

7 Similarity between the endosiphocoleon and the proostracum of belemnites

An inspection of the system of surface lines of the endosiphocoleon consisting of forward arching transverse ridges and longitudinal lines can not fail to suggest the proostracum of the belemnites; and a study of the relative position of the two organs and of the probable phylogenetic relations of the Belemnitidae with the Endoceratidae makes this comparison seem less farfetched or strained than would appear at first glance.

The belemnite shell, when complete, consists, as is well known, of three parts [see text fig.20]. These are the rostrum, the phragmocone and the proostracum. Of these the rostrum or guard is a later acquisition which does not concern us here. The phragmocone is identical with the phragmocone of the early cephalopods which here however has become entirely inclosed within the mantle. From the dorsal side of the last large chamber of the phragmocone (the former living chamber of the conch) proceeds a broad, thin, somewhat arched blade, the proostracum, which consists of two stronger longitudinally striated lateral regions and a very thin intercalated dorsal blade. In the typical belemnites this organ has a size much surpassing that of the rostrum and phragmocone as in the restoration here copied; and in later forms both the latter organs become reduced,¹ while, on the other hand, if the Belemnitidae are traced backward in geologic history, the proostracum becomes smaller and more insignificant and the Triassic forms do not seem

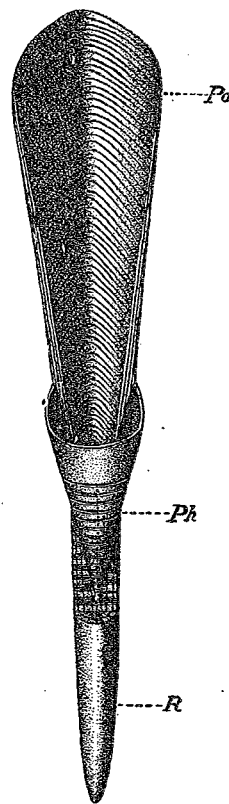


Fig. 20 Restoration of a Belemnite shell: R, rostrum; Ph, Phragmocone; Po, Proostracum. (Copy from Zittel)

¹The homologies of the different parts of the cuttlebone or sepion of the Sepia with those of the belemnite shell are not yet clearly established as the differing views of Bather [1888, p.298] and Blake [1888, p.376] evince.