

middle row fewer and more distant from one another. Tentacles ten (?). The dorsal scales seem not to imbricate, and are covered by a thick integument containing numerous more or less irregularly formed reticulate cups. The dorsal surface is not smooth but rough with numerous small warts, and the scales are not visible exteriorly. The sole is strengthened by large perforated plates and small irregular cups. Length, 28 mm.

*Habitat*.—Station 320, February 14, 1876; lat. 37° 17' S., long. 53° 52' W.; depth, 600 fathoms; bottom temperature, 37°·2; green sand; a single specimen.

The general shape of the body bears some resemblance to that of *Psolus phantopus*, its caudal portion being conical and the ventral sole elongated and rectangular. At first sight one is almost tempted to believe that the perisome is devoid of scales, but a closer examination reveals their presence, though they are covered by a thick warty integument, filled with minute very irregular, reticulate cups, which sometimes take the shape of spheres. The scales are irregularly rounded, and do not seem to imbricate one upon the other. No oral or anal valves are present. The warts, visible exteriorly, appear to be formed by a network of the same structure as that which composes the scales themselves. The three series of pedicels are each made up of a simple row, the lateral containing about eighteen, and the median about nine pedicels. The three rows seem not to be confluent at the extremities as is the case in most of the species of this genus. The perisome of the sole contains large irregular, smooth perforated plates (Pl. VI. fig. 4a), as well as cups (Pl. VI. fig. 4b) resembling those in the dorsal body-wall. The tentacles are retracted, but probably ten in number.

The determination of the various species of this very interesting genus is indeed a very difficult task. They seem to form a continuous chain of transitional forms combining the extremes, and further investigations will probably result in the union of several forms which are now considered to be distinct species. *Psolus murrayi*, however, must be looked upon as a characteristic form.

*Psolus incertus*, n. sp. (Pl. VIII. fig. 4; Pl. VI. fig. 5).

Body not depressed, elongate, cylindrical, with the anal portion short, conical. Pedicels only round the margin of the ventral sole, arranged in two rows. Tentacles ten (?). The scales small, very numerous, and overlapping; they have one, two, or three small pores. No oral or anal valves. The sole supported by small irregular plates perforated by a few holes. Length, 20 to 35 mm.

*Habitat*.—Station 150, February 2, 1874; lat. 52° 4' S., long. 71° 22' E.; depth, 150 fathoms; bottom temperature, 35°·2; coarse gravel. Station 151, February 7, 1874; off Heard Islands; lat. 52° 59' 30" S., long. 73° 33' 30" E.; depth, 75 fathoms; volcanic mud. Station 149c, Royal Sound (Kerguelen), January 19, 1874; lat. 49° 32' S., long. 70° E.; depth, 60 fathoms; volcanic mud. One specimen from each locality.