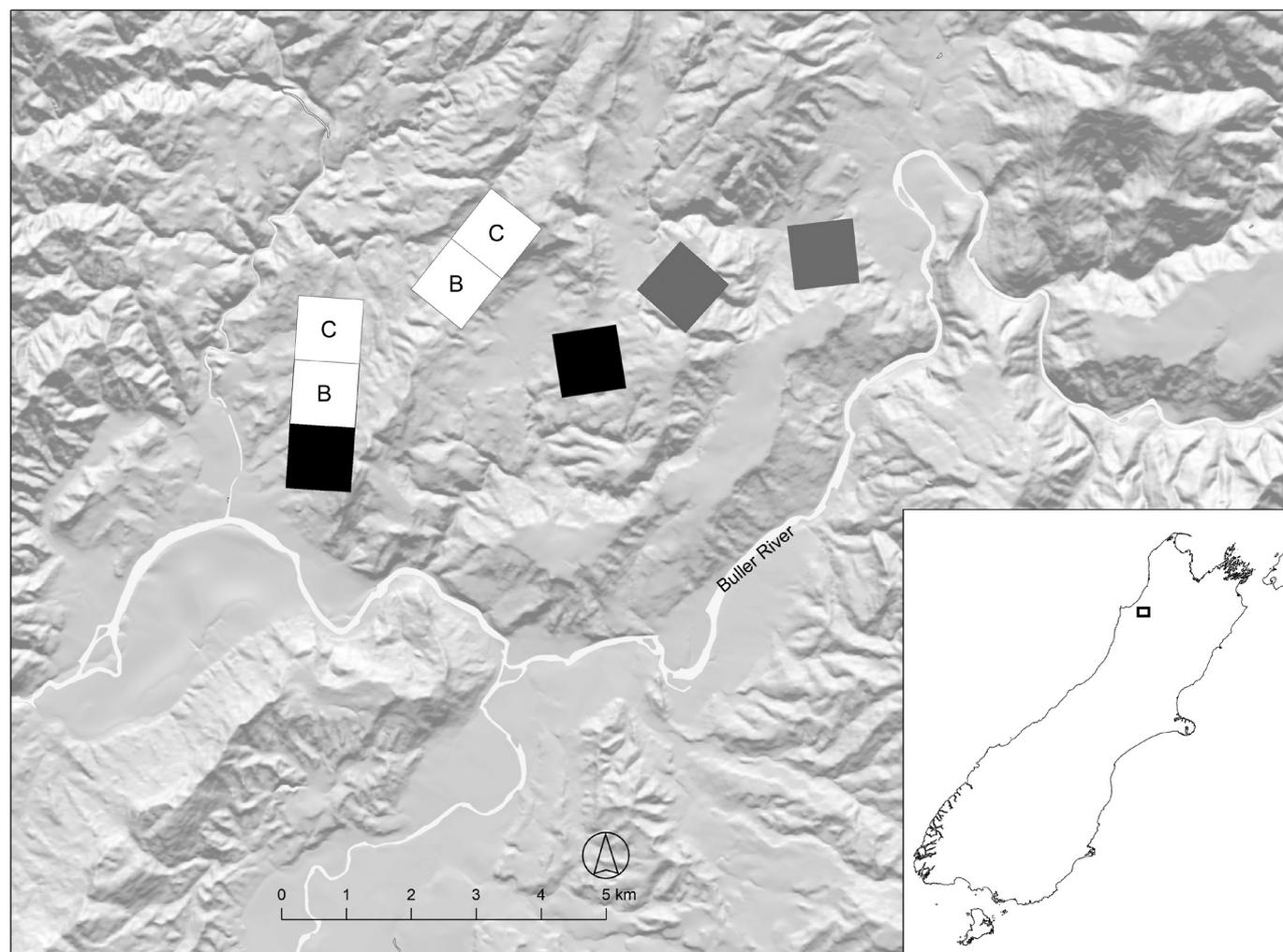


## Supplementary Material

**Appendix S1.** Map of the study area. The location of the study area in the South Island of New Zealand is shown (inset), and the location of the eight 100-ha study blocks. The study blocks pre-fed once or twice in Stage 1 (and only poisoned with 1080 once) are shown as grey or black squares respectively. The white squares show the four blocks subject to dual 1080 baiting, with the 1080 bait for the second baiting being sown by hand either in clusters (C) or broadcast (B).

