

not absolutely, as in some the orders only, or the families only are thus closely related to the elements; there are even natural groups, in which this connection is not manifested beyond the limits of the genera, and a few cases in which it is actually confined to the species. Yet, in every degree of these connections, we find that upon every spot of the globe, it extends simultaneously to the representatives of different classes and even of different branches of the animal and vegetable kingdoms; a circumstance which shows that when called into existence, in such an association, these various animals and plants were respectively adapted with all the peculiarities of their kingdom, those of their class, those of their order, those of their genus, and those of their species, to the home assigned to them, and therefore, not produced by the nature of the place, or of the element, or any other physical condition. To maintain the contrary, would really amount to asserting that wherever a variety of organized beings live together, no matter how great their diversity, the physical agents prevailing there, must have in their combined action, the power of producing such a diversity of structures as exists in animals, notwithstanding the close connection in which these animals stand to them, or to work out an intimate relation to themselves in beings, the essential characteristics of which, have no reference to their nature. In other words, in all these animals and plants, there is one side of their organization which has an immediate reference to the elements in which they live, and another which has no such connection, and yet it is precisely this part of the structure of animals and plants, which has no direct bearing upon the conditions in which they are placed in nature, which constitutes their essential, their typical character. This proves beyond the possibility of an objection, that the elements in which animals and plants live (and under this expression I mean to include all that is commonly called physical agents, physical causes, etc.,) cannot in any way be considered as the cause of their existence.

If the naturalists of past centuries have failed to improve their systems of Zoölogy by introducing considerations derived from the habitat of animals, it is chiefly because they have taken this habitat as the foundation of their primary divisions; but reduced to its proper limits, the study of the connection between the structure and the natural home of animals cannot fail to lead to interesting results, among which, the growing conviction that these relations are not produced by physical agents, but determined in the plan ordained from the beginning, will not be the least important.

The unequal limitation of groups of a different value, upon the surface of the earth, produces the most diversified combinations possible, when we consider the mode of association of different families of animals and plants in different parts of the world. These combinations are so regulated that every natural province has a character of its own, as far as its animals and plants are concerned, and such natural