

# Conservation Biology of *Saxifraga hirculus* (Marsh saxifrage)

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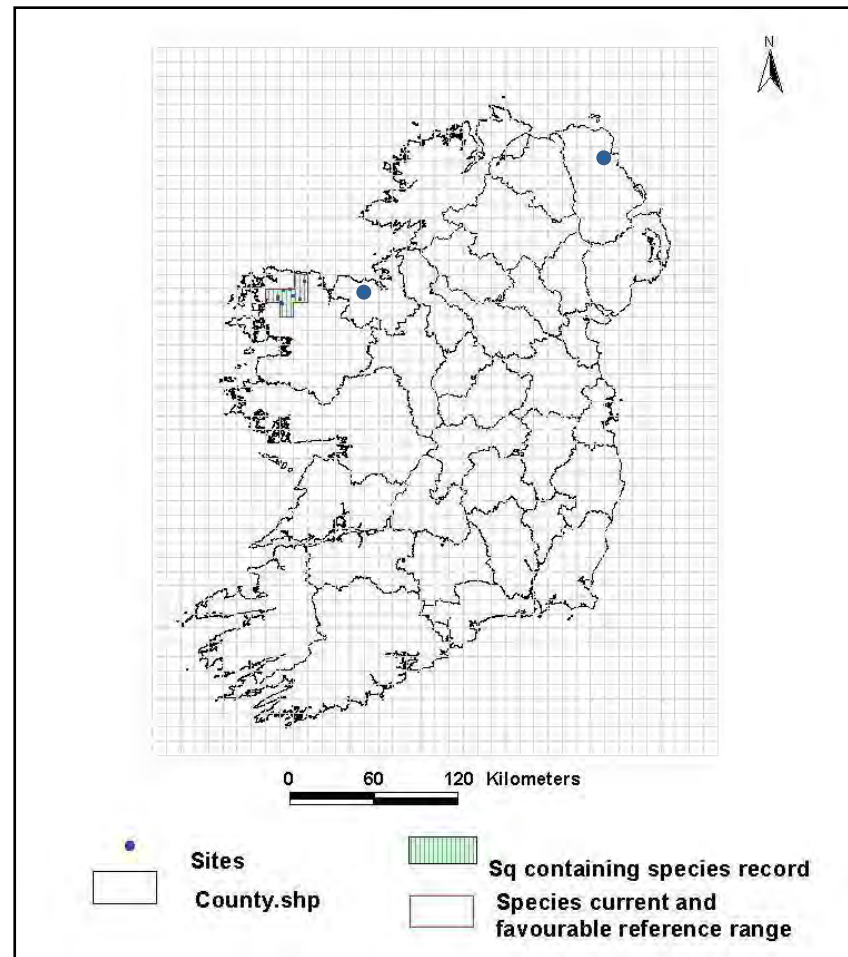
# Structure of the talk

- Distribution and status
- Ecology – Species Action Plan
- Reproduction and Genetics

