

plant holds. A fresh and clean cut was then made by means of a sharp pair of scissors, a few millimetres above the old wound. It was twenty minutes after four in the afternoon when the plant was cut and placed in the glass with a little water at the bottom in order to test the absorption power and vitality in the specimen at hand.

In less than one minute there was a clear evidence of a stiffening in the wilted petioles which formed decided curved lines or arches with the flowers and buds drooping or inclined at various angles.

At twenty-three minutes after the hour, there were clearer signs of a revival, and the buds and flowers had begun to raise their heads from the positions in which they severally were at the outset, and the topmost bud had changed its position fully 30° . Following the course pursued by this bud, at twenty-four minutes after four, it was fully 60° away from its first position. At twenty-five minutes after, this bud had made an arc of a circle subtending a right angle or 90° . At twenty-seven minutes after, making seven minutes after the experiment was begun, the topmost bud, and the part of the petiole supporting it showed no sign of wilting or prostration, but was gradually and effectively reaching the normal position in the fields, having raised itself an additional twenty-five or thirty degrees. At twenty-nine minutes after the hour, by far the longest part of the petiole was quite erect with the terminal bud very nearly vertical.

Thus it appears that in nine minutes of time only, the drooping and prostrate bud, which had been cut off from the natural and steady supply of moisture for its support, after the plant had been immersed, at its wound, in water, had taken up sufficient moisture to restore and revive its branches, causing them to raise their heads, describing an arc subtending an angle of fully one hundred and fifty degrees.

When the experiment was first tried it was further noted that the first branches to give evidence of new life and vigor, were those nearer to the base or root. The first branch took the first supply of water, and the second branch took the next on, in regular order to the top. The topmost bud was the one selected for the experiment and calculations which proved most interesting. A sheet