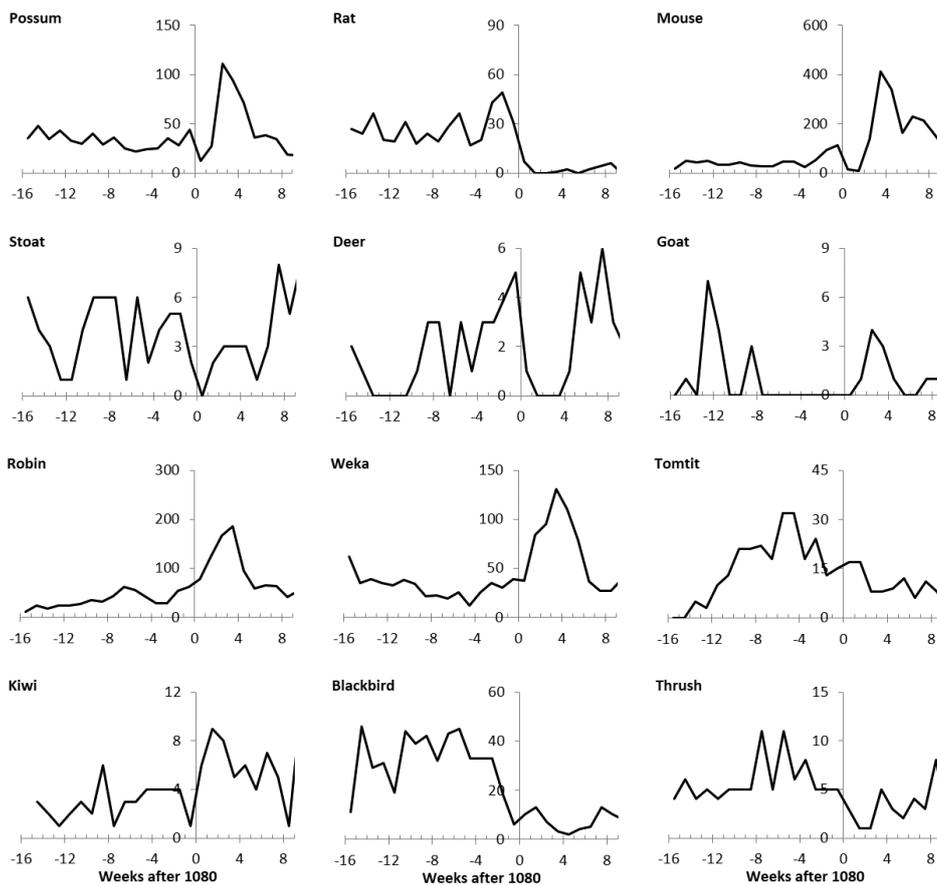


**Appendix S2.** Non-target effects of pre-fed hand-laid 1080 baiting with EDR-coated RS5 cereal bait.

In addition to possums and rats, there were sufficient camera trapping data to characterise trends in the weekly visitation rate of four other mammal species and six bird species (four native and two introduced; Fig. 1). Mouse (*Mus musculus*) visits were generally low before the second 1080 baiting but doubled after the pre-feed was aerially sown. Mouse visits then declined to near zero immediately after the 1080 baiting before increasing after fresh peanut-butter chew cards were deployed at camera sites. Numbers of visits by stoats (*Mustela erminea*), red deer (*Cervus elaphus*) and goats (*Capra hircus*) were low and highly variable, but with visits by all three species recorded both before and after the hand-laid baiting. The number of visits by weka (*Gallirallus australis*) and robins (*Petroica australis*) increased markedly immediately after the baiting, before declining to pre-baiting levels. As with possums, we attribute the post-baiting upsurge to an attraction to the peanut butter in chew cards deployed at that time (both species were photographed pecking at the

cards). Tomtit (*Petroica macrocephala*) visits increased from low levels in November to much higher levels in summer, peaking 4–6 weeks before the baiting, and then declining more-or-less steadily into winter, with no clear marked decrease immediately after baiting. Kiwi (*Apteryx haastii*) visits were more frequent after the baiting, whereas visits by blackbirds (*Turdus merula*) and thrushes (*Turdus philomelos*) were less frequent, particularly for thrushes 2–3 weeks after the baiting.

We are not aware of any previous assessment of the non-target effects of hand-laid 1080 baiting. Our data did not show any immediate major reductions for the most common non-target species, except for deer and thrush (Figure 1). As deer visits were again recorded some weeks after the second 1080 baiting, we suspect they may simply have moved out of the study blocks because of the increased human activity in them. Thrush visits also increased again as time-after-baiting increased. Overall, the only bird species for which visitation rates were much lower overall after 1080 baiting than before was the blackbird, which is known to be susceptible to 1080 poisoning (Morriss et al. 2016).



**Figure 1.** Weekly visitation rates to 69 trail camera sites in the four New Creek study blocks subject to a second (hand-laid) 1080 baiting at the start of week 0, for six mammal and six common bird species.

**Reference**

Morriss GA, Nugent G, Whitford J 2016. Dead birds found after aerial poisoning operations targeting small mammal pests in New Zealand 2003–14. *New Zealand Journal of Ecology* 40: 361–370.