

## THE STRUCTURE OF SOME PRIMITIVE CEPHALOPODS

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Plates 6-13

Professor Whitfield has described [1886,<sup>1</sup> p. 319], as *Orthoceras brainerdi*, a cephalopod from the Fort Cassin (Upper Beekmantown) beds of Fort Cassin Vt., which is also very common in beds of like age outcropping along the shore of Lake Champlain at Valcour N. Y. While the originals of the species exhibit but fragments of the phragmocone and lack the living chamber and the apical parts of the conch, there are in the extensive museum collection of specimens secured at Valcour, not only conchs which supplement the original material but also a great number of siphuncles which exhibit interesting internal structures.<sup>2</sup> These and the peculiarities of the apical portion of the conch have led to the investigation, whose results are herewith presented. An extension of the research to the siphuncles of *Piloceras explanator* Whitfield, another form which is equally common in the Fort Cassin beds at the type locality and at Valcour, has brought to light homologous structures which are also described here.

### 1 Parts of siphuncle

In a siphuncle of the mature conch of *Cameroceras*<sup>3</sup> *brainerdi* four well defined parts, succeeding each other in apertural direction, can be differentiated. For reasons of plainer demonstration we will consider them here in the reversed order of origin or in apical direction. The first portion of the siphuncle of this species is entirely empty, as in *Orthoceras* [see

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<sup>1</sup>See list of references.

<sup>2</sup>Subsequently these structures were also found in specimens from Fort Cassin itself, which are a part of the State Museum collection.

<sup>3</sup>We use here the older term *Cameroceras* not differentiating between *Cameroceras* and *Endoceras*, as Hyatt has done.