

true, and independent of the progress of positive geology in other countries; while the systematic names applied to any particular formation of America, are founded only on the supposed analogies between the formations of America and those of Europe. Now those names cannot remain the same, if after further examination, the objects of comparison have not retained the same place in the geologic series; if the most able geologists now take for transition-limestone and green sandstone, what they took formerly for zechstein and variegated sandstone. I believe the surest means by which geologic descriptions may be made to survive the change which the science undergoes in proportion to its progress, will be to substitute provisionally in the description of formations, for the systematic names of red sandstone, variegated sandstone, zechstein, and Jura limestone, names derived from American localities, as sandstone of the Llanos, limestone of Cumanacoa and Caripe, and to separate the enumeration of facts relative to the superposition of soils, from the discussion on the analogy of those soils with those of the Old World.\*

\* Positive geography being nothing but a question of the series or succession (either simple or periodical) of certain terms represented by the formations, it may be necessary, in order to understand the discussions contained in the third section of this memoir, to enumerate succinctly the table of formations considered in the most general point of view.

I. Strata commonly called Primitive; granite, gneiss, and mica-slate (or gneiss oscillating between granite and mica-slate); very little primitive clay-slate; weisstein with serpentine; granite with disseminated amphibole; amphibolic slate; veins and small layers of greenstone.

II. Transition strata, composed of fragmentary rocks, (grauwacke,) calcareous slate, and greenstone. earliest remains of organized existence: bamboos, madrepores, producta, trilobites, orthoceratites, evamphalites). Complex and parallel formations; (a) Alternate beds of grey and stratified limestone, anthracitic mica-slate, anhydrous gypsum, and grauwacke; (b) Clay-slate, black limestone, grauwacke with greenstone, syenite, transition-granite, and porphyries with a base of compact felspar; (c) Euphotides, sometimes pure and covered with jasper, sometimes mixed with amphibole, hyperstein, and grey limestone; (d) Pyroxenic porphyries with amygdaloides and zirconian syenites.

III. Secondary strata, presenting a much smaller number of monocotyledonous plants; (a) Co-ordinate and almost contemporary formations with red sandstone (rothe todtes liegende), quartz-porphyry, and fern-coal. These strata are less connected by alternation than by opposition. The