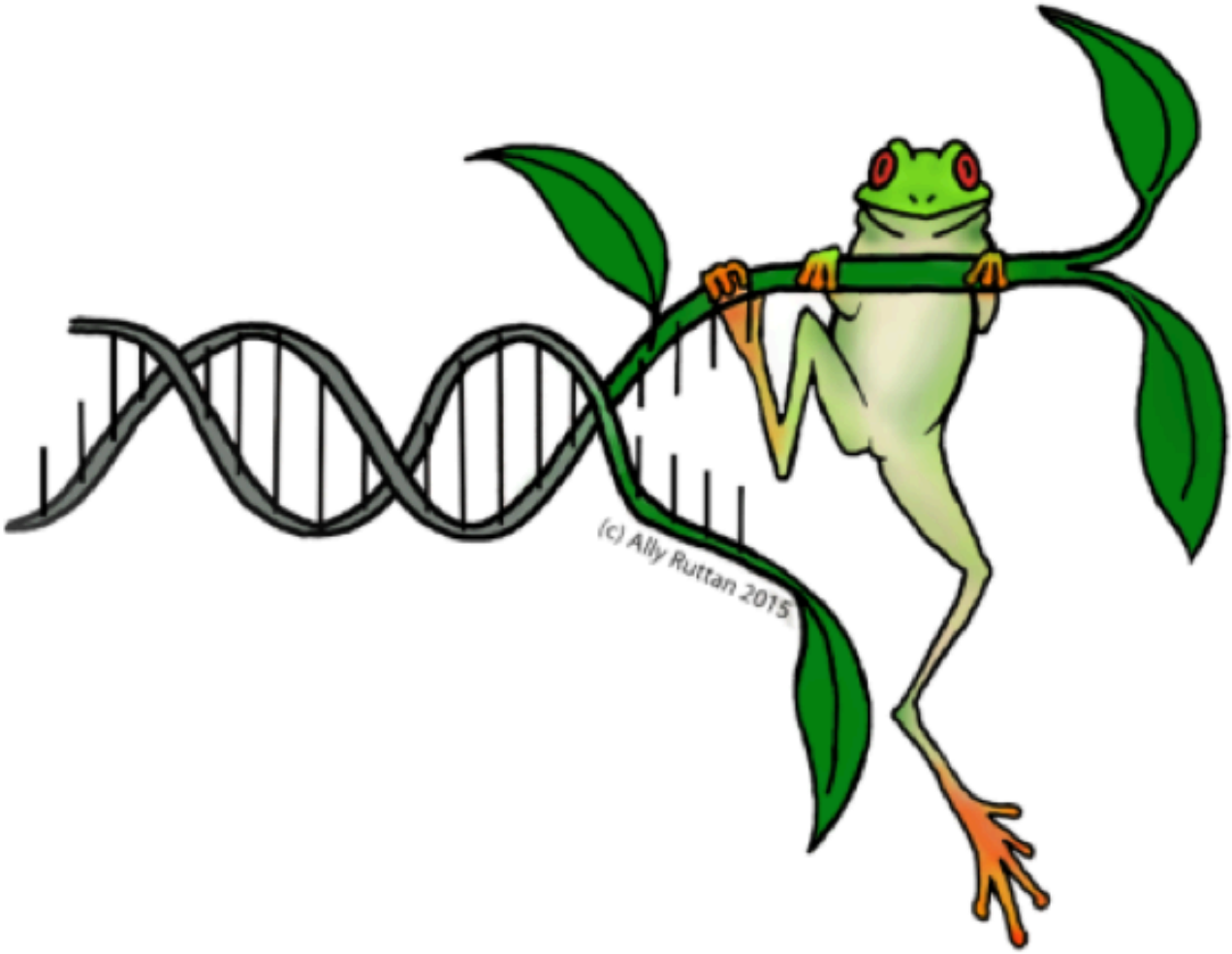
# 45th Ontario Ecology, Ethology, and Evolution Colloquium

**May 13th – 15th, 2015**
**York University**



# WELCOME

We are excited to welcome students and faculty to the Ontario Ecology, Ethology and Evolution Colloquium (OE3C) 2015!

OE3C is an annual conference that, for the past 45 years, has brought together top researchers from across Ontario to share their work in the fields of ecology, ethology, and evolution in an intimate and constructive forum. This year, for the first time in history, the graduate students of York University's Biology and Environmental Studies departments are proud to be hosting OE3C!

As the largest graduate-student-focused conference in Ontario, typically drawing over 120 participants from Ottawa to Regina, you will find a wide range of research being presented at OE3C 2015. We are also honoured to have five plenary speakers present their most recent and intriguing findings within the fields of ecology, ethology and evolution.

This conference has previously offered students the opportunity to make contact with faculty interested in recruiting promising young researchers. Like past OE3Cs, this conference was entirely organized by a subset of dedicated graduate students. Together, we strive to make this conference a positive, friendly, collaborative academic experience for all.

Enjoy your stay at York University!

