

but occur. Whether or not the contrast further arose from some geographical cause, such as a land-barrier, that completely separated the areas remains uncertain. The Durness limestones, as regards their fossil contents and lithological characters, may be compared with the Potsdam sandstone and Calciferous group of the United States and Canada. They represent the Middle and Upper Cambrian, possibly part of the Lower Silurian formations.²⁶

In the southeast of Ireland masses of purplish, red, and green shales, slates, grits, quartzites, and schists occupy a considerable area and attain a depth of apparently several thousand feet without revealing their base, though in Wexford they may possibly rest on pre-Cambrian rocks. Their top is covered by unconformable formations (Lower Silurian and Lower Carboniferous). They have yielded *Oldhamia*, also numerous burrows and trails of annelids (*Histioderma hibernicum*, *Arenicolites didymus*, *A. sparsus*, *Haughtonia pæcila*). In the absence of fossil evidence it is impossible to bring these strata into correlation with those of Wales. Some portions of them have been considerably metamorphosed. On the Howth coast they appear as slates, schists, and quartzites, and include there some remarkable breccias, as well as single blocks of stone scattered through the slates.²⁷

Continental Europe.—According to the classification adopted by M. Barrande, the fauna of the older Palæozoic rocks of Europe suggest an early division of the area of this continent into two regions or provinces—a northern province, embracing the British Islands, and extending through North Germany into Scandinavia and Russia, and a central-European province, including Bohemia, France, Spain, Portugal, and Sardinia.

Passing from the British type of the Cambrian deposits, we encounter nowhere in the northern part of the continent so vast a depth of stratified deposits; on the contrary, one of the most singular contrasts in Palæozoic geology is that presented by the development of these formations in Wales, and in the north of Europe. The enormous masses of sediment, thousands of feet thick, and with such uniformity of lithological character, which record the oldest Palæozoic ages in Wales, are represented in the basin of the Baltic by only a few hundred feet of sediments, which show

²⁶ B. N. Peach, Quart. Journ. Geol. Soc. xlv. 1888, p. 407.

²⁷ Quart. Journ. Geol. Soc. xlvii. 1891. Presidential Address, p. 104.