Identification of mustelid species: otter (Lutra lutra), American mink (Mustela vison) and polecat (Mustela putorius), by analysis of DNA from faecal samples

The abundance of mink, otter, and polecat may be inferred from records of their seats, and the feeding biology of the species is often studied by analysis of skeletal remains and other hard parts in faeces. However, in some situations it is difficult to distinguish between faeces from these three mustelid species. A method is described for assigning faeces to these three mustelid species, based on analysis of DNA extracted from their seats. Mustelid-specific primers were developed for PCR amplification of a part of the mitochondrial cytochrome b gene, and two restriction enzymes were found to detect species-specific sequence variation. Analysis of DNA from different faecal samples showed that the results were reproducible and that the approach provided an efficient method of species identification.

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