

air in contact with the ground. The simultaneous thermic and hygrometric modifications of the upper regions of the air can only be learned (when direct observations on mountain stations or aerostatic ascents are impracticable) from hypothetical combinations, by making the barometer serve both as a thermometer and an hygrometer. Important changes of weather are not owing to merely local causes, situated at the place of observation, but are the consequence of a disturbance in the equilibrium of the aërial currents at a great distance from the surface of the Earth, in the higher strata of the atmosphere, bringing cold or warm, dry or moist air, rendering the sky cloudy or serene, and converting the accumulated masses of clouds into light feathery *cirri*. As, therefore, the inaccessibility of the phenomenon is added to the manifold nature and complication of the disturbances, it has always appeared to me that meteorology must first seek its foundation and progress in the torrid zone, where the variations of the atmospheric pressure, the course of hydro-meteors, and the phenomena of electric explosion, are all of periodic occurrence.

As we have now passed in review the whole sphere of inorganic terrestrial life, and have briefly considered our planet with reference to its form, its internal heat, its electro-magnetic tension, its phenomena of polar light, the volcanic reaction of its interior on its variously composed solid crust, and, lastly, the phenomena of its two-fold envelopes—the aërial and liquid ocean—we might, in accordance with the older method of treating physical geography, consider that we had completed our descriptive history of the globe. But the nobler aim I have proposed to myself, of raising the contemplation of nature to a more elevated point of view, would be defeated, and this delineation of nature would appear to lose its most attractive charm, if it did not also include the sphere of organic life in the many stages of its typical development. The idea of vitality is so intimately associated with the idea of the existence of the active, ever-blending natural forces which animate the terrestrial sphere, that the creation of plants and animals is ascribed in the most ancient mythical representations of many nations to these forces, while the condition of the surface of our planet, before it was animated by vital forms, is regarded as coeval with the epoch of a chaotic conflict of the struggling elements. But the empirical domain of objective contemplation, and the delineation of our planet in its present condition, do not include a consideration