# World wide distribution



# Distribution of *Saxifraga hirculus* in Ireland



# *S. hirculus*

## *Different stages of S. hirculus*



*S. hirculus* rosette



*S. hirculus* in bud



*S. hirculus* in flower



*S. hirculus* in seed

# *S. hirculus* rosettes



# Example of a flush in Co. Mayo containing *S .hirculus*



# Bellacorrick Flush





# Bellacorrick Flush



# Baroosky Flush in Co. Mayo



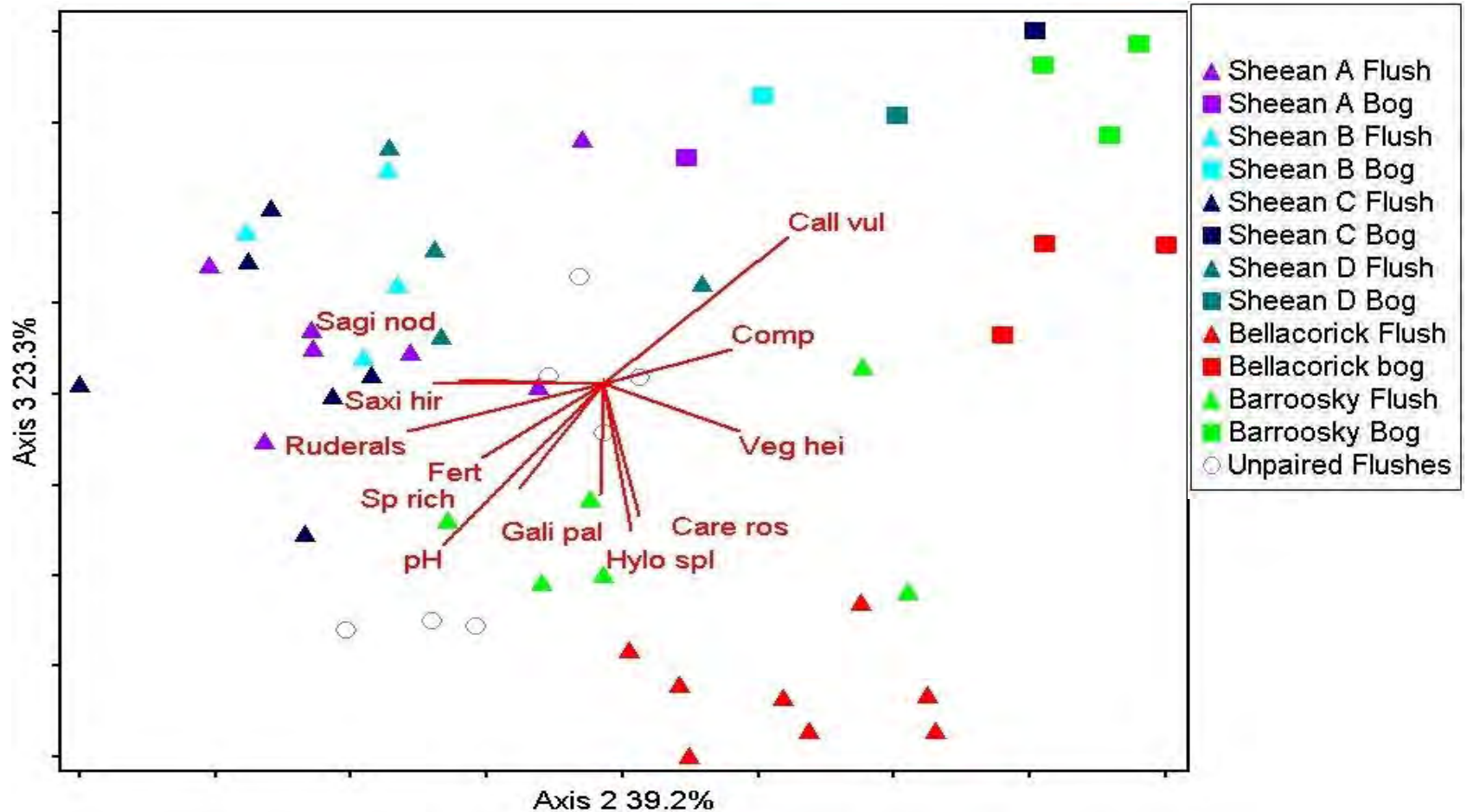
# Formoyle Flush in Co. Mayo



# Ecology

- What differences exist between the undisturbed site Sheean and the disturbed populations at Bellacorick and Barroosky?
- What are the drivers/indicators behind *S. hirculus* abundance.

# NMS ordinations of the relevés colour coded by the three Sheean sites (ABC&D), Bellacorick and Barroosky.



## Positive and negative indicators of *S. hirculus* abundance

Driver	p
<i>Molina caerulea</i>	0.000
<i>Peltigera membranacea</i>	0.000
<i>Holcus lanatus</i>	0.000
<i>Sagina nodosa</i>	0.001
<i>Succisa pratensis</i>	0.003
<i>Triglochin palustris</i>	0.004
<i>Potamogeton polygonifolius</i>	0.006
Grazing levels	0.007
<i>Calluna vulgaris</i>	0.009
<i>Juncus acutiflorus</i>	0.010
Stress	0.015
Vegetation height	0.018
<i>Equisetum palustre</i>	0.026

