

guage is learnt ; that is, the reader must connect the terms immediately with his own sensations and notions, and not mediately, through a verbal explanation ; he must not have to guess their meaning, or to discover it by a separate act of interpretation into more familiar language as often as they occur. The language of botany must be the botanist's most familiar tongue. When the student has thus learnt to *think* in botanical language, it is no idle distinction to tell him that a *bunch* of grapes is not a *cluster* ; that is, a *thyrsus* not a *raceme*. And the terminology of botany is then felt to be a useful implement, not an oppressive burden. It is only the schoolboy that complains of the irksomeness of his grammar and vocabulary. The accomplished student possesses them without effort or inconvenience.

As to the other question, whether the construction of such a botanical grammar and vocabulary implies an extensive and accurate acquaintance with the facts of nature, no one can doubt who is familiar with any descriptive science. It is true, that a person might construct an arbitrary scheme of distinctions and appellations, with no attention to natural objects ; and this is what shallow and self-confident persons often set about doing, in some branch of knowledge with which they are imperfectly acquainted. But the slightest attempt to use such a phraseology leads to confusion ; and any continued use of it leads to its demolition. Like a garment which does not fit us, if we attempt to work in it we tear it in pieces.

The formation of a good descriptive language is, in fact, an inductive process of the same kind as those which we have already noticed in the progress of natural history. It requires the *discovery of fixed characters*, which discovery is to be marked and fixed, like other inductive steps, by appropriate *technical terms*. The characters must be so far fixed, that the things which they connect must have a more permanent and real association than the things which they leave unconnected. If one bunch of grapes were really a *racemus*, and another a *thyrsus*, according to the definition of these terms, this part of the Linnæan language would lose its value ; because it would no longer enable us to assert a general proposition with respect to one kind of plants.

Sect. 3.—Linnæan Reform of Botanical Nomenclature.

In the ancient writers each recognized kind of plants had a distinct name. The establishment of Genera led to the practice of designating