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sentative of the 13,000 feet of limestone of the same formations in Nevada, and no unconformity, by any extensive erosion, is indicated; and, again, the 9,000 feet of limestone of the Upper Cambrian and Lower Silurian (Ordovician) of the Central Nevada section is unrepresented in the Wasatch section of Utah. These facts readily prepare us to believe that the hiatus between the Keweenaw and Upper Cambrian is fully equivalent to the period of the Lower and Middle Cambrian.

Another reason is that from the extended orographic movement preceding the erosion of the Cambrian, we should expect to find evidence of that crossion in the Cambrian of Utah and Nevada, but, as yet, none such is known.

Thus far the question of the existence of the Keweenaw system has been treated from a purely structural basis,\* but, in the course of my study of the distribution of the Cambrian faunas, I have met with some facts that require an explanation and the most plausible one demands the existence of an extended orographic movement, prior to the deposition of the Cambrian strata of the western side of the Continent, that raised a land area over the central portion of the Continent which existed up to the period of the beginning of the deposition of the Upper Cambrian formations, when it was depressed beneath the level of the sea and the Upper Cambrian strata deposited over portions of it.

The facts demanding explanation are: 1st. The entire absence, as far as known to date, of the Lower Cambrian or Paradoxides fauna west of the Atlantic border: 2d. The absence of the Middle Cambrian or Olenellus fauna over areas occupied by the formations of the Keweenaw system.

If we accept the view that the Keweenaw, Grand Cañon, and Llano strata are outcrops of a system of strata of pre-Cambrian age that extended, in connection with the Huronian and Laurentian beneath it and projecting up through it, from the great body of Archean land on the north, southward over the area now occupied by the central portions of the Continent, or the Mississippi Valley, and westward to the area occupied by sediments accumulated on the western side of the Keweenaw system of strata when the latter formed a land area, then the explanation asked is given. The pre-Keweenaw portion of this Keweenaw land must have been extensive as, in the Missouri area at St. Louis and the Ozark Mountains, the Archean appears beneath the Upper Cambrian ; and all the eastern slopes

\* Professor T. C. Chamberlain gives a most excellent summary of the Keweenaw series and its stratigraphic position in vol. i, of the Geology of Wisconsin. In the section, on page 65, it is placed as a distinct system, resting unconformably on the Huronian which, in turn, is separated from the Laurentian by an unconformity. The Cambrian is shown above the Keweenaw as a system between it and the Lower Silurian (Ordovician).