

Science for Environment Policy

Litter size of European mink less than half that of invasive American mink

The litter size of the endangered European mink is less than half of that of its main competitor, the invasive American mink, research shows. The higher fertility of the American mink may allow rapid population growth of this species, threatening European mink with extinction.

Populations of European mink have declined dramatically over the last century and only three populations remain: one in northern Spain and south western France, one in Romania, and a larger one in Russia and Belarus. American mink, which originally escaped from fur farms in Europe, are thought to play a large part in this decline mostly because of competition for resources.

In this study, partly conducted under the LIFE GERVE project¹ in western and south-western France and Navarra, Spain, researchers measured the embryonic litter size of both European and American mink, to provide vital information to understand population growth rates.

Measuring the litter size of such elusive species is not easy because it is almost impossible to gather data by observing them in the wild. Researchers therefore used dead specimens of free-ranging European and American mink which had been collected by volunteers. The 21 European mink had generally been killed by road collisions, whereas the majority of the 100 American mink used were trapped as part of invasive species control measures.

Once the specimens had been collected, they were dissected and, for each one, the uterus was removed and stained. This staining technique aids the counting of placental scars from the year's breeding season, formed each time a pup is implanted/carried. In cases where females were still pregnant when they died, researchers counted the number of embryos as a record of litter size.

To test the reliability of this technique, the researchers had previously studied 49 American females taken from fur farms in south-western France. By using farmed animals, the researchers were able to access farmers' records of the litter sizes of the females and check this against the staining results. The staining method was proven to be reliable, as long as the specimens were dissected no longer than seven months after giving birth.

The results showed that the average litter size of European mink was 3.4 pups; however, the American mink had an average litter size of 7.5. Such high rates of reproduction in American mink are likely to result in rapid population growth. This can have detrimental effects on European mink through increasing competition, or transmission of diseases. The researchers conclude that this study highlights the urgent need for effective control of American mink, especially within the European mink habitat range.



October 2013
Thematic Issue 43
LIFE Projects

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Source: Fournier-Chambrillon, C., Bifulchi, A., Mazzola-Rossi, E., *et al.* (2010). Reliability of stained placental scar counts in farmed American mink and application to free-ranging mustelids. *Journal of Mammalogy*. 91(4):818–826. DOI: 10.1644/09-MAMM-A-297.1.

Contact: c.fournier-chambrillon@wanadoo.fr

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To cite this article/service: "Science for Environment Policy": European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol.

1. http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_pr oj_id=2925&docType=pdf