ARPHA Conference Abstracts 9: e201629
doi: 10.3897/aca.9.e201629

OPEN ACCESS

Conference Abstract

Impacts of invasive mammals on Holm oak forest restoration on Mediterranean islands

Alice Misuri[‡], Benedetta Favre[‡], Renato Benesperi[‡], Michele Giunti[§], Eugenia Siccardi[‡], ,br/>Daniele Viciani[‡], Lorenzo Lazzaro[|,‡]

‡ University of Florence, Florence, Italy
§ NEMO Nature and Environment Management Operators srl, Florence, Italy
| University of Florence, Firenze, Italy

Corresponding author: Lorenzo Lazzaro (lorenzo.lazzaro@unifi.it)

Received: 28 May 2026 | Published: 29 May 2026

Citation: Misuri A, Favre B, Benesperi R, Giunti M, Siccardi E, Viciani D, Lazzaro L (2026) Impacts of invasive mammals on Holm oak forest restoration on Mediterranean islands. ARPHA Conference Abstracts 9: e201629. https://doi.org/10.3897/aca.9.e201629

Abstract

Ecosystem restoration on Mediterranean islands is often hindered by the residual effects of past land use and invasive species. Decades of holm oak forest exploitation, the establishment of secondary pine plantations, and the introduction of invasive mammals have altered habitat functionality. Consequently, the conversion of these conifer stands to promote the recovery of native *Quercus ilex* L. communities has become a conservation priority.

This study investigates the regeneration constraints of *Q. ilex* in Mediterranean insular environments, focusing on the inhibitory role of conifer-derived litter and seed predation by invasive rodents and lagomorphs. We integrated an *ex situ* experiment (384 acorns) testing germination under varying soil and litter conditions, with an *in situ* field experiment (300 acorns) across five areas, comparing three treatments: closed cages (exclusion of all mammals), open cages (exclusion of lagomorphs), and unfenced controls.

Results indicate that while local soil conditions do not significantly impact *Q. ilex* recruitment, invasive fauna represent the primary constraint for forest restoration. Seedling emergence was substantially reduced by early predation and, to a lesser

© Misuri A et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

extent, by litter presence. These findings highlight the need for integrated management strategies in insular ecosystems.

Presenting author

Alice Misuri

Presented at

Neobiota 2026, the 14th International Conference on Biological Invasions

Conflicts of interest

The authors have declared that no competing interests exist.