

gelatinous mass, in which granular spherical bodies with large and distinct nuclei (about one-fifth of the diameter of the body-wall on this spot) seem to be suspended. Is this a local injury? Are these bodies enclosed gregarines or other parasitical unicellular organisms?

These questions can as yet only be formulated but not answered, and I would call the attention of future observers dealing with fresh material to similar cases, which no doubt must be accompanied by some externally visible distinction between the tissues.

Of the Bermuda specimen, which I refer to this species only with doubt, and which measured 33 mm. in length by  $2\frac{1}{2}$  mm. in diameter, the integument was very imperfectly preserved; still it corresponds in the remaining characters with the other specimens of *Cerebratulus truncatus*. There are also points of agreement in the structure of the proboscidian sheath.

The transverse blood-vessels are very thick-walled in this specimen, a feature more particularly due to the basement-tissue below the inner epithelial lining.

*Cerebratulus medullatus*, n. sp. (Pl. XI. fig. 10; Pl. XII. figs. 9, 10).

It is hardly consistent with the most lenient rules of zoological nomenclature, and it is certainly not consistent with those which I have myself advocated in my introduction, to establish a new species on a fragment which has neither head nor tail! Still, as I have been rather careful on other occasions, and that especially with regard to genera, I may be trusted to be anxious to guard against superfluous additions to an already cumbersome synonymy. The reasons by which I am guided in putting up this mutilated spirit fragment as the type of a new species are purely morphological, and, as will be seen in the paragraph treating of the nervous system, the peculiarities offered by this species are of sufficient morphological interest to give it a place by itself, and (in at the same time naming it) to direct the attention of collecting naturalists to this form.

It came up in the same haul of the dredge as did one of the specimens of *Cerebratulus truncatus* just described, viz., at Station 49, off Nova Scotia, from a depth of 85 fathoms.

In sections it is, however, immediately seen to be distinguished from the foregoing species by several features, the first of which concerns the integument. Instead of the integument being separated from the longitudinal outer muscular layer by a more or less massive expanse of basement-tissue (Pl. XIII. fig. 6), the integument itself being divided into a superficial and a deeper glandular layer (which are separated by a secondary basement membrane and an expanse of fibres, such as is found in *Cerebratulus corrugatus*, *Cerebratulus truncatus*, &c., also in the Challenger collection), our present species has the superficial layer of the integument immediately applied to the outer longitudinal muscles, from which it is thus only separated by the outer secondary basement layer just alluded to (Pl. XII. fig. 10). This fact causes the integument in transverse