

valves, these openings being surrounded by circles of numerous scales which seem to decrease towards the openings themselves, so that the number of scales between the mouth and the anus was greater. Only in very small specimens (about 15 mm.) of *Psolus squamatus* have I observed a more or less regular arrangement of larger oral and smaller anal valves, but I have never observed this in *Psolus fabricii*, though I have examined much smaller individuals of this species. Moreover, there is a great difference in the arrangement of the pedicels, when comparing specimens of about the same size. As has been pointed out, *Psolus antarcticus* has two rows of pedicels, while equally large specimens of *Psolus squamatus* (about 50 mm. long) always have three rows. Even the odd ambulacrum in the northern form seems to have more pedicels. The deposits in the sole of *Psolus squamatus* resemble those in the same region of *Psolus antarcticus*, but they often seem to be devoid of knobs or other processes.

The specimen brought home from Station 320 is very small, 13 mm. long, and has the oral and anal valves very regularly arranged. Its pedicels are disposed in two rows round the sole, which seems to be completely devoid of deposits. The scales are comparatively large, so that only four are situated between the oral and anal valves. The surface of the scales is nearly smooth. Having seen only a single specimen, I could not make any detailed examination, but it seems probable that it belongs to the species in question.

*Psolus squamatus*, Düben and Koren, 1844 (var. ?) (Pl. XV. figs. 1, 2 ; Pl. VI. fig. 2).

*Habitat*.—Station 307, January 4, 1876 ; lat. 49° 24' 30" S., long. 74° 23' 30" W.; depth, 140 fathoms ; blue mud ; two specimens. Station 308, January 5, 1876 ; lat. 50° 8' 30" S., long. 74° 41' W.; depth, 175 fathoms ; blue mud ; two specimens. Station 311, January 11, 1876 ; lat. 52° 45' 30" S., long. 73° 46' W.; depth, 245 fathoms ; bottom temperature, 46°·0 ; blue mud ; several specimens.

The four individuals brought home from Stations 307 and 308 are rather large, varying from 50 to 60 mm. in length. If not identical, they cannot be considered as anything more than varieties of the northern form. They even seem to combine this form with *Psolus antarcticus*. A double row of pedicels surrounds the sole, those in the outer row being situated on the inner side of the margin. Strangely enough, one of the specimens obtained at Station 307 possesses pedicels on the odd ambulacrum, and these form a simple row at the middle of the body but an alternating double row posteriorly and anteriorly. Considering the fact that the other specimens are in want of the middle row of pedicels, and having regard to the general appearance of the body, it is most probable that this peculiarity may be referred to an individual deviation. The scales bear small rounded granules which occur especially round the free margin ; the oral aperture is closed by five larger triangular scales, alternating with and partly