



The fate of a red wood ant species, *Formica lugubris*, introduced into North America from Europe.

Andrew J. Storer (1), Martin F. Jurgensen (1), Anita C. Risch (2), Johanne Delisle (3) and Michael D. Hyslop (1)

(1) Ecosystem Science Center, Michigan Technological University, School of Forest Resources and Environmental Science, 1400 Townsend Drive, Houghton MI 49931, USA. (2) Swiss Federal Institute for Forest, Snow and Landscape Research, Zuercherstrasse 111, 8903 Birmensdorf, Switzerland. (3) Natural Resources Canada, Laurentian Forestry Centre, 1055 rue du P.E.P.S, P.O. Box 10380, Stn. Sainte-Foy, Québec, G1V 4C7, Canada.

storer@mtu.edu / Fax: (906) 487 2915 / Phone: (906) 487 3470

Red wood ants (*Formica* s.str) are not prevalent in forests in North America, but commonly occur in coniferous forests in northern Europe and Asia. In the 1970s a European red wood ant species, *Formica lugubris*, was intentionally introduced into North America at a field site approximately 30km north of Quebec City. The purpose of the introduction was to evaluate the potential for this species as a biological control agent against conifer defoliating Lepidoptera species. A population of *F. lugubris* became established at the site in Quebec during the years following introduction, but its long-term fate has not been reported. We visited this field site in 2005 to determine whether the population of *F. lugubris* still existed at the release site. We found that this species is well established and located some of the mounds that resulted from the original release. In addition, we mapped and measured over 100 mounds around the original release site. Mounds sizes ranged from only 5cm tall to over 1m tall. *F. lugubris* has become a dominant understory arthropod in this mixed forest. We report the distribution of the mounds of this ant species at the release field site in Quebec, and discuss potential ecological impacts, including effects at the community and ecosystem levels.