研究报告　　　　最新目录 | 下期目录 | 过刊浏览 | 高级检索　　　<< Previous Articles | Next Articles >>

基于MAXENT模型的秦岭山系黑熊潜在生境评价

齐增湘[1,2], 徐卫华[2*], 熊兴耀[1], 欧阳志云[2], 郑 华[2], 甘德欣[1]

[1]湖南农业大学园艺园林学院, 长沙 410128
[2]中国科学院生态环境研究中心城市与区域生态国家重点实验室, 北京 100085

Assessment of potential habitat for *Ursus thibetanus* in the Qinling Mountains

Zengxiang Qi[1,2], Weihua Xu[2*], Xingyao Xiong[1], Zhiyun Ouyang[2], Hua Zheng[2], Dexin Gan[1]

[1] College of Horticulture & Landscape, Hunan Agricultural University, Changsha 410128
[2] State Key Laboratory of Regional and Urban Ecology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085

摘要	参考文献	相关文章

Download: PDF (1383KB)　　HTML 1KB　Export: BibTeX or EndNote (RIS)　　Supporting Info

摘要 明确物种生境空间分布格局及其与环境因子的关系, 对制定合理有效的保护对策十分重要。本文以黑熊(*Ursus thibetanus*)为研究对象, 以其重要栖息地秦岭山系为研究区域, 选取68个黑熊分布点数据和34个环境因子, 应用MAXENT模型分析其生境空间分布及主要影响因子, 以最大化Kappa值的生境适宜性指数为阈值划分适宜生境, 结合已建自然保护区进行保护空缺分析, 并通过构建阻力面和最小成本路径分析, 开展黑熊生境廊道规划。结果表明: 人类干扰和土地利用类型是影响黑熊生境选择的主要生态因子, 居民点密度、到荒草地距离、到耕地距离3个因子对黑熊生境选择有重要影响, 其综合贡献值分别为21.4%、17.5%和15.9%, 到阔叶林距离、到水体距离等因子次之。黑熊的适宜生境主要集中分布在秦岭山系主脊的中西部地区, 占整个秦岭山系面积的19.23%。空缺分析表明: 已建自然保护区群覆盖了23.49%的适宜生境, 但尚有8,480 km^{2}处于保护区之外。为更有效保护秦岭黑熊及其生境, 建议建设12条生境廊道, 同时结合其他物种进行系统保护规划。

关键词： 黑熊　GAP分析　生境评价　最小成本路径分析　生境廊道

Abstract：　Understanding the distribution of suitable habitat of target species and their relationship with environment are critical to formulating effective protective measures. The Qinling Mountains contain important habitat for Ursus thibetanus. A predictive habitat distribution map of this species was estimated using the Maximum Entropy (MAXENT) model with a total of 68 recorded points of known bear occurrence and 34 environmental factors. The distribution of potential habitat and its relationship with major environmental factors were analyzed and a gap analysis was carried out in light of existing nature reserves. Habitat corridor networks were also planned using resistance surface and least-cost analysis. Results showed that human interference and landuse type were the main factors influencing habitat choice of *U. thibetanus*. Three variables including residential density, distance to grassland and distance to cultivated land had the greatest effect on habitat selection, with a contribution of 21.4%, 17.5% and 15.9% respectively, followed by the distance to broad-leaf forest and distance to water. Estimated suitable habitat for *U. thibetanus* was distributed mainly in the middle and western portions of the Qinling Mountains and occupied 19.23% of the Mountains' total area. Gap analysis showed that approximately 23.49% of the bear's predicted suitable habitat was protected within the nature reserves, but that 8,480 km^2 of suitable habitat was outside these reserves. In order to protect *U. thibetanus* and its habitat more effectively, suggestions for the construction of 12 habitat corridors and a systematic conservation planning process integrating other species' needs were proposed.

Keywords： *Ursus thibetanus*　GAP analysis　habitat evaluation　least cost path analysis　habitat corridor

引用本文:

齐增湘, 徐卫华, 熊兴耀, 欧阳志云, 郑 华, 甘德欣.基于MAXENT模型的秦岭山系黑熊潜在生境评价[J]　生物多样性, 2011,V19(03): 343-352

Service
把本文推荐给朋友
加入我的书架
加入引用管理器
Email Alert
RSS

作者相关文章
齐增湘
徐卫华