

Vanishing Vipers 2016

The Spatial Ecology of Translocated Adders: A Case Study.

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INTRODUCTION - Translocations

- The practice of relocating species
- Conservation and development-led
- Very little post-translocation monitoring
- Problem species



Crotalus horridus

Translocations – Problem Species

Crotalus tigris



Ophiophagus hannah



Problem Species continued

Notechis scutatus



Elaphe schrenckii



Project Aims

- Project Aim
 - Ascertain how adders respond to translocation
- Questions
 - Distances
 - Home ranges
 - Habitat Use
 - Detectability



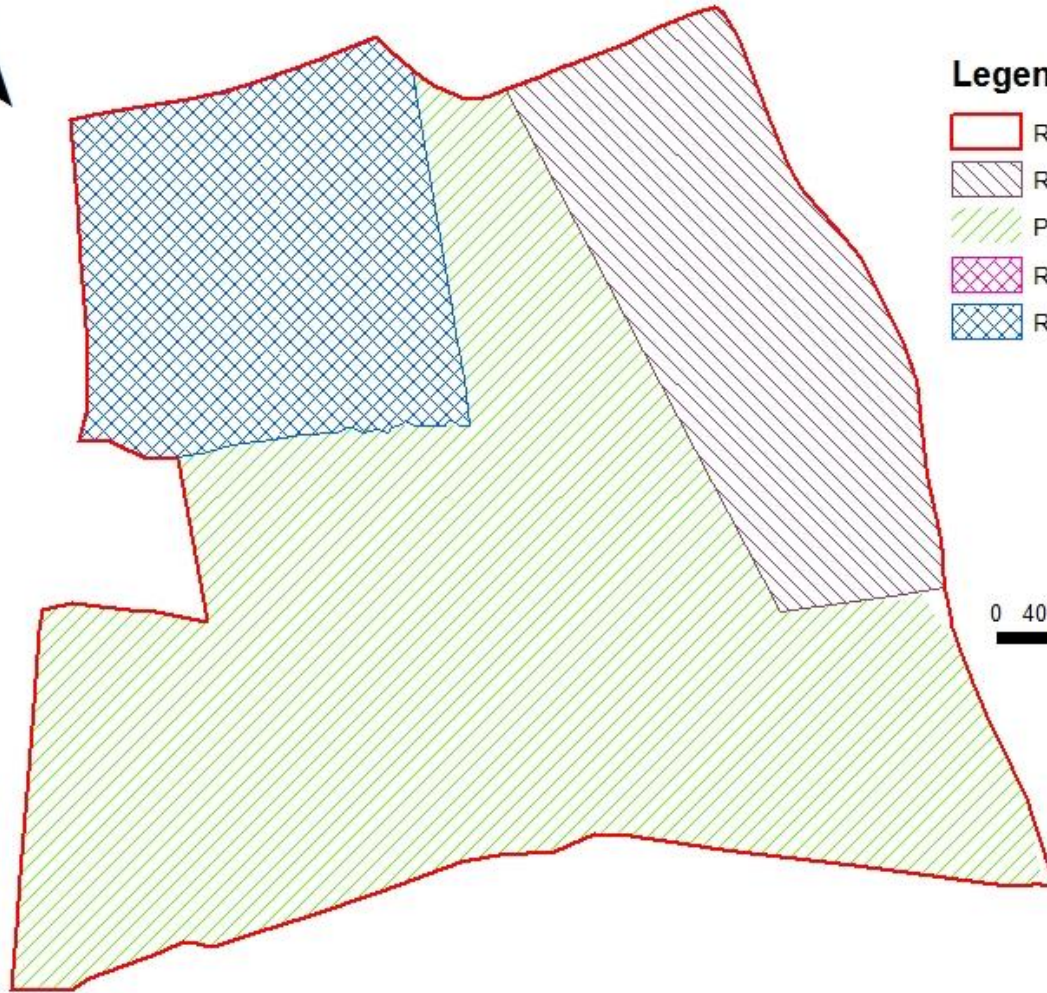
Disused Golf Course, Essex



Typical Habitats



Proposed Development

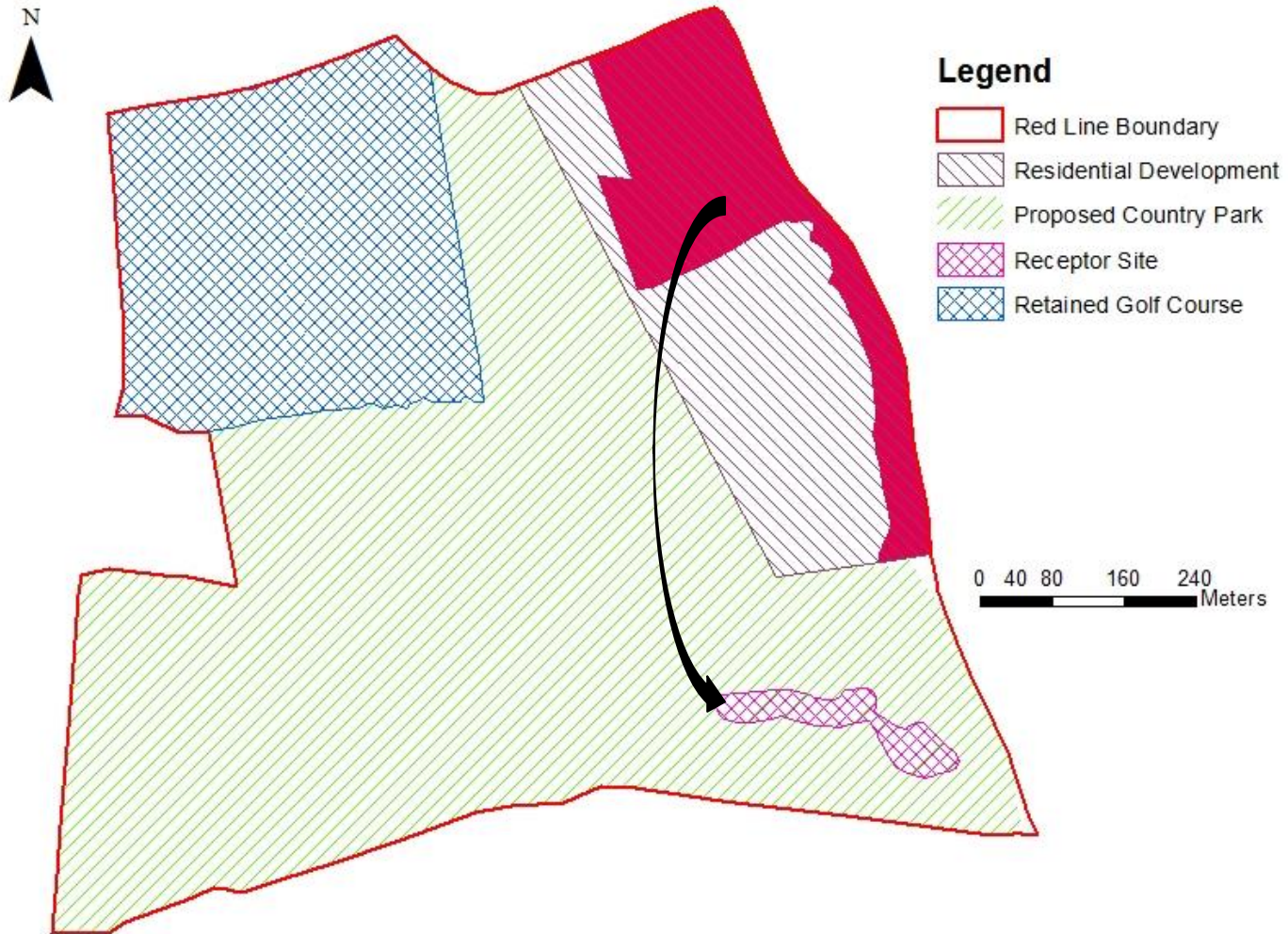


Legend

-  Red Line Boundary
-  Residential Development
-  Proposed Country Park
-  Receptor Site
-  Retained Golf Course

