

Conference schedule

Day 1
Thursday
May 25th

11am - 12pm Registration and check-in **at University College Building**
12 - 1:30pm Welcome lunch and reception **at University College Building**
1:30 - 2:30pm Keynote Ethology: Dr. Karen Warkentin **at University College Building**
2:30 - 4:30pm Conference excursions **at various locations**
4:30 - 5:30pm FOGS Pollinator Garden - Planting Day **at Middlesex College parking lot**
6 - 9 pm Trivia Night & Mexican Buffet Dinner Social **at the Grad Club**

Day 2
Friday
May 26th

8 - 9am Breakfast and poster set-up **at the Physics & Astronomy Atrium**
9 - 10am Keynote Ecology : Dr. Dara Orbach **at the University College Building**
10am - 12pm Concurrent talk sessions **at the University College Building**
10:45am - 11am Coffee Break **at the University College Building**
12 - 2pm Lunch & Learn I **at the Physics & Astronomy Atrium**
2 - 4 pm Concurrent talk sessions **at the University College Building**
3:00 - 3:15pm Coffee Break **at the University College Building**
4:00 - 4:15pm Group photo **at the University College Building**
6 - 10:30 pm Buffet Dinner & Dance **at the Thames Hall Atrium**

Day 3
Saturday
May 27th

8 - 9am Breakfast and poster set-up **at the Physics & Astronomy Atrium**
9 - 10am Keynote Evolution: Dr. Sergio Muñoz-Gómez **at the University College Building**
10am - 12pm Concurrent talk sessions **at the University College Building**
10:45am - 11am Coffee Break **at the University College Building**
12 - 2pm Lunch & Learn II **at the Physics & Astronomy Atrium**
2 - 4 pm Panel "Surviving the Anthropocene" **at the University College Building**
3:00 - 3:15pm Coffee Break **at the University College Building**
5 - 8 pm Closing Ceremony & Awards **at the Grad Club**

Talk sessions

AGA ROOM

FRIDAY, MAY 26th, 10 am – 12pm: SESSION - AGA, UNIVERSITY COLLEGE BUILDING 3110

10:00 – 10:15 am: Temporal analysis of genetic diversity in an isolated population of the Bog Copper butterfly, *Tharsalea epixanthe*

10:15 – 10:30 am : Out of thin air: surveying tropical bat roosts through air sampling of eDNA

10:30 – 10:45 am: Unraveling the impacts of the Mid-Pleistocene Transition on diversification of *Gazella subgutturosa*: insights from phylogeography and species distribution modeling

BREAK

11:00 – 11:15 am: The effects of species reintroduction on genetics: a proposed monitoring program for the reintroduction of the mottled duskywing butterfly (*Erynnis martialis*)

11:15 – 11:30 am: Mating complications: Exploring patterns of mating in fruit flies, *Drosophila melanogaster* in environments differing in their structural complexity

11:30 - 11:45 am: Linking morphology and genetics to explore ant population diversification across the Galapagos Islands

11:45 – 12 pm: fruitless transcripts and neurons that influence mate choice in female *Drosophila melanogaster*

PLANT EVOLUTION

FRIDAY, MAY 26th, 10 am – 12 pm: SESSION – PLANT EVOLUTION, UNIVERSITY COLLEGE BUILDING 3225

10:00 – 10:15 am: Investigating the range expansion of *Amaranthus palmeri*: variation in phenology and trade-offs

10:15 – 10:30 am: The rapid evolution of resistance gene copy number variation

10:30 – 10:45 am: An evolutionary perspective of plant receptor kinase signalling

BREAK

11:00 – 11:15 am: A look into the past: Investigate the origin(s) of glyphosate resistance in *Amaranthus palmeri* using herbarium samples

11:15 – 11:30 am: Pollinator decline alters selection on floral traits of *Mimulus guttatus*

11:30 – 11:45 am: Is extended floral longevity in response to pollinator decline adaptive?: A test with *Lobelia siphilitica*

11:45 – 12 pm: Random and non-random variation in flower colour along an urban-rural gradient

