

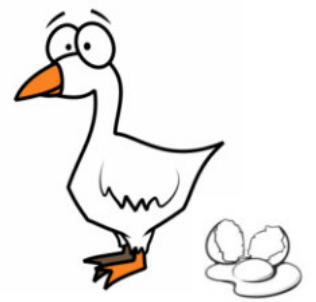
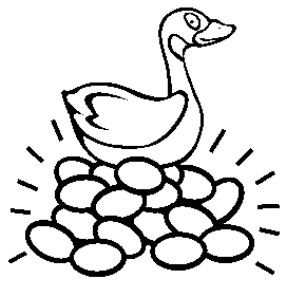
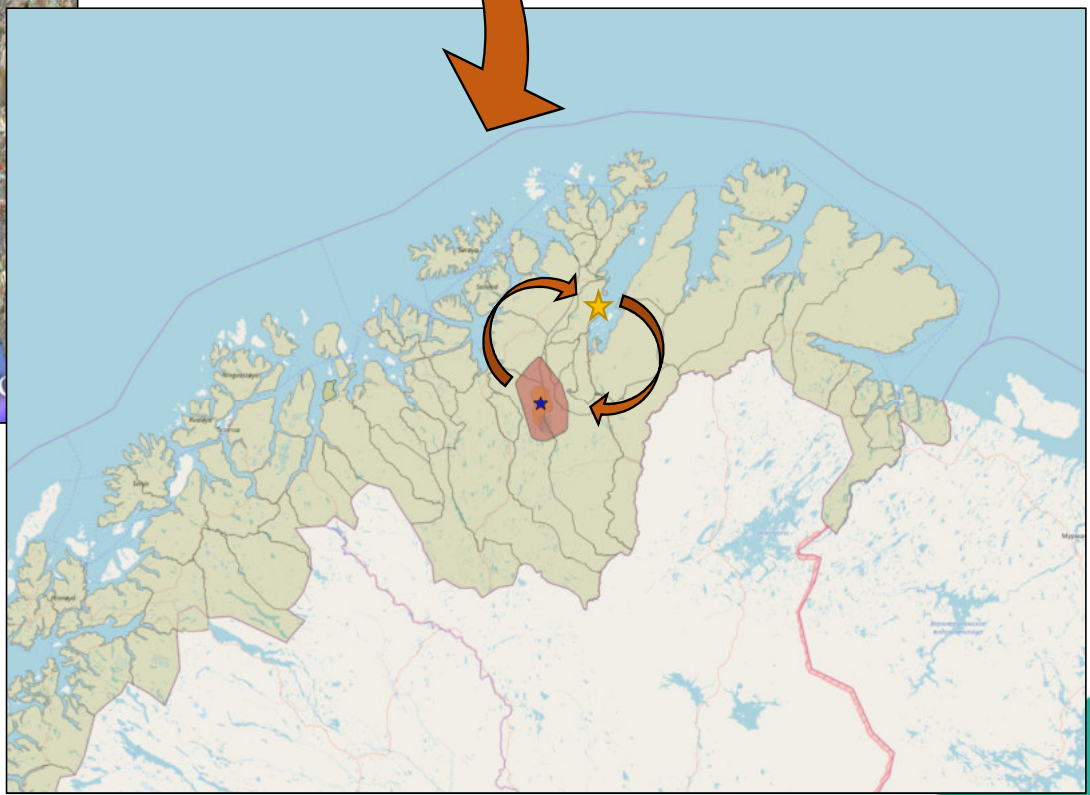
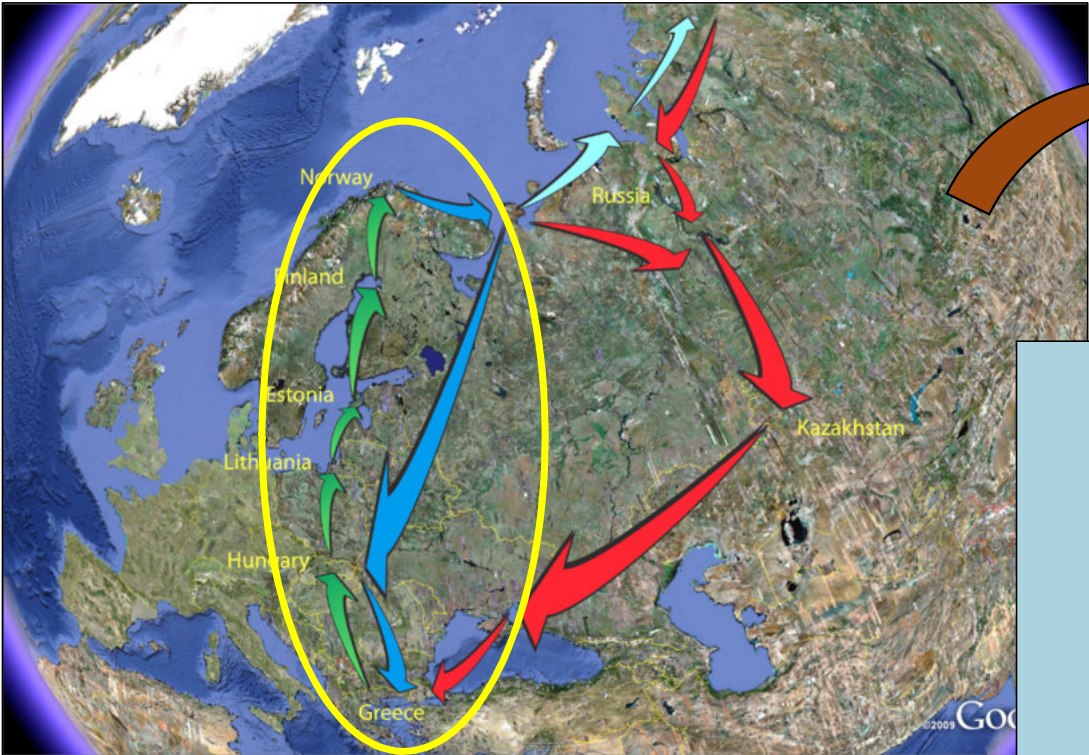
Opposite predation-mediated effects of food web dynamics on an endangered arctic-nesting goose species: implications for management

Filippo Marolla | Tomas Aarvak | Ingar J. Øien | Jarad P. Mellard
John-André Henden | Sandra Hamel | Audun Stien
Torkild Tveraa | Nigel G. Yoccoz | Rolf A. Ims



