

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – JOHN E. PEARCE

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Results

A total of 1,536 different BINs (Barcode Index Numbers; a proxy for species) were encountered at John E. Pearce Provincial Park. Over half the BINs captured were flies (Diptera), followed by moths and butterflies (Lepidoptera), bees, ants and wasps (Hymenoptera), and beetles (Coleoptera; Figure 1).

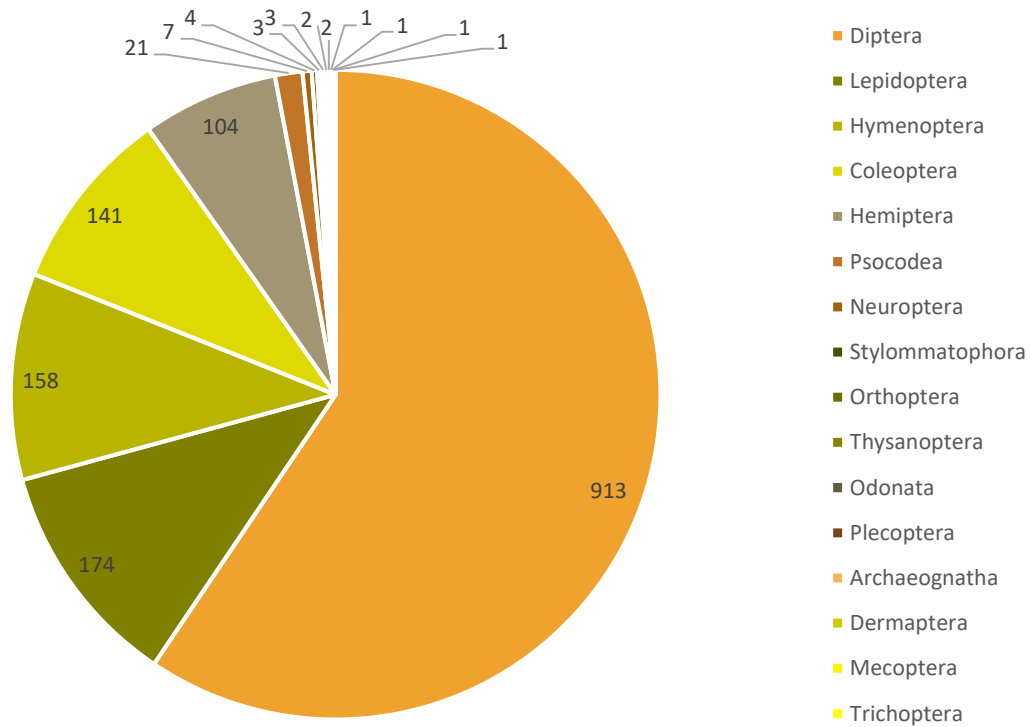


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at John E. Pearce Provincial Park.

Species diversity and insect abundance varied throughout the collecting period; the period that captured the most BINs was not necessarily the largest sample collected (Figure 2). The peak of species diversity was obtained in late September.

In total, 459 species were named, representing 33% of the BINs. All but two of the BINs were assigned at least to family and 65% were assigned to a genus. Specimens collected from this site represent 177 different families and 552 genera. A complete species list is attached separately.

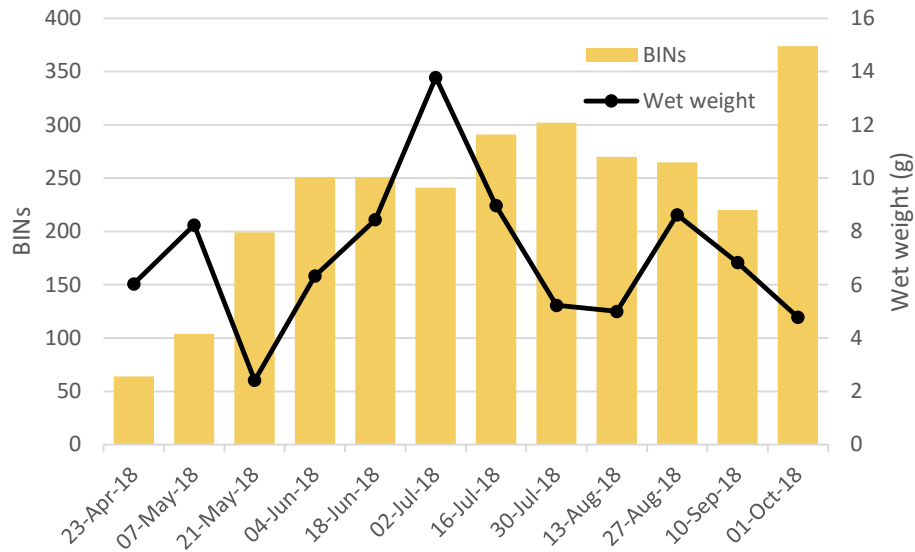


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of the sample) captured at the trap over the 2018 collecting period.

In combination with the OPP Malaise Program run in 2014, a grand total of 2,279 BINs have been captured from John E. Pearce. There was an overlap of 519 BINs between both sampling years and the 2018 Mixedwood Plains trap added 1,017 BINs to the total species pool (Figure 3).

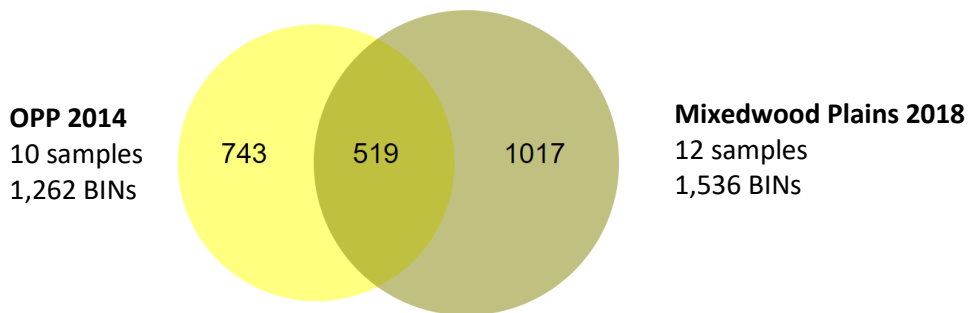


Figure 3. Venn diagram showing the species overlap between the 2014 and 2018 Malaise trapping projects.

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Funding provided by:



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