

definite laws, if that really differs in its nature from certain forms of the hypothesis of evolution. We have also learned that, time being given, animals and plants manifest wonderful powers of migration, that they can vary within considerable limits without ceasing to be practically the same species, and that under certain conditions they can endure far longer in some places than in others. We also see evidence that it is not on limited islands, but on the continents, that land animals and plants have originated, and that swarms of new and vigorous species have issued from the more northern regions in successive periods of favourable Arctic climate. The last of these new swarms or "centres of creation," that with which man himself is more closely connected, belongs to the Palearctic region. We have already seen that in every geological period, when the submerged continental plateaus were pervaded by the warm equatorial waters, multitudes of new marine species appear. In times when, on the contrary, the colder Arctic currents poured over these submerged surfaces, carrying mud and stones, great extinction took place, but certain northern forms of life swarmed abundantly, and when elevation took place, marine species became extinct or were forced to migrate. Everywhere and at all times multiplication of species was promoted by facilities for expansion. The great limestones of our continents, full of corals and shells of new species, belong to times when the ocean spread itself over the continental plateaus, affording wide, untenanted areas of warm and shallow water. The introduction of new faunas and floras on the land belongs to times when vast supplies of food for plants and animals and favourable conditions of existence were afforded by the emergence of new lands possessing fertile soils and abundantly supplied with light, heat, and moisture. Thus geological and geographical facts concur with ordinary observation and experience in reference to varietal forms, in testifying that it is not mere struggle for