

宜昌市滨江公园自生植物生境构成与保护价值研究

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摘要 生境丧失是城市生物多样性降低的主要原因,对城市开展生境制图和生境质量评价能够揭示现状生境空间分布格局特征、提供必要的生态数据以及准确呈现研究区域现状生境存在的问题,是有效开展生物多样性保护的基础。本文以宜昌市滨江公园为例,选择植被郁闭度因子、植被优势种年龄因子和植被垂直结构因子将研究区域划分为4种生境类型、13种生境亚类,选择生境类型重要性、自生植物物种丰富度和自生植物物种特有性3个评价指标对各生境类型的生境质量进行综合评价,以期为我国其他城市开展生物多样性保护和提升工作提供依据。研究结果表明:(1)闭合绿地中龄单层林(C-M+L1)、闭合绿地中龄复层林(C-M+L2)和半闭合绿地中龄单层林(PC-M+L1)是滨江公园的主要生境类型,自生植物在这些生境类型中存在明显分布偏好。(2)闭合绿地中龄单层林(C-M+L1)和闭合绿地中龄复层林(C-M+L2)的评价总分同为最高,生境质量最高,其次是以多年生修剪草坪为主的半开敞绿地(PO-S);半开敞绿地中龄单层林(PC-M+L1)和半开敞绿地中龄复层林(PC-M+L2)因其生境类型相对重要性和自生植物物种丰富度的分值较高,这两种生境类型的生境质量也相对较高。可以通过规划设计引导和控制人的活动范围,降低对这些生境类型的人为干扰,以维持该区域内生物多样性水平。(3)以修剪灌木为主的开敞绿地(O-SH)、以一二年生自然草地为主半开敞绿地(PO-TA)、半闭合绿地幼龄单层林(PC-Y+L1)、半闭合绿地幼龄复层林(PC-Y+L2)、半闭合绿地老龄复层林(PC-OA+L2)和闭合绿地幼龄单层林(C-Y+L1)的生境质量评价总分最低。这些生境类型应在未来滨江公园改造和提升中作为首选生境恢复的对象,通过生态修复手段,改善生境质量,以恢复动植物的生存空间,进而提升生物多样性水平。

关键词 生境制图; 自生植物; 生境质量评价; 城市生物多样性保护; 风景园林

Biotope Composition and Conservation Value of Spontaneous Plants in Riverside Park of Yichang

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Abstract: Biotope loss is the main reason for the decline of urban biodiversity. Biotope mapping and quality assessment for cities can reveal the spatial distribution pattern characteristics of the current biotope, provide necessary ecological data and accurately present the existing problems of the current biotope in the study area, which is the basis for effective biodiversity conservation. Riverside Park, Yichang was taking as an example to provide basis for other cities in China to carry out biodiversity conservation and promotion. The study area is divided into 4 biotope types and 13 biotope subtypes by selecting canopy density, age of dominant species and vertical structure of vegetation. The quality of each biotope type is comprehensively evaluated by selecting the importance of biotope type, the richness and specificity of spontaneous plant species. The results show that: (1) middle age one-layered forest in closed green space (C-M+L1), middle age multi-layered forest in closed green space (C-M+L2) and middle age one-layered forest in partly closed green space(PC-M+L1) are the main biotope types of Riverside Park, and there are obvious distribution preferences of spontaneous plants in them. (2) The total evaluation scores of middle age one-layered forest in closed green space (C-M+L1) and middle age multi-layered forest in closed green space(C-M+L2) are the highest which means the highest biotope quality, followed by maily short-cut grass

in partly open green space (PO-S). Because of the relative importance of biotope types and the high scores of species richness of spontaneous plants, the quality of middle age one-layered forest in partly closed green space (PC-M+L1) and middle age multi-layered forest in partly closed green space (PC-M+L2) is relatively high. Human activities can be guided and controlled through planning and design to reduce human disturbance to these biotope types, so as to maintain the biodiversity level in the region. (3) The total biotope quality evaluation scores of shrub in open green space (O-SH), mainly tall grass in partly open green space (PO-TA), young age one-layered forest in partly closed green space (PC-Y+L1), young age multi-layered forest in partly closed green space (PC-Y+L2), old age multi-layered forest in partly closed green space (PC-OA+L2) and young age one-layered forest in closed green space (C-Y+L1) were the lowest. These biotope types should be the first choice for the restoration in the reconstruction and upgrading of the riverside park in the future. Through ecological restoration, the biotope quality should be improved to restore the living space of animals and plants, and then improve the biodiversity level.

Key words: biotope mapping; spontaneous plants; biotope quality assessment; urban biodiversity conservation; landscape architecture