Elusive mustelids – 18 months in the search of stoat (Mustela erminea) and weasel (M. nivalis)

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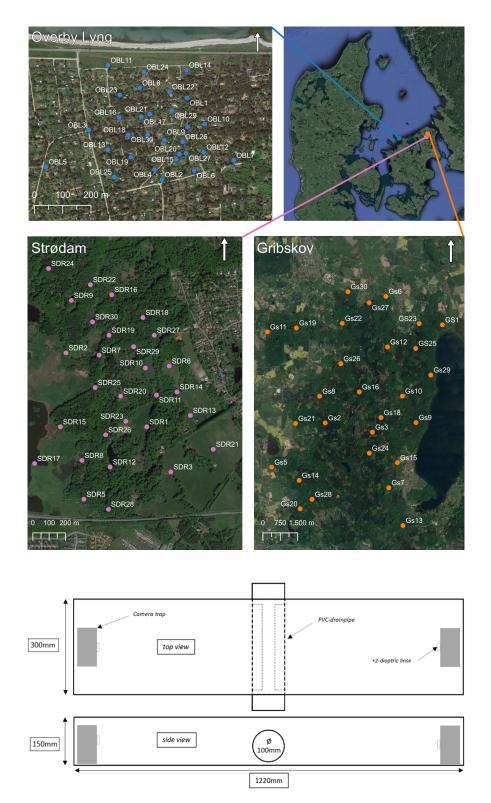[1]University of Copenhagen Natural History Museum of Denmark

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Abstract

Stoat (Mustela erminea) and weasel (M. nivalis) are hard to monitor as they are elusive of nature and leave few identifying marks in their surroundings. Stoat and weasel are both fully protected in Denmark and thought to be widely distributed throughout the country. Despite this stoat and weasel were listed on the Danish Red List as Near Threatened in 2019, as their densities and population trends are unknown. Using a modified novel camera trapping device, the Double-Mostela, specifically devel-oped to monitor and individually identify stoat and weasel, we attempted to make density estimates based on identification of individual stoats and weasels. We deployed camera traps both inside Double-Mostela traps and externally in three different study areas in Northern Zealand, Denmark, and tested commercial, American scent-based lures to attract stoat and weasel. We obtained trapping rates of 0.03 and 0.06 weasel per 100 camera trap days and 0.45 and 1.26 stoats per 100 camera trap days in two of the study areas, respectively. This is low compared to other countries and in one study area both species were absent. We found no effect of scent-based lures in attracting small mustelids com-pared to non-bait traps. Potential reasons behind low capture rates of weasel and stoat are land use changes over the last 200 years, predation from larger predators, birds of prey and free-roaming, domestic cats as well as unintended secondary poisoning with rodenticides. Due to the scarcity of weasel and stoat captures, we were unable to make density estimates based on identification of individuals, however, we identified potential features that could be used for identification and density estimates with more captures.

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