

worms. Each tape-worm produces within a short period millions of eggs, while man, in whom these tape-worms are lodged, forms a far smaller number of eggs, and yet fortunately there are fewer tape-worms than human beings. In like manner, among plants there are many splendid orchids, which produce thousands of seeds and yet are very rare, and some kinds of asters (*Compositæ*), which have but few seeds, are exceedingly common.

This important fact might be illustrated by an immense number of examples. It is evidently, therefore, not the number of actually existing germs which indicates the number of individuals which afterwards come into life and maintain themselves in life; but rather the case is this, that the number of adult individuals is limited by other circumstances, especially by the relations in which the organism stands to its organic and inorganic surroundings. Every organism, from the commencement of its existence, struggles with a number of hostile influences: it struggles against animals which feed on it, and to which it is the natural food, against animals of prey and parasites; it struggles against inorganic influences of the most varied kinds, against temperature, weather, and other circumstances; but it also struggles (and this is much the most important!), above all, against organisms most like and akin to itself. Every individual, of every animal and vegetable species, is engaged in the fiercest competition with every other individual of the same species which lives in the same place with it. In the economy of nature the means of subsistence are nowhere scattered in abundance, but are very limited, and far from sufficient for the number of organisms which might develop from the germs produced. Therefore