

all doubt. And thus the snap-dragon, of which we have spoken above, is derived from the *Peloria*, which is the normal condition of the flower, by the abortion of one stamen, and the degeneration of two others. Such examples are too numerous to need to be dwelt on.

Sect. 2.—Application of Vegetable Morphology.

THE doctrine, being thus fully established, has been applied to solve different problems in botany; for instance, to explain the structure of flowers which appear at first sight to deviate widely from the usual forms of the vegetable world. We have an instance of such an application in Mr. Robert Brown's explanation of the real structure of various plants which had been entirely misunderstood: as, for example, the genus *Euphorbia*. In this plant he showed that what had been held to be a jointed filament, was a pedicel with a filament above it, the intermediate corolla having evanesced. In *Orchideæ* (the orchis tribe), he showed that the peculiar structure of the plant arose from its having six stamens (two sets of three each), of which five are usually abortive. In *Coniferæ* (the cone-bearing trees), it was made to appear that the seed was naked, while the accompanying appendage, corresponding to a seed-vessel, assumed all forms, from a complete leaf to a mere scale. In like manner it was proved that the *pappus*, or down of *composite* plants (as thistles), is a transformed calyx.

Along with this successful application of a profound principle, it was natural that other botanists should make similar attempts. Thus Mr. Lindley was led to take a view¹¹ of the structure of *Reseda* (mignonette) different from that usually entertained; which, when published, attracted a good deal of attention, and gained some converts among the botanists of Germany and France. But in 1833, Mr. Lindley says, with great candor, "Lately, Professor Henslow has satisfactorily proved, in part by the aid of a monstrosity in the common *Mignonette*, in part by a severe application of morphological rules, that my hypothesis must necessarily be false." Such an agreement of different botanists respecting the consequences of morphological rules, proves the reality and universality of the rules.

We find, therefore, that a principle which we may call the *Principle of Developed and Metamorphosed Symmetry*, is firmly established

¹¹ Lindley, *Brit. Assoc. Report*, iii. 50.