

stored to a portion of its contested right and title to be considered as a *primordial* rock.

The recent progress of geognosy, that is to say, the more extended knowledge of the geognostic epochs characterized by difference of mineral formations, by the peculiarities and succession of the organisms contained within them, and by the position of the strata, whether uplifted or inclined horizontally, leads us, by means of the causal connection existing among all natural phenomena, to the distribution of solids and fluids into the continents and seas which constitute the upper crust of our planet. We here touch upon a point of contact between geological and geographical geognosy which would constitute the complete history of the form and extent of continents. The limitation of the solid by the fluid parts of the earth's surface, and their mutual relations of area, have varied very considerably in the long series of geognostic epochs. They were very different, for instance, when carboniferous strata were horizontally deposited on the inclined beds of the mountain limestone and old red sandstone; when lias and oolite lay on a substratum of keuper and muschelkalk, and the chalk rested on the slopes of green sandstone and Jura limestone. If, with Elie de Beaumont, we term the waters in which the Jura limestone and chalk formed a soft deposit the *Jurassic or oolitic*, and the *cretaceous seas*, the outlines of these formations will indicate, for the two corresponding epochs, the boundaries between the already dried land and the ocean in which these rocks were forming. An ingenious attempt has been made to draw maps of this physical portion of primitive geography, and we may consider such diagrams as more correct than those of the wanderings of Io or the Homeric geography, since the latter are merely graphic representations of mythical images, while the former are based upon positive facts deduced from the science of geology.

The results of the investigations made regarding the areal relations of the solid portions of our planet are as follows: in the most ancient times, during the silurian and devonian transition epochs, and in the secondary formations, including the trias, the continental portions of the earth were limited to insular groups covered with vegetation; these islands at a subsequent period became united, giving rise to numerous lakes and deeply-indented bays; and, finally, when the chains of the Pyrenees, Apennines, and Carpathian Mountains were elevated about the period of the more ancient tertiary formations, large continents appeared, having almost their present