EVOLUTION

FRIDAY, MAY 26th, 10 am – 12 pm: SESSION - *EVOLUTION*, UNIVERSITY COLLEGE BUILDING 2105

10:00 – 10:15 am: Novel climates and competitive ability: a test for adaptive trade-offs between closely related species

10:15 – 10:30 am: Scales, plates, and toepads: investigating evolutionary modularity and rates in *Anolis* scales

10:30 – 10:45 am: Assessment of cryptic Azure butterfly (*Celastrina*) species in southern Ontario using whole genome sequencing

BREAK

11:00 – 11:15 am: The relationship between dispersal and diversification in birds

11:15 – 11:30 am: Sexual dimorphism in *Steatoda nobilis*: how do the sexes differ in phenotypic and life history investment strategies?

11:30 – 11:45 am: Kin recognition in an invasive perennial plant influences the success of subsequent generations

11:45 – 12 pm: On the improbability of detecting phenotypic trade-offs and a partial solution

URBAN & AGRO ECOLOGY

FRIDAY, MAY 26th, 2 – 4pm: SESSION - *URBAN & AGROECOLOGY*, UNIVERSITY COLLEGE BUILDING 3110

2:00 – 2:15 pm: Ecological engineering for stormwater treatment: a case study in the Idlewood subdivision, Kitchener, Ontario, Canada (July-October 2022)

2:15 – 2:30 pm: Leveraging community science and sustainability to advocate for bird-friendly building design

2:30 – 2:45 pm: Using a One Welfare lens to see a new perspective of agroecology and its potential in the laying hen industry

2:45 – 3:00 pm: The role of restoration management and within-year variation on seed bank diversity and composition of designed urban meadows

BREAK

3:15 – 3:30 pm: Automation of green roof vegetation cover using machine learning and a comparison of digital and thermal imaging

3:30 – 3:45 pm: Canadian Bat Box Project

3:45 – 4:00 pm: Assessing the Spatiotemporal Abundance of Soybean Gall Midge in Soil from Infested Fields

HABITAT & DISPERSAL

FRIDAY, MAY 26th, 2 – 4 pm: SESSION – *HABITAT & DISPERSAL*, UNIVERSITY COLLEGE BUILDING 3225

2:00 – 2:15 pm: Heat stress experienced during metamorphosis: Impacts on subsequent pheromone mediated mating in the true armyworm (*Mythimna unipuncta*) (Lepidoptera: Noctuidae)

2:15 – 2:30 pm: The sweet smell of success: Habitat specific foraging challenges may shape olfactory traits in pumpkinseed sunfish

2:30 – 2:45 pm: Could the use of different species of milkweed as larval hostplants influence the fall migration of Monarchs?

2:45 – 3:00 pm: Influence of prey density on spatial and temporal patterns of kills by Canada lynx

BREAK

3:15 – 3:30 pm: Allocation of stored fatty acids during flight in Monarch Butterflies (*Danaus plexippus*): Implications for the importance of en route migratory nectaring sites

3:30 – 3:45 pm: Daily movement and habitat-use of lake sturgeon (*Acipenser fulvescens*) in south-eastern Lake Superior

3:45 – 4:00 pm: Androgens and movement: effect of experimental testosterone on migration behaviour of song sparrows

ECOLOGY I

FRIDAY, MAY 26th, 2 – 4 pm: SESSION *ECOLOGY I*, UNIVERSITY COLLEGE BUILDING 2105

2:00 – 2:15 pm: Long-term effects of silviculture on below ground carbon stocks in boreal forest sites varying in soil texture in Ontario, Canada

2:15 – 2:30 pm: Testing a core assumption of trait-based ecology: Are plant traits good predictors of individual performance?

2:30 – 2:45 pm: Do controlled environments provide ecologically relevant estimates of symbiotic interactions? A case study with plants and arbuscular mycorrhizal fungi

2:45 – 3:00 pm: Are high elevation habitats a refuge from biological control for invasive spotted knapweed (*Centaurea stoebe*)?