UiT / THE ARCTIC UNIVERSITY OF NORWAY





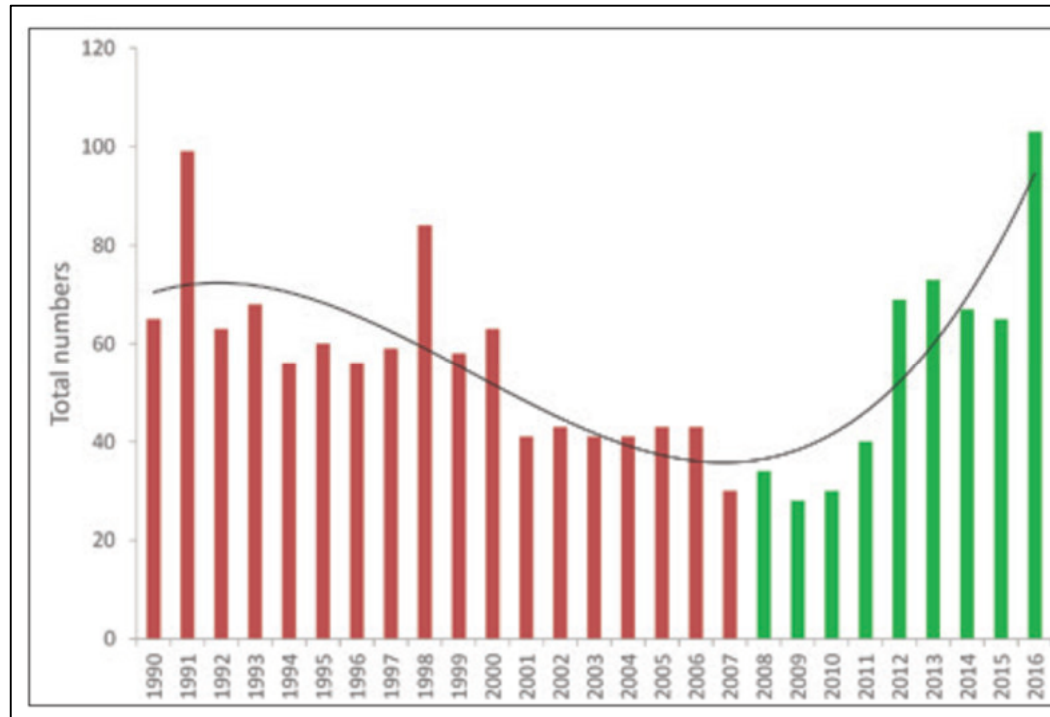


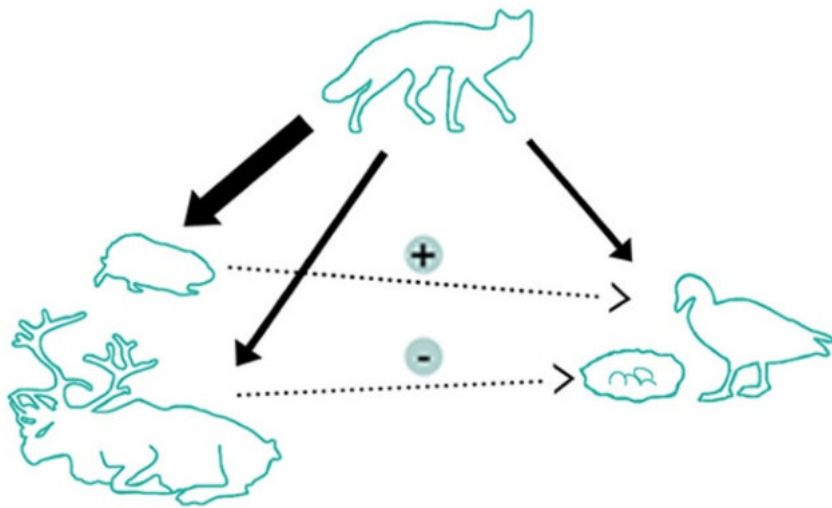
Figure 2. Total number of individuals of Lesser White-fronted Geese identified at the Valdak Marshes, Porsanger Fjord, Finnmark, Norway in the years 1990-2016. Green bars show years with active Red Fox culling programme in the core breeding area.



