lower one longer, and both nearly naked. Two very short genital openings, about 5 mm. long, near inner angle. When the skin is removed the genital plate and scale are seen, the plate being rounded, much longer than broad, tapering