

an evidence of the frequency of aqueous precipitation, in like manner as do the frequent mists with which the lovely plateau of Bogota is covered. Mists arise and disappear several times in the course of an hour in such elevations as these, and with a calm state of the atmosphere. These rapid alternations characterize the Paramos and the elevated plains of the chain of the Andes.

The electricity of the atmosphere, whether considered in the lower or in the upper strata of the clouds, in its silent problematical diurnal course, or in the explosion of the lightning and thunder of the tempest, appears to stand in a manifold relation to all phenomena of the distribution of heat, of the pressure of the atmosphere and its disturbances, of hydro-meteoric exhibitions, and probably, also, of the magnetism of the external crust of the earth. It exercises a powerful influence on the whole animal and vegetable world; not merely by meteorological processes, as precipitations of aqueous vapor, and of the acids and ammoniacal compounds to which it gives rise, but also directly as an electric force acting on the nerves, and promoting the circulation of the organic juices. This is not a place in which to renew the discussion that has been started regarding the actual source of atmospheric electricity when the sky is clear, a phenomenon that has alternately been ascribed to the evaporation of impure fluids impregnated with earths and salts,* to the growth of plants,† or to some other chemical decompositions on the surface of the earth, to the unequal distribution of heat in the strata of the air,‡ and, finally, according to Peltier's intelligent researches,§ to the agency of a constant charge of negative electricity in the terrestrial globe. Limiting itself to results yielded by electrometric observations, such, for instance, as are furnished by the ingenious electro-magnetic apparatus first proposed by Colladon, the physical description of the universe should merely notice the incontestable increase of intensity in the general positive electricity of the atmosphere,|| accompanying an increase of altitude and the absence of trees, its daily variations (which, according to Clark's experiments at Dublin,

* Regarding the conditions of electricity from evaporation at high temperatures, see Peltier, in the *Annales de Chimie*, t. lxxv., p. 330

† Pouillet, in the *Annales de Chimie*, t. xxxv., p. 405.

‡ De la Rive, in his admirable *Essai Historique sur l'Electricité*, p. 140.

§ Peltier, in the *Comptes Rendus de l'Acad. des Sciences*, t. xii., p. 307; Becquerel, *Traité de l'Electricité et du Magnétisme*, t. iv., p. 107

|| Duprez, *Sur l'Electricité de l'Air* (Bruxelles, 1844), p. 56-61