

still have to be shown that mutual fertility in all cases served to define groups of equal morphological value; in fact, this test is a sort of last defence of the notion that species have, generally speaking, any other existence than the convenience of the describer.

The matter may be most readily considered by supposing that the systematist had before him for classification all the animals that have at any time existed; transitional forms between what are now accepted as the best of species would be as common as leaves in Val Ombrosa; yet classification would be as possible as ever, and not quite so uncertain as at present. But to a great extent the classification would be quantitative, and the groups resulting would have more equal value than those which, with our fragmentary material, we can now attempt to establish. Thus, with a continuous spectrum, in which all the tints pass insensibly into each other, the physicist is still able to speak of red and blue, though had he nothing else than the mere sense of colour to guide him he would have to agree upon conventional lines of demarcation; yet can any one assert that the results that would be so obtained would be less natural than such as would follow from a classification founded on a spectrum, produced by a prism with an absolute selective absorption for the very middle of the red, blue, and yellow regions? And how do we know that the interruptions in the series of animal forms produced by the action of natural selection are a whit more natural than that we have supposed in the illustration just suggested? According to Darwin it is the transitional forms which tend to become extinct under the action of natural selection; no doubt, but how are we to distinguish between transitional forms, where all are transitional at their inception. Is it not by the action of natural selection in causing them to become extinct? and is this not somewhat arguing in a circle? To me, therefore, a species is nothing more than a collection of more or less similar individuals, distinguished from other similar groups by any constant difference, however trivial, say in the details of form of a particular spicule, or by the relative size of the spicules in the two assemblages. It may be remarked that by the use of the qualification constant I revive that of the absence of intermediate forms under another form. But that is not really so, and the qualification might be omitted without affecting the definition, for if the character is not constant it might as well not exist. There is, however, in my mind a proviso that ought not to be unconsciously disregarded; this is the geographical distribution as an element in the definition of a species, and this evidently derives its value from the underlying belief in the doctrine of descent, for if the descendants of two originally similar parents, one of which had its home in the Pacific and the other in the Atlantic, do not differ from each other in any discoverable character, we have nothing for it but to class them together as a single species; should they, however, differ in the slightest definable particular, we shall readily make use of this to indicate the difference in their descent. Should now an exactly intermediate form be discovered in the Indian Ocean, this will not destroy the distinction between our two species, we