

研究报告

菊花花色遗传及花色嵌合体发现

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摘要 对开黄花菊花和开白花菊花材料分别和开红花菊花材料进行了正反交, 结果表明, 花色遗传比较复杂, 在以红花材料作为母本组合中表现为比较明显的偏母性遗传特征, 而以黄花和白花材料为母本则不表现偏母性特征; 除此之外, 菊花花色遗传还表现出不完全显性和镶嵌显性的特点。在黄花材料3501和红花材料3509所得到杂种中发现了2个分枝出现花色嵌合体的现象, 该嵌合体特征是花一边为红色, 而另一边则出现镶嵌显性的现象。染色体分析表明, 不同颜色嵌合体花瓣的染色体数目都是36条, 因此, 实验所得到的花色嵌合体不是由染色体数目变化造成的, 而有可能是转座子插入影响色素合成基因造成的。

关键词 [菊花](#); [花色遗传](#); [嵌合体](#)

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The Heredity of Flower Colors and the Discovery of Flower Color Chimera in Chrysanthemum Species

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Abstract

The reciprocal crosses of yellow colored chrysanthemum × red colored chrysanthemum and white colored chrysanthemum × red colored chrysanthemum were conducted in order to analyze the heredity of flower colors. The results revealed that the heredity of flower colors was very complicated, and mainly exhibited matroclinous characteristics when red colored materials was used as maternal parent but not in the combinations when the yellow or white colored materials were used as maternal parents. The incomplete dominance and mosaic dominance also existed in the heredity of chrysanthemum flower colors. The flower-color chimeras with two kinds of flower buds were discovered in the cross of 3501 × 3509, i.e. one side of the flower buds was completely in red color, which was same as the parental material of 3509, and another side was generally in yellow color with red spots on them. Cytological analysis showed that two sides were both with 36 chromosomes, indicating that the formation of chimera was not resulted from the changes of chromosome numbers, but from the destruction of pigment synthesis genes by the insert of transposable element.

Key words [chrysanthemum](#) [heredity of flower color](#) [chimaera](#)

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