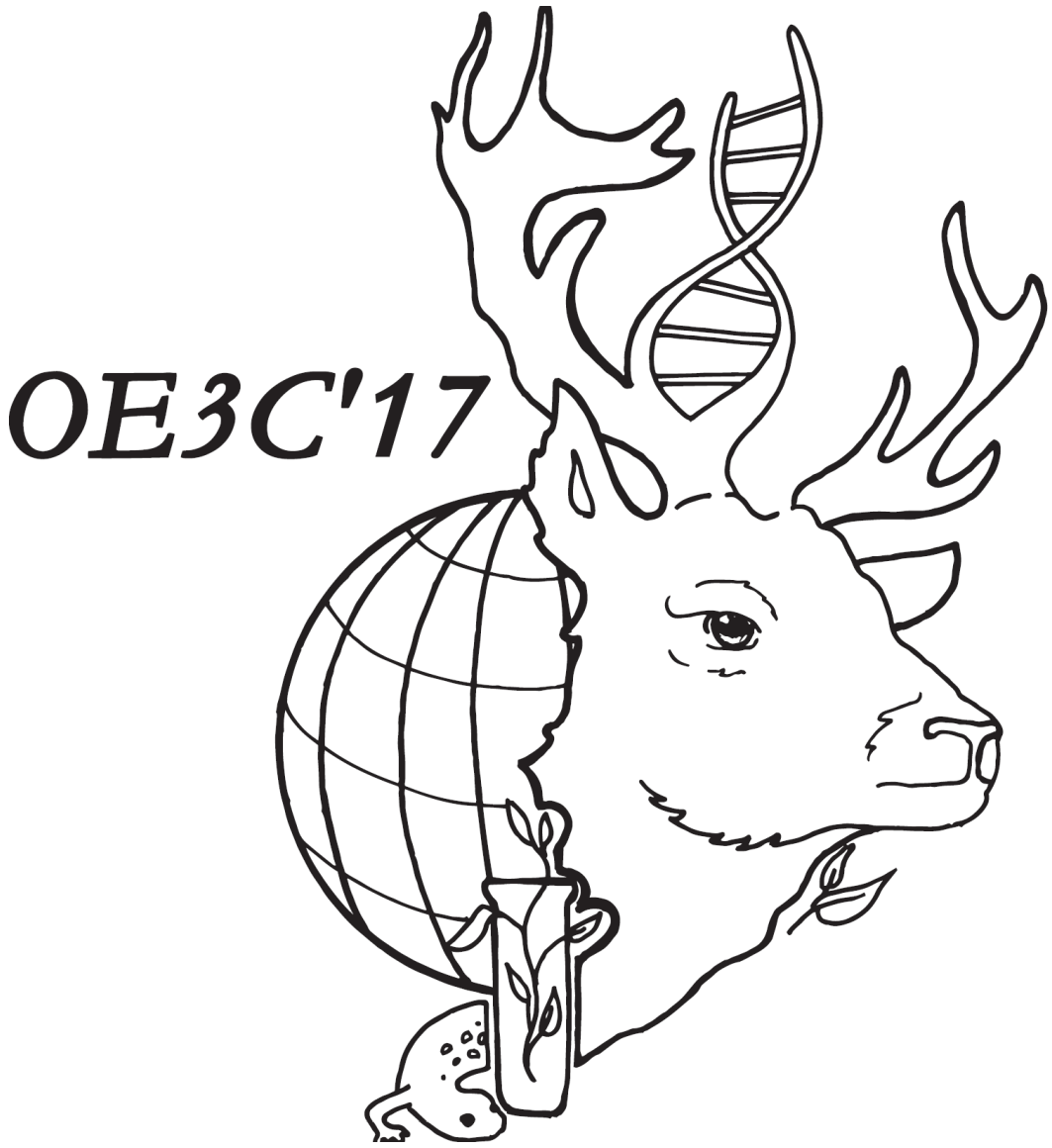
47TH ONTARIO ECOLOGY, ETHOLOGY, AND EVOLUTION COLLOQUIUM

May 18th-20th, 2017
Queen's University



PROGRAM CONTENT

WELCOME

Welcome to The Ontario Ecology, Ethology, and Evolution Colloquium 2017 (OE3C'17)!

For 47 years OE3C has brought together researchers from across Ontario, nearby provinces and states to share their work in the fields of ecology, ethology, and evolution. OE3C is entirely run by student volunteers from different Ontario institutions each year. This year's event was organized by a dedicated committee of 16 graduate and undergraduate students from the Queen's University Biology Department.

We are excited to welcome over 100 participants to OE3C'17 including researchers from Ontario, Quebec, and New York State. We have a diverse range of topics with six concurrent full length sessions, as well as a lighting talk session and poster event. We are proud to feature four plenary speakers who will present on their research and personal journeys.