0 40 80 160 240
Meters

Proposed Development



Donor Site



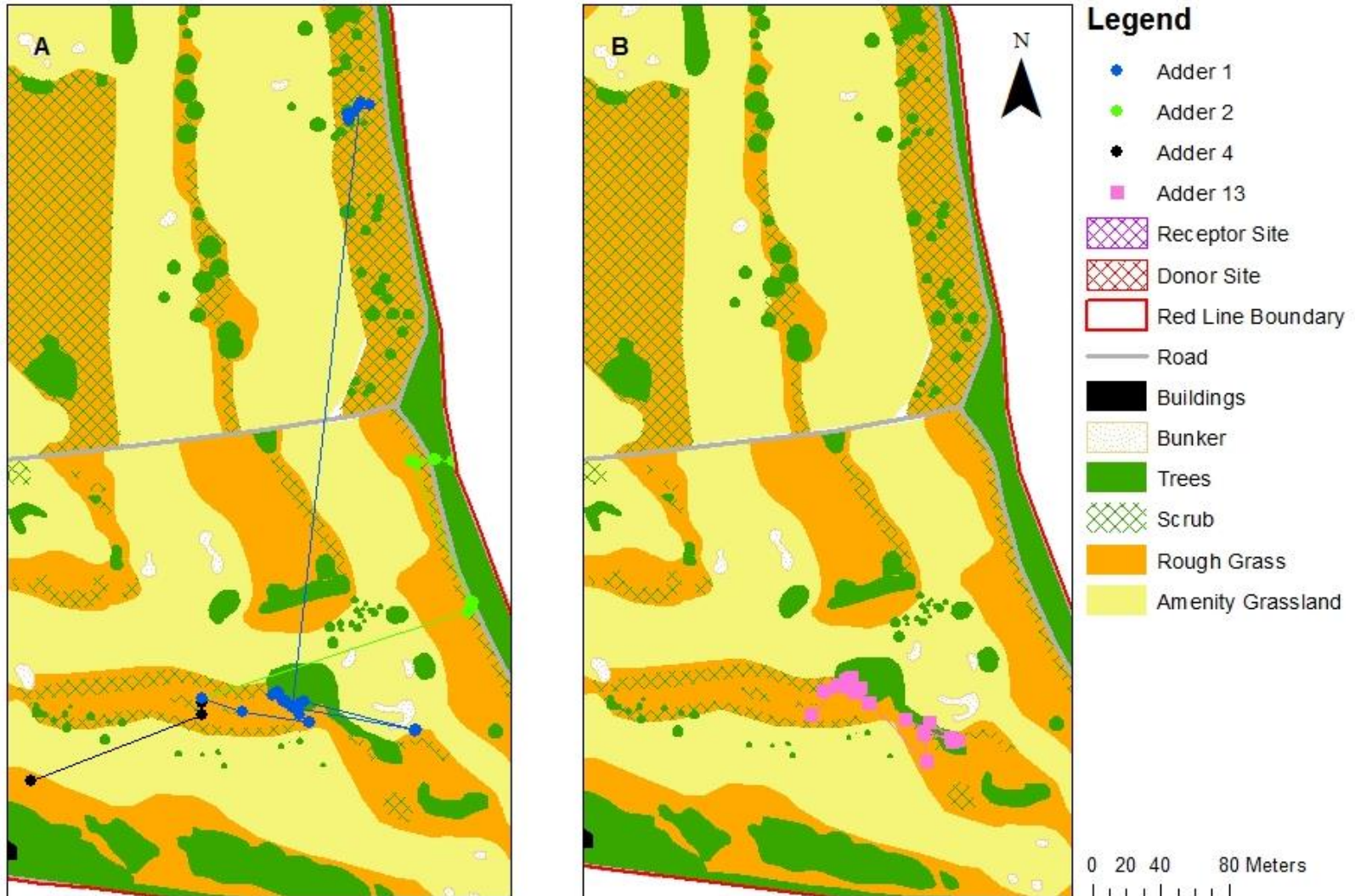
Receptor Site



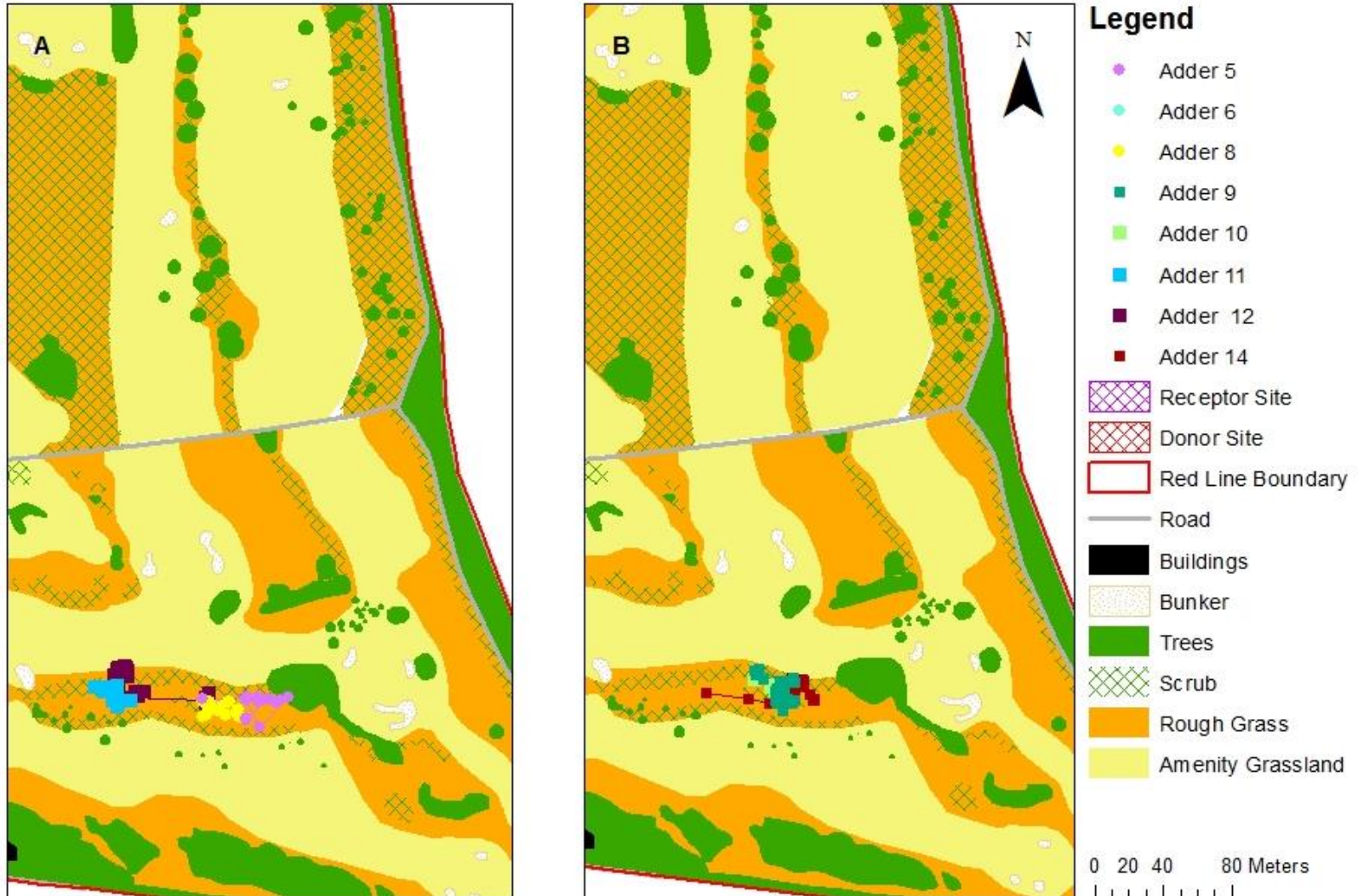
Methods



Movements - Males



Movements - Females



Summary of Movements

- Movements significantly higher in translocated males
 - Exploration
- Largest unidirectional movements made by males
 - All telemetered males left the receptor
 - Courtship
 - Philopatry
- Females remained largely *in situ*



