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研究论文

不同强度旅游干扰对黄山松群落物种多样性的影响

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摘要 研究天柱山国家森林公园不同强度旅游干扰下黄山松群落的物种多样性，用物种丰富度指数S、Simpson指数D、Shannon-Wiener指数H和Pielou均匀度J比较分析了不同层次物种多样性变化。结果表明：乔木层中，低度干扰下多样性指数较大；其他层次中，中度干扰下多样性指数最高。整个群落分析表明，低度干扰下几种多样性指数分别为38、3.0976、0.9326、0.7515；中度干扰下，多样性指数最高，分别为44、3.2519、0.9421、0.8594，其中灌木层和草本层所起的作用较大；高度干扰下，多样性指数有很大程度的下降，分别为34、3.0095、0.9289、0.7834。利用群落优势度（C）衡量了不同干扰下黄山松群落的稳定性，结果发现中度干扰下的群落稳定性最低。表明中度干扰能一定程度增加群落的物种多样性，但可能会导致群落稳定性降低。

关键词 黄山松群落；旅游干扰；物种多样性；稳定性

分类号

Disturbing effects of tourism on species diversity in *Pinus taiwanensis* communities

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Abstract The disturbance of tourism on the species diversity in different layers of the *Pinus taiwanensis* communities in Tianzhu Mountain National Forest Park were studied by using species richness index (S), Simpson index (D), Shannon-Wiener index (H), and Pielou Evenness index (J). The highest diversity index values were found for arbor layer under the low disturbance. The highest diversity index values were found for other layers under the intermediate disturbance. The values of S, D, H and J under the low disturbance were 38, 3.0976, 0.9326, and 0.7515, respectively. The values of these indices under the intermediate disturbance were 44, 3.2519, 0.9421, and 0.8594, respectively, higher than those under the low disturbance, especially for the shrub and herb layers. Under the high disturbance, the values of these diversity indices were 34, 3.0095, 0.9289, and 0.7834, respectively, lower than those under the intermediate disturbance. The stability of forests under different disturbances was examined with the community dominance index (C). The C value under the intermediate disturbance was the lowest among the three disturbances. This suggests that the intermediate disturbance can increase species diversity but decrease community stability.

Key words *Pinus* *taiwanensis* community traveling disturbance species diversity stability

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