

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – BALSAM LAKE

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

Results

A total of 3,481 different BINs (Barcode Index Numbers; a proxy for species) were encountered at Balsam Lake Provincial Park. Over half the BINs captured were flies (Diptera), followed by bees, ants and wasps (Hymenoptera), moths and butterflies (Lepidoptera), and beetles (Coleoptera; Figure 1).

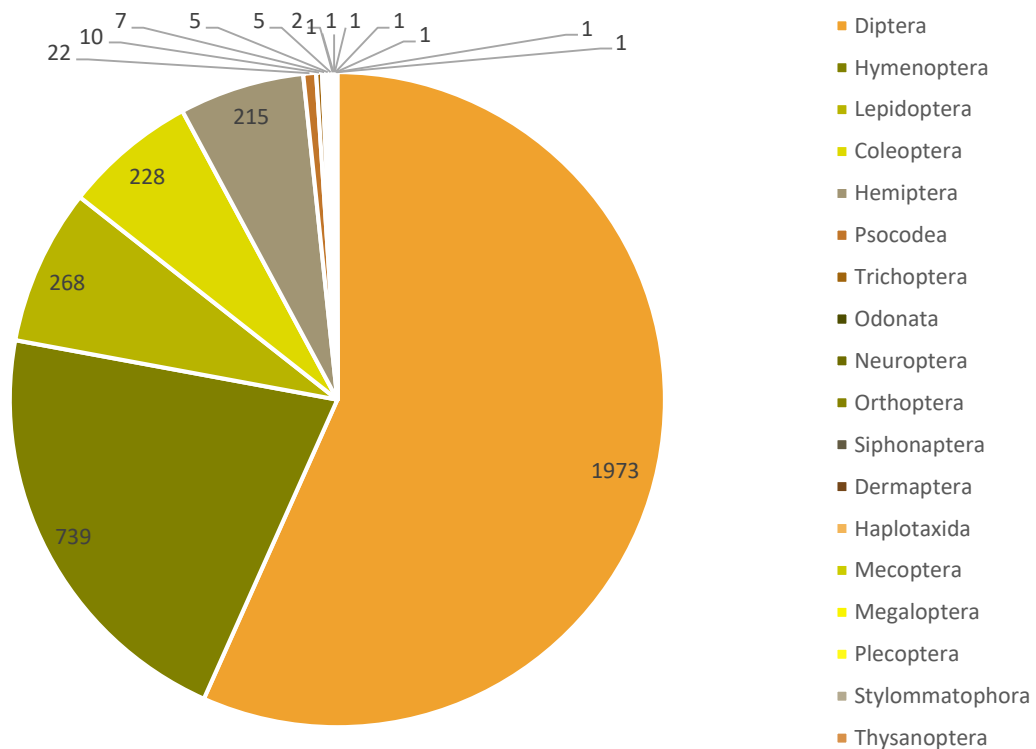


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Balsam Lake Provincial Park.

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, 964 species were named, representing 30% of the BINs. All but six of the BINs were assigned at least to family and 68% were assigned to a genus. Specimens collected from this site represent 246 different families and 1068 genera. A complete species list is attached separately.

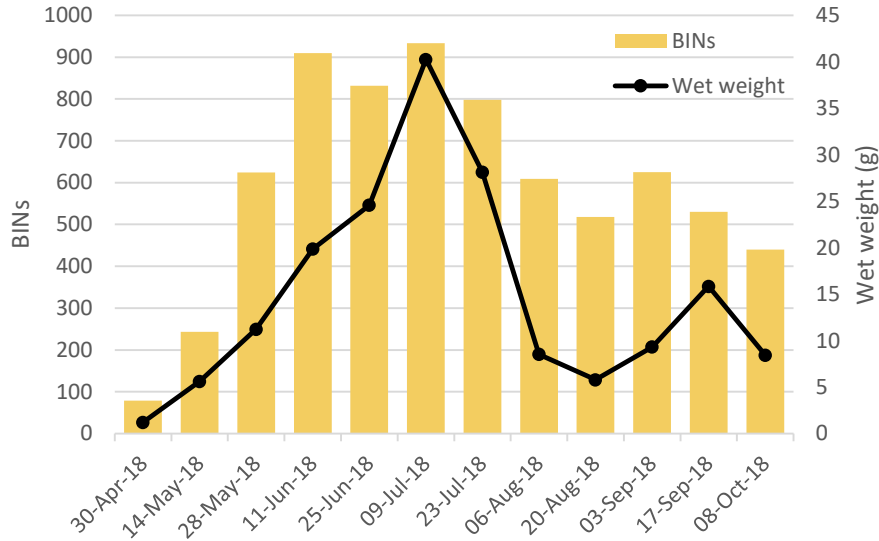


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of the sample) captured at the trap over the 2018 collecting period.

In combination with the OPP Malaise Program run in 2014, a grand total of 5,528 BINs have been captured from Balsam Lake. There was an overlap of 1,075 BINs between both sampling years and the 2018 Mixedwood Plains trap added 2,406 BINs to the total species pool (Figure 3).

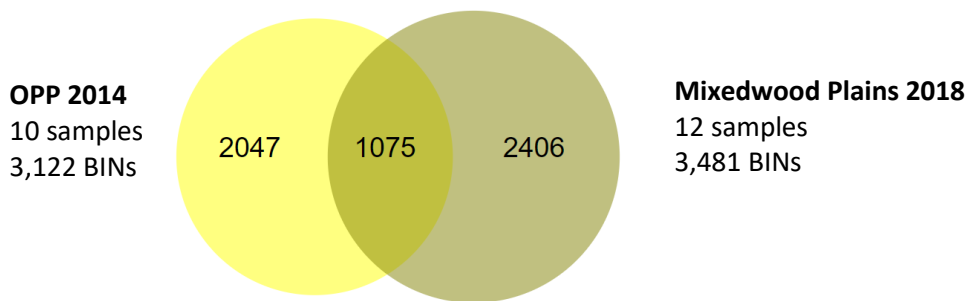


Figure 3. Venn diagram showing the species overlap between the 2014 and 2018 Malaise trapping projects.

Contact Information

Jeremy deWaard, PhD
 Director - Collections
dewaardj@uoguelph.ca

Kate Perez, MSc
 Field Operations Lead – Collections
kperez@uoguelph.ca



University of Guelph
 50 Stone Road East, Guelph, ON,
 Canada N1G 2W1
www.biodiversitygenomics.net

Funding provided by:



FOOD FROM THOUGHT