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哀牢山常绿阔叶林乔木树种的幼苗组成及时空分布特征

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Composition and spatial-temporal distribution of tree seedlings in an evergreen broad-leaved forest in Ailao Mountains, Yunnan, China

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摘要 哀牢山自然保护区的常绿阔叶林面积达到504 km^2, 是我国亚热带常绿阔叶林保存面积最大的保护区之一。2008年, 中国科学院西双版纳热带植物园在哀牢山自然保护区的中山湿性常绿阔叶林核心区建立了一块6 ha的森林动态监测样地。为了了解哀牢山中山湿性常绿阔叶林树种幼苗组成和分布特征及其存活和死亡的规律, 对样地中的幼苗分别进行了定位监测和动态研究。结果表明, 重要值居前10位的林下幼苗中, 有5种是重要值居前10位的树种。从雨季末期到旱季末期, 幼苗的数量和种类都大量减少, 原因可能是由于干旱胁迫的影响。在林窗中央和林窗边缘, 新增的幼苗数量和种类都较多, 死亡率较低, 而林冠下新增的幼苗死亡率较高。可见, 林窗的出现可能更有利于某些树种幼苗的定居, 从而维持了森林树种的多样性。

关键词: 干旱胁迫 林窗 存活 更新

Abstract: Ailao Mountain National Nature Reserve covers 504 km^2 and is one of the largest tracts of evergreen broad-leaved forests in China. A 6-ha plot was established in the reserve in 2008 by Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, for the purpose of monitoring long-term dynamics of the forest. Tree seedlings were sampled in this plot to understand their composition and spatio-temporal distribution. Five of the top 10 seedling species in terms of importance values were the same as 5 of the top 10 adult tree species with the highest importance values. Both abundance and species richness of tree seedlings dropped between the end of the rainy season and the end of dry season, likely due to drought stress. Seedlings in canopy gaps were richer in species, more abundant in terms of density, and experienced lower mortality compared with those under the forest canopy, suggesting that forest gaps facilitate the recruitment of seedlings in the forest.

Keywords: drought stress forest gap survival regeneration

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