

required for the existence of corals in the seas, and of forests of palms and tree ferns, and swarms of reptiles, on the islands and continents of northern latitudes.* The climate of particular latitudes would also be materially influenced by the great changes in the relative proportion of land and water, which took place in different geological periods. Thus, as Mr. Lyell has satisfactorily demonstrated, the dry land in the northern hemisphere has been on the increase since the commencement of the tertiary epoch; not only because it is now greatly in excess beyond the average proportion which land generally bears to water on our planet, but also that a comparison of the secondary and tertiary strata, affords indications throughout the space occupied by Europe, of a transition from the condition of an ocean interspersed with islands, to that of a large continent; and this increase of the land may in some measure have contributed to that gradual diminution of temperature which the organic remains denote.†

48. ASTRONOMICAL RELATIONS OF THE SOLAR SYSTEM.—Having thus endeavoured to interpret the natural monuments of the earth's physical history, let us contemplate the relation of our solar system to the countless orbs around us. For while astronomy explains that our system once existed as a diffused nebulosity, which passing through various

* See an excellent summary of the present state of geological theory in Phillips's *Treatise on Geology*.

† Lyell's *Principles of Geology*, vol i. chap. vii.