BREAK

3:15 – 3:30 pm: Using paleolimnology to assess long-term environmental change in lakes from Killarney Provincial Park and Sudbury, Ontario, Canada

3:30 – 3:45 pm: Evidence of deterministic community assembly from fossil diatoms in ancient Lake Towuti, Indonesia

3:45 – 4:00 pm: The effect of vegetation maintenance on avian species richness in public parks

ETHOLOGY I

SATURDAY, MAY 27TH, 10 am – 12pm: SESSION - *ETHOLOGY I*, UNIVERSITY COLLEGE BUILDING 2105

10:00 – 10:15 am: Costly traumatic insemination in bed bugs and the factors influencing female avoidance

10:15 – 10:30 am: Fear of predators has enduring effects on the brain and behaviour in wild animals

10:30 – 10:45am: Heads up! Social vigilance behavior in American crows

BREAK

11:00 – 11:15 am: Vibratory signalling patterns in male *Steatoda nobilis* during courtship displays

11:15 – 11:30 am: A baffling conundrum: why don't more crickets make acoustic tools?

11:30 – 11:45 am: Correlates of fitness in male *Steatoda nobilis*: this-over-that or has-it-all?

11:45 am – 12 pm: Variation in the kinematics of black widow spider legs during locomotion

ECOLOGY & ETHOLOGY II

SATURDAY, MAY 27TH, 10 am – 12pm: SESSION – *ECOLOGY & ETHOLOGY II*, UNIVERSITY COLLEGE BUILDING 3225

10:00 – 10:15 am: Increasing access to field work for BIPOC undergraduate students

10:15 – 10:30 am: How do mowing regimes affect tree cricket egg hatching success?

10:30 – 10:45 am: Metapopulation dynamics change toward and maybe contribute to a species range limit

BREAK

11:00 – 11:15 am: Effect of Artificial Light on the Development of Juvenile *Steatoda nobilis*

11:15 – 11:30 am: Tale of two fishes: How personality and species affect group behaviour

11:30 – 11:45 am: Can Misunderstanding Lead to Demise? Evaluating Motion Signal Performance of Toad-Headed Lizard *Phrynocephalus putjatai* x *P. guinanensis* Hybrids

11:45 am – 12:00 pm: The effect of mating status on male motivation to mate and willingness to fight in competitions in false widow spiders (*Steatoda nobilis*)

MOLECULAR TOOLS & ECOLOGY

SATURDAY, MAY 27TH, 10 am – 12 pm: SESSION - *MOLECULAR TOOLS & ECOLOGY*, UNIVERSITY COLLEGE BUILDING 3105

10:00 – 10:15 am: The role of phenylpropanoids in *Arabidopsis thaliana* defense against *Tetranychus urticae* herbivory

10:15 – 10:30 am: Assessing the potential of *Caenorhabditis elegans* in the bioremediation of *Microcystis aeruginosa*

10:30 – 10:45 am: Host-adaptation and specialization in *Tetranychus urticae* and *Tetranychus evansi*

10:45 – 11:00 am: Candidate Gene Validation of Sociability in *Drosophila Melanogaster*

BREAK

11:15 – 11:30 am: The Role of V-ATPase in Regulating pH in the Digestive Tract of *Tetranychus urticae* Koch

11:30 – 11:45 am: A hair out of place: Understanding the maintenance of a trichome polymorphism in *Camissoniopsis cheiranthifolia*

11:45 am – 12 pm: Viral-induced flower colour change reveals that turnip mosaic virus increases with stand size and human disturbance in *Hesperis matronalis*

12:00 – 12:15 pm: Plant-pest interaction: dissection of detoxification patterns associated with metabolic resistance in *Tetranychus urticae* adapted to *Arabidopsis thaliana*

CLIMATE CHANGE

SATURDAY, MAY 27TH, 10 am – 12 pm: SESSION *CLIMATE CHANGE*, UNIVERSITY COLLEGE BUILDING 3110

10:00 – 10:15 am: How will photosynthesis and growth in boreal forests respond to climate change?

