

LECTURES

A FRAGRANT GLADIOLUS HYBRID

At the June meeting Mrs Joan Wright of Matakana told members of her adventures in the world of artificial hybrids. It was the story not quite of "fools step in where angels fear to tread" but a case, perhaps, of "where ignorance is bliss, 'tis folly to be wise." For Mrs Wright attempted an exercise upon which more sophisticated geneticists had (unknown to her at the time) already served judgment as to its impossibility, and with which more experienced breeders had had only failures. She had crossed two genera - Gladiolus, Acidanthera - and had obtained hybrids with intermediate characters including some of the desirable floral characters of the former and detectable quantities of the fragrance of the latter.

Thereafter, ensued a complex programme of breeding and genetic analysis in which the writer played a small but useful role. The initial hurdle of producing the hybrids (two were obtained) proved to be only one of many. It was early demonstrated that the parents had four sets of chromosomes (Gladiolus) and two sets (Acidanthera) and that the hybrids have three sets. Then it became evident that the hybrids contributed three sets as seed parents but only one (rarely two) as pollen parents. Finally, it was concluded that usually a few chromosomes were lost, in crosses of the hybrids by the parents or with each other, and by a stroke of bad luck, those that were lost included the ones bearing the factors for fragrance.

A new line of attack was opened where successful crosses were made of hybrids to Acidanthera in which all three hybrid sets of chromosomes (including the two from Gladiolus and one from Acidanthera) were combined with a further set from the latter, so that there was produced a hybrid with four sets, two from each genus. Since the Gladiolus sets tend to pair off with each other and similarly for the Acidanthera sets, this hybrid proved reproductively able to produce seeds, and, being strongly-scented with many Gladiolus characteristics, it turned out to be a very desirable and interesting new cultivar which has received much acclaim overseas.

Mrs Wright is continuing her breeding programme and hopes, by further selection, to produce plants with improved floral characteristics but without losing the precious fragrance factors which have added a new dimension to the Gladiolus flower.

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