

That this system was a true first approximation to a solution of the problem, appears to be allowed by naturalists. Although, says Cuvier,<sup>6</sup> there are in it no genera well defined and well limited, still in many places the species are brought together very naturally, and in such a way that a few words of explanation would suffice to form, from the groups thus presented to us, several of the genera which have since been received. Even in botany, as we have seen, genera were hardly maintained with any degree of precision, till the binary nomenclature of Linnæus made this division a matter of such immense convenience.

The amount of this convenience, the value of a brief and sure nomenclature, had not yet been duly estimated. The work of Willoughby forms an epoch,<sup>7</sup> and a happy epoch, in the history of ichthyology; for the science, once systematized, could distinguish the new from the old, arrange methodically, describe clearly. Yet, because Willoughby had no nomenclature of his own, and no fixed names for his genera, his immediate influence was not great. I will not attempt to trace this influence in succeeding authors, but proceed to the next important step in the progress of system.

*Improvement of the System. Artedi.*—Peter Artedi was a countryman and intimate friend of Linnæus; and rendered to ichthyology nearly the same services which Linnæus rendered to botany. In his *Philosophia Ichthyologica*, he analysed<sup>8</sup> all the interior and exterior parts of animals; he created a precise terminology for the different forms of which these parts are susceptible; he laid down rules for the nomenclature of genera and species; besides his improvements of the subdivisions of the class. It is impossible not to be struck with the close resemblance between these steps, and those which are due to the *Fundamenta Botanica*. The latter work appeared in 1736, the former was published by Linnæus, after the death of the author, in 1738; but Linnæus had already, as early as 1735, made use of Artedi's manuscripts in the ichthyological part of his *Systema Naturæ*. We cannot doubt that the two young naturalists (they were nearly of the same age), must have had a great influence upon each other's views and labors; and it would be difficult now to ascertain what portion of the peculiar merits of the Linnæan reform was derived from Artedi. But we may remark that, in ichthyology at least, Artedi appears to have been a naturalist of more original views and profounder philosophy than his friend and editor, who afterwards himself took up the subject.

<sup>6</sup> Cuvier, p. 57.

<sup>7</sup> p. 58.

<sup>8</sup> p. 20.