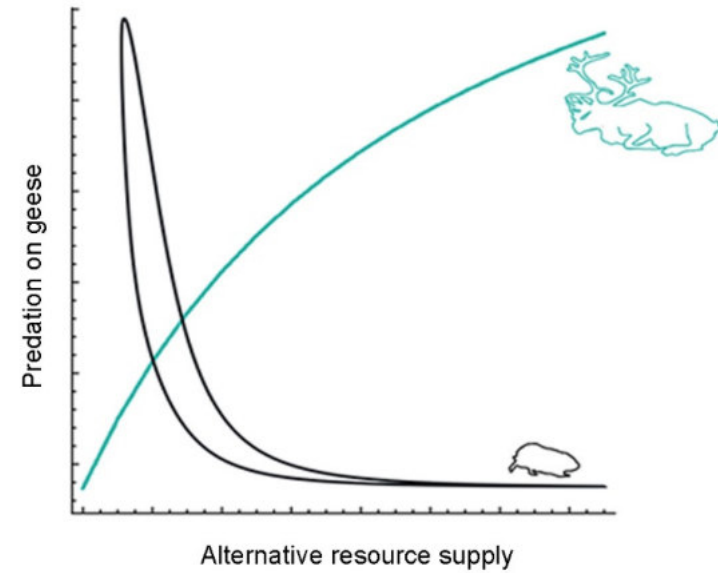
Vougioukalou et al. 2017

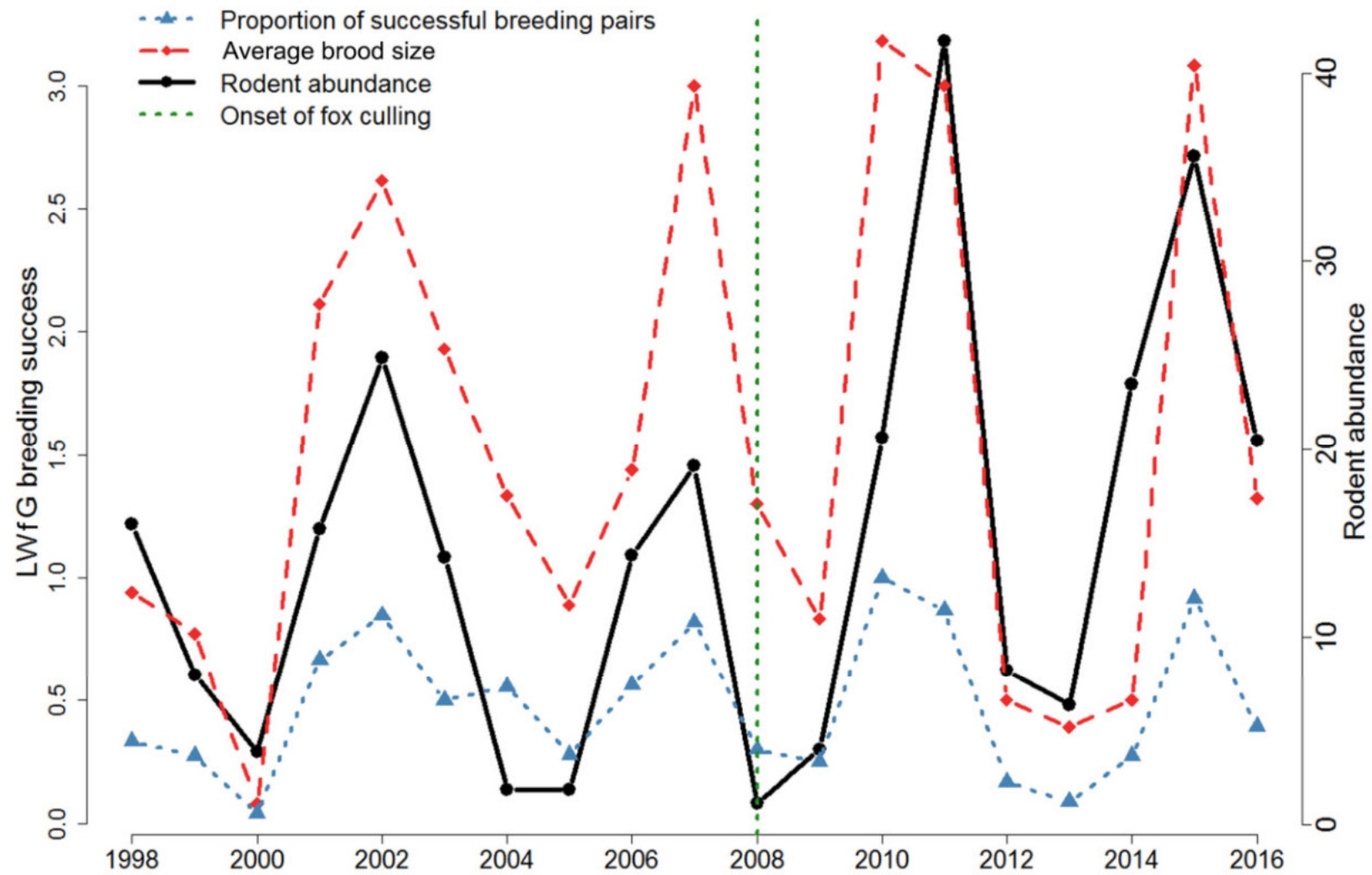
Potential drivers of predation pressure

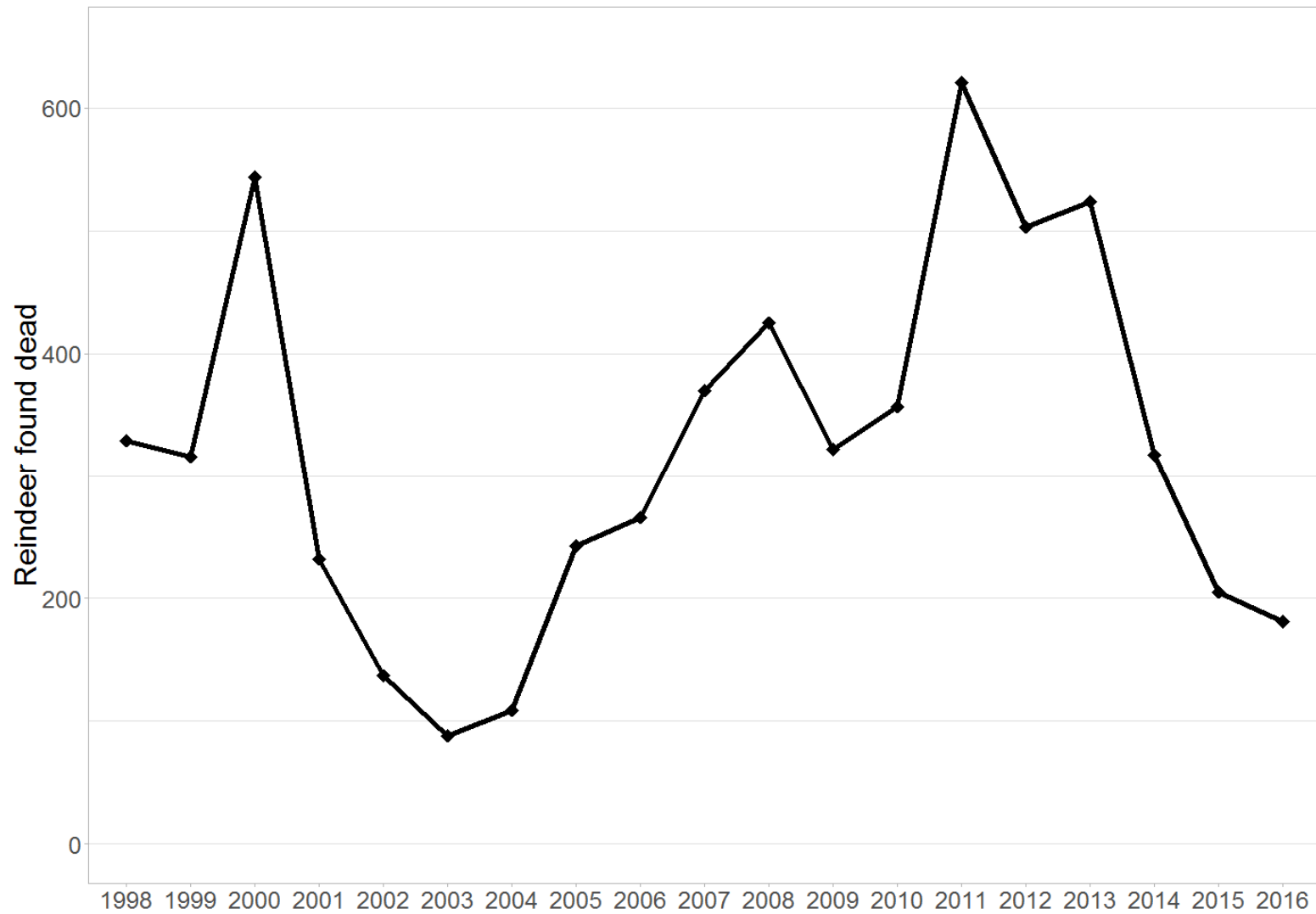
(a)

