

predation on birds through prey-switching. Interactions also occur among the predators themselves. Observations suggest removing cats (*Felis catus*) and ferrets can lead to higher numbers of stoats, while stoat control can increase abundance of weasels. Recent advances in control and surveillance techniques show promise for managing mustelids but further research is required, especially as community dynamics are likely to be affected strongly by predicted climate change.

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Managing mustelids - uneven population expansion of the invasive American mink influences approach to management and control

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Invasive species have a detrimental impact on native ecosystems and as a result these impacts should be reduced. Eradication can be difficult in mainland areas but control is often a feasible option, providing recolonisation of control areas is minimised. The American mink is an invasive mustelid in many countries following repeated introductions through fur farming. It's colonisation of a variety of habitats has caused devastation amongst many native bird and small mammal populations, including other mustelids. The spread of American mink throughout Scotland, UK, is well documented but is only under control in some parts of the country. This talk will present results from a study using molecular genetic techniques to define management units of mink in Scotland. In general, mink populations in the west and east of Scotland were found to belong to different genetic clusters and the amount of gene flow among populations varied both between and within these clusters. Landscape features were shown to affect the rate and direction of colonisation. Recommendations for reducing the distribution of mink in Scotland will be provided along with some general advice for mink management and control, which is applicable both in Scotland and elsewhere.

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SESSION 2: INVASIVES (2)

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The rise and fall of a mink population

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The American mink (*Neovison vison*) was first imported to Iceland in 1931 for fur farming. Soon it escaped and had occupied most of the Icelandic lowlands by 1975. According to the hunting bag, the population of the island increased until 2003, but has decreased dramatically since then. Direct estimates of population size in the Snæfellsnes Peninsula, W-Iceland, in 2001, 2002 and 2006 follow the same pattern. Changes in hunting methods or intensity cannot explain these fluctuations. Measurements of a sample of the catch from 1996-2011 indicate decreasing fertility and deteriorating body condition in recent years. Another study also indicates simultaneous changes in diet (Magnúsdóttir et al, in prep.). The causes of the mink population decrease are not fully understood, but might be linked to global climate changes, especially in the oceans, and perhaps the dramatic increase in arctic fox (*Vulpes lagopus*) population size in Iceland in the last decades.

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Predicting the American mink invasion in Catalonia (Spain): comparison of two iSDM strategies

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Invasive Species Distribution Modeling (iSDM) is particularly challenging because of the violation of the core assumption of equilibrium between a species and its environment. Here we used iSDM to predict the expansion of