

## 茂兰喀斯特森林主要演替群落的凋落物动态

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**摘要** 对茂兰喀斯特森林3种主要演替群落——喀斯特原生乔木林、次生林和灌木林的凋落物数量、组成特征及季节动态变化进行了为期27个月的观测研究。结果表明, 茂兰喀斯特原生乔木林、次生林和灌木林的年平均凋落物量分别为4.503、3.505和2.912 t·hm<sup>-2</sup>; 年总凋落物的叶、枝、花果和其他的比例分别为64.72%、14.60%、12.33%、8.35%; 74.28%、7.43%、10.88%、7.41%和75.94%、8.56%、12.93%、2.57%, 叶凋落物量占总凋落物量的64.72% - 75.94%; 茂兰喀斯特森林3种演替群落凋落物的月动态变化规律均为双峰型, 峰值分别出现在生长季早期3 - 5月和休眠期10 - 12月。

**关键词:** 喀斯特森林 凋落物 凋落节律 茂兰 演替群落

**Abstract:** *Aims* Litter is a key in nutrient cycling and energy flow of forest ecosystems. Our objective was to study the functions of karst forest litter by analyzing litter dynamics.

*Methods* Litter samples were collected monthly from karst primary forest, secondary forest and shrubland in our Maolan karst study area from October 2006 to December 2008. We divided the samples into leaves, branches, flowers and fruit, and others and weighed each after drying to constant weight at 80 ° C.

*Important findings* The annual mean litter productions of primary forest, secondary forest and shrubland in the Maolan karst study area were 4.503, 3.505 and 2.912 t·hm<sup>-2</sup>, respectively. The proportions of leaves, branches, flowers and fruits, and others for karst primary forest were 64.72%, 14.60%, 12.33% and 8.35%, respectively, while for karst secondary forest were 74.28%, 7.43%, 10.88% and 7.41%, respectively, and for karst shrubland were 75.94%, 8.56%, 12.93% and 2.57%, respectively. Therefore, leaves dominated litter. The monthly litterfall production dynamics for each community exhibited a bimodel distribution, with peaks early in the growing season and at dormancy.

**Keywords:** karst forest, litter, litter-fall dynamics, Maolan, succession community

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