

## MOLECULAR CHARACTERIZATION OF OPHIOSTOMATOID FUNGI ASSOCIATED WITH FOUR BARK BEETLES COLONIZING WHITE SPRUCE IN EASTERN CANADA

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Sap-stain of logs and lumber is a major concern for forestry in Canada. The fungi associated with wood discoloration are included in the Ophiostomatoid group and a large proportion of them are vectored by bark beetles (*Coleoptera: Scolytidae*). To our knowledge, no study has been conducted on the characterization of Ophiostomatoid fungi associated with bark beetles in Eastern Canada. The objective of this study was to identify the principal Ophiostomatoid species associated with four species of bark beetles (*Dryocoetes affaber*, *Ips borealis*, *I. perturbatus* and *Polygraphus rufipennis*) colonizing white spruce (*Picea glauca*) in Eastern Canada, and more specifically in the province of Quebec. We used both morphological characters and molecular tools to classify Ophiostomatoid fungi. PCR-RFLP markers in the rDNA (ITS2 – 28S) were found for each taxon that was isolated from bark beetles and used to classify isolates. Then, phylogenetic analysis based on portions of the rDNA large subunit and  $\beta$ -tubulin gene sequences was carried out to establish relationships among taxa isolated in this study and known species. We obtained 14 taxa in the genera *Ambrosiella*, *Hylorhinocladiella*, *Leptographium* and *Ophiostoma*. Within this group, seven taxa did not match any known species and must be eventually characterized in detail.