examination, though perhaps in a less satisfactory state of preservation, I will add to the above account some supplementary details.

The smooth cake-like specimen figured by Wyville Thomson (figs. 5, 6) was not when I received it so well preserved as it appears in the woodcuts referred to. The specimen is represented in Pl. XXIX. figs. 2, 3, of the natural size, after a photograph from either side. It is evident that half the fringed margin (from which a rectangular portion has been cut for investigation) is well preserved, while the rest of the marginal portion seems compressed and torn. The side represented in fig. 3, covered with a somewhat wide-meshed network of more or less thin strands, exhibits a tolerably uninjured surface, and is almost smooth with the exception of the projecting knobs about the centre of the (uninjured) disc. On the other side, however (fig. 2) the marginal portion exhibits for about a finger's breadth an intact dermal layer, with a fine-meshed lattice-work, through which were seen the large deep apertures or pits of the parenchyma, occurring at uniform distances of about 5 to 8 mm., as figured in the woodcut (fig. 5) of Wyville Thomson's Atlantic. The middle portion of the flat sponge body is on the same side much injured and apparently compressed (Pl. XXIX. fig. 2).

From Wyville Thomson's account this latter somewhat inbent side (Pl. XXIX. fig. 2 of my figures, and fig. 5) is said to be the upper, while that covered by the wide-meshed sieve-net and bearing a projecting central boss be the lower (Pl. XXIX. fig. 3, and fig. 6). The projecting central protuberance of the latter is, according to Wyville Thomson, the narrowed basal portion, from which the long tuft of needles was torn away.

The results of my investigation force me, however, to another conclusion, namely, that the side covered with the wide-meshed sieve-network is the upper, while the other with the fine superficial lattice-work and the subjacent pits of the parenchyma is the lower or outer. This is proved first of all by the character of the superficial layers. The wide-meshed framework which covers the surface (fig. 3) exactly resembles the sieve-plate present in the funnel-shaped second specimen (Pl. XXIX. fig. 1) of the same species, while the fine-meshed dermal layer which covers the undamaged marginal zone on the other side (Pl. XXIX. fig. 2) corresponds exactly in structure to the dermal membrane of all Hexactinellids and especially to that of the funnel-shaped specimen (Pl. XXIX. fig. 1) of the same species.

The boss-like elevation in the centre of the surface furnished with the wide-meshed network does not represent the narrowed basal end of the body, but the conus centralis which occurs on all species of *Hyalonema*. The narrowed basal end of the sponge body has, on the other hand, been torn off with the basal tuft of spicules, and is therefore not to be seen on the lower surface of the body (Pl. XXIX. fig. 2). We have here apparently a specimen of *Hyalonema toxeres*, which, after the tearing away of the basal tuft and lower end, has been forced by oblique pressure into a flat compressed form. The normal