

Appendix S5

Indirect control of decomposition by an invertebrate predator

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Monthly ant abundance monitoring

Ant abundance was monitored monthly on all plots in order to determine when to re-poison. Within the inner sampling zone of each plot monitoring baits (moistened Whiskas cat food pellets) were placed on 30 white bait cards (5 x 7 cm) laid out along two 50 m transects per plot. After 30 minutes, we estimated ant abundance on each bait card using a standard scoring system: no ants, 1 ant, 2-5 ants, 6-10 ants, 11-20 ants, 21-50 ants, >50 ants (see Parr 2008). Following an integrated pest management (IPM) approach, we re-poisoned the suppression plots when ant abundance exceeded 20% of control plot levels (Flint 2012).

Ant sampling with pitfall traps in March 2019

To determine whether any ant genera were unsusceptible to the suppression treatment, we collected ants using pitfall traps in March 2019 (1.5 years after the ant suppression treatment was first applied, and three months into the decomposition experiment). Twenty traps per plot were placed in a 5 x 4 grid, with 10 m spacing between traps, and collected after 5 days. Ants were identified to genus at the Universities of Liverpool and Pretoria.

Flint, M.L. (2012) *IPM in Practice, 2nd Edition: Principles and Methods of Integrated Pest Management*. University of California Agriculture and Natural Resources.

Parr, C.L. (2008) Dominant ants can control assemblage species richness in a South African savanna. *Journal of Animal Ecology*, **77**, 1191-1198.