

are to be drawn from the fact alluded to by De Candolle, of species having a close affinity to each other occurring in distinct botanical provinces, or countries inhabited by groups of distinct species of indigenous plants; for in this case naturalists, who are not prepared to go the whole length of the transmutationists, are under the necessity of admitting that, in some cases, species which approach very near to each other in their characters, were so created from their origin; an admission fatal to the idea of its being a general law of nature that a few original types only should be formed, and that all intermediate races should spring from the intermixture of those stocks.

This notion, indeed, is wholly at variance with all that we know of hybrid generation; for the phenomena entitle us to affirm, that had the types been at first somewhat distant, *no cross-breeds would ever have been produced*, much less those prolific races which we now recognize as distinct species.

In regard, moreover, to the permanent propagation of hybrid races among animals, insuperable difficulties present themselves, when we endeavour to conceive the blending together of the different instincts and propensities of two species, so as to insure the preservation of the intermediate race. The common mule, when obtained by human art, may be protected by the power of man; but, in a wild state, it would not have precisely the same wants either as the horse or the ass; and if, in consequence of some difference of this kind, it strayed from the herd, it would soon be hunted down by beasts of prey, and destroyed.

If we take some genus of insects, such as the bee, we find that each of the numerous species has some difference in its habits, its mode of collecting honey, or constructing its dwelling, or providing for its young, and other particulars. In the case of the common hive bee, the workers are described, by Kirby and Spence, as being endowed with no less than thirty distinct instincts.* So also we find that, amongst a most numerous class of spiders, there are nearly as many different modes of spinning their webs as there are species. When we recollect how complicated are the relations of these instincts with co-existing species, both of the animal and vegetable kingdoms, it is scarcely possible to imagine that a bastard race could spring from the union of two of these species, and retain just so much of the qualities of each parent stock as to preserve its ground in spite of the dangers which surround it.

We might also ask, if a few generic types alone have been *created* among insects, and the intermediate species have proceeded from hybridity, where are those original types, combining, as they ought to do, the elements of all the instincts which have made their appearance in the numerous derivative races? So also in regard to animals of all classes, and of plants; if species are in general of hybrid origin, where are the stocks which combine in themselves the habits, proper-

* *Intr. to Entom.*, vol. ii. p. 504. Ed. 1817.