# Reproduction and Genetics

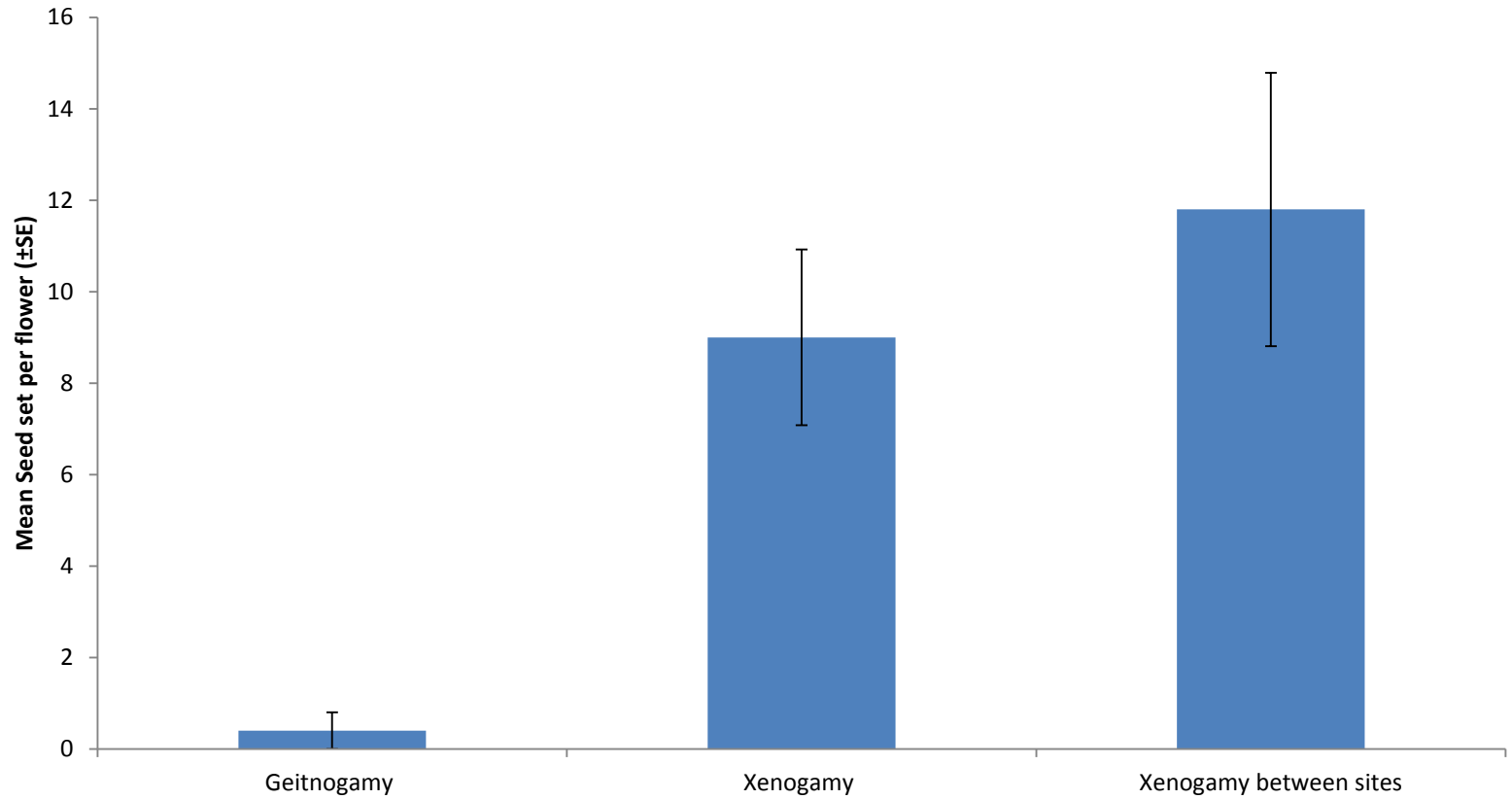
- What strategy of reproduction is utilized by *S. hirculus*?
- Was sexual reproduction occurring/clonal.

