Impacts on Hazel Dormice (*Muscardinus avellanarius*) of twenty years of incremental conifer removal

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Abstract

Within a Planted Ancient Woodland Site (PAWS) of Corsican Pine, planted in 1970, Hazel Dormice (*Muscardinus avellanarius*) in nestboxes were individually marked by PIT tags from 2000 onwards. In adjacent experimental study plots of 3 ha each, different patterns of forest restoration were used. In early winter 2003 c.33 % of conifers were removed: [a] in very small groups; [b] larger felling coupes similar to hazel coppicing; [c] traditional 'rack-and-thin' regime. In 2009 and 2015 a third of remaining pines were removed and in 2020 almost all remaining conifers were removed. The effects on three dormouse abundance indices were recorded through routine monitoring of nest boxes. The overall number of captures varied from year to year, increasing the year following forestry operations in 2003 and 2009, 2015. This was possibly because nestboxes temporarily became more attractive except in 2021 which was a very poor dormouse year. In the rack-and-thin treatment little regeneration occurred and dormouse numbers slowly declined to almost zero. The numbers of individually marked adults in the other plots showed a rising trend. The numbers of nestlings and juveniles recorded initially increased, but have oscillated recently. This study demonstrates that during regular forestry operations in conifers, maintaining a population of this species is possible. This has important implications for managers. A regime of patchwork conifer removal over 4 phases appears to be pragmatic for an economic forestry business and also ensures that dormice remain. The rack-and-thin area lost its dormice but may recover in the next few years.

Keywords

experiment, forest management, restoration, PAWS

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