

But though we cannot but remark the peculiarity of our being indebted to a poet for the discovery of a scientific principle, we must not forget that he himself held, that in making this step, he had been guided, not by his invention, but by observation. He repelled, with extreme repugnance, the notion that he had substituted fancy for fact, or imposed ideal laws on actual things. While he was earnestly pursuing his morphological speculations, he attempted to impress them upon Schiller. "I expounded to him, in as lively a manner as possible, the metamorphosis of plants, drawing on paper, with many characteristic strokes, a symbolic plant before his eyes. He heard me," Göthe says,² "with much interest and distinct comprehension; but when I had done, he shook his head, and said, 'That is not Experience; that is an Idea:' I stopt with some degree of irritation; for the point which separated us was marked most luminously by this expression." And in the same work he relates his botanical studies and his habit of observation, from which it is easily seen that no common amount of knowledge and notice of details, were involved in the course of thought which led him to the principle of the Metamorphosis of Plants.

Before I state the history of this principle, I may be allowed to endeavor to communicate to the reader, to whom this subject is new, some conception of the principle itself. This will not be difficult, if he will imagine to himself a flower, for instance, a common wild-rose, or the blossom of an apple-tree, as consisting of a series of parts disposed in *whorls*, placed one over another on an *axis*. The lowest whorl is the calyx with its five sepals; above this is the corolla with its five petals; above this are a multitude of stamens, which may be considered as separate whorls of five each, often repeated; above these is a whorl composed of the ovaries, or what become the seed-vessels in the fruit, which are five united together in the apple, but indefinite in number and separate in the rose. Now the morphological view is this;—

Thou, my love, art perplext with the endless seeming confusion
 Of the luxuriant wealth which in the garden is spread;
 Name upon name thou hearest, and in thy dissatisfied hearing,
 With a barbarian noise one drives another along.

All the forms resemble, yet none is the same as another;

Thus the whole of the throng points at a deep hidden law,

Points at a sacred riddle. Oh! could I to thee, my beloved friend,

Whisper the fortunate word by which the riddle is read!

² *Zur Morphologie*, p. 24.