

论著

湖北钉螺种群内AFLP分子标记遗传变异分析

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摘要

目的 探讨湖北钉螺种群内的遗传变异及其程度。方法 采用扩增片段长度多态性(AFLP)分子标记技术对9省(云南、四川、广西、福建、湖南、湖北、江西、安徽、江苏)13种群湖北钉螺基因组DNA进行扩增,分析钉螺种群内的遗传变异。结果湖北钉螺13种群AFLP扩增片段位点数为403~472,江西星子钉螺种群内遗传多样性较高,多态位点频率、Nei's基因多样性指数和Shannon's信息指数分别为93.2%、0.345和0.510,而广西宜州钉螺种群内遗传多样性较低,以上3指标分别为55.8%、0.191和0.287;广西宜州钉螺种群内的相似性较大,相似系数(中位数)为0.904,而江苏丹徒钉螺种群内的相似性较低,相似系数(中位数)为0.748;13种群内的遗传变异差异显著($P<0.01$)。结论 我国广泛分布的湖北钉螺,种群内存在一定程度的遗传变异。不同地区湖北钉螺种群内遗传变异程度不同,有的相差较大。

关键词 [湖北钉螺](#) [扩增片段长度多态性](#) [遗传变异](#)

分类号

Analysis of Genetic Diversity of AFLP Marker among Populations of *Oncomelania hupensis*

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Abstract

Objective To explore the degree of genetic diversity among populations of *Oncomelania hupensis*. Methods AFLP method was used to amplify the genomic DNA of thirteen snail populations from nine provinces (i.e. Yunnan, Sichuan, Guangxi, Fujian, Hunan, Hubei, Jiangxi, Anhui and Jiangsu) and the genetic diversities among snail populations were analyzed. Results The number of AFLP fragments amplified ranged from 403 to 472 for thirteen *Oncomelania* populations. Among the thirteen snail populations, the genetic diversity within the population from Xingzi County, Jiangxi Province, was most significant, and the percentage of polymorphic loci, Nei's genetic diversity and Shannon's information index were 93.22%, 0.345 and 0.510 respectively, while these indices for the snail population from Yizhou City, Guangxi Region, were the lowest, 55.80%, 0.191 and 0.287 respectively. The similarity between the in-group-individuals from Yizhou City, Guangxi Region, was most significant, and the average coefficient of similarity was 0.904, and that from Dantu County, Jiangsu Province, was the lowest (0.748). The genetic diversities among snail populations were significantly different for the thirteen snail populations ($P<0.01$). Conclusion There is a certain genetic variation among *Oncomelania* snail populations from the mainland of China, and this variation is significantly different among snail populations from different areas.

Key words [Oncomelania hupensis](#) [AFLP](#) [Genetic diversity](#)

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