
Crop and urban systems

The barn owl and its predatory capacity against rodent pests: a case study on its role in biological control of the common vole

Hernández-Garavís, Lorena^{1*}; Báscones-Reina, Miriam¹; González-Simón, Paula¹; Garcés-Toledano, José Fernando¹; Cuéllar-Basterrechea, Carlos¹; Rodríguez-Moreno, Beatriz¹; Blanca-Chana, Fernando¹; Caminero-Saldaña, Constantino¹

¹ Group for the Rehabilitation of Native Fauna and its Habitat (GREFA), Majadahonda, Spain

* garavis@grefa.org

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The common vole (*Microtus arvalis*) is a pest that causes significant damage to agriculture in certain areas of the Spanish cereal steppe. To promote biological control, nest boxes for barn owls (*Tyto alba*) have been installed in affected areas. Using camera traps, a barn owl family was monitored for two years, one with high vole abundance and the other with low abundance. This study, although with a limited sample size, aims to illustrate the potential of the barn owl as a control agent during a common vole outbreak. The objectives were to quantify prey consumption by a barn owl family during its breeding cycle, to assess whether the hunting activity of this raptor varies between different reproductive stages (incubation, chick rearing) and between years with different vole abundance.

Preliminary results reveal a significant increase in vole consumption by barn owls during years of high vole abundance, highlighting their role as natural biological controllers. These findings quantify the valuable ecosystem service provided by barn owls and provide a basis for promoting their conservation and encouraging their use as a tool for integrated pest management at local and regional levels in areas with similar conflicts.