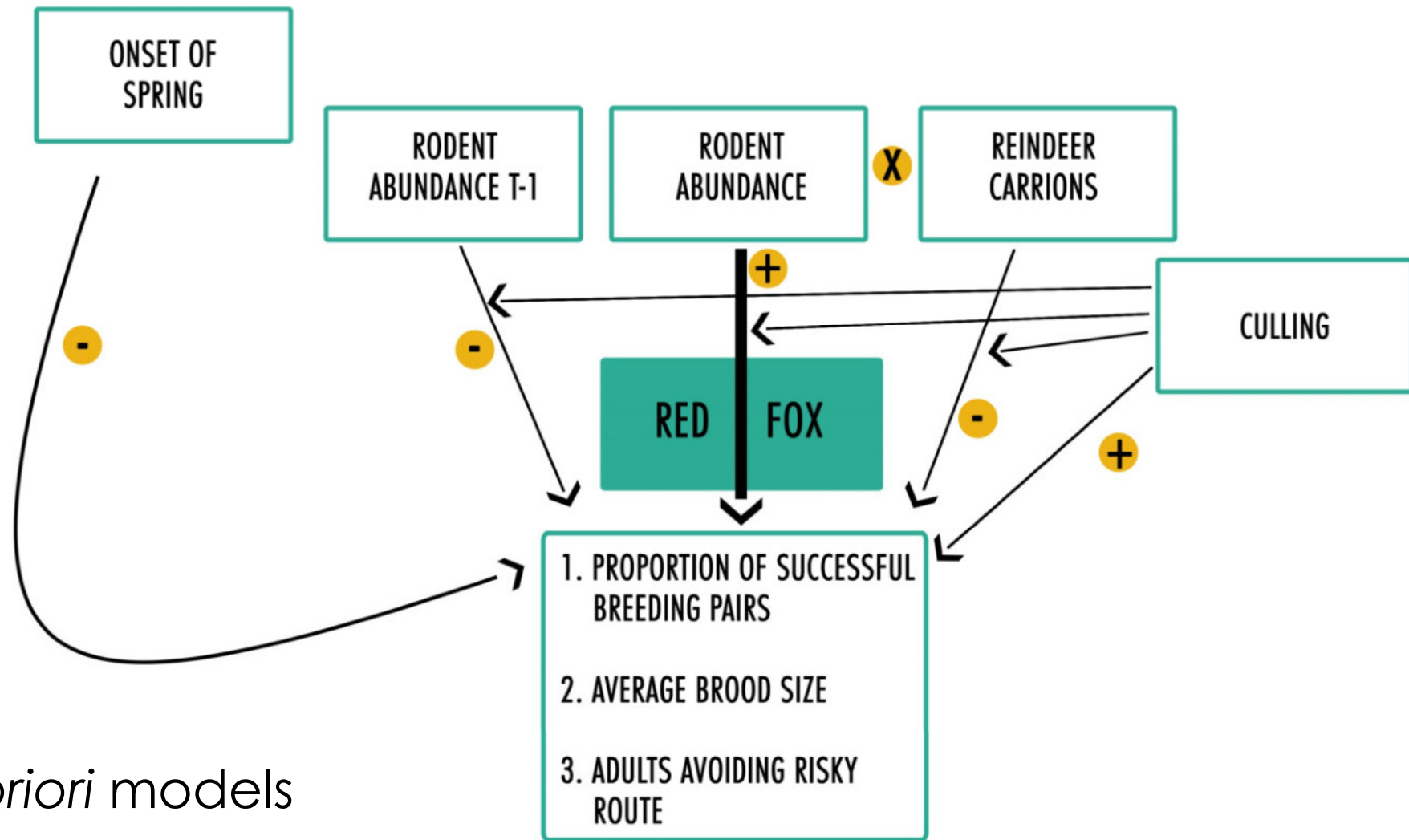


(b)

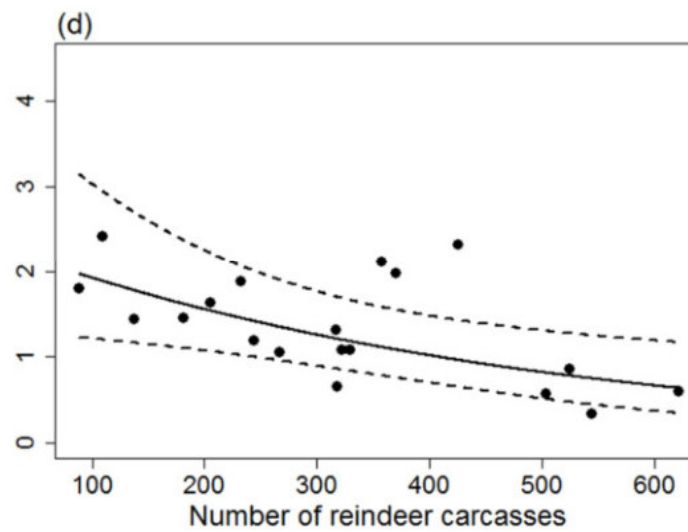
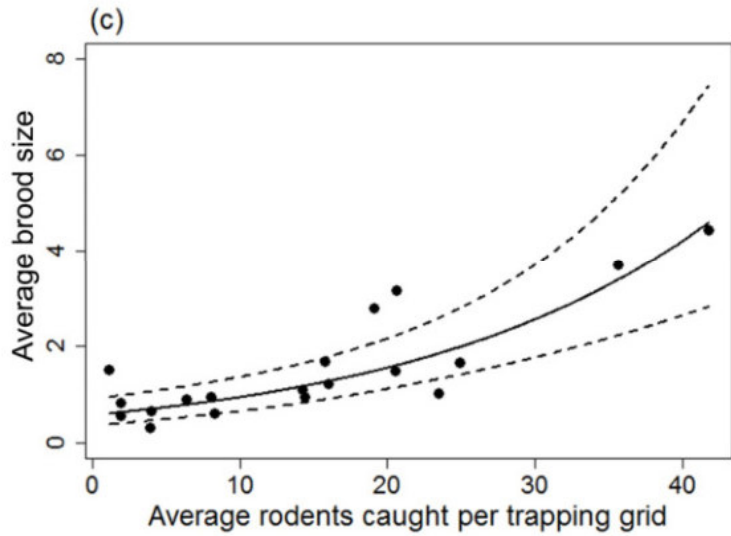
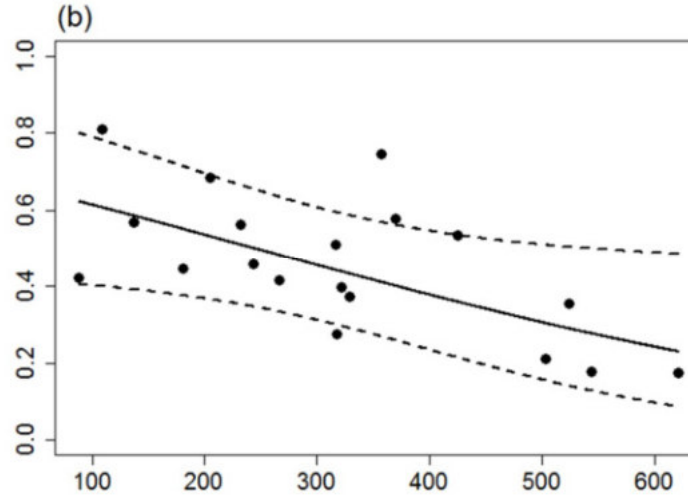
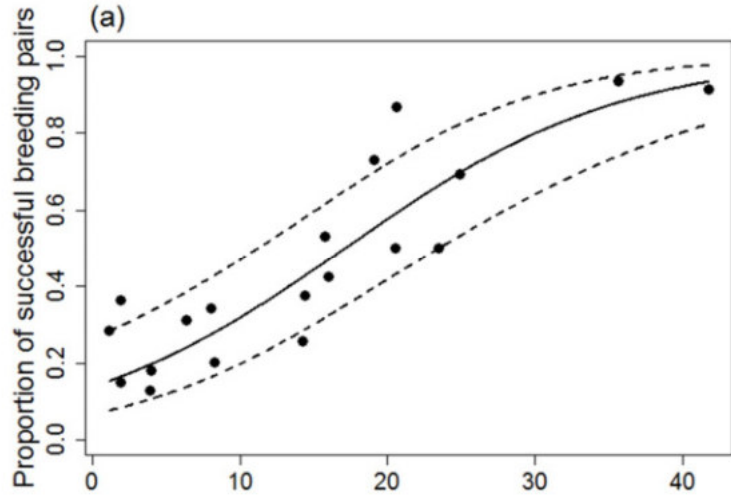




