

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – FORKS OF THE CREDIT

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

Results

A total of 2,743 different BINs (Barcode Index Numbers; a proxy for species) were encountered Forks of the Credit Provincial Park. Over half the BINs captured were flies (Diptera), followed by bees, ants and wasps (Hymenoptera), moths and butterflies (Lepidoptera), and true bugs (Hemiptera; Figure 1).

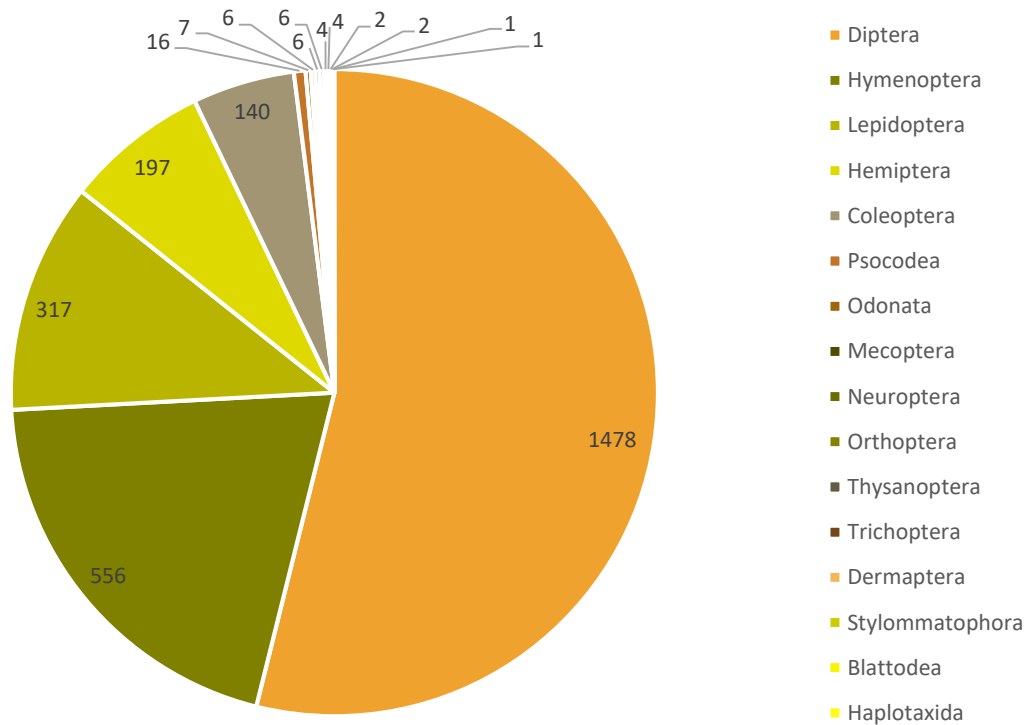


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Forks of the Credit Provincial Park.

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

In total, 849 species were named, representing 34% of the BINs. All but five of the BINs were assigned at least to family and 71% were assigned to a genus. Specimens collected from this site represent 213 different families and 955 genera. A complete species list is attached separately.

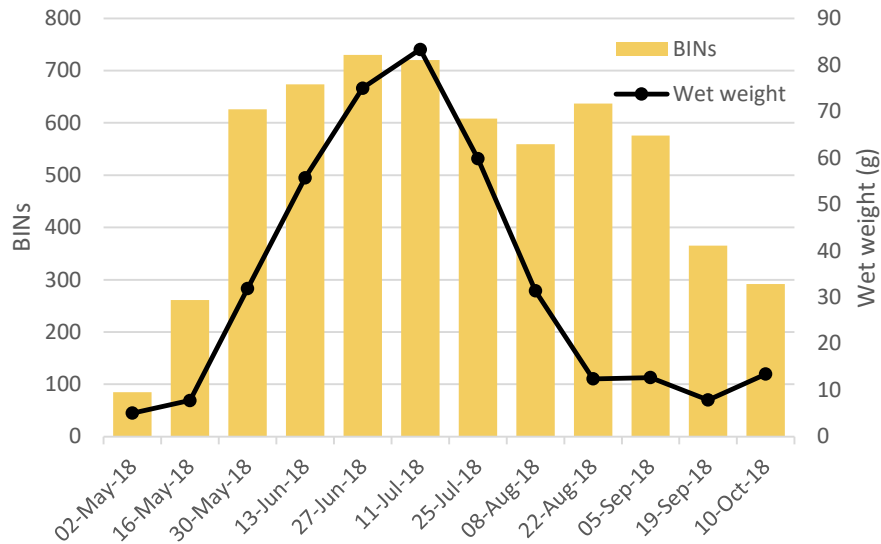


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of the sample) captured at the trap over the 2018 collecting period.

In combination with the OPP Malaise Program run in 2014, a grand total of 4,276 BINs have been captured from Forks of the Credit. There was an overlap of 1,073 BINs between both sampling years and the 2018 Mixedwood Plains trap added 1,670 BINs to the total species pool (Figure 3).

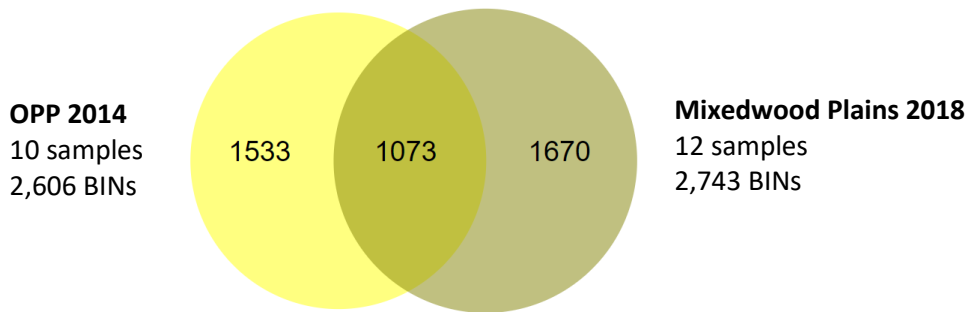


Figure 3. Venn diagram showing the species overlap between the 2014 and 2018 Malaise trapping projects.

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