

slightly backwards, so that the breadth at its rounded posterior extremity is about 60 mm. As the height of the body decreases gradually forwards, the anterior broadest portion becomes flat and almost discoidal. The left ambulacrum of the dorsal surface carries only five very minute processes, while the right one is provided with seven; all of them are usually so small that they are scarcely distinguishable. The large dorsal appendage attains a length of 110 mm., being thus comparatively shorter than in *Psychropotes longicauda*. The brim, which is of considerable breadth, especially round the anterior extremity of the body, has the appearance of being lobed in consequence of the great number of large pedicels or processes which proceed from its edge. These pedicels communicate with longer or shorter, very wide canals, which in their turn open into the ambulacral vessels; the first eighteen pedicels or rather processes are connected with the dorsal ambulacra, while the rest of them belongs to the ventral-lateral ambulacra (Pl. XXXIX. fig. 1).

The calcareous bodies bear the strongest resemblance to those of the species just mentioned, though they seem to be more dispersed especially on the ventral surface; besides, I have not been able to observe the deposits of the inner layer of the integument, and if such are present they must be extremely thinly scattered. On the contrary, I have found in the connective tissue of the integument abundance of pigment of a yellowish-brown colour.

The cæcal sacks which constitute the reproductive organ are large, more or less distinctly rounded and about 12 mm. in diameter, being thus several times larger than in *Psychropotes longicauda*.

The above summary description proves that this form is closely allied to the preceding one; the only differences to be found are the size of the body, the proportion between the length of the body and that of the dorsal appendage, the number of dorsal processes, and the presence or absence of deposits in the inner layer of the integument.

*Psychropotes longicauda*, var. *fusco-purpurea*, n. (Pl. XXIX. fig. 1).

*Habitat.*—Station 157. March 3, 1874. Lat. 53° 55' S., long. 108° 35' E. Depth, 1950 fathoms; diatom ooze. Two specimens.

The largest of the two individuals which were brought home measures 200 mm. in length and 77 mm. in breadth. This variety differs from the preceding forms by the following characteristics:—(1.) The colour is dark violet, almost black, with darker bands along the dorsal ambulacra. (2.) The dorsal appendage, 65 mm. long in the largest specimen, is smaller in proportion to the size of the body, and its obtuse end wants the digitiform processes; its left canal decreases more perceptibly upwards than the right one, and does not reach the top of the appendage. (3.) The minute processes of the dorsal surface are arranged in four pairs. (4.) The deposits do not present so great a variation in dimensions as in the preceding forms; their four slightly curved and spinose arms, measuring in length about 0.1 mm., carry a couple of larger outwardly directed spines, and the centre, where the arms are united, gives off an obtuse, short process (Pl. XXXV. fig. 11).