

to the existence of types which held the same relation to the phylephebic species of *Piloceras* as does *Proterocameroceras* to *Cameroceras*; and which would be properly called "*Proteropiloceras*." If in *P. explanator* the cameras did not extend on one side to near or quite to the apex of this nepionic bulb, we would not hesitate to make this form the type of the proposed subgenus. It is evident that a process of acceleration in the phylogeny of this genus has led to a crowding back of the formation of septa, which originally was the cause of the contraction of the siphuncle, to the very apex of the nepionic bulb without, however, having yet been able to efface all vestiges of this former inflation of the conch. This also points clearly to the process by which the nepionic bulbs of *Proterocameroceras* and *Proterovaginiceras* have become reduced in *Cameroceras* and *Vaginiceras*, i. e. by a tachygenetic encroachment of the metanepionic growth stage on the aseptate ananepionic stage.

Besides the presence of the nepionic bulb, *Piloceras* exhibits also in its endosiphuncular structure characters which link it closer to the Protero-forms of the other associated series, than to *Cameroceras*.

The siphuncle is, like the conch, short, conical, with elliptic to oval section [*see* pl.10]; the endosiphococone is short and broad with elliptic upper section, rapidly shrinking to a flat blade at its narrower end [*see* pl.13, fig.1, 2]. Its cast shows peculiar flutings arranged in bundles and which, in one specimen, appear to consist of longitudinally arranged pits and strongly remind one of the similar depressed lines found on the outer conch. Since the latter are produced by muscular attachment of the animal within the living chamber, the presence of these scars on the wall of the endosiphococone seems to me a strong argument for the view that in this primitive form the visceral cone shared still to a great measure the functions of the living chamber. We have already seen that in *Proterocameroceras brainerdi* a large anterior portion of the siphuncle remained unobstructed by deposits and was evidently occupied by the animal during its lifetime. In *Piloceras explanator* this portion of the siphuncle was considerably wider