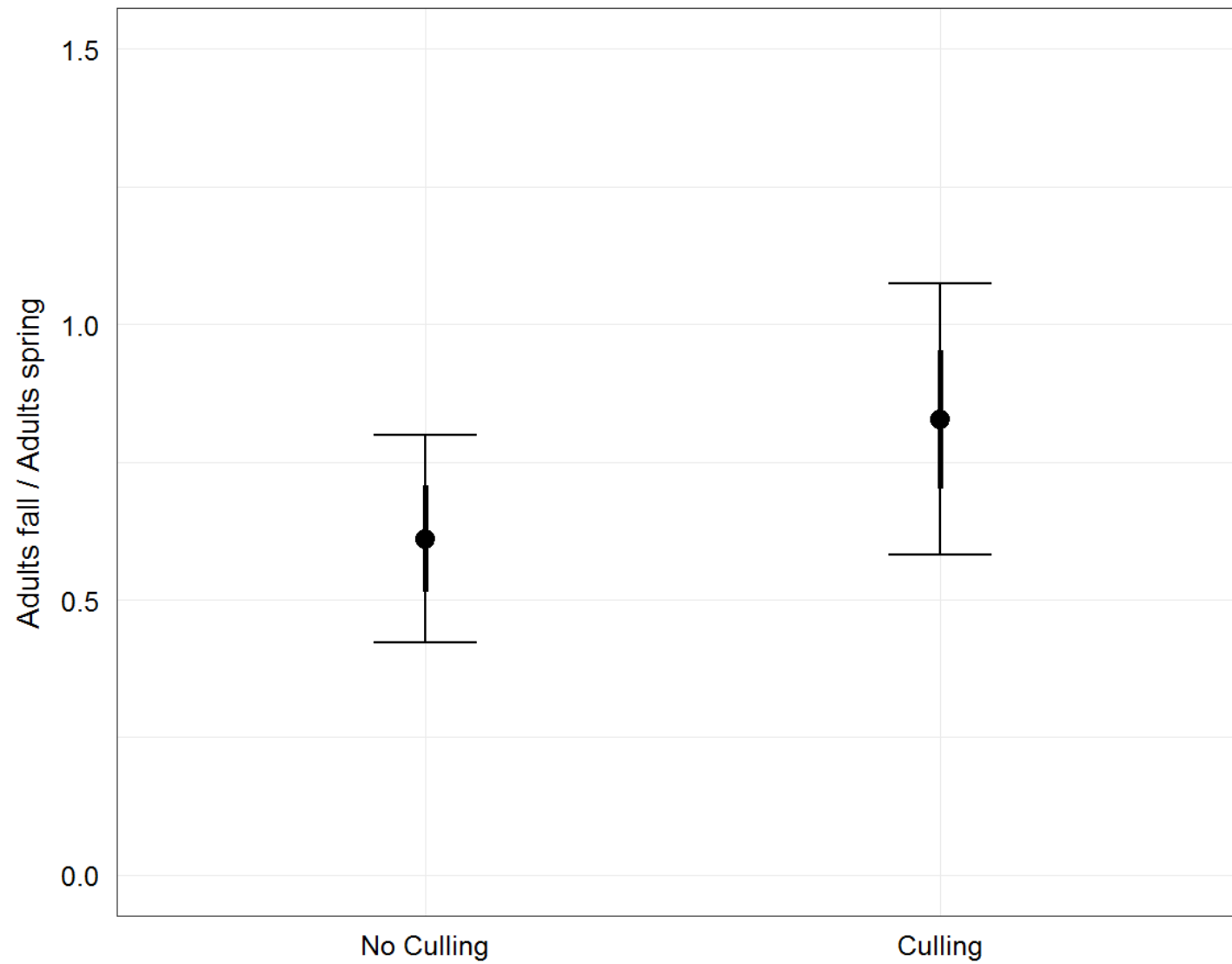




•7 *a-priori* models



NO effect of spring, rodents lagged and culling

