

研究报告

虹鳟6个养殖群体遗传多样性的微卫星分析

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摘要

利用14对微卫星分子标记对虹鳟的6个养殖群体进行遗传多样性分析。结果表明: 6个群体的平均等位基因数A为 2.89~4.22, 平均有效等位基因数Ne 为2.15~2.78, 平均观察杂合度Ho 为0.4801~0.6786, 平均期望杂合度He 为0.5052~0.6211, 平均多态信息含量PIC 为0.4298~0.5762; 其中渤海站群体的等位基因数最多、多态信息含量最高, 有效种群最大, 通过基因型的P值发现6个群体只在位点AF375034符合Hardy-Weinberg平衡, 在其他位点都不同程度的偏离平衡, 同时对6个群体的遗传距离进行了估算, 聚类分析发现挪威群体与其他群体遗传距离最远。

关键词 [虹鳟](#); [养殖群体](#); [遗传多样性](#); [微卫星](#)

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Diversity of the Cultured Populations of Six Rainbow Trout *Oncorhynchus mykiss* by Microsatellite

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Abstract

<P>Rainbow trout are cultured widely throughout the world for supplementation in natural ecosystems and for commercial aquaculture. In 1959 it was firstly introduced to China from Korea. After introduction from America and other countries such as Norway, Denmark, and so on, rainbow trout were now cultured in about 20 provinces in China. In this study, microsatellite DNA was employed to assess the genetic variations between 6 cultured populations of rainbow trout (American golden trout, American Donaldsons, Norway, Denmark, Finland, and Bohaizhan). The results showed that in these 6 cultured populations the average number of allele (A) was 2.89 to 4.22; average number of effective allele (Ne) was 2.15 to 2.78; the value of average observed heterozygosity (Ho) in six populations was 0.4802 to 0.6786; the value of average expected heterozygosity (He) was 0.5052 to 0.6211; and the value of average polymorphism information content (PIC) was 0.4298 to 0.5762. Hardy-Weinberg equilibrium analysis revealed that all of these 6 populations showed a remarkable genetic disequilibrium at loci AY039634, AY039638, AY0396466. Only at locus AF375034 all of 6 populations showed equilibrium. The genetic distance of six cultured populations was calculated and cluster analysis was also carried out.
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Key words [Oncorhynchus mykiss](#) [cultured population](#) [genetic diversity](#) [microsatellite](#)

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