

retention of the phragmocone than to its original absence in the apical portion of the shell. Since however in this species the septa by their septal necks or funnels form a continuous ectosiphuncular wall, which is thicker than the septal partitions and is readily distinguishable in one specimen [*see* pl.6, fig.3] by its light gray color contrasting with the black matrix, we have carefully searched for traces of this wall along the apical cone, without finding any beyond the contraction of the shell at the beginning of the visible chambering of the conch. A black conchiolinous deposit forms the undoubtedly outermost wall of this preseptal conch.

A little forward of the beginning of the cameras (about the fourth camera) there occurs a distinct contraction, as in the corresponding places in the species cited above. The apical portion of this free part is slightly curved. The endosipholining, which in the phragmocone is adjacent to the septal necks, extends through the full length of this apical free part of the siphuncle [*see* pl.3, fig.3]. It contrasts distinctly with the white coarse calcite filling of the siphuncle and retains its full width and sharp delimitation to within 30 mm of the apex, when it begins to thin out; and about 15 mm from the apex it has disappeared entirely, the siphuncle being there wholly filled by the white sugary calcite. The extension and composition of this layer of carbonaceous calcite leaves no doubt that it originally formed within a membrane and thus became charged with organic matter. This endosipholining is in section sharply outlined by a fine black line which represents an outer conchiolinous shell layer. This also extends into the chambered portion of the shell, at least into its earlier part. It is this layer which gives to the separate siphuncles of this species their black, shiny surface. There is no doubt that this is identical with the cuticle of horny matter which incases the whole mantle and also the siphuncle of *Nautilus*, and which also has occasionally been observed enveloping the siphuncle of fossil cephalopods.

The endosiphuncle passes unrestricted to the very apex of the siphuncle, where it distinctly empties to the exterior [*see* pl.6, fig.3]. Its last apical part (about 1 mm) is filled with black material which appears to be the same as the matrix. This suggests that in this