

influence, was undoubtedly our countryman, John Ray, who was Fellow of Trinity College, Cambridge, at the same time with Isaac Newton. But though Cuvier states³⁸ that Ray was the model of the systematists during the whole of the eighteenth century, the Germans claim a part of his merit for one of their countrymen, Joachim Jung, of Lubeck, professor at Hamburg.³⁹ Concerning the principles of this botanist, little was known during his life. But a manuscript of his book was communicated⁴⁰ to Ray in 1660, and from this time forwards, says Sprengel, there might be noticed in the writings of Englishmen, those better and clearer views to which Jung's principles gave birth. Five years after the death of Jung, his *Doxosopia Physica* was published, in 1662; and in 1678, his *Isagoge Phytoscopica*. But neither of these works was ever much read; and even Linnæus, whom few things escaped which concerned botany, had, in 1771, seen none of Jung's works.

I here pass over Jung's improvements of botanical language, and speak only of those which he is asserted to have suggested in the arrangement of plants. He examines, says Sprengel,⁴¹ the value of characters of species, which, he holds, must not be taken from the thorns, nor from color, taste, smell, medicinal effects, time and place of blossoming. He shows, in numerous examples, what plants must be separated, though called by a common name, and what must be united, though their names are several.

I do not see in this much that interferes with the originality of Ray's method,⁴² of which, in consequence of the importance ascribed to it by Cuvier, as we have already seen, I shall give an account, following that great naturalist.⁴³ I confine myself to the ordinary plants, and omit the more obscure vegetables, as mushrooms, mosses, ferns, and the like.

Such plants are *composite* or *simple*. The *composite* flowers are those which contain many florets in the same *calyx*.⁴⁴ These are subdivided according as they are composed altogether of complete florets,

³⁸ *Leçons Hist. Sc.* p. 487.

³⁹ Sprengel, ii. 27.

⁴⁰ Ray acknowledges this in his *Index Plant. Agri Cantab.* p. 87, and quotes from it the definition of *caulis*.

⁴¹ Sprengel, ii. 29.

⁴² *Methodus Plantarum Nova*, 1682. *Historia Plantarum*, 1686.

⁴³ Cuv. *Leçons Hist. Sc. Nat.* 488.

⁴⁴ *Involucrum*, in modern terminology.