

Middle Cambrian fauna as *Olenellus*. *O. typicalis* is a strongly-marked type and appears to be one of the forms that carried the *Paradoxides* type up through the Cambrian to the *Dicellosephalus* type of the Upper Cambrian. *O. Marcoui* is also allied to *Dicellosephalus*; and the genus *Olenoides*, as a whole, is the representative of *Dicellosephalus* of the Upper Cambrian. *Bathynotus holopyga* is another curious form, restricted, so far as known, to one locality and horizon. Its relations appear to be with *Olenoides* and *Dicellosephalus*.

§ 116. The *Conocephalidæ* family predominates in the trilobitic portion of the fauna in having 6 genera and 21 species.

*Ptychoparia Piochensis*, with its 19 thoracic segments, adds to the genus *Ptychoparia* a greater range in the number of segments of the thorax, 14-15 being changed to 14-19. The other species of the genus are essentially of the same general type as the typical forms.

*Crepicephalus* is hardly of generic value, although so used in this paper. The study of the Upper Cambrian species will assist in the determination of its generic position.

*Oryctocephalus* adds another genus to the *Conocephalidæ*, and it appears to be warranted by the combination of characters observed in the head and pygidium. The peculiar glabellar furrows and the strong spinous pygidium are unlike any other known to me.

The genera *Anomocare* and *Solenopleura* are not sufficiently well represented to demand special notice.

In *Protypus* there is a combination of characters recalling *Ptychoparia*; at the same time, the glabella and head point to *Angelina* and *Bathyrurus*. The genus has a wide geographic range and is, as far as we know, confined to the Middle Cambrian.

§ 117. There is a group of genera intermediate between the *Conocephalidæ* and the *Asaphidæ* that, as yet, have not been arranged in any defined family. They include the genera *Bathyrurus*, *Bathyriscus*, and *Asaphiscus*, and may be defined as the family *Bathyruridæ*, as follows: Trilobites of an oval form; medium size; capable of rolling up. Head a little longer than the pygidium; glabella distinctly defined, with or without distinct glabellar furrows; facial sutures terminating posteriorly within the genal angles and anteriorly on the frontal margin; eyes medium-size to large, semilunar. Thorax with 7-9 segments; pleuræ furrowed. Pygidium somewhat smaller than the head, formed of numerous (6, 8+) closely united segments; border flattened, smooth. Doublure of head and pygidium thin and well developed. The general assemblage of characters places the *Bathyruridæ* close to the *Asaphidæ*, but I do not think we should include its genera under the typical group of the latter.

§ 118. *Asaphiscus Wheeleri* suggests forms placed under the genus *Asaphus*, but the glabella and the direction of the facial suture in front of the eyes are those of the *Conocephalidæ*. The species and genus is known from only one locality and horizon. *Bathyriscus Howelli* and