

专论与综述

岛屿生物地理学与集合种群理论的本质与渊源

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摘要 岛屿生物地理学和集合种群理论是目前生物多样性保育所依赖的主要生态学理论。人们通常强调这两种理论的区别, 对它们之间的关联却很少注意到。事实上, 这两种理论是同根同源的。以经典集合种群理论的创始人R. Levins对他与岛屿生物地理学的创始人R. H. MacArthur的合作过程以及岛屿生物地理学对他提出集合种群理论的影响的回顾为基础, 分析比较了岛屿生物地理学、经典集合种群理论、以Hanski为代表的现代集合种群理论的基本假设、研究范式和核心思想的异同, 简要介绍了多物种集合种群与集合群落研究的差异, 最后分析了岛屿生物地理学和集合种群理论在生物多样性保育实践中的应用和存在问题。

关键词 [岛屿生物地理学](#); [集合种群](#); [保护生物学](#); [范式](#)

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Origin and essence of island biogeography and metapopulation theory

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Abstract MacArthur & Wilson's equilibrium theory of island biogeography and modern metapopulation theory are the two main theories applied in biodiversity conservation and reserve planning. The difference between the two theories was usually noticed. However, it was seldomly regarded that the conceptions of the two theories were tangibly connected, and the two theories had the same origin. Because there were frequent and close contacts between Levins and MacArthur, we wrote a letter to R. Levins, the creator of metapopulation theory, in August, 2005, and requested him to retrospect his cooperative process with R. H. MacArthur and what effects the theory of island biogeography brought to him to put forward the idea of metapopulation. Levins gave us a detailed answer. Based on this, we compared the assumptions, main models and essences between island biogeography, classical and modern metapopulation theory. Mutispecies metapopulations and metacommunities were introduced. The application and limitation of island biogeography and metapopulation theory in conservation biology were also analyzed.

Key words [island biogeography](#) _ [metapopulation](#) _ [conservation biology](#); [paradigm](#)

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