This dataset is associated to the publication:

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Abstract

Forest plantations are increasingly recognized for their role in providing ecosystem services in agroforestry systems. Understanding the habitat preferences of potentially beneficial birds supports effective forest management. Our study focused on identifying breeding habitat preferences of a raptor guild and assessing exotic eucalypt plantations as potential breeding sites. We explored preferences at various spatial scales considering vegetation features, intraspecific territorial behaviour, and interspecific interactions within the guild to determine their importance. We hypothesized that feeding habits and body mass explain differences in habitat preferences among three diurnal raptors (Northern goshawk, Common buzzard, Eurasian sparrowhawk). We employed random forest models to differentiate breeding sites from control plots, assessing factors' relative importance and unravelling the hierarchical process of habitat selection in southwestern Europe's eucalypt plantations. The studied eucalypt plantations emerged as suitable breeding habitats, harbouring dense breeding populations with uniform spatial distribution. Intraspecific territoriality and vegetation significantly influenced breeding habitat selection, while interspecific interactions held lesser influence. Species-specific variations were attributed to feeding habits and body masses. Tall eucalypt trees and mature-like patches were crucial elements driving breeding habitat selection. Raptors' preference for specific woody elements primarily influences areas within a relatively small radius around their nests (including the nest tree, nest site −10 m radius, and nest stand −50 m), with sparrowhawks showing preferences extending to 125 m. Raptors' inclination for mature woody elements and mature forest patches should steer forest management to bolster these apex predators and their contributions in eucalypt plantations within agroforestry systems.

Dataset

data_habitatpreferences.xls:

- **Sheet 1 "Meta – Dataset":** information of columns/variables in dataset. See supplementary material (Table S1 and S5) of the article for a more detailed description of the habitat variables measured at raptor nesting sites and control plots at different spatial scales.

- **Sheet 2 "Dataset":** complete data set-surveys.

Please note that all specific information related to the raptor's nest location has been deleted due to confidentiality concerns, as it is considered sensitive information.

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