

stant fluctuation from year to year occasioned by one or other series of animals and plants predominating, and that every year the struggle for life somewhat alters their relations.

Every single species of animal and plant would have densely peopled the whole earth's surface in a short time, if it had not had to struggle against a number of enemies and hostile influences. Even Linnæus calculated that if an annual plant only produced two seeds (and there is not one which produces so few), it would have yielded in twenty years a million of individuals. Darwin has calculated of elephants, which of all animals seem the slowest to increase, that in five hundred years the descendants of a single pair would amount to fifteen millions of individuals; this is supposing that every elephant, during its period of fertility (from the 30th to the 90th year), produced only three pairs of young ones, and survived itself to its hundredth year. In like manner the increase of the number of human beings—if calculated on the average proportion of births to population, and no hindrances to the natural increase stood in the way—would be such as to double the total in twenty-five years. In every century their total number would have increased sixteen-fold; whereas we know that the total number of human beings increases but slowly, and that the increase of population is very different in different countries. While European tribes spread over the whole globe, other tribes or species of men every year draw nearer to their complete extinction. This is the case especially with the redskins of America, and with the copper-coloured natives of Australia. Even if these races were to propagate more abundantly than the white Europeans, yet they would