

# Nesting hole site selection by the Syrian Woodpecker, *Dendrocopos syriacus*, in Yazd province, Iran

(Aves: Picidae)

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**Abstract.** We studied the selection of nesting sites by the Syrian Woodpecker, *Dendrocopos syriacus* (Hemprich & Ehrenberg), in a forest oasis in semi-arid central Iran. Habitat variables such as tree height, tree diameter and canopy cover of nesting trees were compared with randomly selected non-used trees. The results showed that, in spite of the availability of different tree species in the study area such as Mountain Almond (*Amygdalus scoparia*), Montpellier Maple (*Acer cinerascens*) and Pistachio tree (*Pistachia atlantica*), only Pistachio trees were used for nest hole construction. The most important factors influencing nesting hole site selection were tree species and their diameter at breast height (DBH). The mean DBH of 40 Pistachio trees selected by Syrian Woodpeckers was 1.26 m, which was significantly larger than that of the non-selected Pistachio trees (1.10 m) ( $P < 0.05$ ). The canopy cover of the selected trees (2.65 m<sup>2</sup>) was also significantly higher compared with the control trees (2.41 m<sup>2</sup>) ( $P < 0.04$ ).

**Key words.** Syrian Woodpecker, Pistachio tree, habitat preferences, forest stands, Iran.

## Introduction

The reason why individuals in a woodland or forest bird population establish territories in particular locations depends upon an interplay between the ‘niche gestalt’ of individual bird species and a number of site-specific factors including geographic location, altitude, land productivity, woodland area and isolation, edge effects, stand structure and floristic composition, and social and demographic considerations (JAMES 1971, FULLER 1995). For woodpeckers (Picidae), it was shown that the White-backed Woodpecker (*Dendrocopos leucotos* (Bechstein)) chooses full-grown deciduous forests with a large number of dead trees for habitation. Some woodpeckers such as Great Spotted Woodpecker (*Dendrocopos major* (Linnaeus)) and Middle Spotted Woodpecker (*Dendrocopos medius* (Linnaeus)) select their hole nesting sites in forest margins more than in inner parts because of the greater resin content in the marginal nesting trees, especially in patch-like habitats (KOSINSKI & WINIECKI 2004, VIRKKAL & TIAINEN 1993). It was found that forest foliage affects nesting tree selection since an enclosed coverage surrounding the tree may have a minimal effect on the nesting choice of the woodpecker (ROSS et al. 1997, ADKINS & CUTHBERT 2003). STACHURA-SKIERCZYŃSKA et al. (2009) found that the Three-toed Woodpecker (*Picoides tridactylus* (Linnaeus)) prefers taller older trunks with an uneven vertical structure, where the dominant trees have needle-like leaves. Since such areas are often located outside of protected area boundaries, the species will suffer from various threats such as the side effects of a fragmented ecosystem. Studies showed that American woodpeckers such as the Downy Woodpecker (*Picoides pubescens* (Linnaeus)) prefer soft-wood specimens with a diameter of more