10:15 – 10:30 am: Investigating variation in herbivore-and-climate-mediated selection on flowering time in an invasive wetland plant

10:30 – 10:45 am: Changes in peatland soil fauna biomass alter food web structure and function under warming and hydrological changes

BREAK

11:00 – 11:15 am: Complex Effects of Mycorrhizae on Poplars Under Elevated Temperature and CO₂

11:15 – 11:30 am: Responses of Soil Predatory Mites to Climate Warming and Elevated CO₂ in Boreal Peatlands

11:30 – 11:45 am: The effects of global change on soil and plant N retention in a grass-dominated old field over both the short and longer term

11:45 am – 12:00 pm: The effects of warming on floral traits

Lunch & Learn sessions

LUNCH & LEARN I

FRIDAY, MAY 26th, 12 – 2pm at PHYSICS & ASTRONOMY ATRIUM

POSTER 1, POSTER BOARD 1: How do frozen crickets maintain mitochondrial function?

POSTER 2, POSTER BOARD 1: Investigating the influence of parasitism on dispersal and cannibalism behaviors of backswimmers (*Notonecta undulata*)

POSTER 3, POSTER BOARD 2: Recovery Mechanisms of Grassland Plant Diversity after the Cessation of Nutrient Addition

POSTER 4, POSTER BOARD 2: The microplastic exposure landscape: a mass balance of microplastics in a large in-lake pelagic mesocosm experiment at the IISD Experimental Lakes Area (IISD-ELA)

POSTER 5, POSTER BOARD 3: Does climate influence scale size among populations of Anolis lizards?

POSTER 6, POSTER BOARD 3: Investigating mosquito abundance and species richness in the Georgian Bay Islands

POSTER 7, POSTER BOARD 4: A range-wide migratory network for Blackpoll Warblers (*Setophaga striata*)

POSTER 8, POSTER BOARD 4: WITHDRAWN

POSTER 9, POSTER BOARD 5: Investigating microplastics in muscle tissue of cold-adapted salmonids

POSTER 10, POSTER BOARD 5: Road salt pollution alters sex-bias in emerging mosquito populations

POSTER 11, POSTER BOARD 6: Expression of Co-Operative Behaviour Under Different Lighting Environments on *Drosophila melanogaster* Larvae

POSTER 12, POSTER BOARD 6: Quantifying the Presence of Trace Element Metals in Yellow Perch (*Perca flavescens*) Tissue After Microplastic Exposure in In-Lake Mesocosms

POSTER 13, POSTER BOARD 7: Sleeping sites of the white-eared opossum (*Didelphis albiventris*) in a Brazilian tropical forest: insights into sex differences

POSTER 14, POSTER BOARD 7: The role of intradiol ring-cleavage dioxygenases in *Tetranychus urticae* adaptation to *Arabidopsis thaliana*

POSTER 15, POSTER BOARD 8: Both microplastic concentration and food availability affect *Daphnia magna* survival.

POSTER 16, POSTER BOARD 8: Dynamics of stored lipids in fall migratory Monarch Butterflies (*Danaus plexippus*): Nectaring in Mexico allows recovery from the southwestern US drought?

POSTER 17, POSTER BOARD 1: Wingtip shape influences take-off speed within and among migratory songbirds

POSTER 18, POSTER BOARD 1: Ecological Drivers of Autumn Refuelling and Stopover Behaviour in Songbirds Migrating Through Eastern New Brunswick

POSTER 19, POSTER BOARD 2: Arthropod Diversity in Regrown Urban Grass Environments

POSTER 20, POSTER BOARD 2: Genetic diversity and fitness variation among populations of clonal invasive plants

POSTER 21, POSTER BOARD 3: The influence of flight capacity of Neotropical birds in the Ecuadorian Andes on the proportion of *Polylepis* patches occupied

POSTER 22, POSTER BOARD 3: Evaluation of prey correlation with lice cleaning efficiency of lumpfish (*Cyclopterus lumpus*) in Canadian Atlantic salmon (*Salmo salar*) aquaculture in Newfoundland, Canada using morphological identification and DNA metabarcoding techniques

POSTER 23, POSTER BOARD 4: Tail morphologies strengthen the relationship between flight efficiency and natal dispersal distances in birds

POSTER 24, POSTER BOARD 4: WITHDRAWN

POSTER 25, POSTER BOARD 5: WITHDRAWN

POSTER 26, POSTER BOARD 5: Community structure of *Trichoptera* across the credit river watershed in the 1950s

