

The pygidium is not shown in any of Dr. Emmons's specimens or in those obtained by Mr. Ford at Troy, New York. We have not observed it in place on the trilobite, but from finding an elongate telson like that of *O. Thompsoni* in the limestone at Troy associated with fragments of *O. asaphoides*, it is quite probable that the pygidium is of the same character. The objection to this is the broad space at the base of the fourteenth segment in the specimen figured by Dr. Emmons (Amer. Geol.), and also at the eleventh segment in Mr. Ford's figure (Amer. Jour. Sci., vol. xiii, p. 265, fig. 5, 1877). The pleuræ of the segments resemble those of *Mesonacis Vermontana* in their curvature rather than the strongly recurved pleuræ of *O. Thompsoni*, of the eleventh to the fourteenth segments. The discovery of more perfect specimens can alone determine the number of segments and the character of the pygidium.

The second epoch in the history of the species we owe to the investigations of Mr. S. W. Ford, who discovered in the limestones at Troy, New York, a number of minute specimens showing some of the metamorphoses of the species.

Two of Mr. Ford's figures I have reproduced, one showing a young stage, where the body is partially developed, and the other the mature form; illustrations are also given of two very small heads, figs. 5 and 6, plate xvii. Fig. 5 has a length of four-fifths of a millimeter, and fig. 6, of 1.75^{mm}. Mr. Ford calls the spines *xx* the interocular spines; these are absorbed during the development of the animal and also to a great extent their continuation up on the head; the surface of the latter is crossed by elevated lines corresponding in position to the glabellar furrows; they appear to indicate the original segmentation of the head, most of which is lost by absorption during the subsequent development, except on the glabella; the connection between the frontal lobe of the glabella and the ocular somite or segment is beautifully shown. As far as can be determined, the thorax is not yet developed in either specimen represented by figs. 5 and 6. Fig. 8 shows the great development of the third thoracic segment, and also the interocular spines and genal spines, which are placed so close to each other in figs. 5 and 6. A specimen figured by Mr. Ford shows them separated by a slight crevice. Fig. 8 also shows the tendency of the genal angles to extend forward, a feature so extravagantly developed in *O. Gilberti*.

Mr. Ford has discussed the metamorphoses of the young of *O. asaphoides* in a minute and able manner, and the reader is referred to his papers (Amer. Jour. Sci., 3d ser., vols. xiii, xv, and xxii) for further information.

The geographic range of *O. asaphoides* is not yet well determined, owing to the fact that when in a fragmentary condition it is impossible to detect the difference between it and *O. Thompsoni* and *O. Gilberti* when the latter is also without the thoracic segments.

Formation and localities.—Middle Cambrian. In argillaceous shales at Reynolds's Inn, northeast of Bald Mountain, Washington County,