

well as several of the others, has two of its parts suppressed, and are perfectly consistent with the theory previously explained.

4. Many Cruciferae become tetrandrous by pelorization; others are normally so. In either case the four stamens are thus equal. This, I answer, is at least as easily explained in our theory as on that of the separation of stamens into two.

5. Finally, certain Cruciferae instead of returning to the quaternary type recede from it. The single stamens undergo a change analogous or very similar to that of the double pair. One of us has observed flowers of *Matthiola incana*, in which the single stamens were cleft throughout their entire length, each portion being provided *with half an anther and half a filament*. M. Lestiboudois speaks of a *Cheiranthus Cheiri* in which these stamens were completely geminated, not laterally as the longer pair, but from without inwards. M. Lermye met with a flower of the same species, which had the lower stamens doubled exactly as the upper. Now let these cases be fairly considered: the first appears to show that a stamen may be occasionally slit vertically, but it is acknowledged that there is no increase in the real number of parts, each portion it is expressly stated consisting of half an anther (a single cell,) and half a filament. This may render more probable Dr. Lindley's explanation of Fumariaceae, destroying an analogy on which Dr. Gray greatly relies, but it supplies no argument in favour of a single primitive organ having become two perfect ones with all their parts. The case observed by Lestiboudois is apparently not one of Chorisis, but of development under the stimulus of cultivation of the gland, which is often noticed *within* the short stamens; that of M. Lermye requires to be more accurately described, but it must not be hastily assumed to have consisted in a division of the single stamen into two perfect ones, it may have been a case like that seen by one of the authors themselves, a mere fissure of the stamen into two parts; or it is perhaps just possible that the single stamen may have been suppressed, and the two glands which often appear at each side of it, developed into a pair of stamens. It is certainly not sufficient without more exact information, to support or overthrow a theory. Dr. Gray relies so completely on the arguments of Messrs. Moquin Tandon and Webb, that I need only farther observe that even if Chorisis furnishes the true explanation of the symmetry of Fumariaceae, which I hold to be very doubtful, there is no such relation between that order and Brassicaceae as would oblige