Best regards,
OE3C 2015 Organizing Committee

# ORGANIZING COMMITTEE

OE3C 2015 would not be possible without the hard work and dedication of the following individuals who helped plan and organize this year's event:

**Miranda Chen**
**Samantha Stefanoff**
**Cassandra Debets**
**Alex Filazzola**
**Katrina Gaibisels**
**Brock Harpur**
**Amanda Liczner**
**Lianna Lopez**
**Lisa Rosenberger**
**Cassandra Silverio**
**Sean Chin**
**Thomas Van Zuiden**
**Ally Ruttan**

# IMPORTANT INFORMATION

## Registration

All registration and check-in will occur in the Life Sciences Building (LSB) on York University's Keele campus. On Wednesday, registration will be open from 5:30 – 7:00 pm in the lobby of LSB. Refreshments and appetizers will be served. On Thursday and Friday mornings, registration will be open from 8:00 – 9:00 am in the lobby of LSB. Breakfast will be served during both of these registration periods.

Your Registration fee includes: breakfasts, lunches, evening appetizers, coffee breaks and two drink tickets to be used either on Wednesday or Thursday evening and an OE3C welcome package. When you register, you will receive your official OE3C conference attendance receipt.

## Presentations

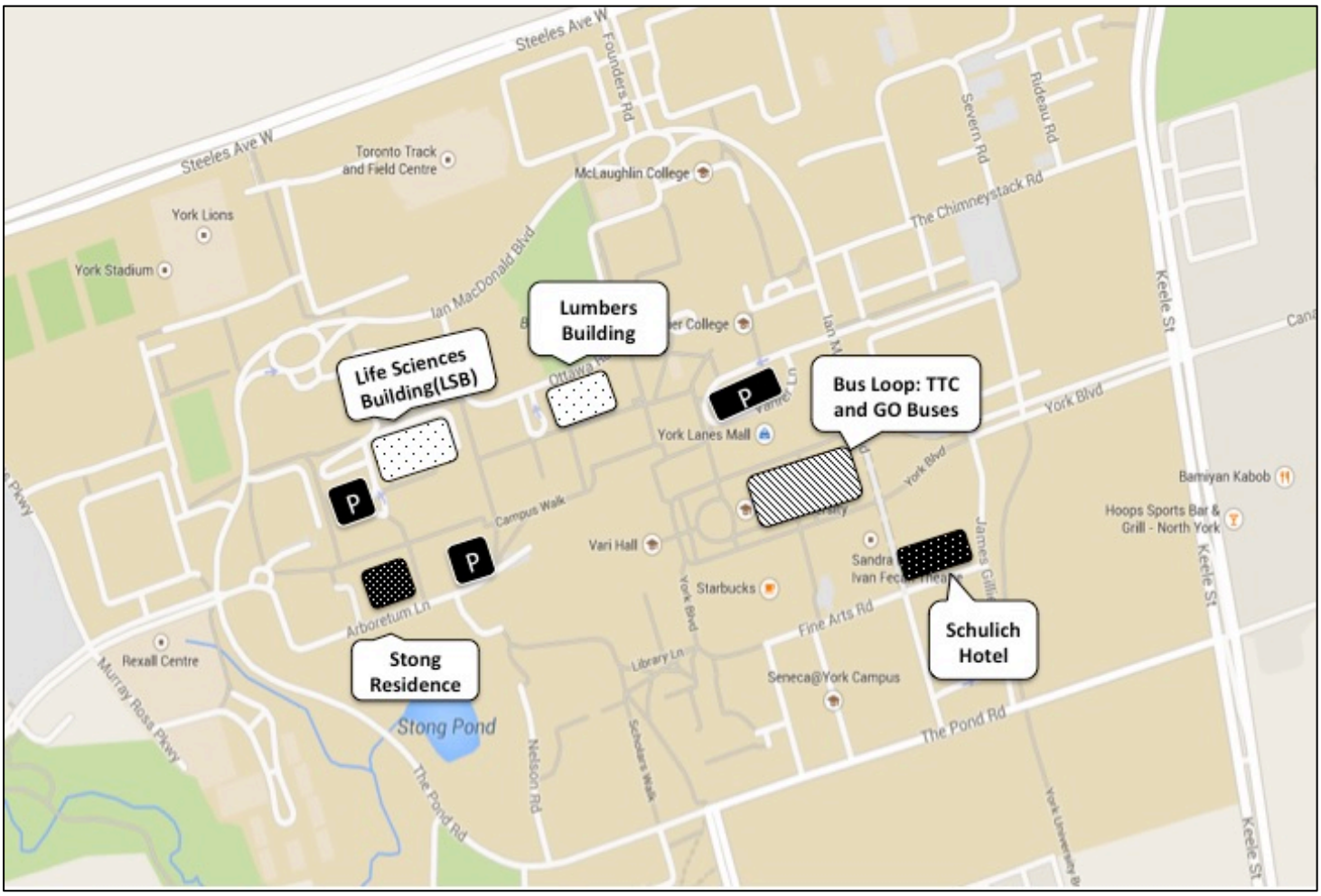
**Oral Presentations -** Presentations will be a maximum of 15 minutes (including time for questions). Moderators in your session will signal you at 10 minutes and ask for a wrap-up at 14 minutes. Please report to your scheduled room in the Life Sciences Building **10 minutes before** your session begins to load your **PowerPoint (.ppt)** files to the computer prior to the session.

