

to become one of the commonest weeds in the island, and it has maintained its ground ever since 1845.*

The most remarkable proof, says De Candolle, of the extent to which man is unconsciously the instrument of dispersing and naturalizing species, is found in the fact, that in New Holland, America, and the Cape of Good Hope, the aboriginal European species exceed in number all the others which have come from any distant regions ; so that, in this instance, the influence of man has surpassed that of all the other causes which tend to disseminate plants to remote districts. Of nearly 1600 British flowering plants, it is supposed that about 300 species are naturalized ; but a large proportion of these would perish with the discontinuance of agriculture.

Although we are but slightly acquainted, as yet, with the extent of our instrumentality in naturalizing species, yet the facts ascertained afford no small reason to suspect that the number which we introduce unintentionally exceeds all those transported by design. Nor is it unnatural to suppose that the functions, which the inferior beings, extirpated by man, once discharged in the economy of nature, should devolve upon the human race. If we drive many birds of passage from different countries, we are probably required to fulfil their office of carrying seeds, eggs of fish, insects, mollusks, and other creatures, to distant regions : if we extirpate quadrupeds, we must replace them not merely as consumers of the animal and vegetable substances which they devoured, but as disseminators of plants, and of the inferior classes of the animal kingdom. I do not mean to insinuate that the very same changes which man brings about, would have taken place by means of the agency of other species, but merely that he supersedes a certain number of agents ; and so far as he disperses plants unintentionally, or against his will, his intervention is strictly analogous to that of the species so extirpated.

I may observe, moreover, that if, at former periods, the animals inhabiting any given district have been partially altered by the extinction of some species, and the introduction of others, whether by new creations or by immigration, a change must have taken place in regard to the particular plants conveyed about with them to foreign countries. As, for example, when one set of migratory birds is substituted for another, the countries from and to which seeds are transported are immediately changed. Vicissitudes, therefore, analogous to those which man has occasioned, may have previously attended the springing up of new relations between species in the vegetable and animal worlds.

It may also be remarked, that if man is the most active agent in enlarging, so also is he in circumscribing the geographical boundaries of particular plants. He promotes the migration of some, he retards that of other species ; so that, while in many respects he appears to be exerting his power to blend and confound the various provinces of indigenous species, he is, in other ways, instrumental in ob-

* Principles of Botany, p. 389.