

organisms may make the journey from one continent to another together with the birds and insects. Of course all parasites, the number of which is legion, fleas, lice, mites, moulds, etc., migrate with the organism upon which they live. In the earth which often remains sticking to the claws of birds there are also small animals and plants or their germs. Thus the voluntary or involuntary migration of a single larger organism may carry a whole small flora and fauna from one part of the earth to another.

Besides the means of transport here mentioned, there are many others which explain the distribution of animal and vegetable species over the large tracts of the earth's surface, and especially the general distribution of the so-called cosmopolitan species. But these alone would not be nearly sufficient to explain all chorological facts. How is it, for example, that many inhabitants of fresh water live in various rivers or lakes far away and quite apart from one another? How is it that many inhabitants of mountains, which cannot exist in plains, are found upon entirely separated and far-distant chains of mountains? It is difficult to believe, and in many cases quite inconceivable, that these inhabitants of fresh water should have in any way, actively or passively, migrated over the land lying between the lakes, or that the inhabitants of mountains in any way, actively or passively, crossed the plains lying between their mountain-homes. But here geology comes to our help, as a mighty ally, and completely solves these difficult problems for us.

The history of the earth's development shows us that the distribution of land and water on its surface is ever and continually changing. In consequence of geological changes