**Poster Presentations** – Posters will be set up in the lobby of the Life Sciences Building. Please hang your poster at your assigned spot between 3:30 – 5:00pm, Thursday May 14th with materials provided. Poster dimensions should **NOT** exceed 4 ft. wide by 3 ft. long.

**Parking -** Parking is available on York's Campus – see map for areas where there are parking garages and lots.

**Accommodations** - On-campus accommodations will be in the Stong Residence building and Schulich Executive Learning Centre Hotel (see campus map). Check in for both are at 3:00pm and check out at 11:00am.

# CAMPUS MAP


Steeles Ave W
Toronto Track and Field Centre
McLaughlin College
York Lions
York Stadium
Ian MacDonald Blvd
Lumbers Building
Life Sciences Building(LSB)
Bus Loop: TTC and GO Buses
York Lanes Mall
York Blvd
Campus Walk
Vari Hall
Starbucks
Arboretum Ln
Stong Residence
Stong Pond
Rexall Centre
Murray Ross Pkwy
Fine Arts Rd
Schulich Hotel
Seneca@York Campus
The Pond Rd
Library Ln
Nelson Rd
Scholars Walk
Founders Rd
Severn Rd
Rideau Rd
The Chimneystack Rd
Keele St
Barniyan Kabob
Hoops Sports Bar & Grill - North York
P

# DIRECTIONS

From Hwy 401

- Take Allen Road exit North
- Allen turns into Dufferin Street, continue on Dufferin North
- Turn west onto Steeles Ave. West.
- Turn south onto Founders Rd.
- Continue to the roundabout and head west on Ian MacDonald Blvd.
- Continue to another roundabout on Ian MacDonald Blvd and go south down Thompson Rd.
- Continue on Thompson, keeping right until you reach Thompson Road Lot

From Hwy 400

- Exit at Finch and go east
- Go north on Sentinel Rd.
- Go West on the Pond
- The Pond Road turns into Ian MacDonald Boulevard, continue North into the roundabout
- From the roundabout head south down Thompson Rd.
- Continue on Thompson, keeping right until you reach Thompson Road Lot

From downtown Toronto by TTC

- Take the Yonge-University Spadina line north to Downsview station
- Once at Downsview station, take the 196 (not the 196B) express bus to York University.

From downtown Toronto by Car

- Get to the Allen Rd. North and continue until it turns into Dufferin St. North
- Continue on Dufferin North until Steeles
- Turn west onto Steeles Ave. West.
- Turn south onto Founders Rd.
- Continue to the roundabout and head west on Ian MacDonald Blvd.
- Continue to another roundabout on Ian MacDonald Blvd and go south down Thompson Rd.
- Continue on Thompson, keeping right until you reach Thompson Road Lot

# PLENARY SPEAKERS

We are pleased to have five plenary speakers joining us this year! All plenary sessions will be an hour long and will take place in the Life Sciences Building in room 106. Please refer to the OE3C 2015 Schedule to find out when the speakers are presenting.

**Dr. Brock Fenton**
***Department of Biology***
***University of Western Ontario***

**The Origin, evolution, and diversification of bats**

With just over 1260 extant species, bats (*Chiroptera*) are the second largest order of mammals. There were at least 10 families of bats by the middle Eocene (~52 million years ago). Genomic evidence and fossils suggest that bats had originated about 13 million years earlier. I will reflect on the adaptations that could have been key to the origin of bats (flight, echolocation, size), and consider how we can explain their diversification. Arguably, there is little evidence of competition among species of bats for resources such as food and roosts. Using DNA barcode analysis to identify the species of insects consumed by bats advances our knowledge of this situation.

**Dr. Sandra Rehan**
***Department of Biological Sciences***
***University of New Hampshire***

**A phylogenetic approach to understanding molecular evolution of insect sociality**

Understanding the evolution of animal societies, considered to be a major transition in evolution, is a key topic in evolutionary biology. Recently, new gateways for understanding social evolution have opened up due to advances in genomics, allowing for unprecedented opportunities in studying social behavior on a molecular level. In particular, highly eusocial insect species (caste-containing societies with non-reproductives that care for siblings) have taken center stage in studies of the molecular evolution of sociality. Despite recent enormous advances in both ecological and genomic studies on eusocial insects, we still lack a broad model to explain how this major transition in evolution has come about. I highlight the importance of a comparative, phylogenetic context and hypothesis-driven genomic approaches for understanding the evolution of social phenotypes.

