I am of opinion that de Vries' view that the turgidity of the cell is mainly dependent on the presence of certain osmotically active substances in the sap, of an acid nature, requires some further qualification, for my own results agree rather with those of Schwartz, since I find that turgid cells may possess either an acid or an alkaline sap. Thus, in *Drosera* itself, the cells of the tentacles have an acid, and those of the petals of the flower an alkaline reaction.

Finally, the property of contractility, which I have established for the irritable cells of *Drosera* and *Mimosa*, and for the less specialised cells of *Mesocarpus*, is, I believe, a property which is possessed, in a greater or less degree, by all the actively living cells which constitute the tissues of plants. The important bearing of these results on all phenomena of movement and growth is sufficiently obvious.

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THE REPLUM IN CRUCIFERAE.—What is the replum? Writers on systematic botany use the term for the framework of the fruit, left after the fall of the valves, across which the septum stretches. In Continental and American text-books the term is also used in this sense. In most British text-books the term is applied to the septum itself. The purpose of this note is to point out which of those uses is the correct one.

The word was introduced by Brassai in *Flora*, Jahrg. XVI, Bd. I, p. 313. In a note to a discussion of the morphology of the capsule in Papaveraceae, he remarks of the fruit in Cruciferae that it is to be regarded as a capsule with two parietal placentas, the walls of which are cut out on two opposite sides between the placentas. The portions so cut out—his *assumenta*, our *valves*—are larger or smaller in different cases and may indeed be non-existent, and a series may be traced from *Thlaspi*, in which they are large, to *Bunias*, where they are absent. The whole remaining portion of the capsule after removal of the valves is the *replum*. Although he does not specially mention the septum, it is clear from the whole context that Brassai introduced the term for the framework across which the septum stretches, and not for the septum; and this would correspond with the original meaning of the word, viz., 'the upright rail fixed in the centre of the frame of a door-case in order to guard the crevice formed by the junction of two valves' (White and Riddell). The

use of the word in most of our text-books in Britain is therefore wrong, and, so far as I can discover, the error was first made by Henfrey in his *Outlines* (1847), whence it has been copied into other books.

According to Lecoq and Juillet the term *repletum* was applied by Richard to a pericarp such as that of *Orchideae*, in which the valves fall away leaving a framework of cohering delicate threads. I have not been able to find the word in Richard's works, but its use by him, involving the same idea as that conveyed by Brassai's term, would be prior to the paper of Brassai referred to above.

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