

Genus *Pseudostichopus*, n. gen.

Tentacles nineteen or twenty. Ambulacral appendages in the shape of pedicels alone (?); those on the ventral surface not arranged in the three longitudinal series characteristic of *Stichopus*. Two bundles of genital tubes present. Anus without teeth, but hidden in a distinct vertical furrow. Deposits unknown. Retractors absent.

*Pseudostichopus mollis*, n. sp. (Pl. X. figs. 5, 6).

Body more or less elongately oval, equally rounded anteriorly and posteriorly. Mouth almost completely ventral in position. Tentacles twenty. Anus ventral, hidden in a rather deep furrow formed by two vertical folds of the perisome. Pedicels very minute, present only on the paired ambulacra; the odd ventral ambulacrum seems to be naked, if pedicels really exist, they must be very rudimentary. Pedicels of the dorsal surface arranged in a narrow double row along each ambulacrum, those of the lateral ventral ambulacra being more crowded and, as it seems, placed in two to five (?) rows. Calcareous deposits of the perisome absent. Colour in alcohol, light yellowish-white. Length, 140 mm.

*Habitat*.—Station 309A, January 8, 1876; lat. 50° 56' S., long. 74° 14' W.; depth, 140 fathoms; blue mud; six specimens. Station 311, January 11, 1876; lat. 52° 45' 30' S., long. 73° 46' W.; depth, 245 fathoms; bottom temperature, 46°·0; blue mud; numerous specimens. Station 144A, off Marion Island, December 26, 1873; lat. 46° 48' S., long. 37° 49' 30" E.; depth, 50 to 75 fathoms; bottom, volcanic sand; two specimens.

Though I cannot find any deposits in the perisome, it seems very likely that such were present in the living animals, and, consequently, that they have been dissolved in the Challenger specimens by the influence of some acid. From the want of deposits as well as from the minuteness of the pedicels in general, a very careful examination is necessary to be convinced of the presence of these pedicels, which are almost indistinguishable from the exterior of the body. At first sight therefore one is tempted to consider the animals as belonging to the apodous Holothurids. For the same reasons I cannot positively state the absence of pedicels in the odd ambulacrum; sometimes I thought I observed some rudimentary ones. It is also almost impossible to tell the true shape of the ambulacral appendages, but, to judge from some small ones which I saw extended, they are probably pedicels and not papillæ. The vertical furrow in the posterior extremity of the body appears to be characteristic of the forms of this genus (Pl. X. fig. 5). The tentacles are retracted within the body and their processes retracted, but, as far as I can see, they must be allied to those present in the *Aspidochirota*.

The body-wall is soft, thin, and pliable; along the sides of the animals it is inconspicu-