

研究论文

# 白冠长尾雉越冬期栖息地选择的多尺度分析

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收稿日期 2005-12-14 修回日期 2006-5-10 网络版发布日期: 2006-7-25

**摘要** 2000年至2002年冬季, 在河南董寨国家级自然保护区对我国特有珍稀雉类白冠长尾雉 (*Syrmaticus reevesii*) 越冬期栖息地进行了调查, 并结合RS和GIS在多个尺度上对其栖息地选择进行了分析。结果表明, 不同尺度上影响白冠长尾雉越冬期栖息地选择的因素存在差异, 影响因子之间还存在相互作用。在微生境上, 影响因子主要是坡度、乔木盖度以及坡向余弦值与灌木高度的相互作用; 在115 m尺度上, 关键因子是灌木林、阔叶林和针叶林的面积; 250m尺度上, 主要因子是针叶林和阔叶林的面积及针叶林与阔叶林面积的相互作用; 对于距离因素, 到河漫滩和到农田的距离是影响白冠长尾雉越冬期栖息地选择的关键因子。根据回归分析和AIC及AIC<sub>C</sub>值, 115 m尺度上栖息地变量对白冠长尾雉越冬期的栖息地选择影响最大。综合分析发现, 在较大的尺度上, 影响白冠长尾雉越冬期栖息地选择的关键因子有针叶林面积、阔叶林面积、针叶林和灌木丛面积的相互作用、到河漫滩的距离以及到农田的距离。

关键词 [白冠长尾雉](#) [越冬期](#) [栖息地选择](#) [尺度](#)

分类号 [Q143, Q958.1](#)

## Multi-scale analysis on wintering habitat selection of Reeves's Pheasant (*Syrmaticau reevesii*) in Dongzhai National Nature Reserve, Henan Province, China

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**Abstract** Reeves's Pheasants (*Syrmaticus reevesii*) is a threatened species of pheasants, which is endemic to China. The wintering habitat selection by the species was investigated at three scales (10m×10m, 115m and 250m scale, i.e. 0.01 hm<sup>2</sup>, 4.15 hm<sup>2</sup> and 19.63 hm<sup>2</sup>, correspondingly) in Dongzhai National Natural Reserve from 2000 to 2002. In addition, the characteristics at distance scale were also investigated. At each scale a range of habitat variables were compared between used and control points. At the smallest scale (0.01 hm<sup>2</sup>), the variables influencing wintering habitat selection were slope, tree coverage, and the interaction between the cosine of slope aspect and shrub height. Reeves's Pheasant preferred sites were those with an aspect exposed to the sun, a gentle slope, higher shrubs, and high tree coverage. At the mid-scale (4.15 hm<sup>2</sup>), the area of shrub, broad-leaved forest, and conifer forest were the key factors. Shrub cover was lower around the used points compared to the control points, whereas broadleaf or conifer forest cover was higher. At the largest scale (19.63 hm<sup>2</sup>), broadleaf and conifer forest cover, and their interaction were the key factors. Habitat use was similar at the mid and large-scale, and it seems that a mosaic of habitats is important to Reeves's pheasants. Moreover, the proximity of beach and farmland was important of winter habitat selection. According to the lowest AIC and AIC<sub>C</sub> values a

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t the mid-scale, the characteristics at this scale were stated as the ultimate factors influencing the habitat selection of the bird. When considering a range of habitat variables at all scales within a multivariate regression, the most important variables identified at each scale were conifer forest cover at the mid-scale, broadleaf forest cover and the interaction between the conifer forest cover and shrub cover at the large-scale and distance to beach and farmland. Overall there were differences in habitat selection by Reeves's Pheasant at each scale, and some habitat factors have an interactive effect. These results highlight the importance of multi-scale analyses when considering habitat selection by Pheasants.

**Key words** Reeves's Pheasant \_ *Syrnaticus reevesii* \_ wintering \_ habitat selection \_ scale

DOI

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