**Dr. Irena Creed**
***Department of Biology***
***University of Western Ontario***

**Climate effects on wetland soils create the perfect storm for toxic cyanobacteria blooms**

A grand challenge for the 21st century will be to better manage lands to ensure the provision of safe and reliable water supplies. Recent reports show that the frequency and intensity of algal blooms in surface waters are increasing, particularly cyanobacteria that can produce potent toxins. Competing paradigms have led to contentious debates regarding phosphorus vs. nitrogen control. An emerging conceptual model is that climate-driven changes of wetland processes is no only altering the fate of macronutrients (N removal, P release), but releasing essential micronutrients, together which create the "perfect storm" for cyanobacteria blooms.

**Dr. Frank Davis**
***Bren School of Environmental Science & Management***
***University of California***

**Changing windows of opportunity for tree seedling establishment under 21st Century climate change**

Plant species distributions are shifting in response to ongoing climate change, with profound implications for future biodiversity and ecosystem services. In mountainous regions, species vulnerability could be reduced by local topoclimatic buffering of regional climate change. I will briefly review recent research to model tree establishment and species range shifts under climate change. I will then summarize some results from an ongoing NSF Macrosystems Biology project in which climatologists, hydrologists, plant geographers and ecologists are teaming up to measure and model microclimates and tree species establishment in mountain landscapes in California. I will summarize our approach to modeling topoclimatic variation in surface temperature and soil moisture regimes and demonstrate an approach for mapping interannual variation in tree species recruitment windows of opportunity under current and projected future climates.

**Dr. Christopher Lortie**
***Department of Biology***
***York University***

**Changing interactions in a changing world**

Times are a changing. Global changes are real, dramatic, and prominent in ecological research. Even most fundamental research studies on interactions, gradients, or perturbation invoke global change issues as the validation and implication of the respective work reported. However, integrating individual studies is challenging, and ecology must now very rapidly move beyond context specificity to provide useful, reproducible evidence for many of these global issues. Gradients are a changing too in connectance, length, and severity. Herein, a review and conceptual framework of gradient studies that explore ecological interactions are developed. Experimental field manipulations and syntheses are also presented as a means to advance theory and highlight opportunities for future research. Gradients are powerful tools that can be used to shape distributed, collaborative studies of interactions provided interaction estimates are coupled with drivers at multiple scales, network dynamics, and trophic levels. Contrasts of the frequency and/or importance of interactions, positive or negative, are only as useful as their capacity to expand the relevance of the local ecological context.

# PLENARY NOTES

# CONFERENCE SCHEDULE

| **Wednesday, May 13**<br>*Life Sciences Building (LSB)* | |
|---|---|
| 3:00-5:00 | "Birds and the Bees" workshop |
| 5:30-7:00 | Opening reception and registration<br>*LSB Lobby* |
| 7:00-8:00 | **Dr. Brock Fenton**<br>*LSB Room 103* |
| 8:00-11:00 | Social at Shopsy's |
| **Thursday, May 14**<br>*Life Sciences Building (LSB)* | |
| 8:00-9:00 | Registration and Breakfast<br>*LSB Lobby* |
| 9:00-10:00 | **Dr. Sandra Rehan**<br>*LSB Room 103* |
| 10:00-10:15 | Coffee break/Speakers upload talks<br>*LSB Lobby* |
| 10:15-12:45 | **Session1A: Social Behaviour and Mate Selection**<br>*LSB Room 103* |
| | **Session1B: Aquatic Ecology**<br>*LSB Room 106* |
| 12:45-1:45 | Lunch/Speakers upload talks<br>*LSB Lobby* |
| 1:45-4:15 | **Session2A: Conservation Biology and Biodiversity**<br>*LSB Room 103* |
| | **Session2B: Avian Ecology and Behaviour**<br>*LSB Room 106* |
| 4:15-4:30 | Coffee break<br>*LSB Lobby* |
| 4:30-5:30 | **Dr. Irena Creed**<br>*LSB Room 103* |
| 5:30-7:00 | **Poster Session**<br>*LSB Lobby* |

| **Friday, May 15**<br>*Life Sciences Building (LSB)* | |
|---|---|
| 8:00-9:00 | Registration and Breakfast<br>*LSB Lobby* |
| 9:00-10:00 | **Dr. Christopher Lortie**<br>*LSB Room 103* |
| 10:00-10:15 | Coffee break/Speakers upload talks<br>*LSB Lobby* |
| 10:15-12:45 | **Session3A: Evolutionary Ecology**<br>*LSB Room 103* |
| | **Session3B: Innovations in Biology**<br>*LSB Room 106* |
| 12:45-1:45 | Lunch/Speakers upload talks<br>*LSB Lobby* |
| 1:45-4:15 | **Session4A: Community Ecology and Plant Biology**<br>*LSB Room 103* |
| | **Session4B: Insect Ecology and Invasion Biology**<br>*LSB Room 106* |
| 4:15-4:30 | Coffee break<br>*LSB Lobby* |
| 4:30-5:30 | **Dr. Frank Davis**<br>*LSB Room 103* |
| 5:30-6:00 | Student awards and closing reception<br>*LSB Room 103* |

