South Wales,[84] asserts that *Amaryllis belladonna* bears many more seeds when fertilised by the pollen of *Brunswigia* (*Amaryllis* of some authors) *josephinæ* or of *B. multiflora*, than when fertilised by its own pollen. Mr. Beaton dusted four flowers of a Cyrtanthus with their own pollen, and four with the pollen of *Vallota* (*Amaryllis*) *purpurea*; on the seventh day "those which received their own "pollen slackened their growth, and ultimately perished; those "which were crossed with the Vallota held on."[85] These latter cases, however, relate to uncrossed species, like those before given with respect to Passiflora, Orchids, &c., and are here referred to only because the plants belong to the same group of Amaryllidaceæ.

In the experiments on the hybrid Hippeastrums, if Herbert had found that the pollen of two or three kinds alone had been more efficient on certain kinds than their own pollen, it might have been argued that these, from their mixed parentage, had a closer mutual affinity than the others; but this explanation is inadmissible, for the trials were made reciprocally backwards and forwards on nine different hybrids; and a cross, whichever way taken, always proved highly beneficial. I can add a striking and analogous case from experiments made by the Rev. A. Rawson, of Bromley Common, with some complex hybrids of Gladiolus. This skilful horticulturist possessed a number of French varieties, differing from each other only in the colour and size of the flowers, all descended from Gandavensis, a well-known old hybrid, said to be descended from *G. natalensis* by the pollen of *G. oppositiflorus*.[86] Mr. Rawson, after repeated trials, found that none of the varieties would set seed with their own pollen, although taken from distinct plants of the same variety (which had, of course, been propagated by bulbs), but that they all seeded freely with pollen from any other variety. To give two examples: Ophir did not produce a capsule with its own pollen, but when fertilised with that of Janire, Brenchleyensis, Vulcain and Linné, it produced ten fine capsules; but the pollen of Ophir was good, for when Linné was fertilised by it seven capsules were produced. This latter variety, on the other hand, was utterly barren with its own pollen, which we have seen was perfectly efficient on Ophir. Altogether, Mr. Rawson, in the year 1861, fertilised twenty-six flowers borne by four varieties with pollen taken from other varieties, and every single flower produced a fine seed-capsule; whereas fifty-two flowers on the same plants, fertilised at the same time with their own pollen, did not yield a single seed-capsule. Mr. Rawson fertilised, in some cases, the alternate flowers,

[84] 'Gardener's Chronicle,' 1850, p. 470.

[85] 'Journal Hort. Soc.,' vol. v. p. 135. The seedlings thus raised were given to the Hort. Soc.; but I find, on inquiry, that they unfortunately died the following winter.

[86] Mr. D. Beaton, in 'Journal of Hort.,' 1861, p. 453. Lecoq, however ('De la Fécond.,' 1862, p. 369), states that this hybrid is descended from *G. psittacinus* and *cardinalis*; but this is opposed to Herbert's experience, who found that the former species could not be crossed.

http://www.geology.19thcenturyscience.org/books/1887-DarwinAnimalsPlants/README.htm