

植物和微生物遗传学

异质性生境对半红树植物海漆 (*Excoecaria agallocha*) 居群

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收稿日期 2004-10-28 修回日期 2004-12-28 网络版发布日期 接受日期

摘要 选取半红树植物——海漆 (*Excoecaria agallocha*) 作为研究对象, 采用简单重复序列 (ISSR) 分子标记技术, 对不同地理位置、不同生境 (潮间带和陆生) 海漆居群的遗传多样性及遗传结构进行研究。结果表明, 在同一地点, 潮间带居群的遗传变异水平均高于其陆生居群。潮间带居群间的遗传分化水平 (GST = 0.191) 略低于其陆生居群间的遗传分化 (GST = 0.218), 表明潮间带居群间通过漂浮的种子进行的基因交流较陆生居群间频繁。AMOVA分析显示, 由异质性生境造成的分子变异为15.13%, 而采样不同地区间 (相距181~759 km) 造成的分子变异却只有11.63%, 暗示环境胁迫造成的选择压力导致海漆居群适应性进化。同时地理隔离、南海北部的西南季风漂流及中国沿岸流和遗传漂变对海漆居群的遗传分化均有着重要影响。

关键词 [半红树植物](#); [海漆](#); [异质性生境](#); [遗传结构](#); [ISSR](#)

分类号 [Q943](#)

Effects of Divergent Habitat on Genetic Structure of Population of *Excoecaria agallocha*, a Mangrove Associate

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Abstract

Genetic diversity and population genetic structure of *Excoecaria agallocha*, a typical mangrove associate species, were surveyed at divergent habitats (intertidal and inland). In general, intertidal populations had higher genetic diversity than inland populations. Genetic differentiation among intertidal populations (GST = 0.191) were smaller than that among inland populations (GST = 0.218), suggesting that gene flow via seed among intertidal populations were stronger. In an analysis of molecular variance (AMOVA), we found that 15.13% of the genetic variance could be explained by the differentiation between habitats, as compared to only 11.63% to geographical effects among five sites 181-759 km distant from each other. This implies that markedly selection regimes result in habitat adaptation. Isolation-by-distance, Southwest Monsoon Current, China Coastal Current and genetic drift played important role in genetic differentiation of China population of *Excoecaria agallocha*.

Key words [Mangrove associate](#) [Excoecaria agallocha](#) [divergent habitat](#) [genetic structure](#) [ISSR](#)

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