# ENJOY THE LONG WEEKEND!

## Session1A: Social Behaviour and Mate Selection – *LSB 103*

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|---|---|
| **10:15** | Infanticide and female reproductive skew in a cooperatively breeding primate<br>**Laura Heslin Piper - University of Toronto**, Becky E. Raboy |
| **10:30** | Siblings: Rivals or Allies?<br>**Emily Martin - Wilfrid Laurier University** |
| **10:45** | Friendship in relation to kinship: Factors that affect investment in kin and non-kin<br>**Sara Kafashan - University of Guelph** |
| **11:00** | Genetic variation in male induced harm and its implication for female mate choice<br>**David Filice - Wilfrid Laurier University** |
| **11:15** | Sleeping-site use by a territorial primate<br>**Emma S. Dawkins - University of Toronto**, Becky E. Raboy |
| **11:30** | Paternity reduction does not effect parental care in the plainfin midshipman fish (*Proichthys notatus*)<br>**Henry H. Kou - McMaster University**, Aneesh P.H. Bose, Sigal Balshine |
| **11:45** | Observational primes and social strategies<br>**Amanda Rotella - University of Guelph** |
| **12:00** | Does the complexity of mating arenas affect the interaction between sexual and natural selection?<br>**Amardeep Singh - University of Toronto**, Howard D. Rundle, Aneil F. Agrawal |
| **12:15** | The Cultural Potential of Bats<br>**Krista Patriquin - University of Toronto** |

## Session1B: Aquatic Ecology – *LSB 106*

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|---|---|
| **10:15** | Predatory dragonfly cues induce functional plasticity in lamellar autotomy of larval damselflies<br>**Katherine L. Black - University of Guelph**, Douglas S. Fudge, Beren W. Robinson |
| **10:30** | Benthic subsidies in lakes: new insights from hardwater lakes<br>**Lushani Nanayakkara - University of Regina**, Ryan Cooper, Elizabeth Starks, Björn Wissel |
| **10:45** | Investigating the influence of land use and water chemistry on the production of algae along the shoreline of Lake Huron<br>**Samantha Stefanoff - York University**, Sapna Sharma, Todd Howell |
| **11:00** | Use of redundancy analysis to evaluate effect of environmental conditions on distribution/abundance of larval lake whitefish (*Coregonus clupeaformis*) in LakeHuron<br>**Lauren Overdyk - University of Guelph**, Robert Hanner, Stephen Crawford |
| **11:15** | Relationship between metabolism and behaviour in Lake Superior brook trout (*Salvelinus fontinalis*)<br>**Cameron J. Strnad - University of Guelph**, Robert L. McLaughlin |
| **11:30** | What's hot about mercury? Investigating how fish mercury levels have changed in Ontario<br>**Miranda Chen - York University**, Sapna Sharma, Satyendra Bhavsar |
| **11:45** | Be the biggest bully on the playground - foraging strategies from Coho salmon<br>**Jessica Phillips - University of Toronto**, Stephanie Peacock, Andrew Bateman, Mark Lewis, Larry Dill, Mack Bartlett, Martin Krkosek |
| **12:00** | Evidence of behavioural-based assortative mating among divergent ecotypes of pumpkinseed sunfish (*L. gibbosus*)<br>**Shevon M. Comeau - University of Guelph**, B. W. Robinson |
| **12:15** | Walleye like it cool, smallmouth bass like it hot: predicting the walleye response to climate change and smallmouth bass expansion in Ontario inland lakes<br>**Thomas Van Zuiden - York University**, Sapna Sharma |
| **12:30** | Effects of lake habitat on diet and a trade-off between fall body size and condition in 0+ juvenile pumpkinseed sunfish (*L. gibbosus*)<br>**Patrick Sobchak - University of Guelph**, B. W. Robinson |

## Session 2A: Conservation Biology and Biodiversity – *LSB 103*

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|---|---|
| **1:45** | Assessing inter-annual and seasonal trends in polar bear body condition using adipose tissue lipid content<br>**Luana Sciullo - York University**, Gregory Thiemann, Nick Lunn |
| **2:00** | Modelling habitat suitability for critically endangered Taiwanese humpback dolphins (genus *Sousa*)<br>**Lauren Dares - Trent University**, John Y. Wang, Shih Chu Yang, Bradley N. White |
| **2:15** | Coyote diet and movement in Tommy Thompson Park<br>**Brenna Thompson - York University**, Brent Patterson, Gail Fraser |
| **2:30** | The effects of the Algonquin Provincial Park Wolf Moratorium<br>**Lynn Remmelgas - Lakehead University** |
| **2:45** | Evaluating landscape suitability for two threatened primates in the Bahian Atlantic Forest<br>**Cylita Guy - University of Toronto**, Becky E. Raboy |
| **3:00** | Examining the effects of connectivity and corridor quality on the viability of lion tamarinds in forest fragments<br>**Jacqueline Awad - Dosen - University of Toronto**, Nathan Schumaker, Becky E. Raboy |
| **3:15** | Investigating the role of habitat loss in bumble bee population declines<br>**Mariya Cheryomina - York University**, Sheila R. Colla, Laurence Packer, Bridget Stutchbury |
| **3:30** | Can synchrony among different species populations enhance biodiversity?<br>**Jurek Kolasa - McMaster University**, Janelle Gravesande, Matt P. Hammond |
| **3:45** | Plant and insect herbivore responses to drought and nitrogen fertilization in a restored tallgrass prairie and an old field<br>**Morgan Randall - University of Guelph**, Andrew S. MacDougall |
| **4:00** | Understanding interactions among determinants of invasion<br>**Michael Rogers - University of Guelph**, Andrew S. MacDougall |

