

Scotland, in the summer of 1880, Mr Murray brought home a rich collection of very interesting abyssal forms, among which I was much surprised to find a great abundance of *Lætmogone violacea*. More than a hundred specimens were obtained at Station 4, August 10, at a depth of 555 fathoms.

This species differs externally from the preceding one by the considerably smaller dimensions of its body and by the greater number of its dorsal processes, which in general do not attain a great length. As the Holothurids dredged by Mr Murray during the cruise of the "Knight Errant" have been placed at my disposal, I have had an opportunity of noticing that the number of processes and pedicels even in these specimens is rather variable, though it seems generally to approach that stated in the diagnosis. The discoidal ends of the tentacles, about 4.5 mm. in diameter, present in resemblance to those of the preceding species no other traces of processes than a few minute protuberances round their edges. The pedicels are very large, and measure at their base about 8.5 mm. in diameter. The dorsal processes, on the contrary, are very slender and of an elongated conical shape, measuring at the base about 3 mm. in diameter; they vary greatly in size, and sometimes attain a length of 30 mm. or more. Like the pedicels, they are highly flexible, but want the power of retraction; however, they are able to be more or less contracted. The processes are arranged in a single row along each ambulacrum except anteriorly, where the two or three first of each side frequently—though not always—are disposed in a transverse row, the two next following being also placed side by side. The animals are in such a state of contraction that I am somewhat uncertain as to the arrangement of those anterior processes. The perisoma is thinner and more transparent than in *Lætmogone wyville-thomsoni*, and is not so abundantly pigmented. The spicula (Pl. XXXVI. fig. 24), which apparently only exist on the ventral surface, are scattered, simple, spinose, and reach a length of about 0.16 mm. The wheels are found of all dimensions everywhere in the integument, and resemble perfectly those of the above-mentioned species; the smaller ones have as many as thirteen spokes and a diameter of about 0.036 mm.; the larger ones (Pl. XXXVI. fig. 20), on the contrary, attain to about 0.2 mm. in diameter, and possess usually eight to nine spokes; the spokes being strongly arcuated, the nave does not lie on the same plane as the felly but inside it. From the edge of the considerable hole in the centre of the nave, proceed commonly four minute rods running together to a point. The wheels have the appearance of a crown with the concave side turned outwards. The largest wheels are found in the parietes of the processes and in the dorsal perisoma, though they are more thinly scattered in the latter. The cruciform spinose bodies (Pl. XXXVI. fig. 21) in their most developed state reach about 0.2 mm. in diameter, while the smallest ones measure only about 0.072 mm., and they are very numerous on the dorsal surface, whereas they are found more scattered and commonly smaller on the ventral one; the arms of those deposits are more or less strongly arcuated and extremely spinose,