

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – DUNCAN ESCARPMENT

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Results

A total of 1,538 different BINs (Barcode Index Numbers; a proxy for species) were encountered at Duncan Escarpment Provincial Nature Reserve (PNR). Over half the BINs captured were flies (Diptera), followed by moths and butterflies (Lepidoptera), bees, ants and wasps (Hymenoptera), and beetles (Coleoptera; Figure 1).

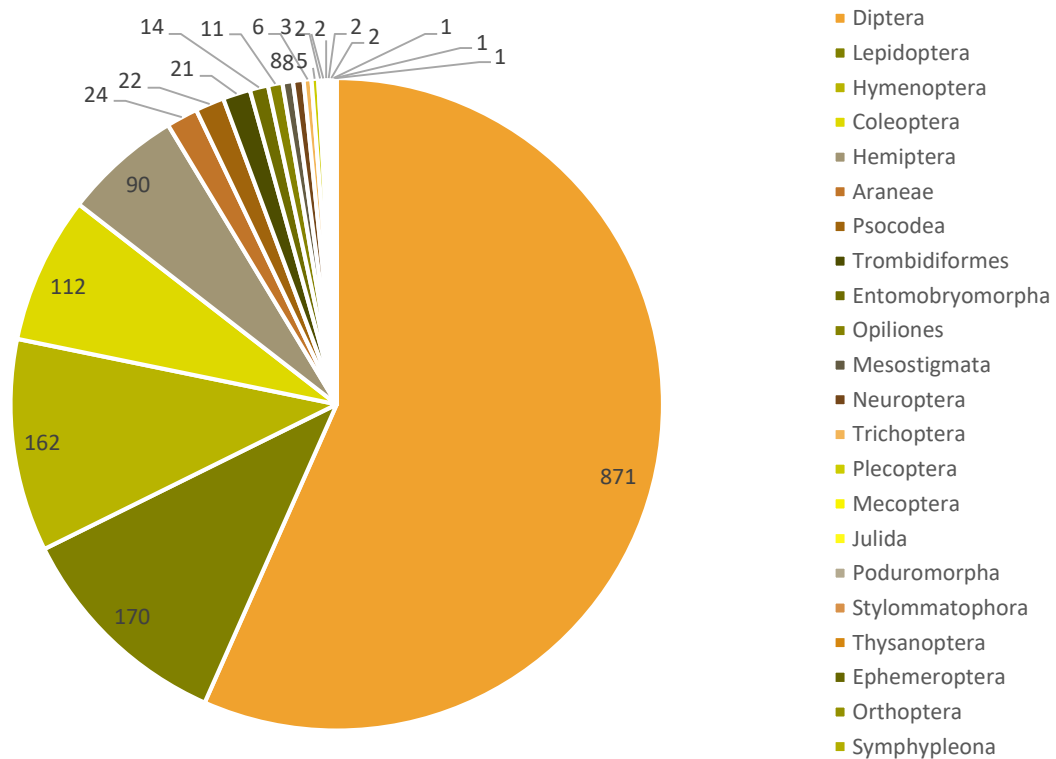


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Duncan Escarpment PNR.

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 early July.

In total, 454 species were named, representing 32% of the BINs. All but one of the BINs were assigned at least to family and 66% were assigned to a genus. Specimens collected from this site represent 208 different families and 550 genera. A complete species list is attached separately.

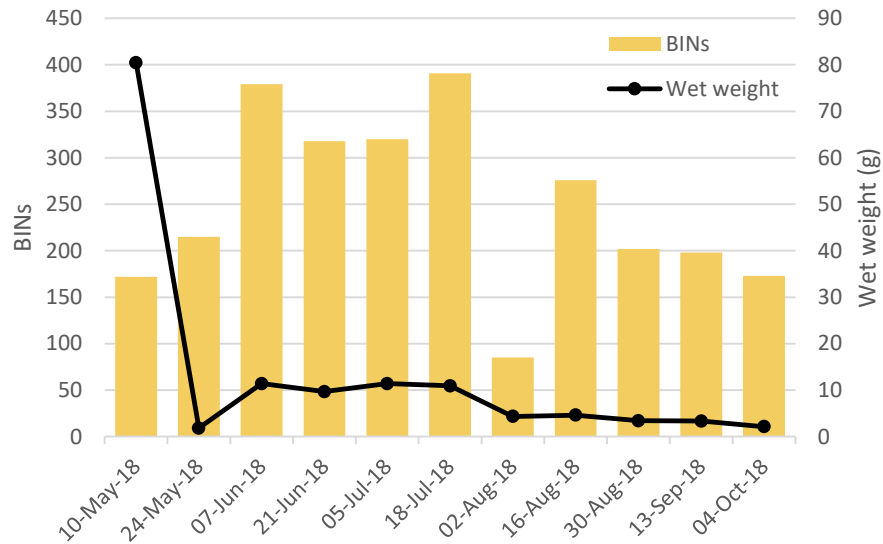


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of the sample) captured at the trap over the 2018 collecting period.

In combination with the OPP Malaise Program run in 2014, a grand total of 2,616 BINs have been captured from Duncan Escarpment. There was an overlap of 722 BINs between both sampling years and the 2018 Mixedwood Plains trap added 816 BINs to the total species pool (Figure 3).

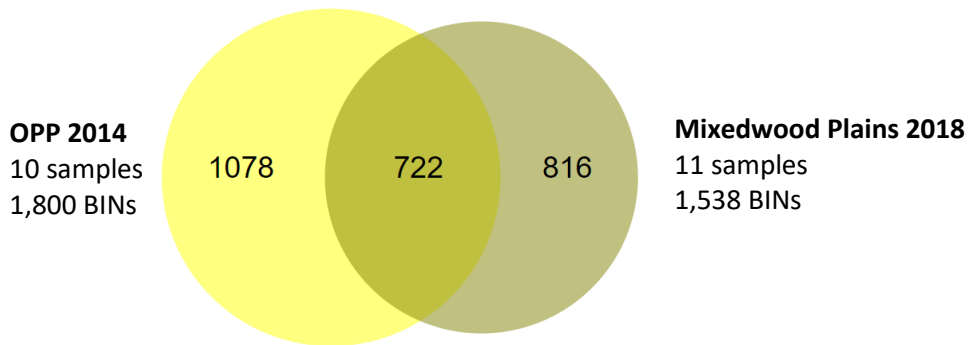


Figure 3. Venn diagram showing the species overlap between the 2014 and 2018 Malaise trapping projects.

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