

can be linked to paleozoic orthoceraconic cephalopods and the latter again quite probably took their origin from endoceratitic forms—by way of Baltoceras—and since therefore there is good reason to consider the Belemnitidae as descendants of the Endoceratidae, the similarity of the proostracum and endosiphocoleon is probably more than a mere analogy between unrelated forms due to formation by a like organ (mantle) in the like posterior position, but it partakes more of the nature of the recrudescence of an organ discarded before, when a new use had been found for it within the same race.

It does not matter that the endosiphocoleon is a flattened tube and the proostracum only a blade, as a flattened tube would be readily changed into a blade under the stress of a new adaptation.

8 Endosiphuncular structure of *Piloceras*

We have already anticipated the results of our investigation of *Piloceras* in the synoptic table on page 326, in deriving *Piloceras* from a more primitive genus *Proteropiloceras*, that stands on the same plane of phylogenetic development as *Proterocameroceras* and *Nanno*. We have also recorded [p.301] that in *Piloceras* an endosiphoblade has been observed by Dawson, which indicates that the endosiphuncular structure may not only be homologous to that of *Cameroceras* by the possession and strong development of the endosiphosheaths, but also by the character of the endosiphuncular tubes.

While, however, in the few specimens of *Piloceras* in which the apical end has been actually observed, no nepionic bulb has been found, and the siphuncle has been seen to expand gradually and to be inclosed entirely within the phragmocone [see Foord], we have found that *P. explanator* Whitfield at least retains very distinct traces of the nepionic bulb or apical inflation [see pl. 13, fig.3]. This species points hence clearly

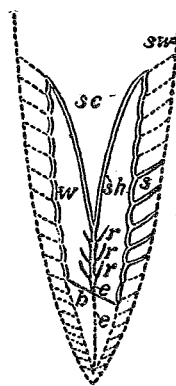


Fig. 21. *Piloceras ammonium* Dawson. Longitudinal section; showing endosiphocone [sc], last endosiphosheath [sh], endosiphotube [e] and remains of endosiphosheaths [r]. Dawson's original drawing. (Copy from Foord)