## Session 2B: Avian Ecology and Behaviour – *LSB 106*

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|---|---|
| **1:45** | Females in control: Female sensitivity to predation risk shapes changes in courtship and reproductive behaviours<br>**Tin Nok Natalie Cheng - Western University**, Michael Clinchy, Liana Zanette |
| **2:00** | A tactic to stay alive: anti-predator behavioural responses affect physiology but not flight performance in high risk environments<br>**Benjamin Walters - Western University**, Michael J. Clinchy, Tin Nok Natalie Cheng, Chris Guglielmo, Liana Y. Zanette |
| **2:15** | Song control or vocal control system? The neural basis of learned call production in songbirds<br>**Shannon Mischler - Western University**, Emma J. Karlin, Scott A. MacDougall-Shackleton |
| **2:30** | Effects of simulated recurrent inclement winter weather on white-throated sparrows (*Zonotrichia albicollis*)<br>**Andrea Boyer - Western University**, Scott A. MacDougall-Shackleton |
| **2:45** | Quantifying the effects of perceived predation risk on the avian brain<br>**Emma Hobbs - Western University**, Scott A. MacDougall-Shackleton, Michael Clinchy, Liana Zanette |
| **3:00** | Coevolution of red crossbills (*Loxia curvirostra*) and their blood-borne parasites<br>**Erica Lovett - Western University**, Jamie Cornelius, Thomas Hahn, Beth MacDougall-Shackleton |
| **3:15** | Fear compromises parental care and the survival of post-fledged young<br>**Philip Dudeck - Western University** |

## Session 3A: Evolutionary Ecology – *LSB 103*

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|---|---|
| **10:15** | Detection of Fungal Effectors in Fungal-Plant Interactions to Examine Effector Evolution<br>**Craig Moore - University of Guelph** |
| **10:30** | Theoretical model examining the successional genetics of ring species complexes<br>**Michael Williamson - University of Guelph**, Cortland Griswold |
| **10:45** | Comparing Male and Female Breeding Phenology in Gray Treefrogs<br>**Hayley Roberts - Queens University**, Marc. J. Mazerolle, Stephen C. Lougheed |
| **11:00** | Why is gynodioecy a rare sexual system? Lessons from the *Lamiaceae*<br>**L. Ruth Rivkin- University of Guelph**, Andrea L. Case, Christina M. Caruso |
| **11:15** | The effect of mycorrhizal fungi and soil phosphorous level on selection for photosynthetic rate in *Lobelia siphilitica*<br>**Emma Bothwell - University of Guelph**, Hafiz Maherali |
| **11:30** | Killer Sperm: Genes and mechanisms of gametic isolation in nematode speciation<br>**Caressa Tsai - University of Toronto**, Janice Ting, Asher D. Cutter |
| **11:45** | Exploring the genomic basic of local adaptation in *Caenorhabditis briggsae*<br>**Stephanie Mark - University of Toronto** |
| **12:00** | Molecular genetics of distyly in *Turnera* (Passifloraceae)<br>**Paul Chafe - York University**, Joel Shore |
| **12:15** | The relationship between bat size and call frequency, as explained by directionality<br>**Jeneni Thiagavel - University of Toronto**, John M. Ratcliffe |

## Session3B: Innovations in Biology – *LSB 106*

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|---|---|
| **10:15** | Predicting the occurrence of persistant hotspots in ecosystem variables<br>**Matt Hammond - McMaster University**, Jurek Kolasa |
| **10:30** | Vocalisations, feeding and flight behaviour of nectar-feeding bats (*Glosophaga soricina* and *Leptonycteris yerbabuenae*)<br>**Meghan A. Murphy - University of Western Ontario**, Brock M. Fenton |
| **10:45** | The sustainable campus, active versus passive environmental engagements within neoliberal universities<br>**Ashleigh Uriasiz - York University** |
| **11:00** | Do fleas reduce gerbils' ability to properly assess food patch profitability?<br>**Ashael Raveh - University of Western Ontario**, Burt P. Kotler, Boris R. Krasnov, Zvika Abramsky |
| **11:15** | Low cost ddRAD applied to a model species (*Littorina saxatilis*) for studying microparapatric ecological speciation<br>**Tony Kess - University of Guelph**, Jeffery Gross, Fiona Harper, Elizabeth G. Boulding |
| **11:30** | Linking health and the microbiome in a wild mammal (*Tamiasciurus hudsonicus*)<br>**Colleen Bobbie - Laurentian University**, Nadia Mykytczuk, Albrecht Schulte-Hostedde |
| **11:45** | A tale of two species: experimental evolution in a study of speciation in *Caenorhabditis* nematodes<br>**Yifei Dai - University of Toronto**, Asher D. Cutter |
| **12:00** | What makes a better mother? Genetic mechanisms of asymmetric maternal influence on hybrid male sterility in *Caenorhabditis* nematodes<br>**Donglin Wang - University of Toronto**, Joanna Bundus, Asher Cutter |