OE3C is one of the largest graduate-student organized and focused events in Ontario. It has and will continue to provide researchers the opportunity to share their work, learn about other research, and provide networking opportunities to peers and faculty. We strive to make this event environmentally conscious, inclusive, collaborative, and engaging for all attendees.

On behalf of the 2017 organizing committee, welcome to OE3C'17 and enjoy your stay at Queen's University

Sincerely,

Dylan Sora & Anastasia Shavrova
OE3C 2017 Executive Organizers

Organizing Committee

Dylan Sora

Anastasia Shavrova

Muzzammil Abdur-Razak

Bronwyn Harkness

Joshua Alpern

Erin Suenaga

Drew Sauve

Anya Kochel

Eugene Sit

JieYuen Ong

Yihan Wu

Katherine Duchesneau

Huckleberry Nelson

Ying Chen

Chloe Montreuil-Spencer

Registration:

On **Thursday**, registration will be open from **7 - 11:00pm** at the Grizzly Grill (395 Princess St). On **Friday,** registration will be open from **7:15 – 8:15 am** and **9:30 - 10am** in the Biosciences Complex Atrium (116 Barrie St). On **Saturday** the final registration will be open from **8:00 – 9:00** am in the Biosciences Complex Atrium. Registration for OE3C 2017 includes a conference package, an OE3C'17 mug, an OE3C'17 tote bag, 2 breakfasts, 2 lunches, snacks during the poster session and Thursday and Friday socials, coffee at breaks, and two drink tickets for the poster session.

Onsite registration will be available both Thursday and Friday (for $70, preferably cash). This registration is for non-presenters only. It will include a OE3C'17 mug, 2 breakfasts, snacks during the poster session and Thursday and Friday socials, coffee at breaks and meal times; and one drink ticket for the poster session. It will not include lunches so those planning to register onsite should make arrangements.

Presentations:

Oral Presentations – **Full talks** will be a maximum of 15 minutes (12 minutes with 3 minutes for questions). Moderators will signal you at 10 minutes and 12 minutes, and asking you to wrap-up your presentation at 14 minutes. **Lightning talks** will be a maximum of 7 minutes (5 minutes with 2 minutes for questions). Moderators will signal you at 4 minutes and 5 minutes and ask you to wrap-up your presentation at 6 minutes. Please report to your scheduled room in the Biosciences Atrium **15 minutes before** your session begins, during the coffee breaks to load your **PowerPoint (.ppt) or PDF** file saved as **LastnameFirstnameSchool**, using a **portable USB drive** onto the computer. We also recommend sending us a copy of your presentation to oe3c2017@gmail.com 24 hours before your presentation day.

Poster Presentations - Posters should **NOT exceed dimensions of 3 ft. wide by 4 ft. long** (this is a vertical format). Posters will be set up in the atrium of the Biosciences Complex on an assigned poster board. Although the poster session runs from 5 – 7pm on Friday, we encourage presenters to hang their posters **Friday morning at 8:00am** and leave them up for the duration of the conference to encourage discussion during the meals and breaks. Posters that are not removed from poster boards by **Saturday at 4pm** during the last coffee break will be discarded.

Abstracts – In order to conserve paper a full abstract list will not be printed. If you wish to see a full list of presenter abstracts please go to http://www.queensu.ca/oe3c17/schedule-and-abstracts

T-Shirts:

OE3C'17 T-shirts will be available for pickup during registration. T-shirt purchases will be **cash only**. For those who pre-ordered T-shirts the price is $15 and will be given along with conference packages. Additional t-shirts will be available in a limited quantity for $18.

Parking:

If you have booked a residence room, parking passes are available at the front desk during check in. Rates are $14 per day or a week pass of $28. Parking on weekends is free in some lots. For a full list of available lots and rates please check Queen's Parking (www.queensu.ca/parking/regulations) or Kingston General Hospital Parking (www.kgh.on.ca/patients-families-and-visitors/getting-kgh-0).

Meals:

The opening reception will be held from 7–11:00pm on Thursday at The Grizzly Grill (395 Princess St) where appetizers and finger food will be served. Breakfast will be served in the Biosciences Complex Atrium (see campus map) from 7:15-8:15am on Friday and 8:00-9:00am Saturday, during morning registration. Lunches will be held in the Biosciences Complex Atrium Centre from 12:15-1:30pm Friday and Saturday. The poster session reception will be held from 5:00-7:00pm on Friday, in the Biosciences Complex Atrium. Finger foods and drinks will be served. After the poster session there will be a Friday social at The Queen's Grad Club (162 Barrie St) where additional snacks will be served.

