Assessing the effects of habitat loss and deterioration on a red squirrel translocation site; insights for future conservation management.

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Abstract

Translocations, a conservation tool used to conserve and restore dwindling species, are often associated with high failure rates. Inadequate long-term monitoring of both populations and their introduction sites beyond the initial years post-translocation creates a gap in our understanding of the factors that determine translocation success or failure, resulting in less informed projects in the future. This lack of long-term monitoring is partly caused by the absence of a well-defined framework by which the success of the translocation can be measured, leading to premature and sometimes inaccurate assessments of their outcome. We investigated the long-term outcome of a red squirrel translocation in the west of Ireland, specifically assessing the habitat changes in the translocation site since the introduction in 2005, and their impact on carrying capacity. Using digitised historical map data, we showed that the translocation site experienced a 53% reduction in suitable habitat. Additionally, there was a 41-81% reduction in the red squirrel carrying capacity of the forest, according to feeding survey data. Clear-felling, a forest fire and a shift in tree species composition collectively contributed to this decline in site suitability. This investigation underscores the complexity of translocation projects and emphasises the pivotal role of habitat quality in their outcomes. We advocate for detailed habitat assessments during the planning phase, avoidance of unstable habitats as translocation sites, and the implementation of long-term monitoring practices.

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