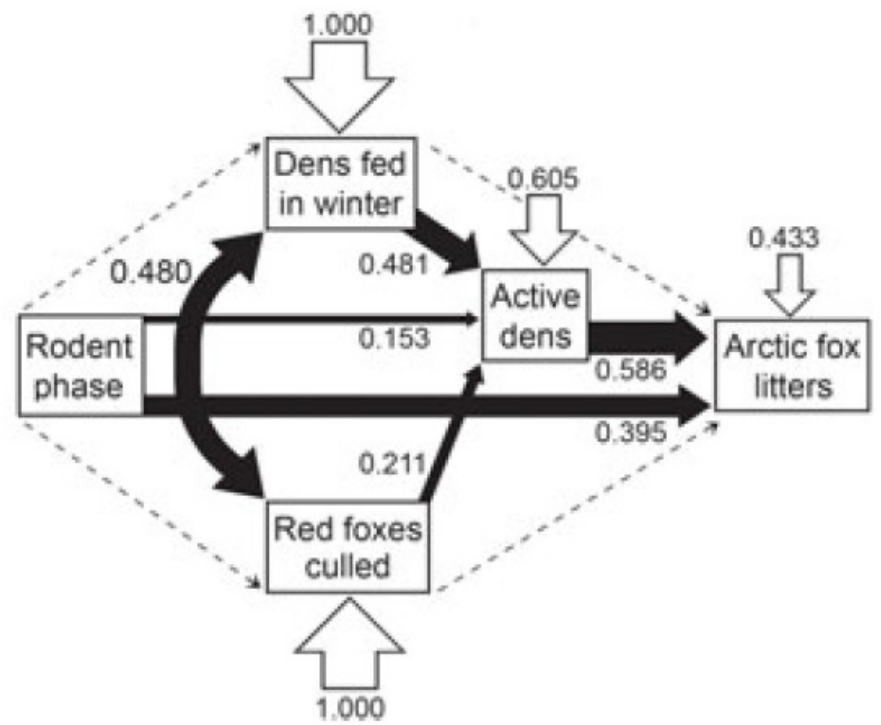
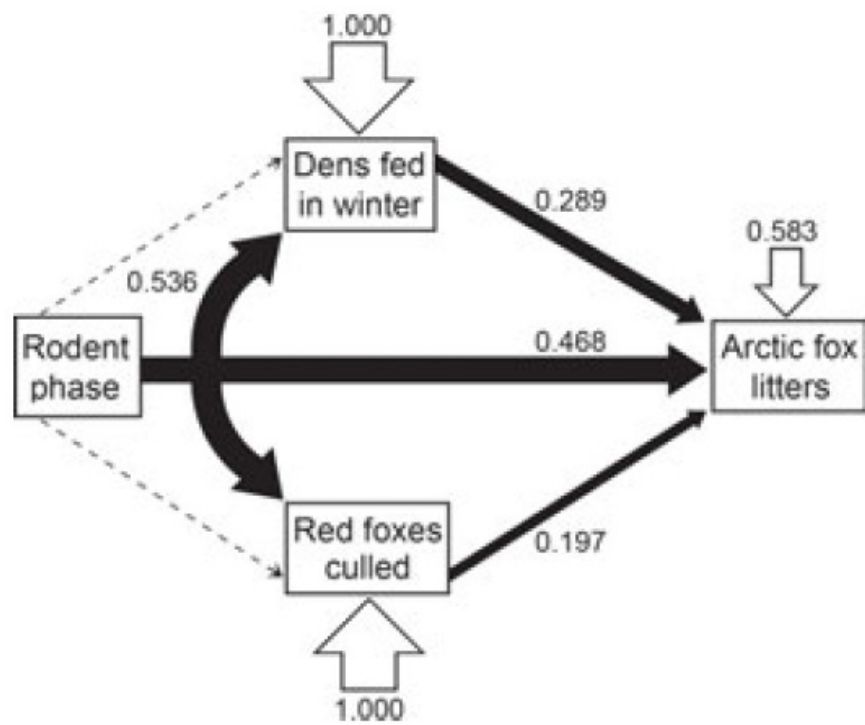


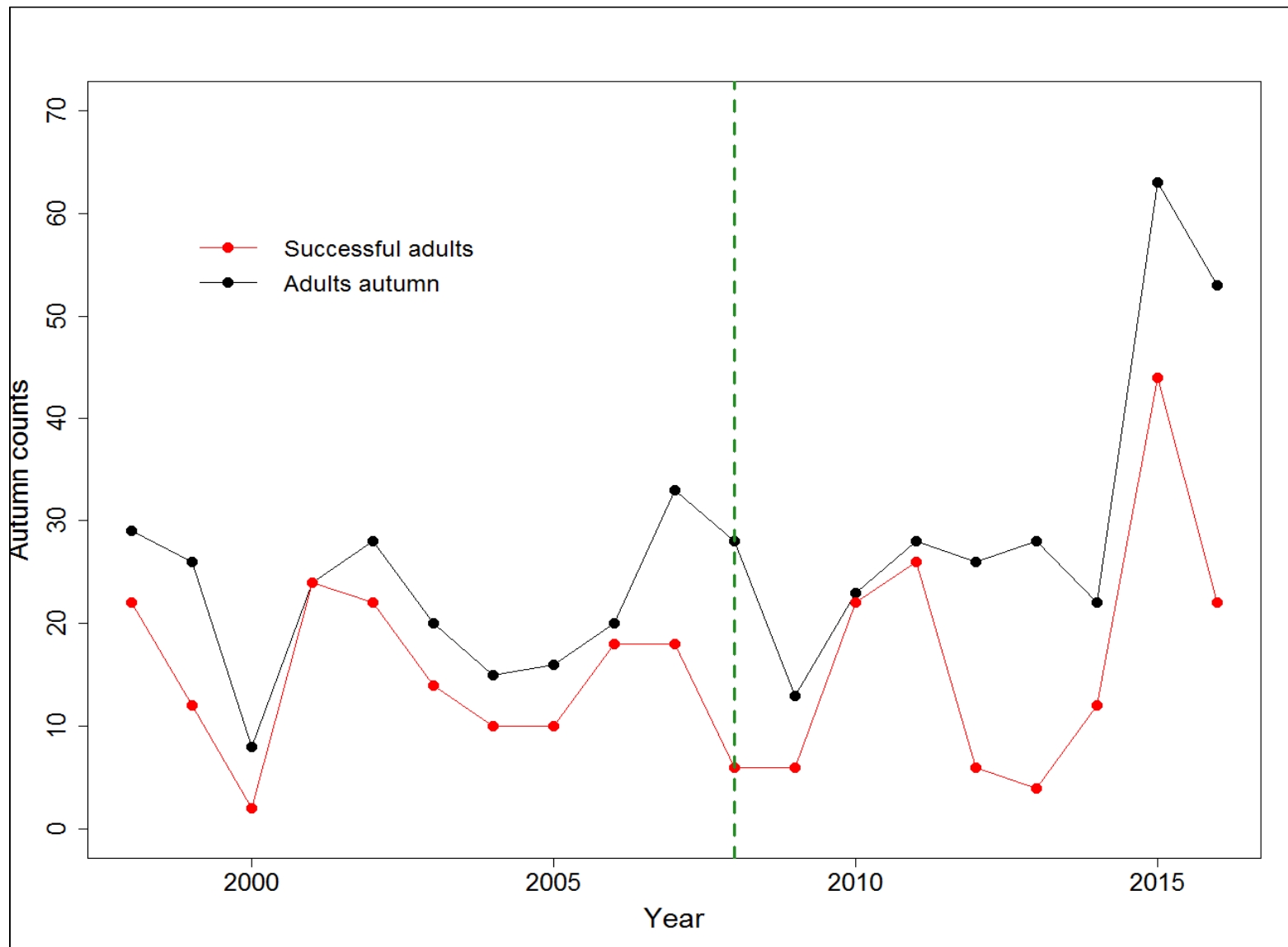
Main conclusions:

