

the case in *Psolus operculatus*. The deposits of the sole are very densely crowded, being larger, more plate-like, and provided with more holes than in the forms dredged at Station 49. In some specimens a few pedicels may be found on the odd ambulacrum.

Psolus antarcticus, Philippi, 1857 (Pl. XV. figs. 3, 4; Pl. VI. fig. 1).

Habitat.—Station 308, January 5, 1876; lat. $50^{\circ} 8' 30''$ S., long. $74^{\circ} 41'$ W.; depth, 175 fathoms; blue mud; six specimens. Station 320, February 14, 1876; lat. $37^{\circ} 17'$ S., long. $53^{\circ} 52'$ W.; depth, 600 fathoms; bottom temperature, $37^{\circ} \cdot 2$; green sand; a single very small specimen.

Though this species is doubtless nearly allied to the northern forms, especially *Psolus squamatus*, it differs considerably in several important points, and a comparison of the Arctic and Antarctic representatives will clearly show that they are distinct. The six specimens I have had at my disposal were all collected near the west coast of Patagonia, not far from the Strait of Magellan, so there can be but little doubt that they really belong to the species described by Philippi.

The largest specimen has a length of 50 mm. The body-form is like that of *Psolus squamatus*. The mouth is closed by five very large triangular valves, the sides of which are almost equal. In the largest specimen, which I am about to describe, the length of the sides of these triangular scales is 9 mm.; their slightly curved bases, being distinctly marked, give rise to a circular or angular ring. In two of the specimens, however, some of the oral scales are parted in two, thus presenting a more irregular arrangement. In the same manner, the anal aperture is closed as a rule by five distinct though much smaller scales, which give rise to a smaller anal circle round their base. The scales are almost smooth or very finely granulated, and do not overlap each other so much as is the case in the Arctic forms, and those which lie close to the oral scales seem often to be of considerable size. Very minute scales surround the margin of the dorsal surface. Seven to nine scales occur between the oral and anal scales. In all the specimens I have seen the scales have a brownish colour, excepting round the free margin, where a broad brim of a light greyish colour occurs.

The flat ventral sole is constantly surrounded by only two rows of pedicels, the exterior of which is situated in the sharp margin itself and contains much smaller pedicels. Anteriorly, and sometimes posteriorly, the odd ambulacrum carries very few—two, three, or four—pedicels. The deposits in the sole (Pl. VI. fig. 1) consist of irregularly perforated plates, with in most cases numerous distinct knobs; very seldom a plate devoid of knobs is to be found. Sometimes the plates are slightly hollowed so as to take the shape of very flat cups.

I have been able to compare this species with equally large specimens of *Psolus fabricii* and *Psolus squamatus*. I never found in them the well-marked oral and anal