variety of trilobites, Spiriferæ, and other brachiopoda and corals, all agreeing perfectly with European Upper Silurian types. Other plants allied to these, and ferns, have been met with in the lowest Devonian or Chemung strata of the State of New York (the olive slate of Pennsylvania and Virginia), associated with fossil shells, very closely allied to the Silurian.* These exceptions to the general rule have been found in those eastern parts of the United States where the Devonian and Silurian sandstones and mudstones are of the greatest thickness, and which we may therefore presume to have originated nearest to the lands then exposed to denudation. The neighbouring continent of that remote epoch may probably have occupied the space now covered by the Atlantic, and there may have been another in the Pacific, while the lands now existing were then the site of deep oceans.

The greater the lapse of ages which separates the origin of a given set of strata from our own times, the greater is the probability that our acquaintance with those strata will relate chiefly to pelagic deposits, or those formed in deep seas, and far from land. It must require a long continuance of subterranean movements, and a frequent shifting of the principal areas of upheaval, before extensive tracts of the bed of deep oceans, such as the Atlantic and Pacific, can be converted into continents. On the other hand, we may presume that the estuary, littoral, and lacustrine strata of such remote ages, being at first of small horizontal extent, as compared to the con-

* Hall's Report, p. 276.