

emigration. These *migrations* are common to all organisms, and are the real cause of the wide distribution of the different species of organisms over the earth's surface. Just as men leave over-crowded states, so all animals and plants migrate from their over-crowded primæval homes.

Many distinguished naturalists, especially Leopold Buch, Lyell,¹¹ and Schleiden, have before this repeatedly drawn attention to the great importance of these very interesting migrations of organisms. The means of transport by which they are effected are extremely varied. Darwin has discussed these most excellently in the eleventh and twelfth chapters of his work, which are exclusively devoted to "geographical distribution." The means of transport are partly active, partly passive; that is to say, the organism effects its migration partly by free locomotion due to its own activity, and partly by the movements of other natural bodies in which it has no active share.

It is self-evident that *active migrations* play the chief part in animals able to move freely. The more freely an animal's organization permits it to move in all directions, the more easily the animal species can migrate, and the more rapidly it will spread over the earth. *Flying* animals are of course most favoured in this respect, among vertebrate animals especially birds, and among articulated animals, insects. These two classes, as soon as they came into existence, can have more easily spread over the whole earth than any other animal, and this fact partly explains the extraordinary uniformity of structure which characterizes these two great classes of animals. For, although they contain an exceedingly large number of different species,