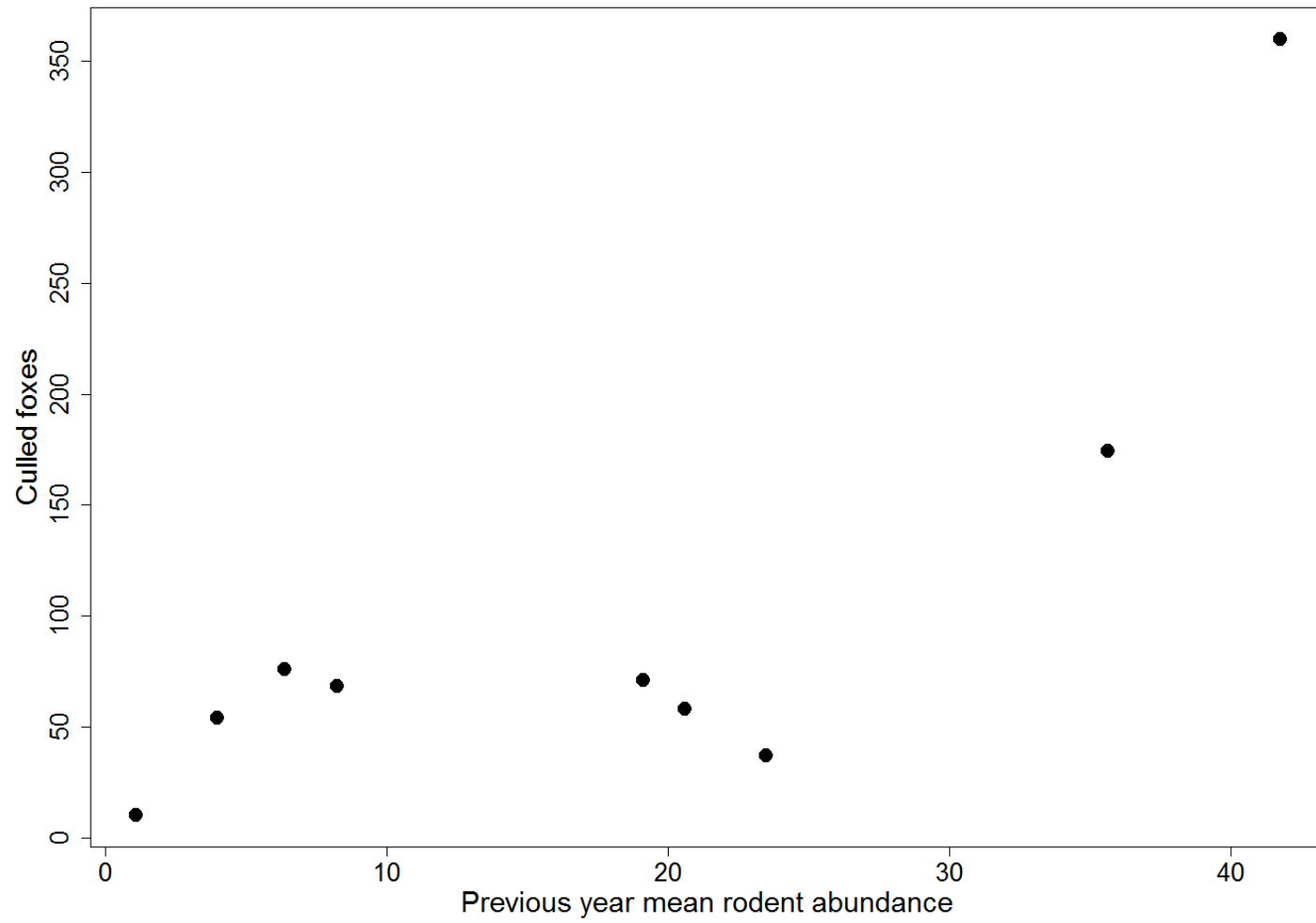
- **Rodents** are important
- Reindeer **carcasses** can be important
- **No evidence for effect of culling** on breeding success or adult birds avoiding the risky migration, despite a positive sign
- Why did the population decline? Why did it increase? Related to recruitment?
- Maybe culling is acting in a different way than expected?
- Population dynamics can be the result of complex biotic and abiotic interactions
- Therefore, it is unsure to what extent management contributes to the recovery of a population if a proper **scientific assessment** that takes into account all the potential **confounding factors** is lacking (Angerbjorn et al. 2013)