# Pollination experiments

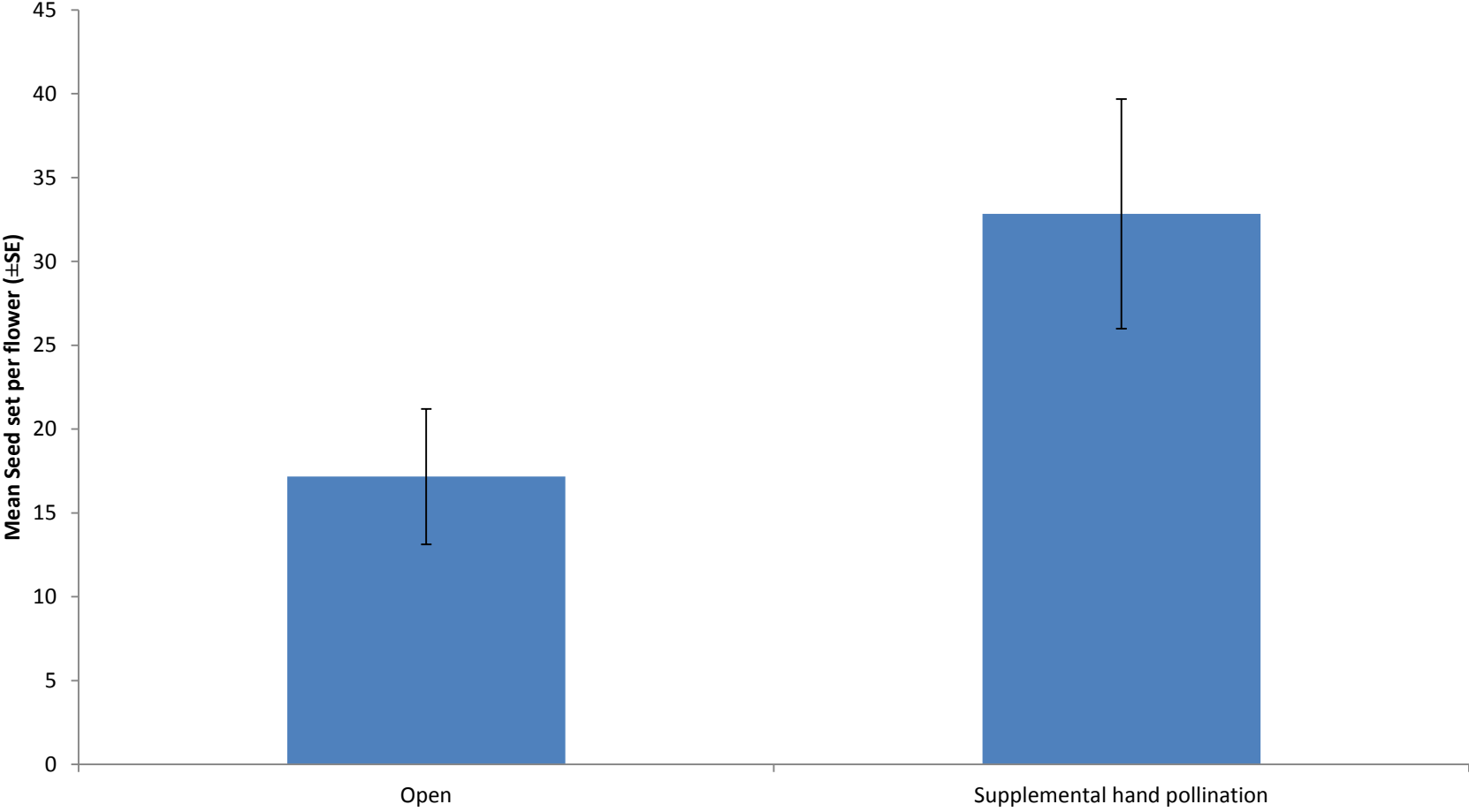




## *S. hirculus* is predominantly outcrossing



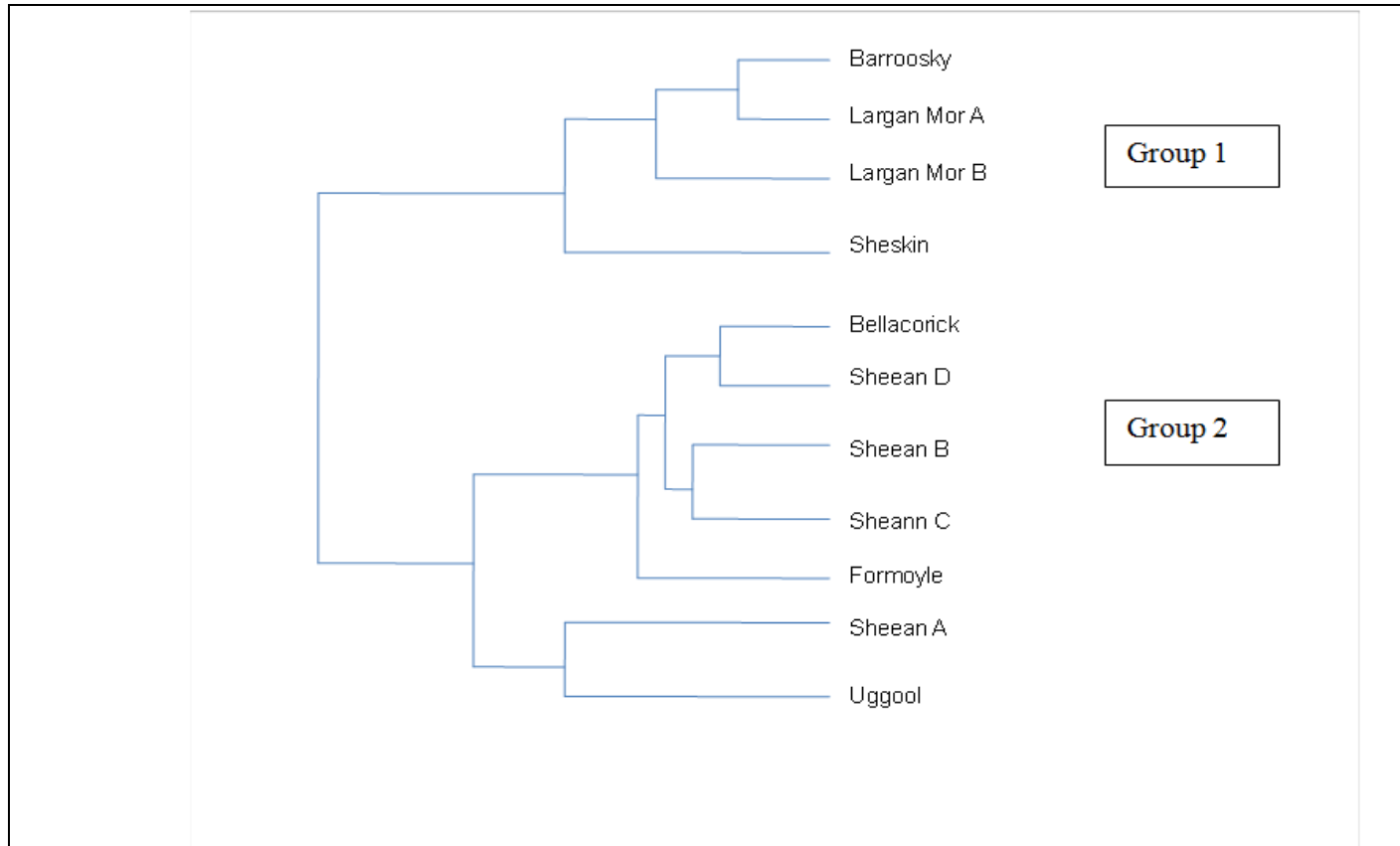
# *S. hirculus* is pollen limited



# Reproduction and Genetics

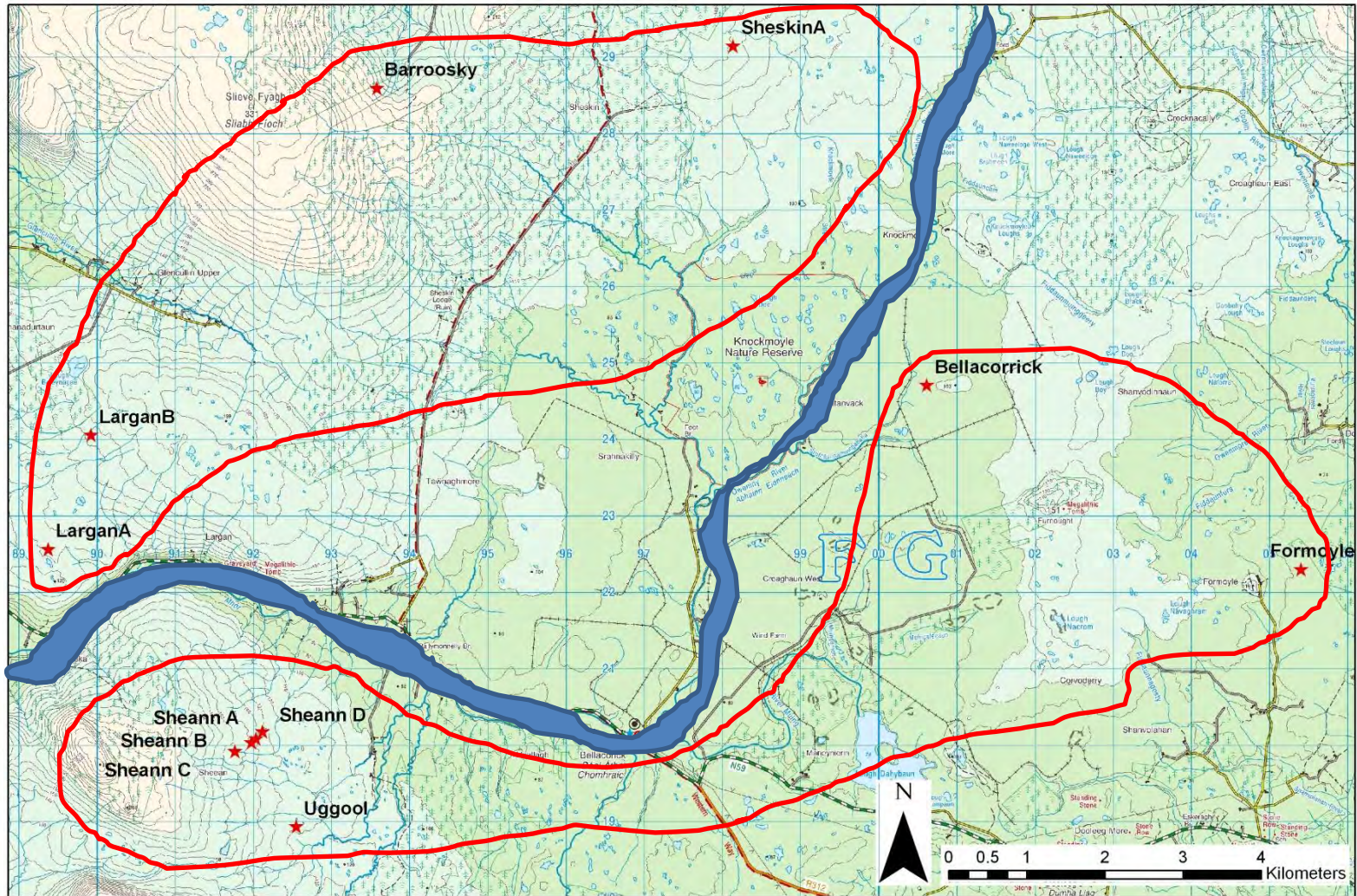
- What strategy of reproduction is utilized by *S. hirculus*?
- Was sexual reproduction occurring/clonal.
- What is the degree of genetic differentiation within and between the individual populations?

## Two subpopulations exist among Irish *S. hirculus* in Mayo



Nei's genetic distance

Map showing locations of genetic material which was analysed in this study.



# Practical Outcome

- Species Action Plan
- Monitoring Protocol

Thank you!