



Conference Abstract

# Effects of undergrowth removal and edge proximity on ground beetles in urban boreal forests

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## Abstract

Urban forests are regularly managed for human safety and aesthetic reasons, but they are crucial habitat for many species. Removals of undergrowth occur commonly in these forests, yet the ecological consequences of these operations are poorly understood. We sampled ground beetles (Coleoptera, Carabidae) along 20-m edge gradients in Finnish urban forests, in five stands treated 0.5–2.5 years earlier with undergrowth removal and in five untreated stands. We hypothesized that undergrowth removal and edge proximity would benefit opportunistic and open-habitat species, whereas shady-habitat species would be affected negatively.

1. Diversity and evenness indices, open-habitat species and *Carabus nemoralis* responded positively, and forest species, *Leistus terminatus* and *Pterostichus oblongopunctatus* responded negatively, to the undergrowth removal.
2. Edge proximity had little effect on carabids.

However, open-habitat carabids were less abundant and less speciose 10–20 m from than right at the edge. We conclude that, while managing urban forests, undergrowth removals should be avoided at sites that host rare or threatened forest-associated species.

**Keywords**

Carabidae, edge effect, forest management

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