

NATAL DISPERSAL OF MOUNTAIN HARE LEVERETS IN SCOTLAND: THE EFFECTS OF HARVESTING



Annabel Harrison^{1,2}, Scott Newey¹, Simon Thirgood¹, Dan Haydon² • a.harrison@macaulay.ac.uk
 1.The Macaulay Land Use Research Institute, Craigiebuckler, Aberdeen, AB15 8QH.
 2.Division of Ecology and Evolutionary Biology, University of Glasgow, Glasgow, G12 8QQ

MOUNTAIN HARES

- Traditional game species
- Common on Scottish grouse moor
- Management culls to control ticks and Louping ill virus
- Fragmented habitat
- Metapopulation



DISPERSAL

Important for:

- Metapopulation viability
- Population recovery
- 'Vacuum' effect
- Potentially very important for mountain hares

BUT

- Poorly understood
- Effects of harvesting unknown

STUDY SITE

~30km grouse moorland in the Cairngorms National Park

2 blocks:

- Control - No hares shot
- Harvested - Traditional hare drives

METHODS

- Leverets live trapped on both blocks
- Fitted with radio tag and radiotracked
- Leveret dispersed if dispersal distance is more than diameter of average female homerange

RESULTS

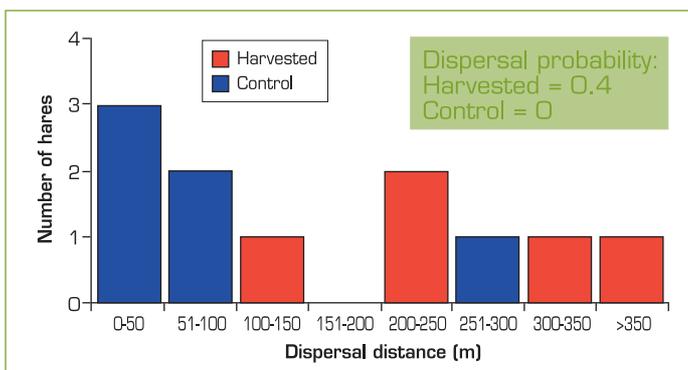


Figure 1: dispersal distances of leverets of harvested and control populations. Dispersal probability is greater in the harvested population.

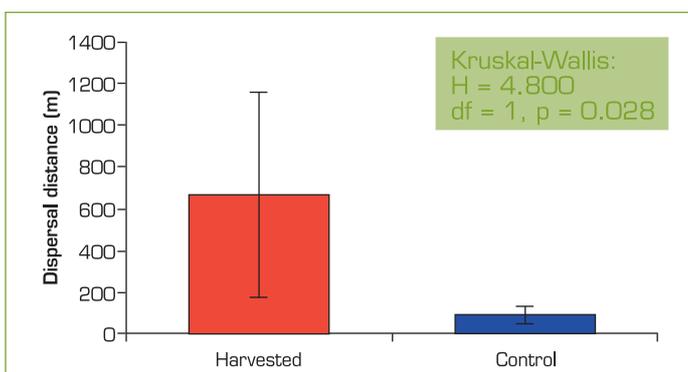


Figure 2: mean dispersal distances of leverets of harvested and control populations with standard error bars. Dispersal distance is significantly greater in the harvested population.

CONCLUSIONS

- Dispersal probability and distance was low
- Extensive culling from specific areas could lead to further fragmentation

BUT

- Dispersal is effected by harvesting
- Could lead to population recovery by movement?
- Management of neighbouring estates must be co-ordinated for economic feasibility