

be well developed. The longitudinal muscles each consist of two bands. The arms of the deposits of the body-wall (Pl. X. fig. 13) are more or less strongly curved inwards, and have a length of up to 0.3 mm.; their ends are slightly enlarged and spinous. The central, outwardly directed column has a length of about 0.24 mm. Both this column and the arms are remarkable in that the minute spines are mostly arranged in transverse bands or rings; thus I counted five such rings in the central column and five to six or more in the arms. Sometimes the spines seem to be more irregularly scattered. The pedicels are strengthened by the same kind of deposits, though they are smaller, and also by some small simple spicules; no terminal plates seem to be present.

(?) *Palopatides appendiculata*, n. sp.

Station 235, June 4, 1875; lat. 34° 7' N., long. 138° 0' E.; depth, 565 fathoms; bottom temperature, 38°·1; green mud; three specimens.

Considering that all the three specimens brought home from the above-mentioned Station are rather macerated and defective, and that the calcareous ring and the deposits of the perisome are totally destroyed, I think it best to give a description without any previous diagnosis.

The largest and best preserved specimen measures in length about 200 mm. The body is elongated and cylindrical, equally rounded anteriorly and posteriorly. The mouth is almost terminal, though ventral in position. The anus is dorsal. Round the sides of the body, as well as round its anterior and posterior ends, the body-wall seems to be slightly thicker, but, as far as I can find, no true brim is discernible. Numerous closely placed conical and flexible processes run out from this thicker part of the body, and they are so arranged as to form a simple row round the body. The largest of these processes are about 10 or 15 mm. long. The dorsal surface also carries processes, but from the defective state of the specimens it is impossible to distinguish their size and distribution. However, they seem to be few in number, arranged only on the ambulacra in a simple row on each, and a pair of them, situated slightly in front of the middle of the body, is larger than the rest. A double row of pedicels is situated along the odd ventral ambulacrum, which appears to be naked only anteriorly. Thus all the interambulacra seem to be in want of ambulacral appendages. The tentacles are twenty, and consist of a small disk with about six digits or processes. The body-wall is very soft, spongy, thick, and swollen, probably from the influence of some acid in the alcohol. The colour in alcohol is sea-green, excepting along the middle of the ventral surface, where it is darkish brown, but probably the original colour is spoiled.

A single Polian vesicle is present, 35 to 40 mm. long. The reproductive organs consist of a bundle of tubes on each side of the dorsal mesentery, each genital tube being branched three to five times. The most anteriorly situated tubes, which constitute each