

研究报告

## 利用30个微卫星标记分析长江中下游鲢群体的遗传多样性

朱晓东<sup>1, 2</sup>, 耿波<sup>1, 3</sup>, 李娇<sup>3</sup>, 孙效文<sup>1</sup>

1. 中国水产科学研究院黑龙江水产研究所, 哈尔滨 150070;
2. 上海水产大学生命科学与技术学院, 上海 200090;
3. 吉林大学畜牧兽医学院, 长春 130062

收稿日期 2006-11-5 修回日期 2006-12-1 网络版发布日期 2007-6-5 接受日期

### 摘要

摘要: 利用30对微卫星分子标记对长江中下游5个鲢群体进行了遗传多样性分析。结果表明: 在30个基因座中, 共检测到144个等位基因, 每个座位检测到的等位基因数为1~10个, 其中有25个座位具有多态性, 多态位点百分率为83.33, 5个群体的平均等位基因数为4.0/4.1, 平均有效等位基因数 $N_e$ 为2.4445~2.6332, 平均观察杂合度 $H_o$ 为0.3233~0.3511, 平均期望杂合度 $H_e$ 为0.4421~0.4704, 平均多态信息含量 $PIC$ 为0.4068~0.4286。对数据进行F-检验,  $F_{st}$ 值表明群体间的遗传分化程度中等, 并对基因型进行了基于Hardy-Weinberg平衡的卡方检验, 所得P值说明5个群体均一定程度上偏离了平衡。5个群体间的遗传相似系数为0.8466~0.9146, 遗传距离为0.0893~0.1665, 并根据Nei氏标准遗传距离用UPGMA方法对5个鲢群体进行亲缘关系聚类。

关键词 [鲢](#) [微卫星](#) [野生群体](#) [遗传多样性](#)

分类号

## Analysis of genetic diversity among silver carp populations in the middle and lower yangtze river using thirty microsatellite markers

ZHU Xiao-Dong<sup>1,2</sup>, GENG Bo<sup>1,3</sup>, LI Jiao<sup>3</sup>, SUN Xiao-Wen<sup>1</sup>

1. Heilongjiang River Fishery Research Institute, Chinese Academy of Fishery Science, Harbin 150070, China;
2. College of Aqua-life Science and Technology, Shanghai Fisheries University, Shanghai 200090, China;
3. College of Animal Science and Veterinary Medicine, Jilin University, Changchun 130062, China

### Abstract

<P>Thirty microsatellite markers were used to analyze the genetic diversity of five Silver carp populations in the middle and lower reaches of the Yangtze River. A total of 144 different alleles were found and the number of alleles in each locus ranged from 1 to 10. Twenty-five loci(83.33%) were polymorphic. In the five populations, the average number of alleles was 4.0 to 4.1, the number of mean valid alleles was 2.4445 to 2.6332, the value of average observed and expected heterozygosity ranged from 0.3233 to 0.3511 and 0.4421 to 0.4704, and the mean <EM>PIC</EM> was 0.4068 to 0.4286. <EM>Fst</EM> value indicated that the populations were moderately differentiated. Chi-square test was used to analyze the genotypes based on Hardy-Weinberg equilibrium, the <EM>P</EM> value denoted that the five populations deviated equilibrium partially. The genetic similarity coefficient of the five populations was 0.8466 to 0.9146, and the genetic distance of the populations was 0.0893 to 0.1665. A UPGMA dendrogram was constructed based on Nei's standard genetic distance for the five Silver carp populations. </P>

Key words [silver carp](#) [microsatellite](#) [wild population](#) [genetic diversity](#)

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

#### 相关信息

▶ [本刊中 包含“鲢”的 相关文章](#)

▶ 本文作者相关文章

- [朱晓东](#)
- [耿波](#)
- [李娇](#)
- [孙效文](#)

