

THE FERTILIZATION OF CALOPOGON PULCHELLUS.

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This beautiful orchid is an inhabitant of open bogs, and where it finds a deep bed of *Sphagnum* with plenty of water beneath, flourishes in great profusion. The outstanding characteristic of this species, which easily distinguishes it from any other of our *Orchidaceae*, is the position of the labellum, which, on account of there being no twist in the ovary, is uppermost. This peculiarity is noted by Gray, but in Britton and Brown not only is no reference made to it in the text, but the diagram is incorrect, as it shows the column uppermost. The representation of the labellum, which is given separately, is also erroneous as the triangular dilation at the base is omitted, as are also the bracket-like ridges.

On account of the unique position of the labellum and the very open character of the flower, I thought that the method of fertilization would prove interesting and determined to investigate it. The way in which it is accomplished is as follows:—The bee alights upon the labellum, which bends near the base (the three bracket-like ridges prevent it doing so elsewhere) until the back of the bee is in contact with the column. The bee, which is of course up-side-down, sucks the nectar secreted by the glands at the base of the column. As it withdraws, its back opens the operculum of the anther, and a pollinium (or several) adheres to its back. On visiting the next flower the pollinium slips past the convex surface of the closed operculum, but as the bee withdraws, the pollinium is caught by the slight beak of the stigma and adheres to it, the bee meanwhile receiving another pollinium from the anther of this flower.