the cases, and supported by some good analogies. In respect to transverse chorisis, it appears to me inconsistent with what is known of vegetable structure and, as Dr. Gray concedes, unsupported by any analogy. But let us inquire what explanation Dr. Gray himself offers and then we can try his hypothesis by the facts. I regret that the Journal of Botany not being within my reach at Toronto, I cannot now recur to the paper to which he refers, but the substance of his own view is that the analogue of the floral parts referred to transverse chorisis is found in the ligule of grasses and the stipules of other plants, he does not think the supposition of axillary organs in the place of buds necessary, although he holds that an axillary bud might be restricted to the development of a single phyton, and thus produce organs in the situation expressed by transverse chorisis. Nothing impossible or antecedently very improbable can be alleged against these suppositions. Some recorded monstrosities even encourage our resort to them, but I cannot perceive either of them to be at all needed in some of the examples appealed to, and it is manifest that neither would afford the smallest assistance in explaining cases of many opposite organs occurring one within another; yet in replying to Dr. Lindley's arguments against chorisis, referring to his forcible appeal to the case of certain varieties of Camellias in which the organs of successive circles become opposite, Dr. Gray says, "Now, when in the very same species, two such different modes of arrangement occur, is it not *a priori* more probable that the two arrangements result from different causes and are governed by essentially different laws?" I think not. The same organs are present in both cases, and either a dimunition or a small increase in the spiral tendency of growth would change the usual alternation into the occasional oppositeness without any thing occurring at all inconsistent with known facts; but if Dr. Gray would receive the opposite petals of these Camellias as an example of transverse chorisis, it is at least one which his own mode of explanation could not possibly reach, and which on any principle yet proposed, must appear most extraordinary. Let us now consider a few examples of transverse chorisis by which we may judge whether there is any need for the name or for any new principle applicable to these cases. "A common case," seys Dr. Gray (Bot. Text Book, 4th ed. p. 253) "is that of the *crown* or small and mostly two-lobed appendage on the inside of the blade of the petals of Silene and of many