

The winter and spring habitat suitability of black woodpecker (*Dryocopus martius*) in Shast Kalateh forest, Gorgan province

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Abstract

Investigation of the ecological characteristics of wildlife species and determination of habitat suitability for them is one of the main pillars for wildlife management and protection. In this study, the winter and spring habitat suitability of black woodpecker (*Dryocopus martius*) was studied in Shast Kalateh forest. Habitat characteristics, including forest vegetation type, structural characteristics of vegetation and topographic parameters together with presence and absence of woodpeckers were recorded within each of 103 sampling plots with a radius of 25 m. The Results of binary logistic regression showed that forest vegetation type, the number of snags, fallen dead trees and trees with height more than 20 m together with habitat elevation (a.s.l.) were the most important parameters affecting the presence of black woodpecker in spring. Moreover, forest vegetation type, the number of snags, trees with height more than 20 m and trees with dbh more than 20 cm together with the elevation (a.s.l.) and slope of habitat were the most important parameters affecting the presence of black woodpecker in winter. The results indicated that this bird species prefers old forest habitats composed with tall and thick trees specially beech trees. Due to high dependency of species such as black woodpecker on the old and undisturbed forest habitats, controlling severe exploitation of such habitats is therefore essential for the conservation of such bird species.

Keywords: Habitat modeling, black woodpecker, habitat characteristics, binary logistic regression