

parts, in which the long continuance of daylight in summer seems in warm periods to have been peculiarly favourable to the introduction of new vegetable and animal forms, and to the giving to them that vigour necessary for active colonization, have originated the greater number of the inhabitants of the land.

Regarded as portions of the earth's crust, the continents are areas in which the lateral thrust, caused by the secular contraction of the interior of the earth and unequal settlement of the crust, has ridged up and folded the rocks, producing mountain chains. This process began in the earliest geological periods, and has been repeated at long intervals, the original lines of folding guiding those formed in each new thrust proceeding from the broad oceanic areas. Along the ridges thus produced, and in the narrower spaces between them, the greater part of the sediment carried by water was laid down, thus producing plateaus in connection with the mountain-chains, while the weight of new sediments and the removal of matter from other areas by denudation, have been constantly producing local depression and elevation. The tendency of the ocean to be thrown toward the poles by the retardation of the earth's rotation, alternating with great collapses of the crust at the equator proceeding from the same cause, along with the secular cooling, have produced alternate submergence and emergence of these plateaus. This has been further complicated by the constant tendency of the Arctic and Antarctic currents, aided by ice, to drift solid materials, set free by the vast denuding action of frost, from the polar to the temperate regions, and by the further tendency of animal life to heap up calcareous accumulations under the warm waters of the tropical regions. All these changes, as already stated, have conspired to modify the directions of the great oceanic currents, and to produce vicissitudes of climate under which animals and plants have been subjected in geological time to