

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – RONDEAU

Collections Unit, Centre for Biodiversity Genomics (CBG), University of Guelph

Results

A total of 1,230 different BINs (Barcode Index Numbers; a proxy for species) were encountered at Rondeau Provincial Park. Over half the BINs captured were flies (Diptera), followed by moths and butterflies (Lepidoptera), beetles (Coleoptera), and bees, ants and wasps (Hymenoptera; Figure 1).

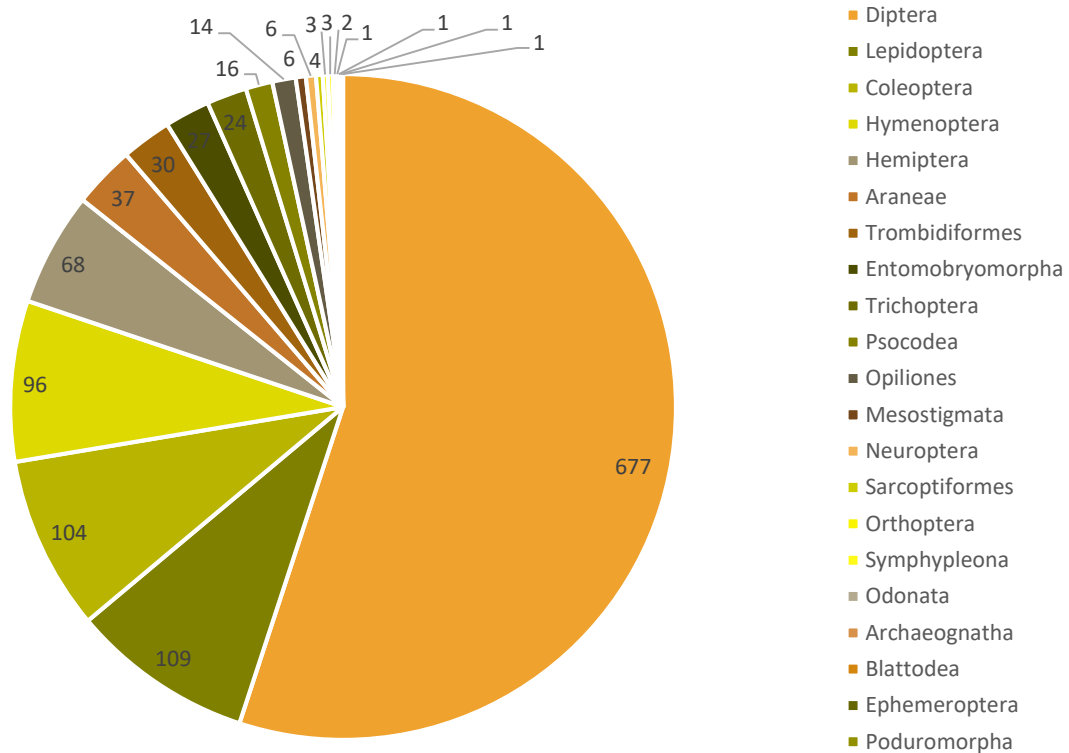


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Rondeau Provincial Park.

Species diversity and insect abundance varied throughout the collecting period; the period that captured the most BINs was also the largest sample collected (Figure 2). The peak of species diversity was obtained in early July.

In total, 364 species were named, representing 32% of the BINs. All but four of the BINs were assigned at least to family and 65% were assigned to a genus. Specimens collected from this site represent 197 different families and 471 genera. A complete species list is attached separately.

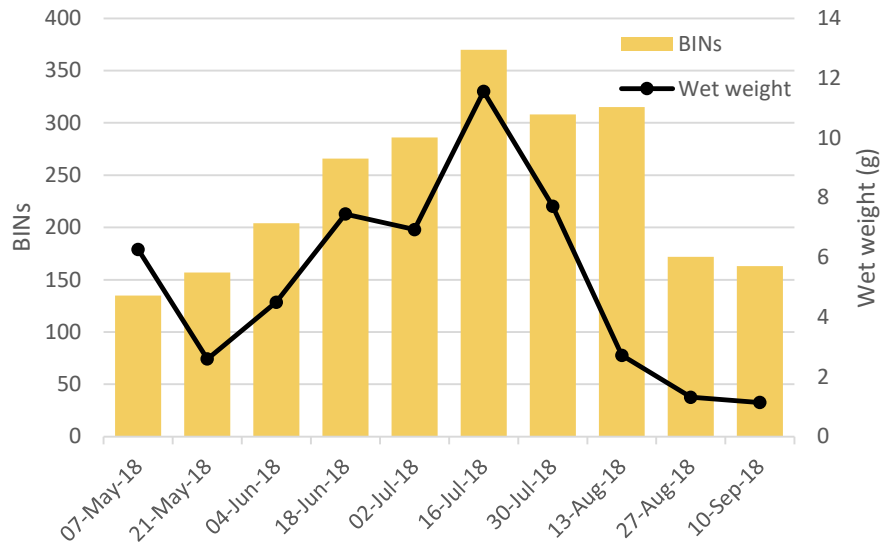


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of the sample) captured at the trap over the 2018 collecting period.

In combination with the OPP Malaise Program run in 2014, a grand total of 2,002 BINs have been captured from Rondeau. There was an overlap of 476 BINs between both sampling years and the 2018 Mixedwood Plains trap added 754 BINs to the total species pool (Figure 3).

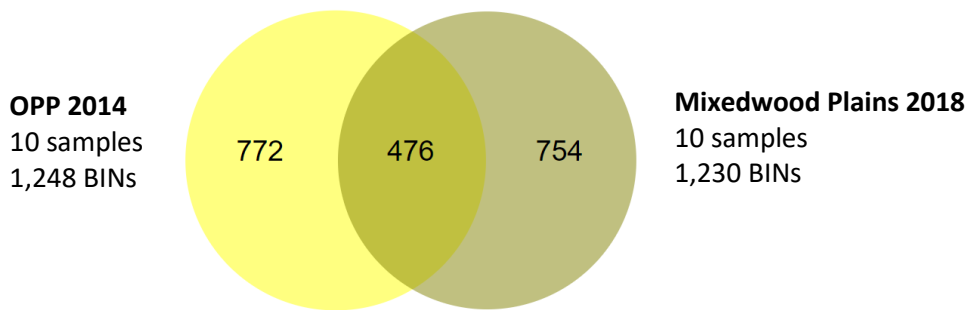


Figure 3. Venn diagram showing the species overlap between the 2014 and 2018 Malaise trapping projects.

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