## Session 4A: Community Ecology and Plant Biology – *LSB 103*

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|---|---|
| **1:45** | The role of life history in the evolution of unreduced gamates<br>**Julia M. Kreiner - University of Guelph**, Brian C. Husband |
| **2:00** | Plant sex when forced to stay small: bigger species can't do it (and why it matters)<br>**Amanda Tracey - Queen's University**, John M. Serafini & L.W. Aarssen |
| **2:15** | Different definitions of "community" influence conclusions in ecological research<br>**Carolyn Trombley - University of Guelph**, Karl Cottenie |
| **2:30** | Impacts of anthropogenic disturbance on arthopod biodiversity and community structure<br>**Chris Ho - University of Guelph**, M. Alex Smith |
| **2:45** | Dispersal in a Terrestrial Metacommunity<br>**Simon Denomme-Brown - University of Guelph** |
| **3:00** | Distribution and possible disperal vectors of *Caenorhabditis* nematodes at Koffler Scientific Reserve<br>**Tobias Mankis - University of Toronto** |
| **3:15** | Latitudinal variation in the herbivory and defence in common evening primrose<br>**Daniel Anstett - University of Toronto**, Ahern, J. R., and Salminen, J.P., and Marc T.J. Johnson |
| **3:30** | Controls on understory species composition and vegetation carbon pools following wildfire in interior Alaska<br>**Carolyn Gibson - University of Guelph**, Karl Cottenie, Evan S. Kane, Gregory Houle & Merritt R. Turetsky |
| **3:45** | Do plant populations adapt to soil biota?<br>**Phil Rekret - University of Guelph**, Hafiz Maherali |
| **4:00** | Proficiency vs. efficiency: a comparison of morphological and molecular techniques for community analyses<br>**Paul B.L. George - University of Western Ontario**, Zoë Lindo |

## Session 4B: Insect Ecology and Invasion Biology – *LSB 106*

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|---|---|
| **1:45** | The bees among us: Modelling occupancy of solitary bees in urban landscapes<br>**J. Scott MacIvor - York University**, Laurence Packer |
| **2:00** | Honey bee population dynamics in the presence of infection<br>**Matthew Betti - University of Western Ontario**, Q. Ali, L.M. Wahl, M. Zamir |
| **2:15** | Tagging effects do not explain variation in the trapping efficiency of sea lamprey in the St.Marys River<br>**Jessica Nelson - University of Guelph**, R.L. McLaughlin |
| **2:30** | Gene expression patterns in eusocial sweat bees using qRT-PCR<br>**David Awde - Brock University**, Adonis Skandalis, Miriam H. Richards |
| **2:45** | Resolving a conflict between molecular and morphological data: The systematic positon of the bee genus *Coelioxoides* Cresson (Apidae)<br>**Thomas M. Onuferko - York University**, Laurence Packer |
| **3:00** | Experimental warming decreases egg-development time in four libellulid dragonfly species<br>**Dachin Frances - University of Toronto**, Shannon J. McCauley |
| **3:15** | Consisent individual differences in behaviour of Sea Lamprey: Implications for control via trapping<br>**Adrienne R. McLean - University of Guelph**, R.L. McLaughlin |
| **3:30** | cGMP affects spatial memory, but not learning in the Honey Bee *Apis mellifer*: New assay<br>**Nadejda Tsvetkov - York University**, Bahar Madani, Lior Krimus, Philip Maciukiewicz, Suzanne MacDonald, Amro Zayed |
| **3:45** | Population structure of the Eastern Carpenter bee (*Xylocopa virginica*): Geographic barriers, climate change and anthropogenic distrubance<br>**Jess Vickruck - Brock University**, Miriam H. Richards |