Ranges - Males



0 30 60 120 Meters



0 30 60 120 Meters

Ranges - Females

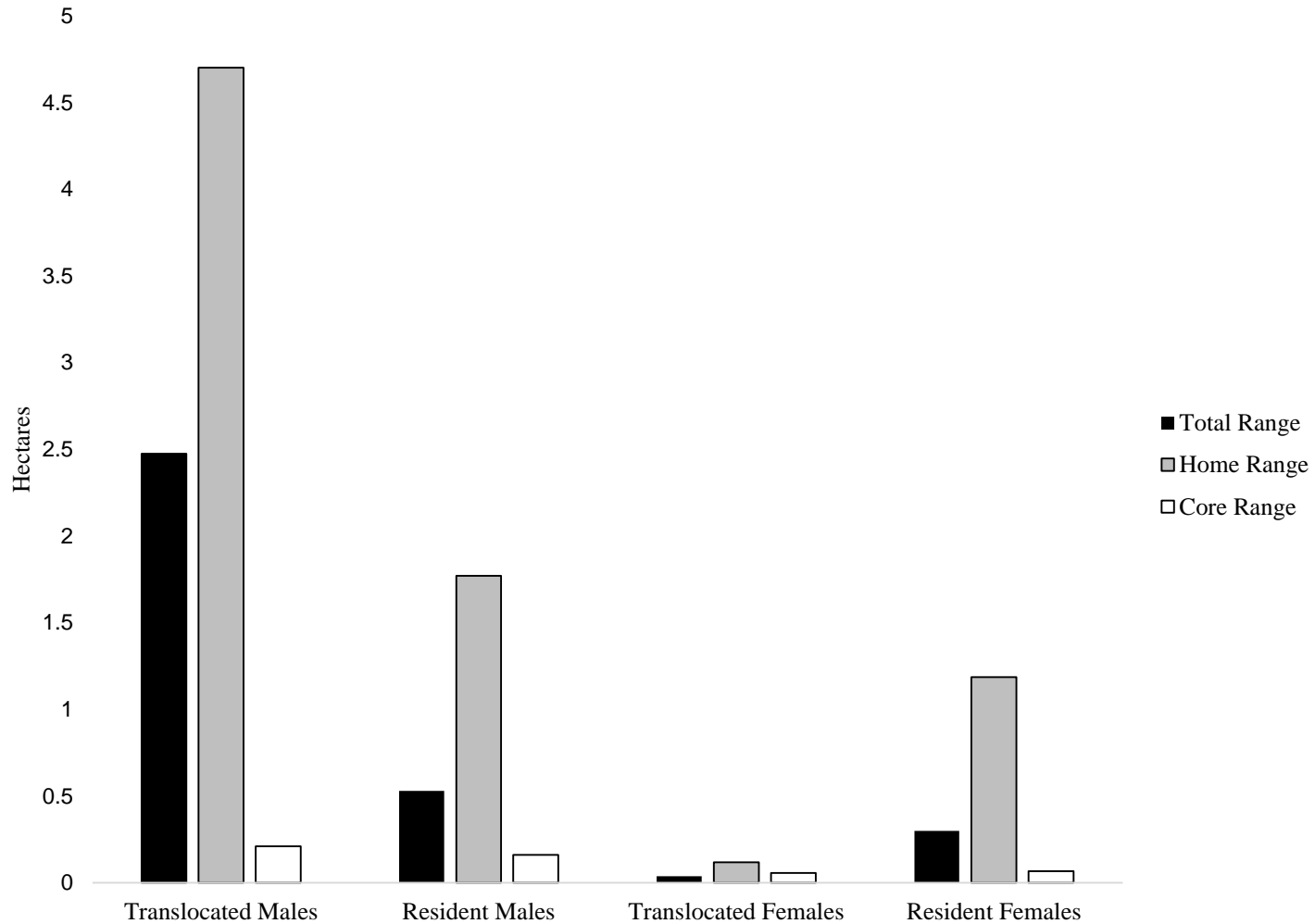


0 30 60 120 Meters



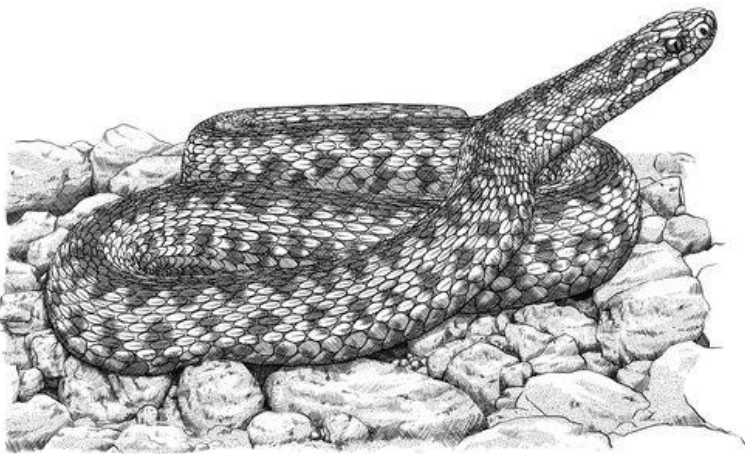
0 30 60 120 Meters

Ranges - Summary



Summary of Ranges

- Translocated males maintain larger:
 - Total range (significant);
 - Home range (non-significant); and
 - Core range (non-significant).
- Translocated females do not hold significantly larger home ranges than resident conspecifics



Miscellaneous

- Size does not influence movements or range
- No change in detectability
- Habitat selection not affected



Implications for Translocation

- Males range farther than females
- Males crossed unsuitable habitat
- Key factors:
 - Surrounding habitat
 - Connectivity
 - Buffers to movement



Implications for Translocation



- Females remain quite sedentary
- Availability of resources is key
 - Prey abundance
 - Shelter and hibernation
 - Insolation
 - Lack of disturbance

Implications for Translocation

- Unknown response for juveniles
- Appear to be prone to predation
- Suitable habitat and well-connected



Acknowledgements

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- Ele and Billy