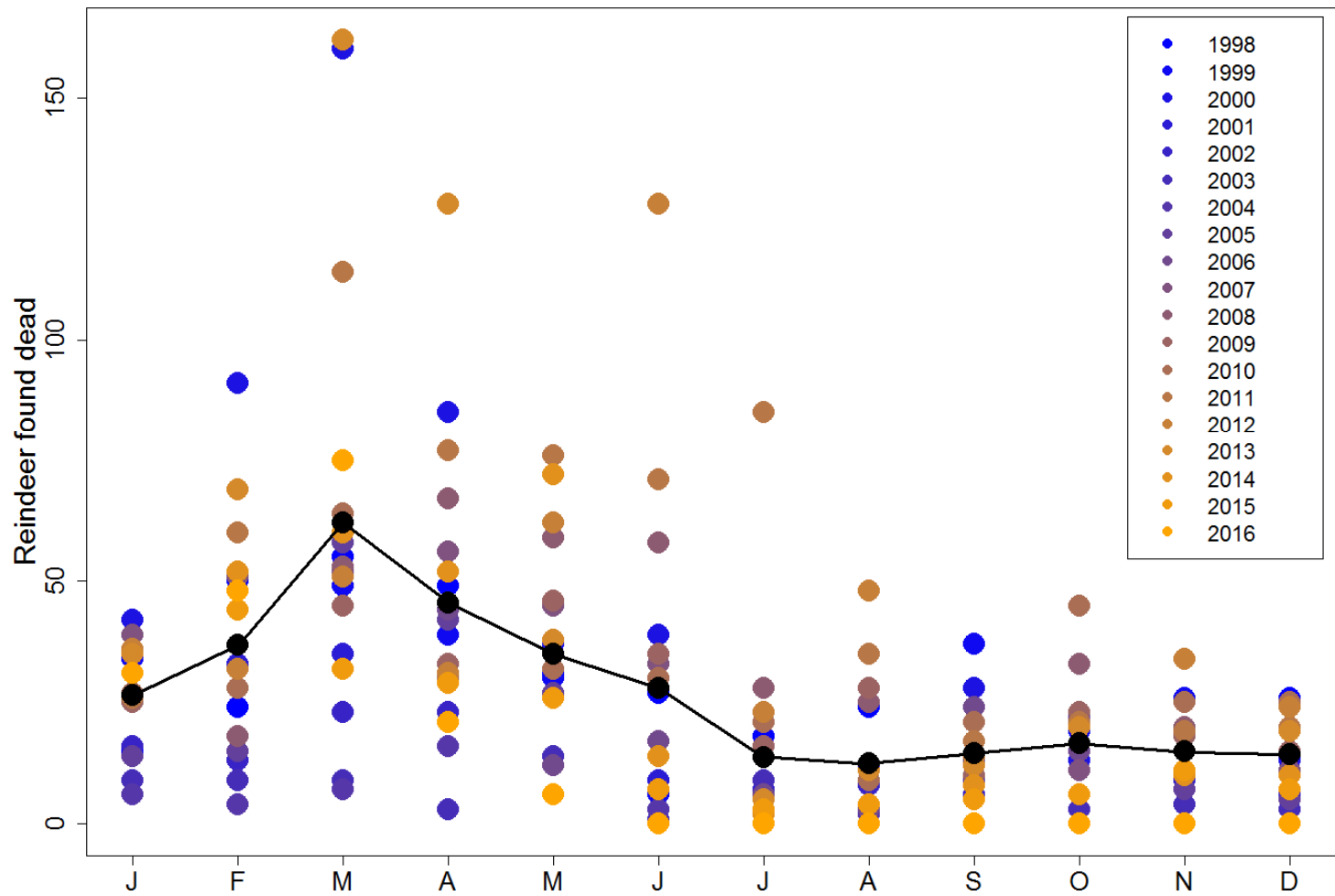
Thanks to Tomas Aarvak, Ingar Øien, and the whole SUSTAIN Tromsø group.

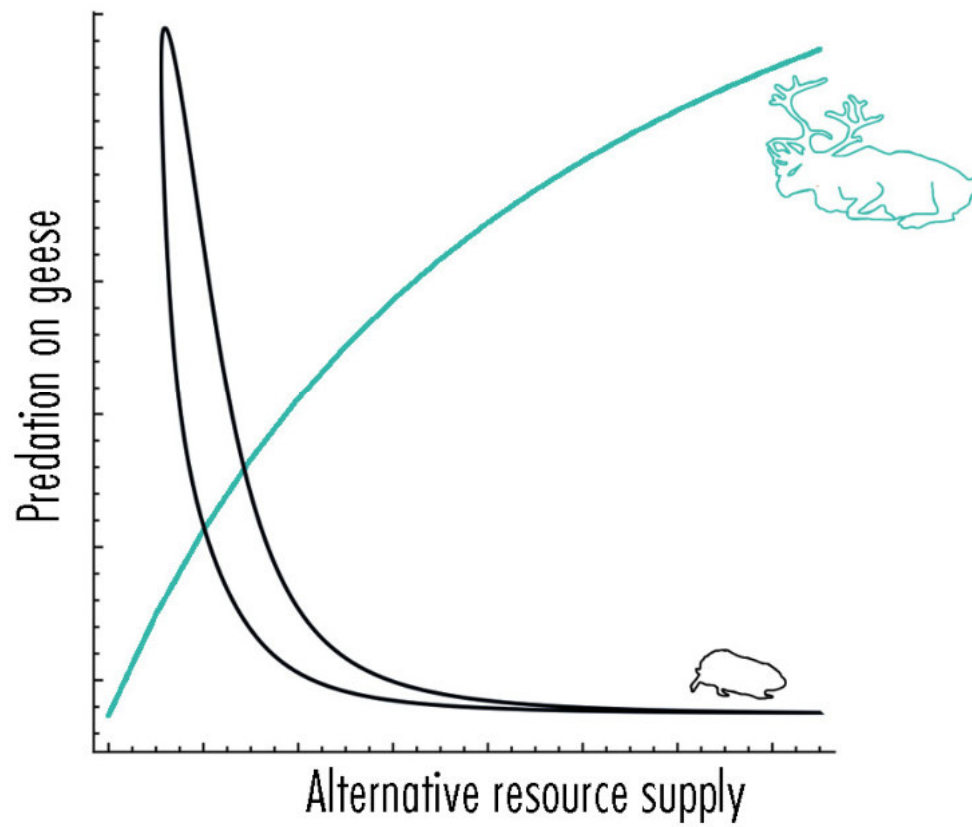












Opinion *TRENDS in Ecology and Evolution* Vol.19 No.6 June 2004 Full text provided by www.sciencedirect.com
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The need for evidence-based conservation

William J. Sutherland¹, Andrew S. Pullin², Paul M. Dolman³ and Teri M. Knight⁴

Trends in Ecology & Evolution

Review

Is Reintroduction Biology an Effective Applied Science?

Gemma Taylor,^{1,2,*} Stefano Canessa,¹ Rohan H. Clarke,³ Dean Ingwersen,⁴ Doug P. Armstrong,⁵ Philip J. Seddon,⁶ and John G. Ewen¹

Diversity

Using Conservation Evidence to Guide Management

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The University of Queensland, Applied Environmental Decision Analysis Centre, Queensland 4072, Australia

Do conservation managers use scientific evidence to support their decision-making?

Andrew S. Pullin ^{a,*}, Teri M. Knight ^b, David A. Stone ^c, Kevin Charman ^c

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^c English Nature, Northminster House, Peterborough PE1 1UA, UK

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- Cause of the population decline is unknown
- No replicates and controls in the management design