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HYBRIDIZATION IN THE GENUS *VIOLA*.

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Certain sections of the genus *Viola*, as is well known, are characterized by that wonderful biological peculiarity, generally termed cleistogamy. The showy flowers of our spring violets generally live but a short time. Although being sexually perfect, i.e., having stamens and pistils normally developed, they generally wither down without producing any seed and the propagation of the individuals and the maintenance of the species are secured through the cleistogamous flowers. These generally appear comparatively late in the season and reach their fullest development after the showy spring flowers have disappeared. As a rule, the cleistogamous flowers are without petals or have them incompletely developed, for which reason they are often in descriptive botany, termed apetalous. The whole flower has the appearance of a half-grown bud arrested in its development. It is often inconspicuous to the eye because of its lack of attractive colours, or even wholly invisible to the casual observer because not rarely it reaches its full development hidden among the decomposed or half-decomposed remnants of plants which cover the ground, or it even flourishes beneath the surface of the soil.

These cleistogamous flowers, however, play the most important part in the life history of the individual as well as of the species. In spite of their seeming incompleteness, they produce, without being aided by outer agencies, all the seed needed for the maintenance of the species. Their pistils are automatically fertilized by the pollen shed from their stamens, the result being the production of an abundance of seed.

This mode of seed production, so different from the ordinary way, did not fail to attract the attention of botanists at least as far back as the 18th century. It was thought to be strange and inexplicable in times when sexuality in plants was still disputed and when the importance of sexual organs as foundations for a scientific plant system was first being discussed.