

DBEM Seminar Talk

Tuesday 5 June

14:00-15:00

Sala Blu (5312) CTT



Speaker

Lars Rød-Eriksen is PhD student at the Norwegian Institute for Nature Research (NINA) and the Norwegian University of Science and Technology (NTNU) in Trondheim, Norway.

He is working on a PhD thesis "Generalist predators in Fennoscandian alpine areas: expansion and retreat under multiple drivers of change". This is part of the project ECOFUNC, funded by the Norwegian Research Council, which focuses on understanding ecosystem functionality in Scandinavian mountain tundra under multiple drivers of environmental change.

Title

Range expansion of boreal generalist species into alpine areas - causes and consequences.

Abstract

Environmental change, through climate warming and multiple anthropogenic influences, has had an increasing impact on natural ecosystems over the past century. As a response, species have been observed to shift, expand or contract their distributional range, leading to invasions, increased competition and in some cases extinction of species or populations. In Fennoscandian alpine areas, the arctic fox population experienced a drastic decline in the early 20th century, and has since failed to recover. Conversely, boreal generalist species, such as the red fox, has experienced a population increase and range expansion into alpine areas, infringing on the habitat of the already threatened arctic fox population.

We have studied the literature on arctic foxes in Fennoscandia dating back to the middle of the 19th century, to identify potential factors - and synergies between these factors - causing the decline and subsequent non-recovery of the arctic fox population in Fennoscandia. It is clear that several factors work together to prevent the non-recovery of the arctic fox, and I will here present our main findings. One critical factor, however, is increased competition with invading boreal species, in particular the red fox. It has already been documented that the red fox is suppressing the recovery of the arctic fox population in some areas in Fennoscandia. However, we do not know the extent of the red vs. arctic fox interactions, or at which threshold red foxes become a hindrance for arctic fox recovery or recolonization. I will here present to you the outline of my next paper on interactions between red and arctic foxes, and hopefully get some input and ideas from you on how to proceed.

Relevant publications

Landa, Arild Magne; Flagstad, Øystein; Areskoug, Veronika; Linnell, John Durrus; Strand, Olav; Ulvund, Kristine R.; Thierry, Anne-Mathilde; **Rød-Eriksen**, et al. The endangered Arctic fox in Norway - the failure and success of captive breeding and reintroduction. *Polar Research* 2017 ;Volum 36.(9) Suppl. 1 s. 1-14

Hamel, Sandra; Killengreen, Siw Turid; Henden, John-André; Eide, Nina Elisabeth; **Rød-Eriksen**, et al. Towards good practice guidance in using camera-traps in ecology: influence of sampling design on validity of ecological inferences. *Methods in Ecology and Evolution* 2013 ;Volum 4.(2) s. 105-113