

But this peculiar distribution of plants would not warrant the conclusion that, in the space occupied by St. Helena, there had been a greater exertion of creative power than in the spaces of equal area occupied by the new adjacent lands; because, within the period in which St. Helena had acquired its peculiar vegetation, each of the spots supposed to be subsequently converted into land may have been the birth-places of a great number of *marine* animals and plants, which may have had time to scatter themselves far and wide over the southern Atlantic.

Why distinct provinces not more blended. — Perhaps it may be objected to some parts of the foregoing train of reasoning, that during the lapse of past ages, especially during many partial revolutions of the globe of comparatively modern date, different zoological and botanical provinces ought to have become more confounded and blended together — that the distribution of species approaches too nearly to what might have been expected, if animals and plants had been introduced into the globe when its physical geography had already assumed the features which it now wears; whereas we know that, in certain districts, considerable geographical changes have taken place since species identical with those now in being were created.

Brocchi's speculations on loss of species. — These, and many kindred topics cannot be fully discussed until we have considered, not merely the general laws which may regulate the first introduction of species, but those which may limit their *duration* on the earth. Brocchi remarked, when hazarding some interesting conjectures respecting "the loss of species," that a modern naturalist had no small assurance, who declared "that individuals alone were capable of destruction, and that species were so perpetuated that nature could not annihilate them, so long as the planet lasted, or at least that nothing less than the shock of a comet, or some similar disaster, could put an end to their existence."* The Italian geologist, on the contrary, had satisfied himself, that many species of Testacea, which formerly inhabited the Mediterranean, had become extinct, although a great number of others, which had been the contemporaries of those lost races, still survived. He came to the opinion that about half the species which peopled the waters when the Subapennine strata were deposited had gone out of existence; and in this inference he does not appear to have been far wrong.

But, instead of seeking a solution of this problem, like some other geologists of his time, in a violent and general catastrophe, Brocchi endeavoured to imagine some regular and constant law by which species might be made to disappear from the earth gradually and in succession. The death, he suggested, of a species might depend, like that of individuals, on certain peculiarities of constitution conferred upon them at their birth; and as the longevity of the one depends on a certain force of vitality, which, after a period, grows

* Necker, *Phytozool. Philosoph.*, p. 21. Brocchi, *Conch. Foss. Subap.*, tome i. p. 229.