

dian Institute in Feby. 1860, and published in Vol. V. of the "Journal", p. 382, to which I now refer. I accept the quaternary symmetry in Brassicaceae, but consider the two lower stamens as part of an exterior circle of which two glands frequently present represent the other two members. I see no pretence for regarding the two pairs of stamens as each representing one divided organ, and I explained in consistency with my own view all the facts produced. Dr. Gray's second example is found in the androecium of Fumariaceae. This consists apparently of six stamens in two groups of three each, and Dr. Gray regards them as really two organs, each divided into three by collateral chorisis. It is to be observed that the two lateral stamens of each group have one anther each, while the central one has two. This suggested the theory of DeCandolle, supported by Lindley, that there are really two pairs of stamens, but those which were in the direction of the lateral pressure are split into halves, one half of each being pushed close to the stamens of the other pair, so as to place the perfect stamen of each end between two half stamens divided from the other pair. The Brassicaceous monstrosity recorded in which an outer stamen is split so as to resemble two each with a single anther, greatly supports this explanation which is favored also by the separated anthers, one on each side the column from the single stamen of many Orchidaceae and the instances of widely separated anthers with a partially divided filament. On this supposition there may be said to be a chorisis, but it is one of the most intelligible kind as there is no creation of an additional anther or of anything more than is present in the undivided stamen. It must be remembered that as chorisis is assumed to be a division from above, the three stamens in *Dicentra* being often quite distinct below and only coherent in the middle is very unfavorable to, I should almost say absolutely inconsistent with Dr. Gray's theory, and whilst this example is before us it is vain to appeal to the more complete union in other Fumariaceae, as it is an obvious case of coherence.

Dr. Gray's third example is one of those cases which appears to me to justify the admission of the principle of chorisis as occasionally giving us a satisfactory explanation of structures which without it seem incomprehensible. He refers to the three groups of stamens each completely united at their base in *Elodea*: justly observing that though the two outer circles in this flower are pentamerous, the inner ones three in number, the carpels, the three groups of stamens, and the three glands are trimerous so that each group of three connected sta-