

北沟林场天然次生林群落结构与种群分布格局

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Community structure and distribution pattern of a natural secondary forest in Beigou forest farm.

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摘要 以河北省围场县北沟林场4 hm²固定大样地为研究对象, 采用点格局分布、混交度和大小比数3个林分空间结构参数, 分析了天然次生林群落结构和种群空间分布格局. 结果表明: 天然次生林乔木层共有11个种群, 其中山杨和白桦占明显优势, 为该层的优势种和建群种; 在空间分布上, 优势种山杨和白桦呈显著聚集分布, 且两个种群之间竞争激烈, 而作为主要伴生树种的华北落叶松和五角枫虽也呈聚集分布, 但在密度和蓄积量上无法与优势种竞争; 受优势种较低的混交度影响, 整个天然次生林的平均混交度仅为0.40, 伴生树种混交度则表现为中等强度、强度和极强度; 天然次生林平均胸径大小比数为0.49, 分布较均匀, 其中山杨、白桦、华北落叶松和蒙古栎在空间结构单元中较占优势, 其他伴生树种优势度不明显.

关键词: 天然次生林 点格局分布 混交度 大小比数

Abstract: Taking the 4 hm² fixed sampling plot in the Beigou forest farm of Weichang County in Hebei Province as test object, and by adopting the parameters (point pattern distribution, mingling, and size differentiation), this paper analyzed the community structure and distribution pattern of a natural secondary forest in the farm. There were eleven populations in the arbor layer of the forest, among which, *Populus davidiana* and *Betula platyphylla* had the obvious advantage in population density and basal area, being the dominant and constructive species of the arbor layer. Spatially, these two species all presented cluster modes remarkably, and competed each other greatly. The main accompanying species *Larix principis-rupprechtii* and *Acer truncatum* also presented cluster modes, but the density and volume were significantly lower than the two dominant species', not able to compete with the dominate species. Affected by the low mingling of dominant species, the average mingling of the whole stand was only 0.40, while the mingling of accompanying species generally presented moderate or high. The mean size differentiation of the whole stand was 0.49, and *P. davidiana*, *B. platyphylla*, *L. principis-rupprechtii*, and *Quercus mongolica* were of dominance or sub-dominance in the spatial structural units, while the other accompanying species had no obvious dominance.

Key words: natural secondary forest point pattern distribution mingling size differentiation

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