

Poster-presentation

FLIGHT ACTIVITY OF THE SPRUCE BARK BEETLE *IPS TYPOGRAPHUS* IN SOUTHERN SWEDEN

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Abstract

The outbreak of *Ips typographus* after the storm in January 2005 that felled ca 75 million m³ in southern Sweden is now in its 4th year. So far ca 3 million m³ of spruce forest have been killed. Since 2005 we have been studying flight activity and development of *Ips typographus* at two research stations in southern Sweden, Asa and Tönnersjöheden which are located in the storm-felling area. In spring 2005, four window traps were placed in a storm-felled spot with remaining wind-falls and four other traps in a shaded position at the nearby stand edge at both study sites. The traps were baited with pheromones and fresh logs and were emptied weekly from April through September. The traps remained at the same sites in all years, and new logs were added each spring. The catches contain many beetle species but here only the spruce bark beetle is discussed.

The catches of *Ips typographus* increased from 2005 to 2007 with a small decrease in 2008 at both Asa and Tönnersjöheden. In all years, beetles were flying through the summer from May to August, but the pattern varied with the weather conditions. In 2006, there was substantial second-generation flight from July to September, and in both 2007 and 2008 the spring flight started already in late April (fig. 1). More *Ips typographus* were caught in shaded traps than in traps exposed to sun, except for the first trapping occasions in early spring. In general, catches were ca twice as high at Tönnersjöheden than at Asa.

The flight data together with emergence data from bark samples and emergence traps show that a successful second generation occurred in 2006. This has not been observed before in Sweden although newly emerged callow beetles have been found in traps before, and such were seen in all years at both sites. Normally, the second generation succumbs in the autumn, as immature stages do not survive the Swedish winter. Obviously, a warmer climate will increase the likelihood for bivoltinism in the spruce bark beetle, and hence faster population build-ups during outbreaks.

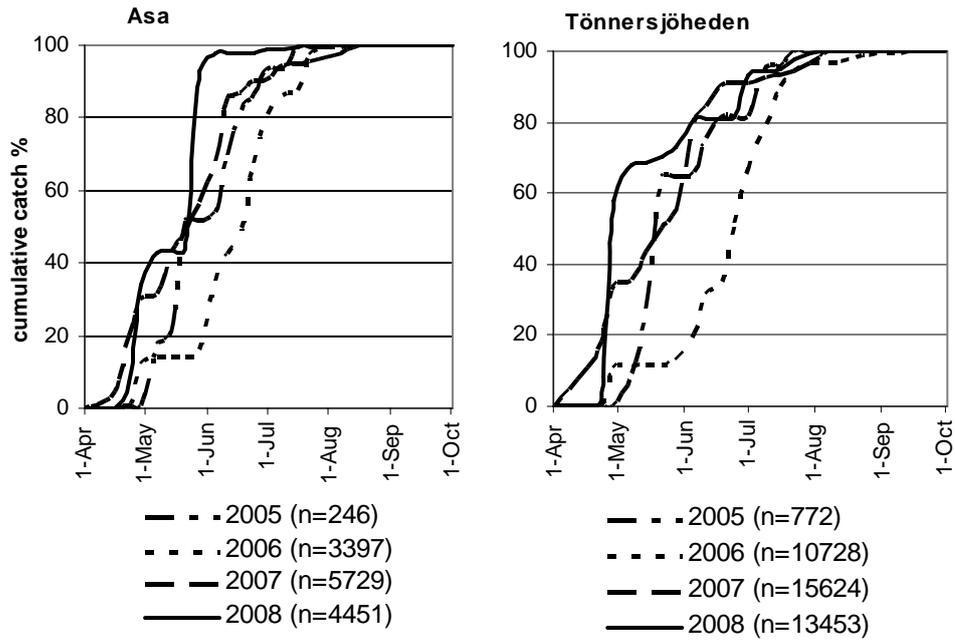


Fig.1. Cumulative catch (%) of *Ips typographus* in 2005-2008 in Asa and Tönnersjöheden (n = total number of caught *Ips typographus*).