POSTER 27, POSTER BOARD 6: White-footed mouse (*Peromyscus leucopus*) response to restoration of grassland alvar

POSTER 28, POSTER BOARD 6: Latitudinal variation in mutualism: a case study using castor plant - ant interactions

POSTER 29, POSTER BOARD 7: Pesticide resistance levels in field and greenhouse populations of *Tetranychus urticae*

POSTER 30, POSTER BOARD 7: The effects of N-heterocyclic carbene-enhanced coats on microbial corrosion of mild steel

LUNCH & LEARN II

SATURDAY, MAY 27th, 12 – 2pm at PHYSICS & ASTRONOMY ATRIUM

POSTER 1, POSTER BOARD 1: Microbial community response to experimental warming in boreal peatlands

POSTER 2, POSTER BOARD 1: WITHDRAWN

POSTER 3, POSTER BOARD 2: Potential probiotic bacteria isolated from water kefir and their inhibitory effect against the contagious bee pathogen *Paenibacillus* larvae

POSTER 4, POSTER BOARD 2: Effects of migratory strategy on flight muscle mitochondrial physiology in songbirds

POSTER 5, POSTER BOARD 3: Effects of site and migratory season on the consumption of biofilm and essential fatty acids composition in Western Sandpipers

POSTER 6, POSTER BOARD 3: *Drosophila* social spacing: elucidating the neural circuitry

POSTER 7, POSTER BOARD 4: The potential for gut microbes to affect honeybee hygienic behaviour

POSTER 8, POSTER BOARD 4: Seeing & speeding: the effects of reduced visibility on fish activity

POSTER 9, POSTER BOARD 5: Juvenile corn snakes do not prefer familiar conspecifics in a 3-chamber task

POSTER 10, POSTER BOARD 5: Effects of Moonlight on Diel Vertical Migration in Juvenile Round Goby

POSTER 11, POSTER BOARD 6: Mating Pool Return Rates and Direction of Mating Competition in a Role Reversed Dance Fly

POSTER 12, POSTER BOARD 6: WITHDRAWN

POSTER 13, POSTER BOARD 7: The effect of nutrient deposition on the costs and benefits of extended floral longevity in response to pollinator decline

POSTER 14, POSTER BOARD 7: WITHDRAWN

POSTER 15, POSTER BOARD 8: Plasticity, protandry, and pollination: the interplay between sex phase transition & flower colour change in an invasive weed

POSTER 16, POSTER BOARD 8: Selection on snake visual developmental genes is associated with shifts in visual ecology

POSTER 17, POSTER BOARD 1: Assessing Alignment Quality of New Reference Genome

POSTER 18, POSTER BOARD 1: Decoding the Fitness Landscape of Acute Myeloid Leukemia: Insights into Clonal Evolution and Gene-Environment Interactions

POSTER 19, POSTER BOARD 2: Unearthing the Miners: A Phylogenetic and Biogeographic Analysis of the Genus *Geositta* (Passeriformes: Furnariidae)

POSTER 20, POSTER BOARD 2: A pilot mutagenesis experiment to identify new, viable, X-linked mutations in *Drosophila prolongata*, a species with male biased sexual dimorphism

POSTER 21, POSTER BOARD 3: Investigating the origins, evolution, and function of a reverse transcriptase-like gene (rtl) in the mitochondrial genomes of volvoclean green algae

POSTER 22, POSTER BOARD 3: Microbial genome sequence compositions associated with life in extreme environments

POSTER 23, POSTER BOARD 4: WITHDRAWN

POSTER 24, POSTER BOARD 4: Modeling space structure impacts in redirected breeding species

POSTER 25, POSTER BOARD 5: The hidden influence of wins and losses: Evidence for human winner and loser effects from randomized trials

POSTER 26, POSTER BOARD 5: Ontogenetic shift from cryptic to aposematic colouration in an Amazonian frog

POSTER 27, POSTER BOARD 6: Pre- and post-zygotic reproductive barriers to inter-species hybrid sterility in *Caenorhabditis* nematodes

POSTER 28, POSTER BOARD 6: WITHDRAWN

POSTER 29, POSTER BOARD 7: WITHDRAWN