

浙江天童受损常绿阔叶林实验生态学研究

浙江天童受损常绿阔叶林实验生态学研究(II): 主要常绿树种的生长格局

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摘要 运用年轮解析技术对中国东部常绿阔叶林常见树种米槠、木荷以及石栎的生长特征进行了研究.结果表明:(1)米槠的径向生长和高生长速度均快于石栎和木荷;相比于米槠和石栎,木荷个体间的生长速度差异较大,不同径级之间的差异也较大;这表明木荷具有较强的生长可塑性和耐荫性,而米槠和石栎的生长较为稳定.(2)依据个体由幼苗生长至林冠过程中(林冠进层)所经历的释压和抑制事件的多少划分了6种林冠进层类型,对比不同类型以及不同物种间的平均生长速度表明,个体所经历的释压和抑制事件越多,其平均生长速度越慢;木荷相比于米槠经历的释压和抑制事件较多,这扩大了两者林冠进层速度的差异.(3)米槠和木荷表现出不同的生长格局——“米槠以不变应万变,木荷则随机应变”.因而在常绿阔叶林中,作为对光环境变化不同适应对策的综合体现,生长格局的分异是物种共存的重要机制.

关键词 [生长格局](#) [林冠进层类型](#) [释压和抑制](#) [年轮解析](#) [常绿阔叶林](#)

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Experimental ecology research on destroyed evergreen broad-leaved forests in TNFP, Zhejiang (II): The growth patterns of dominate evergreen trees obtained by tree ring analysis(Chinese)

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Abstract

This paper used tree ring analysis to study growth patterns of *Castanopsis carlesii*, *Schima superba* and *Lithocarpus glaber*. The results indicate that: (1) *Castanopsis carlesii* has the fastest diameter growth rate and height growth rate among three species. *Schima superba* has bigger variation in growth rate among individuals and size classes, suggesting greater growth plastic for *Schima superba* and steadier growth rate for *Castanopsis carlesii* and *Lithocarpus glaber*. (2) Six canopy accession types are divided basing on the number of releases and suppressions happened in canopy accession process. The average growth rates are contrasted among different canopy accession types and species. The growth rate decreased with the increasing of releases and suppressions trees experienced. *Schima superba* experienced more releases and suppressions than *Castanopsis carlesii*, which expanding their difference in canopy accession speed. (3) *Castanopsis carlesii* and *Schima superba* have different growth patterns: the former takes its own growth way insensibly to variation in light, however the latter changes its growth way. Differentiation of growth pattern, which is the synthesis of adaptive strategies to variation in light, may be an important mechanism to explain the coexistence of so much species in evergreen broadleaved forest(EBLF).

Key words [growth patterns](#) [canopy accession types](#) [release and suppression](#) [tree ring analysis](#) [evergreen broad-leaved forest](#)

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