

the *albumen* or *perisperm* of the grain is analogous to the *white of the egg* of birds, or the *allantoid* of viviparous animals.

*Sexes of Plants.*—The attribution of sexes to plants, is a notion which was very early adopted; but only gradually unfolded into distinctness and generality.<sup>9</sup> The ancients were acquainted with the fecundation of vegetables. Empedocles, Aristotle, Theophrastus, Pliny, and some of the poets, make mention of it; but their notions were very incomplete, and the conception was again lost in the general shipwreck of human knowledge. A Latin poem, composed in the fifteenth century by Jovianus Pontanus, the preceptor of Alphonso, King of Naples, is the first modern work in which mention is made of the sex of plants. Pontanus sings the loves of two date-palms, which grew at the distance of fifteen leagues from each other: the male at Brundisium, the female at Otranto. The distance did not prevent the female from becoming fruitful, as soon as the palms had raised their heads above the surrounding trees, so that nothing intervened directly between them, or, to speak with the poet, so that they were able to see each other.

Zaluzian, a botanist who lived at the end of the fifteenth century, says that the greater part of the species of plants are *androgynes*, that is, have the properties of the male and of the female united in the same plant; but that some species have the two sexes in separate individuals; and he adduces a passage of Pliny relative to the fecundation of the date-palm. John Bauhin, in the middle of the seventeenth century, cites the expressions of Zaluzian; and forty years later, a professor of Tübingen, Rudolph Jacob Camerarius, pointed out clearly the organs of generation, and proved by experiments on the mulberry, on maize, and on the plant called Mercury (*mercurialis*), that when by any means the action of the stamina upon the pistils is intercepted, the seeds are barren. Camerarius, therefore, a philosopher in other respects of little note, has the honor assigned him of being the author of the discovery of the sexes of plants in modern times.<sup>10</sup>

The merit of this discovery will, perhaps, appear more considerable when it is recollected that it was rejected at first by very eminent botanists. Thus Tournefort, misled by insufficient experiments, maintained that the stamina are excretory organs; and Reaumur, at the beginning of the eighteenth century, inclined to the same doctrine.

<sup>9</sup> Mirbel, *El.* ii. 538.

<sup>10</sup> Mirbel, ii. 539.