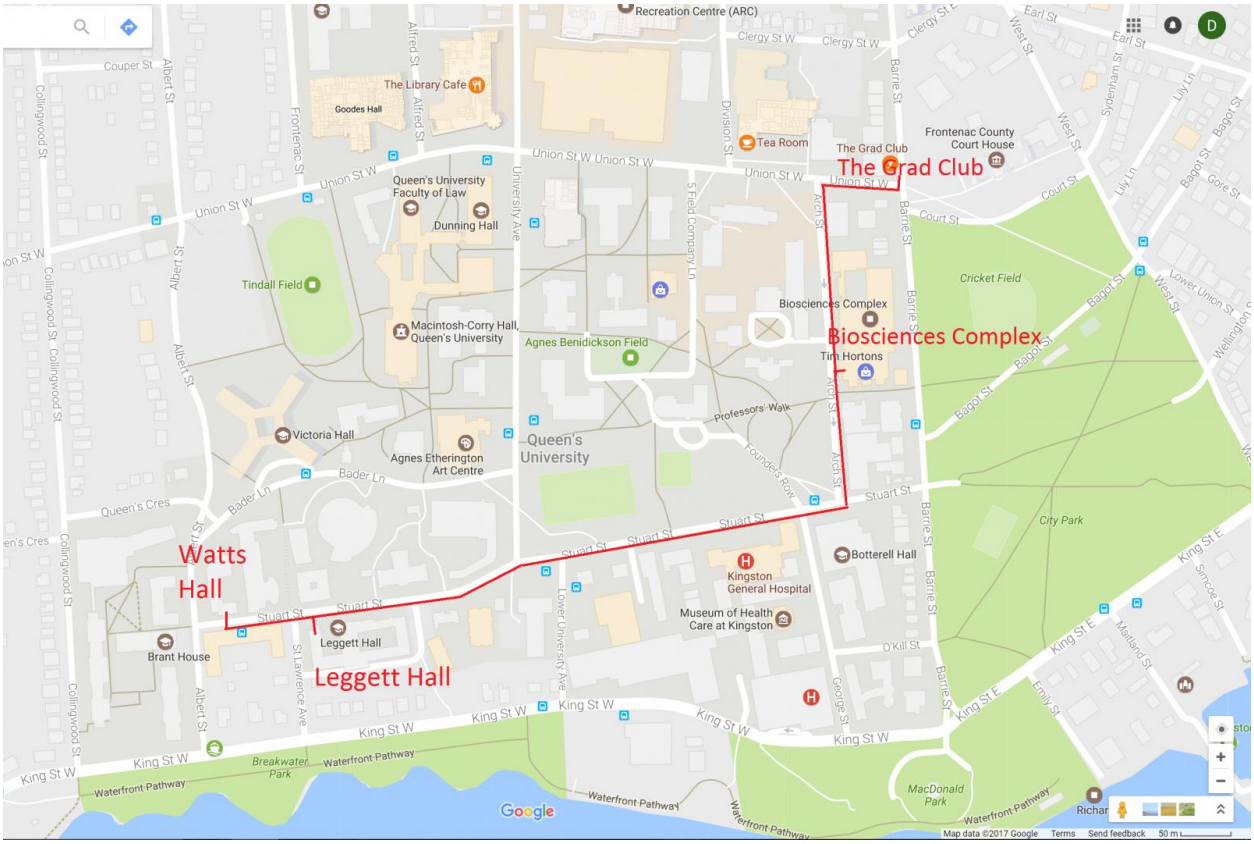
Dietary restrictions have been taken into consideration for all breakfast and lunches ordered. If you have any questions or concerns about food please do not hesitate to contact one of the OE3C'17 organizers.

Recommendations on Places to Eat / Things to Do in the City:

Queen's University is within walking distance to the Kingston downtown which features a number of restaurants and attractions. We recommend the following local establishment: The Grizzly Grill, Stone City Ales, Chez Piggy, Wooden Heads Gourmet Pizza, Tango Nuevo, Megalos, The Red House, Sir John's Public House, Le Chen Noir Bistro, Shushi Bar Da, Sima Sushi, Greco, Kingston Brewing Company, Harper's Burger Bar, Flavors of India, Golden Viet Thai Restaurant, Phnom-Penh Restaurant, and Mexico Lindo Y Que Rico. For a full list of downtown restaurants check out (http://www.downtownkingston.ca/dine).

Queen's University is located on the waterfront of Lake Ontario, so we encourage all guests to take advantage of the beautiful view as well as checking out historic downtown Kingston (weather permitting). Additionally, the following activities in Kingston may be of interest to visitors: Tour Historic Fort Henry, Visit Wolfe Island via the ferry, The Correctional Service of Canada Museum, visit the Agnes Etherington Art Centre or the Miller Museum of Geology & Mineralogy on Queen's Campus.

