



Swedish University of Agricultural Sciences

A large-scale experiment to control the spruce bark beetle *Ips typographus* using pheromone-baited trap logs in Sweden

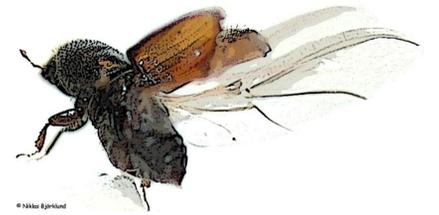
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Introduction

In 2006-2008, ca 3 million m³ of spruce forests have been killed by the spruce bark beetle *Ips typographus* (Col., Scolytinae) in southern Sweden following the huge storm in January 2005 that blew down ca 70 million m³.

Salvage logging has been the main control option but in 2008, two large Swedish forest companies, Sveaskog and Södra Skogsägarna decided to set up a large-scale control experiment in cooperation with SLU in order to try to evaluate the efficiency of pheromone-baited trap logs in reducing beetle-related tree mortality.

Methods

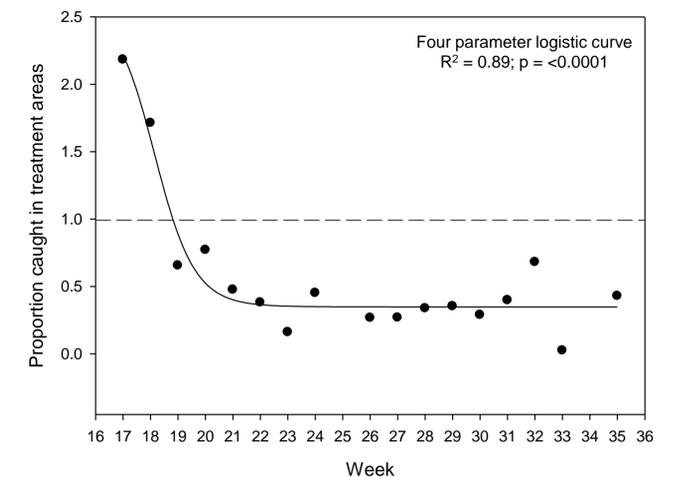
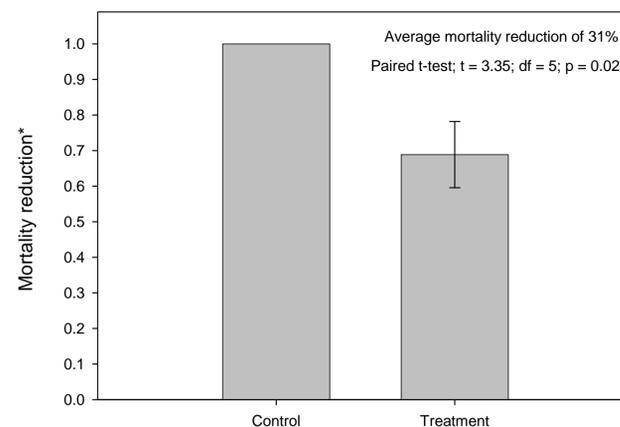
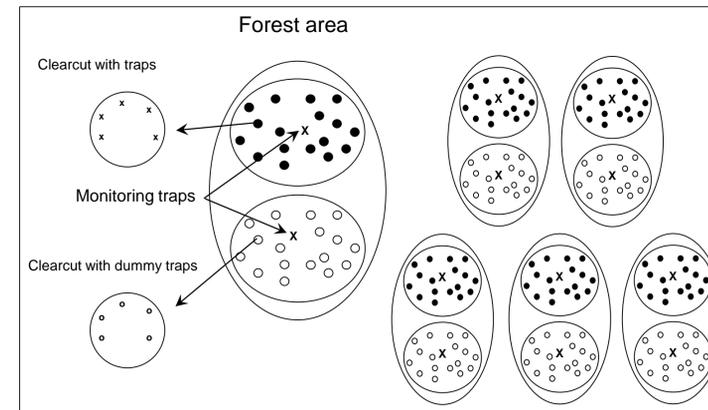
Six areas, ca 2000 ha in size, with substantial amounts of beetle-killed trees in 2007, were selected and divided in two parts and within each half, 35-145 trapping spots were identified and marked at stand edges close to last year's beetle attacks.

In each area, one half was randomly assigned to be a trapping area and the other a reference area with no trapping. In the former, small piles of trap logs that were treated with insecticides and baited with pheromones prior to beetle flight were placed out at each trapping spot.

Beetle flight was monitored using 12 groups of pheromone traps, six in the trapping and six in the reference areas. Tree mortality was recorded in the autumn both from above (using helicopters) and from the ground in all areas within 100 m from the trapping spots with or without traps.

Preliminary results

Data-analyses are still in progress, but two conclusions can already be drawn. The recorded tree mortality was ca 30% lower in the trapping areas than in the reference areas. A similar reduction in beetle catches in the monitoring traps can be seen in late season compared to early season.



* # dead tree per trap in the treatment half / # dead trees per control spot in the control part

