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Corolla length and autogamy in Nicotiana

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Nicotiana has been an interest of study due to its variance in autogamy and floral traits. Species *N. plumbaginifolia* and *N. longiflora* are characterized by their difference in flower size and the ability to self pollinate. *N. plumbaginifolia* is characterized by a short corolla and the tendency to prior self-fertilize, whereas *N. longiflora* is characterized by long flowers that exhibit little or no self-fertilization. It is important to observe the correlation between floral traits and autogamy in order to understand their influence on self-fertilization. In our study, we measured daily corolla growth and observed when the flower would set fruit or fall off. Our sample included plants of short, medium, and long flowers. The plants of medium length were of particluar interest in our study because they showed traits of both N*. plumbaginifolia* (ability to prior self-pollinate) and of *N. longiflora* (flowers of mixed length). The final measurements were run through a statistical analysis of variance using the Plastochron Growth Index (PI). Results showed that flowers of short corolla lengths self fertilized more often and sooner than that of longer lengths. Finally flowers with corollas under 40 millimeters commonly showed traits of prior self-fertilization. From my analysis I determined that corolla length has influence over the flower's ability to self-pollinate.