

TERRESTRIAL ARTHROPOD MONITORING PROGRAM

METABARCODING REPORT – GEORGIAN BAY ISLANDS NATIONAL PARK

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Results

A total of 3,486 different BINs (Barcode Index Numbers; a proxy for species) were encountered at Georgian Bay Islands National 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).

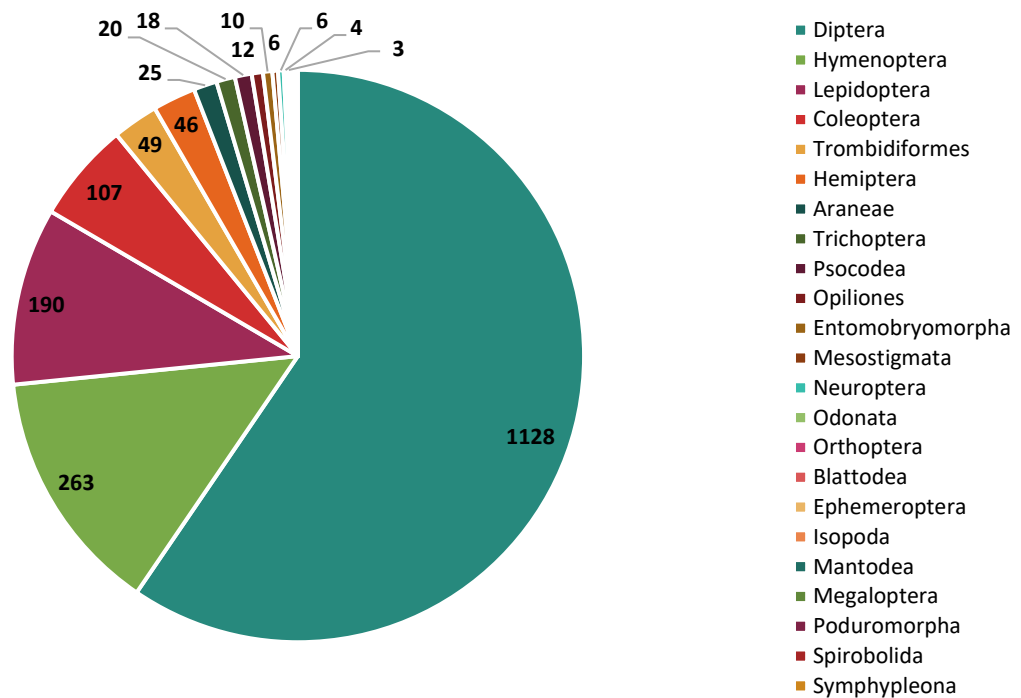


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Georgian Bay Islands National Park.

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 at the beginning of July.

In total, 474 species were named, representing 27% of the BINs. All but three BINs were assigned at least to family and 65% of the BINs were assigned to a genus. Specimens collected from this site represent 204 different families and 597 genera. A complete species list is attached separately.

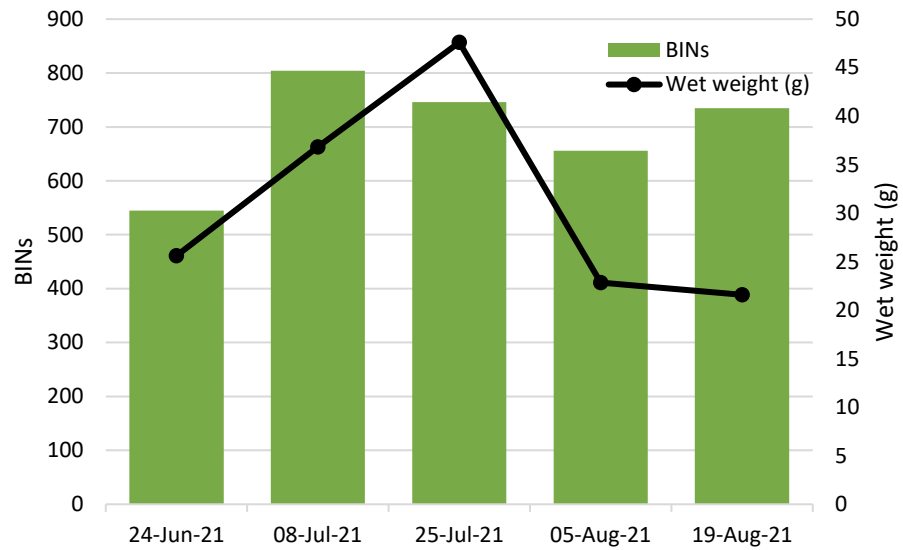


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of sample) captured at the trap over the 2021 collecting period.

In combination with the barcoding results from the 2013 sampling, a grand total of 4,903 BINs have been captured at Georgian Bay Islands National Park. There was an overlap of 644 BINs between both sampling years and the 2021 trap added 1,251 BINs to the total species pool (Figure 3).

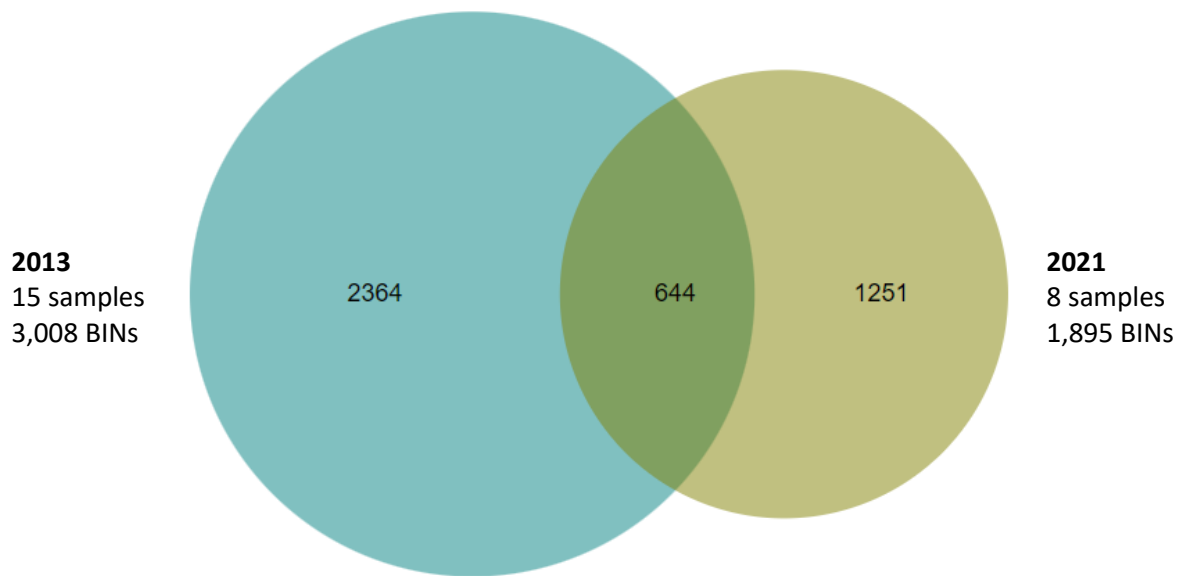


Figure 3. Venn diagram showing the species overlap between the 2013 and 2021 traps.