

The difficulty of representing plants in any useful way by means of drawings, is greater, perhaps, than it at first appears. So long as no distinction was made of the importance of different organs of the plant, a picture representing merely the obvious general appearance and larger parts, was of comparatively small value. Hence we are not to wonder at the slighting manner in which Pliny speaks of such records. "Those who gave such pictures of plants," he says, "Crateuas, Dionysius, Metrodorus, have shown nothing clearly, except the difficulty of their undertaking. A picture may be mistaken, and is changed and disfigured by copyists; and, without these imperfections, it is not enough to represent the plant in one state, since it has four different aspects in the four seasons of the year."

The diffusion of the habit of exact drawing, especially among the countrymen of Albert Durer and Lucas Cranach, and the invention of wood-cuts and copper-plates, remedied some of these defects. Moreover, the conviction gradually arose in men's minds that the structure of the flower and the fruit are the most important circumstances in fixing the identity of the plant. Theophrastus speaks with precision of the organs which he describes, but these are principally the leaves, roots, and stems. Fuchs uses the term *apices* for the anthers, and *gluma* for the blossom of grasses, thus showing that he had noticed these parts as generally present.

In the next writer whom we have to mention, we find some traces of a perception of the real resemblances of plants beginning to appear. It is impossible to explain the progress of such views without assuming in the reader some acquaintance with plants; but a very few words may suffice to convey the requisite notions. Even in plants which most commonly come in our way, we may perceive instances of the resemblances of which we speak. Thus, Mint, Marjoram, Basil, Sage, Lavender, Thyme, Dead-nettle, and many other plants, have a tubular flower, of which the mouth is divided into two lips; hence they are formed into a family, and termed *Labiatae*. Again, the Stock, the Wall-flower, the Mustard, the Cress, the Lady-smock, the Shepherd's-purse, have, among other similarities, their blossoms with four petals arranged crosswise; these are all of the order *Cruciferae*. Other flowers, apparently more complex, still resemble each other, as Daisy, Marigold, Aster, and Chamomile; these belong to the order *Compositae*. And though the members of each such family may differ widely in their larger parts, their stems and leaves, the close study of nature leads the botanist irresistibly to consider their resemblances as