

研究报告

## 川西亚高山森林恢复的空间格局分析

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### 摘要

以米亚罗林区为例, 利用森林样地调查和遥感影像解译方法, 通过森林植被图与数字地形的叠加, 分析了川西亚高山森林大规模采伐和更新后, 主要森林植被类型外貌与起源之间的联系, 以及各类型分布的地形分异规律和空间格局. 结果表明, 大规模采伐和更新后, 森林植被类型的外貌与起源相关, 老龄针叶林为保留下来的原始林, 中幼龄针叶林为人工林, 落叶阔叶林为天然次生林, 而针阔混交林中既有天然次生的成分, 也有人工、天然更新共同作用的成分. 海拔2 800~3 600 m是米亚罗的主要伐区, 森林恢复表现出坡向分异: 人工更新的中幼龄针叶林主要分布于阳坡、半阳坡; 落叶阔叶林和针阔混交林受天然更新的影响, 主要分布于阴坡、半阴坡. 老龄针叶林主要保留在海拔3 600 m以上. 恢复过程中各种森林植被类型镶嵌分布, 景观破碎化严重.

关键词 [亚高山森林, 空间格局, 恢复, 地形, 更新](#)

分类号

## Spatial pattern of sub-alpine forest restoration in west Sichuan

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### Abstract

West Sichuan sub-alpine is an extension of Qinghai-Tibet Plateau to southeast China, which is covered mainly with dark coniferous forest. As a result of long-term large scale over-logging, the forests have been greatly reduced and degraded. Nowadays, the forest restoration and regeneration in the region are being highlighted. Selecting Miyaluo as a case study area and employing the methods of plot investigation, ETM image interpretation, and overlaying vegetation map with digital topography, this paper analyzed the relations between the appearance and origin of four forest vegetation types, along with their topography differentiation and spatial patterns after a large scale logging and regeneration. The results showed that the appearance of forest vegetations was significantly correlated with their origin. Old coniferous forests (OC) were primitive ones, middle-aged and young coniferous forests (MYC) were from artificial regeneration, deciduous broadleaf forests (DB) were natural secondary ones, while mixed coniferous and deciduous forests (MCD) were partly from natural secondary ones and others from the conjunct action of artificial and natural regeneration. The main cut area in Miyaluo located in the sites with elevation from 2 800 to 3 600 m, where forest restoration appeared difference among different aspects. MYC was mainly distributed on sunny and half-sunny slope, DB and MCD were distributed on shady and half-shady slope, and OC were reserved on the sites with elevation more than 3 600 m. In the process of forest restoration, the four forest vegetation types were in mosaic pattern, and the landscape was seriously fragmented.

### Key words

### 扩展功能

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