



昆明西山野生蔓蓼葡萄资源及其遗传多样性分析

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A study on the distribution and genetic diversities of wild graperesources *Vitis bryoniaegolia* in Xishan mountain,Kunming

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摘要 调查了昆明西山野生蔓蓼葡萄(*Vitis bryoniaegolia* Bge)的分布特征,并利用RAPD分子标记对其5个群体的遗传多样性进行了分析.采用5个RAPD引物扩增,共产生71条DNA条带,其中多态条带68条.在物种水平上,蔓蓼葡萄多态位点百分率(PPB)为95.77%,Nei's基因多样性指数(H)为0.3442,Shannon's多样性信息指数(H_{sp})为0.5100;在群体水平上,PPB差异较大(35.21%~84.51%),平均值为60.85%, H 平均为0.2234, H_o 平均为0.3305.各群体间的Nei's遗传一致度(I)范围为0.7171~0.9489.基于Nei's遗传多样性分析得出的群体间遗传分化系数 G_{st} =0.3269,表明西山蔓蓼葡萄的遗传多样性主要来源与群体内而不是群体间.Mantel检测发现,群体间的遗传距离和物理距离之间呈显著的正相关($r=0.981,P=0.019<0.05$).

关键词: 野生葡萄资源 蔓蓼葡萄 RAPD 遗传多样性分析

Abstract: The ecological distribution characters of *Vitis bryoniaegolia* Beg from Xishan mountain in Kunming were investigated,the genetic diversities based on the RAPD markers were studied in 5 groups of *Vitis bryoniaegolia* Bge.The results indicated that 68 diversified loci in total 71 DNA bands were amplified by using 5 random primers.At species level,the percentage of polymorphic bands (PPB), Nei's gene diversity (H) and the Shannon's information index (H_{sp}) were 95.77%,0.3442 and 0.5100,respectively.While at groups level ,the average PPB was 60.85 % (varied from 35.21 %—84.51%).The average H and H_o were 0.2234 and 0.3305,respectively.The coefficient of genes differentiation among groups (G_{st}) based on Nei's genetic distance was 0.3269,which implied that the gene variation was originated mainly within the groups (77.31%) other than among (32.69%) the groups.Genetic identity (I) of the 5 groups was varied from 0.7171 to 0.9489.The geographical distance was significant correlated with the genetic distance based by the Mantel analysis as $r=0.981,P=0.019<0.05$.

Key words:

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