

CHAPTER V.

PROGRESS TOWARDS A NATURAL SYSTEM OF BOTANY.

WE have already said, that the formation of a Natural System of classification must result from a comparison of *all* the resemblances and differences of the things classed; but that, in acting upon this maxim, the naturalist is necessarily either guided by an obscure and instinctive feeling, which is, in fact, an undeveloped recognition of physiological relations, or else acknowledges physiology for his guide, though he is obliged to assume arbitrary rules in order to interpret its indications. Thus all Natural Classification of organized beings, either begins or soon ends in Physiology; and can never advance far without the aid of that science. Still, the progress of the Natural Method in botany went to such a length before it was grounded entirely on the anatomy of plants, that it will be proper, and I hope instructive, to attempt a sketch of it here.

As I have already had occasion to remark, the earlier systems of plants were natural; and they only ceased to be so, when it appeared that the problem of constructing a *system* admitted of a very useful solution, while the problem of devising a *natural system* remained insoluble. But many botanists did not so easily renounce the highest object of their science. In France, especially, a succession of extraordinary men labored at it with no inconsiderable success: and they were seconded by worthy fellow-laborers in Germany and elsewhere.

The precept of taking into account all the parts of plants according to their importance, may be applied according to arbitrary rules. We may, for instance, assume that the fruit is the most important part; or we may make a long list of parts, and look for agreement in the greatest possible number of these, in order to construct our natural orders. The former course was followed by Gærtner;¹ the latter by Adanson. Gærtner's principles, deduced from the dissection of more than a thousand kinds of fruits,² exercised, in the sequel, a great and

¹ *De Fructibus et Seminibus Plantarum.* Stuttg. 1788-1791.

² Sprengel, ii. 290.