Inheritance of a Mutant With a Rudimentary Stigma and Style in Pima Cotton, *Gossypium barbadense* L.¹

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In 1960 two aberrant plants, identical in appearance, were observed in an experimental strain of Pima cotton, *Gossypium barbadense* L. The abnormal plants had small, shrivelled, and empty bolls with sunken tips, indicating sterility. These plants were pruned and transplanted to the greenhouse where subsequent observations revealed several floral abnormalities. The stigmas and styles were dwarfed and did not emerge from the androecium (Figure 1).

The ovaries contained a normal compliment of ovules, but non-emergence of the stigma prevented pollination. The plants had, in addition to rudimentary stigmas and styles, corollas that did not fully open and petals that were corrugated rather than smooth. The pollen from the abnormal plants appeared normal. The inheritance of this association of characters found in the aberrant (mutant) *G. barbadense* plants is reported herein.

A complex of floral abnormalities and sterility similar to that described in this paper was reported in a strain of *Gossypium herbaceum* L. by Iyengar (1). Vijayaraghavan et al.⁴ found that the abnormal development of the stigma and style, with resultant female sterility, and associated characters in *G. herbaceum* was conditioned by one

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