

How much larger it was we do not know, but the orographic movement that brought the Grand Cañon, Llano, and Keweenaw Formations above sea level probably extended all along the central line of the continent, leaving the Atlantic area and the Great Basin of Utah, Nevada, Arizona, &c., areas of deposition during the existence of the Paradoxides fauna, and probably during the existence of the Middle Cambrian fauna, a break on the north or south permitting the latter fauna to pass into the western basin now covered by a portion of the Rocky Mountain area. At the time of the Middle Cambrian fauna the central land area of the Middle and Lower Cambrian epochs, or the Keweenaw land, was depressed beneath the sea and a series of strata deposited that now contains the Upper Cambrian fauna in all the localities where the strata of the Keweenaw land and of the Upper Cambrian show their relations to each other.

If this is a correct interpretation of the evidence now known, we may look in vain in the interior basin for the Paradoxides fauna of the Atlantic basin.

§ 124. That there was life in the older Cambrian or possibly in the pre-Cambrian seas of the interior basin there is no doubt, as we have found traces of it in the Grand Cañon Formation of Arizona; and the development of that fauna is one of the problems yet awaiting solution.

§ 125. During the Upper Cambrian (Potsdam of America, Upper Lingula Flags of Wales) the faunas of the two basins appear to have had free communication with each other, and we now find them with a more similar facies.

§ 126. The above views are more or less theoretical, but the facts demand an explanation other than that the faunas of the Lower, Middle, and Upper Cambrian were contemporaneous, but in different geographic areas. That the Upper and Middle faunas were separated by a great interval is shown by the sections, and that the Middle and Lower faunas were not contemporaneous is shown by the biologic evidence and the indirect evidence of the absence of the Lower fauna in association with the Middle fauna in the Newfoundland area, where they are now found, in different sections, a short distance from each other, but separated by faults and valleys of erosion, now filled by the sea.

§ 127. With the given facts there is little hesitancy in claiming for the Middle Cambrian (Georgia or Olenellus) fauna a distinct horizon in the Great Cambrian System of the American continent. That further research will result in discovering many connecting links between the Lower and Middle and Middle and Upper faunas of the system there is little, if any, doubt; but that the three faunas are not of the same geologic age appears to be now well established.

§ 128. Analytic comparisons with the Cambrian faunas of Europe are omitted until the study of the Upper Cambrian fauna is further advanced.

§ 129. If students discover errors in these preliminary studies of the