

also connected at its convex side to the nearest wall by a band of crystals of organic carbonate of lime. The interspaces are not only arranged symmetrically, but also delimited so sharply by uninterrupted lines, that it is hardly to be doubted that the calcite bands connecting the endosiphococone and wall of siphuncle are the remains of the membranes which held the visceral cone in position within the siphuncle and probably became partially calcified during the lifetime of the animal. The interspaces remained cavities till they were filled by the large calcite crystals now occupying the siphuncle.¹

The supposition of the fixation of the visceral cone and inclosing endosiphosheath to the ectosiphuncle, finds support in the occasional presence of bands of gray brown limestone, extending from the endosiphocoleon (virtually the continuation of the visceral cone) or more posteriorly from the endosiphotube, to the wall of the siphuncle. Such a section is reproduced in plate 8, figure 5. The horizontal transverse band with the inclosed endosiphotube is evidently the "endosiphoblade" of Holm. This is held in a manner corresponding to the fixation of the endosiphococone described above by a band that is placed perpendicular to the endosiphocoleon.² The extension of the internal space of the visceral sac (endosiphococone)

¹In this particular siphuncle the interior is 20 mm from the end of the endosiphococone already so calcified, apparently by secondary calcification, that hardly any trace of the endosiphocoleon is left [see pl.8, fig.8].

²These supporting membranes were, as we have mentioned above, recognized by Dewitz and more fully described by Holm. The latter author [*l. c.*, 1887, p.16] sums up his observations on these supporting membranes in *Endoceras gladius* in the following statement: "During the retrogression of the siphon in the siphuncular tube there were secreted by the siphon three longitudinal membranes which were probably soft, pliable and extended to the wall of the siphuncular tube, one from each of the angular marginal edges and one from the median line of the convex side. Their function was probably to fix the end of the siphon, which was suspended in the siphuncular tube in a position in the middle of the latter. A similar organ was, as we have seen above, observed by Dewitz in the siphuncular tube of a specimen of "*Endoceras commune*." In consequence of this structure the "Spiess" maintains in all specimens of the species in question, which have been investigated by me, the same position in the middle of the siphuncular tube and indicates an invariable position of the end of the siphon. The thin (cuticular) membranes were secreted along the whole length of the siphon."