

研究论文

# 中棉与纳尔逊氏棉 (*G. nelsonii* Fryx) 种间杂种F1的研究

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**摘要** 本文研究了中棉 (*Gossypium arboreum* race sinense) 与纳尔逊氏棉 (*G. nelsonii* Fryx) 种间杂种F1的一些形态性状的遗传变异及花粉母细胞减数分裂的染色体行为。杂种一代呈筒形, 全株密集如毡的绒毛, 叶片缺刻浅, 似纳尔逊氏棉。除第一朵花为闭花外, 其余均为开放花, 呈玫瑰红色。少数花药退化成托叶状。减数分裂中期I的染色体平均构型为6.14I+9.35II+0.05III+0.24IV, 这一结果表明, 中棉A2染色体与纳尔逊氏棉的染色体组存在结构上的差异。讨论了在育种中利用纳尔棉的途径及技术问题。

**关键词** [中棉,纳尔逊氏棉,形态,细胞学](#)

分类号

## Cytological and Morphological Studies on the Interspecific F1 Hybrid between *Gossypium arboreum* and *G. nelsonii*

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**Abstract** Interspecific F1 hybrid of *G. arboreum* race sinense ( $2n=26,A_2$ )  $\times$  *G. nelsonii* Fryx ( $2n=26$ ) was analysed for its chromosome behavior in the meiosis of pollen mother cells. Observation was done on the inheritance of its morphological characters at the flowering stage. It was indicated that the interspecific F1 hybrid showed an obvious mode of transgressive inheritance and most of the F1 characters showed intermediate type. There existed some characters which were lacking in their parents, such as stipule-shaped anther on the base of the staminal column. The average chromosome configuration at metaphase I of F1 hybrid is  $2n=26=6.14I+9.35II+0.05III+0.24IV$ . The result indicated that there may be structural changes such as chromosome translocation between *G. arboreum* and *G. nelsonii*. Based on the result and Skovsted's observation on F1 hybrid of *G. arboreum* and *G. sturtianum* (1937), it is assumed that *G. nelsonii* may be classified into the C genome. The relationship between *G. arboreum* and *G. nelsonii* is also discussed. Tentative procedures are proposed that *G. nelsonii* may be utilized for developing glandless-seed and glanded-plant upland cotton strains.

**Key words** [G.arboreum](#) [G.nelsonii](#) [Interspecific F1 hybrid](#) [Morphology](#) [Cytology](#)

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