TERRESTRIAL ARTHROPOD MONITORING PROGRAM METABARCODING REPORT – RUBY LAKE PROVINCIAL PARK

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

Results

A total of 2,777 different BINs (Barcode Index Numbers; a proxy for species) were encountered at Ruby Lake 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).

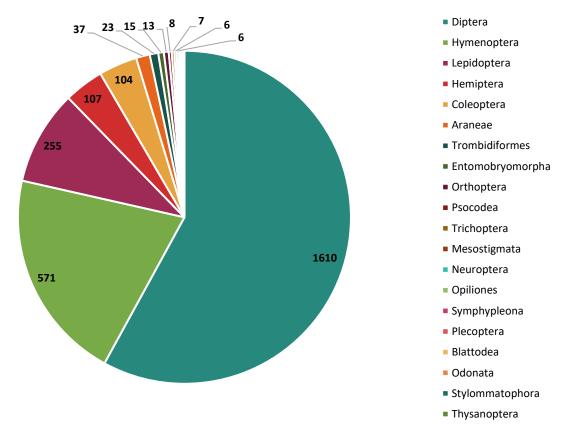


Figure 1. Taxonomic breakdown of BINs captured in the Malaise trap at Ruby Lake Provincial Park.

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 towards the end of July.

In total, 744 species were named, representing 28% of the BINs. All but two BINs were assigned at least to family and 71% of the BINs were assigned to a genus. Specimens collected from this site represent 230 different families and 894 genera. A complete species list is attached separately.

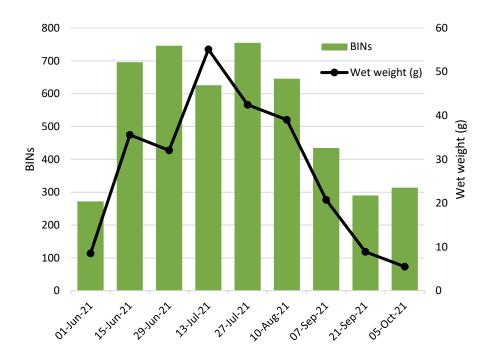


Figure 2. Species diversity (measured by BINs) and approximate insect abundance (measured by wet weight of sample) captured at the trap over the 2021 collecting period.