## Poster Session - *LSB Lobby*

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|---|---|
| **1** | Effects of varying light intensities on the growth of a freshwater diatom, *Navicula* sp.<br>**Cassandra Sinclair - Lakehead University**, Nandakumar Kanavillil |
| **2** | The effects of climate change on the biotic interactions between walleye and smallmouth bass<br>**Lianna Lopez - York University**, Thomas Van Zuiden, Samanthan Stefanoff, Sapna Sharma |
| **3** | Primates under pressure: The influence of predation on space use and groupings patterns in *Leontopithecus chrysomelas*<br>**Alexandra S. Raposo - University of Toronto**, Becky E. Raboy |
| **4** | The Impacts of raccoons on nesting black-crowned night-herons, Toronto, ON, Canada<br>**Sabrina S. Conliffe - York University**, Gail S. Fraser |
| **5** | Effect of double-crested cormorants on the population and nest position of black-crowned night herons<br>**Lisa Rosenberger - York University**, Karen McDonald, Gail Fraser |
| **6** | The effects of urban features on bird window collisions<br>**Sean Chin - York University** |
| **7** | Mating behavior and natural history of *Tetragnatha straminea*: a field study of a long-jawed spider<br>**Victoria Simkovic - University of Western Ontario**, Maydianne C.B. Andrade |
| **8** | Triggers of sibling cannibalism in 'widow' spiderlings<br>**Ramanja Pakirathan - University of Toronto Scarborough**, Monica Mowery and Maydianne C.B. Andrade |
| **9** | Does herbivore saliva defuse the anti-herbivore defence that mutualistic fungal endophytes provide?<br>Michelle Binczyk, Andre Oliveira, **Min Seok Kim- York University**, Janarthany Parameswaran, Dawn R. Bazely, Mark Vicari |
| **10** | Assessing the predictability of spatiotemporal patterns in crop yield<br>**Jimmy Li - McMaster University**, Jurek Kolasa, Matthew Hammond |
| **11** | Chemosensory function and social behaviour in fruit fly larvae (*Drosophila melanogaster*)<br>**Rameeshay Mubasher - McMaster University**, Ana Campos, Reuven Dukas |
| **12** | Genomic correlates to kin recognition and invasiveness in a subterranean termite<br>**Tian Wu - University of Western Ontario**, Graham Thompson |
| **13** | Variation in the reproductive behavior of pumpkinseed sunfish (*L. gibbosus*) in different habitats of Ashby lake, ON.<br>**William Jarvis - University of Guelph**, BW Robinson |

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| **14** | Mapping quantitative trait loci for resistance to infectious salmon anemia in a commerical strain of Atlantic salmon (*Salmo salar*)<br>**Forest Dussault - University of Guelph**, B. Glebe, J.A.K. Elliott, F. Powell, E.G. Boulding |
| **15** | Social signalling in male guppies (*Poecilia reticulata*): relationship between colouration and dominance observed during male-male competition for mates<br>**Adrienn Goczi - University of Toronto**, Mitch Daniel, F. Helen Rodd |
| **16** | Alarm cue avoidance in normal and reversed photoperiod sea lamprey (*Petromyzon marinus*)<br>**Matthew Barnett - Algoma University** |
| **17** | Ritalin and its effect on second-generation guppy body size and male colouration<br>**Iris Yan Ling Chiu - University of Toronto**, Alex De Serrano, Helen Rodd |
| **18** | Effect of potential sea lamprey repellents on the behaviour of juvenile rainbow trout (*Oncorhynchus mykiss*)<br>**Noelle Stratton - Algoma University** |
| **19** | Targeted detection of multiple species at risk (*Unionidae*) using environmental DNA (eDNA)<br>**Charise Currier and Ana Cho- Trent University**, T. Morris, C. Wilson, J. Freeland |
| **20** | Quantifying ecological resilience using community data: a simulation approach<br>**Karl A. Lamothe - University of Toronto**, Donald A. Jackson, Keith M. Somers |
| **21** | How much has the York University STEM community embrace Open Access?<br>**Lucas Colantoni - York University**, Andrea Kosavic and Dawn R. Bazely |
| **22** | Tracking behavioural and neuronal responses to social pheromones: Insights from a non-social model<br>**Justin R. Croft - University of Western Ontario**, Alison L. Camiletti, Graham J. Thompson |
| **23** | An exploration of novel chemosensory alarm cues for sea lamprey (*Petromyzon marinus*)<br>**Istvan Imre - Algoma University** |
| **24** | Behavioural Reponses of adult sea lamprey (*Petromyzon marinus*) to predator and conspecific alarm cues: Evidence of additive effects)<br>**Istvan Imre - Algoma University** |
| **25** | Alarm cue avoidance behaviour in common white sucker (*Catostomus commersonii*)<br>**Istvan Imre - Algoma University** |

# NOTES

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| | | 4 | | | 5 | 7 | | |
| | | | | | 9 | 4 | | |
| 3 | 6 | | | | | | | 8 |
| 7 | 2 | | | 6 | | | | |
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| | | | | 8 | | | 9 | 3 |
| 4 | | | | | | | 5 | 6 |
| | | 5 | 3 | | | | | |
| | | 6 | 1 | | | 9 | | |

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| 5 | | 1 | | | | 6 | | 4 |
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| | | | | 9 | | | | |
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| 7 | | | | | | | | 6 |
| | | | | 2 | | | | |
| | 8 | | 5 | | 7 | | 6 | |
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| | 3 | | | | | | 5 | |
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| | | 1 | 7 | | | 9 | | 6 |
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| 1 | | | | | 5 | | | 4 |
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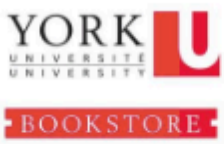


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