

# Impact of salvage logging on saproxylic beetles living in black spruce stumps: response of cerambycids

Olivier Jeffrey <sup>1</sup> Éric Baucé <sup>2</sup> Jacques Ibarzabal <sup>3</sup> Christian Hébert <sup>4</sup>

<sup>1</sup> Laval University, olivier.jeffrey@rncan.gc.ca

<sup>2</sup> Laval University, Consortium iFor, eric.bauce@vrex.ulaval.ca

<sup>3</sup> UQAC, CEF, jacques\_ibarzabal@uqac.ca

<sup>4</sup> RNCAN, christian.hebert@rncan.gc.ca

Boreal forest occupies 72% of the Quebec forest territory and the exploitation of the wood represents an important economic activity. Natural disturbances such as forest fires threaten this economy, even if contributing to renewal of the ecosystems. To maintain constant wood supplies, the forest industry salvages more burned trees than ever before. The objective of this project is to characterize the ecological value of burned woody matter left after salvage, such as stumps, residual snags and down dead wood, for saproxylics beetles through time along a chronosequence of 15 years postfire. 120 trunk window traps, as a device to trap beetles, were installed in burns that prevailed in 1995, 2003, 2005, 2007, 2009 and 2010. Salvage operations were conducted in all studied burns, except those of 2009 and 2010. Sampling was done during the summer of 2010, from which more than 1 000 cerambycids were identified and distributed in 19 species. Our results show lower abundance of cerambycids in the salvaged sites from recent fires (2007) when compared to residual sites. However, no difference was observed in other post-fire years. The uniformity of the environmental variables could explain parts of these results. Thus, further analyses are needed to assess the main variables affecting cerambycid distribution in postfire habitat.

**Keywords:** saproxylic, *Cerambycidae*, woody debris, stumps, salvage logging, fire succession