

北京翠湖湿地公园建园初期的步甲多样性

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Diversity of ground beetle (Coleoptera: Carabidae) at Cuihu, a newlybuilt urban wetland park in Beijing

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摘要

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摘要 为探讨城市湿地公园在城市化过程中对生物多样性的保育作用, 于2006 - 2008年采用陷阱法调查了2002年北京新建的翠湖湿地公园内杨树林、柏树林、混合林、小槲丛和芦苇荡5种植被类型中的步甲多样性。共调查到步甲18属30种441头。步甲物种数和个体数均随建园时间的增加而呈现快速增加的趋势。在5种植被类型中, 每种类型均有25%左右的步甲物种(3 - 4种)是其他类型中所未捕获的。杨树林中的步甲物种数和个体数最多, 且随时间的增加幅度最大, 趋势最明显。这些结果表明, 城市湿地对步甲多样性具有一定的保育功能, 可在一定程度上缓解城市化对步甲多样性的负面影响。根据上述结果, 我们建议在城市湿地公园建设之初, 可考虑先种杨树等植物; 同时适当增加植被多样性, 将有利于其步甲多样性保育功能的最大化。

关键词: 湿地公园 步甲 城市化 生物多样性 北京

Abstract: To evaluate the potential role of an urban wetland park in conserving biodiversity during urbanization, we studied ground beetle (Carabidae) diversity using pitfall traps in five vegetation types, i.e., poplar, cypress, mixed forest, barberry scrub, and reed beds, within a newly-built urban wetland park, Cuihu Wetland Park in Beijing, for three years. A total of 441 individuals representing 30 species and 18 genera of carabid beetles were captured. Carabid species richness and abundance both sharply increased with park age. For each of the five vegetation types, approximately 25% of their carabid species (3 - 4 species) were unique and were not detected in other types. Poplar forest exhibited the highest abundance and richness of carabid species and showed the strongest increasing trend through time. Our results suggested a significant role of urban wetland parks in the conservation of carabid beetle diversity in the process of urbanization. In order to maximize their conservation value, they should be revegetated by a diversity of plants while using poplars as pioneers.

Keywords: wetland park carabid beetles urbanization biodiversity Beijing

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