

simple, slender, longitudinally elongated and acutely pointed, averaging six millimetres in length by about one mm. in breadth at the base: the three pairs of spines about equal in length, though the two lateral ones are placed farther forward than the central and terminal pair. Surface markings entirely unknown.

This genus and species are based upon upwards of fifty specimens collected from a band of shale of Middle Cambrian age, at Mount Stephen, near Field station on the Canadian Pacific Railway. Two of these specimens were collected by Mr. R. G. McConnell, of the Geological Survey of Canada, in 1888, and the remainder by Dr. H. M. Ami, of the same Survey, in 1891. The species seem to have been somewhat gregarious in its habits when living, for upwards of twenty specimens of it are exposed on the surface of a large slab of shale collected by Dr. Ami at this locality, and fourteen upon that of another. It is associated with numerous species of trilobites, brachiopoda, etc., most of which have been described by Dr. Carl Rominger and Mr. O. D. Walcott. All the specimens of *A. Canadensis* are crushed quite flat laterally and occur as obscurely defined and extremely thin impressions of the body segments, with the tail, the latter usually a little twisted, on each of the surfaces exposed by splitting pieces of the shale.

The generic name *Anomalocaris* (from ἀνομοιος, unlike,—καρίς, a shrimp, i.e., unlike other shrimps) is suggested by the unusual shape of the uropods or ventral appendages of the body segments and the relative position of the caudal spines.

Only three genera of Phyllocarida have previously been recorded as occurring in the Cambrian rocks of Europe or America. These are *Ceratiocaris*, McCoy (1848); *Hymenocaris*, Salter (1853); and *Protocaris*, Walcott (1884). To these may now be added *Anomalocaris*, which differs from the other three genera of Cambrian Phyllocarids in the following particulars. In *Ceratiocaris* the caudal appendages consist of a median telson or style, and two lateral stylets. Further, although ventral appendages to the body segments