Campus Map



Venues

The Grizzly Grill

Thursday Night Social

395 Princess St

Biosciences Complex

Conference Location

116 Barrie St (Main entrance on Arch Street across from the Craine Building)

The Grad Club

Friday Social

162 Barrie St

Watts Hall

Queen's Residence

23 Lower Albert Street

Leggett Hall

Queen's Residence

194 Stuart St

PLENARY SPEAKERS

We are pleased to welcome four plenary speakers this year! All plenary sessions will take place in the Biosciences complex (Rm. 1101). Please refer to the OE3C 2017 schedule to find out when specific speakers are presenting.

DR. ROWAN BARRETT
Redpath Museum and Department of Biology
McGill University

Rowan Barrett is an Assistant Professor and Canada Research Chair in the Redpath Museum and Biology Department at McGill University, Montreal, Canada. He completed his Ph.D. at the University of British Columbia in 2010 and received postdoctoral training at Harvard University before taking up his current position. Dr. Barrett's work is focused on understanding the genetic basis of adaptation to changing environments. His research bridges theoretical and empirical approaches in population genetics, evolutionary ecology, and molecular biology to ask questions about the reciprocal interactions between ecological and evolutionary processes. He has pursued this research program with a variety of key study systems, including stickleback fish, deer mice, anolis lizards, and microbes.

DR. ANNE BELL
Director of Conservation and Education
Ontario Nature

Dr. Bell will recount her less-than-straightforward journey from an undergrad program in languages and literature to a senior management position with Ontario Nature, a charitable conservation organization that has been protecting wild species and wild spaces in Ontario for over 85 years. She will touch on milestones of her graduate work in environmental studies as well as some of the highlights and the heartbreaks of advocating for nature in the twenty-first century. She will share lessons learned about landing a job after university and provide insight on the joys and challenges of working in the not-for-profit sector.

Dr. Ben Evans
Department of Biology
McMaster University

Evolution of new sex chromosomes in frogs, and what it tells us about us.

In many species, sexual differentiation is crucial for reproduction and it is therefore surprising when the genetic control of this fundamental process evolves rapidly. To better understand how this rapid evolution occurs, my group at McMaster University studies frogs that have extensive variation in the genetic control of sex determination. We have identified sex-linked genes, and studied genomic processes in newly emergent sex chromosomes, such as recombination and natural selection. Our results demonstrate that novel triggers for sex determination can arise in rapid succession, and that genes linked to sex determination are frequently homologous to sex-linked genes in other very distantly related species, including humans. The implications of this work are to inform us how tightly regulated systems evolve, including the role of genomic redundancy in fast evolution.

DR. FRAN BONIER
Department of Biology
Queen's University

Broadly, research in my lab aims to understand how organisms cope with dynamic challenges. Cities are novel, challenging, and dynamic environments that can shape organisms in a variety of ways, influencing species distributions, behavior, physiology, and ecology. I will present some of our recent comparative work investigating how interactions among species and the challenges posed by urbanization influence distributions of birds in large cities across the globe.

CONFERENCE SCHEDULE

Thursday, May 18: The Grizzly Grill (395 Princess St)		
7:00-11:00	**Registration and Thursday Social:** *The Grizzly Grill*	
Friday, May 19: Queen's Biosciences Complex		
7:15-8:15	**Registration & Breakfast:** *Biosciences Atrium*	
8:15-8:30	**Opening Remarks & Welcome:** *Rm 1101*	
8:30-9:30	**Plenary 1:** *Rm 1101* **Dr. Rowan Barrett** (McGill University)	
9:30-10:00	**Registration & Coffee Break / Speakers Upload Talks:** *Biosciences Atrium*	
10:00-12:30	**Session 1A:** *Rm 1102* Conservation Biology and Climate Change	**Session 1B:** *Rm 1103* Genotype to Phenotype
12:15-1:30	**Lunch / Speakers Upload Talks:** *Biosciences Atrium*	
1:30-3:45	**Session 2A:** *Rm 1102* Behavioural Ecology and Evolution	**Session 2B:** *Rm 1103* Community Ecology and Species Interactions
3:45-4:00	**Coffee Break:** *Biosciences Atrium*	
4:00-5:00	**Plenary 2:** *Rm 1101* **Dr. Anne Bell** (Ontario Nature)	
5:00-7:00	**Poster Session:** *Biosciences Atrium*	
7:00- 11:00	**Friday Social:** *The Queen's Grad Club*	

CONFERENCE SCHEDULE *(CONT.)*

Saturday, May 20: Queen's Biosciences Complex		
8:00-9:00	**Breakfast & Registration:** Biosciences Atrium	
9:00-10:00	**Plenary 3:** *Rm 1101* **Dr. Ben Evans** (McMaster University)	
10:00-10:30	**Coffee Break / Speakers Upload Talks:** *Biosciences Atrium*	
10:30-12:45	**Session 3A:** *Rm 1102* Selection, Adaptation, and Speciation	**Session 3B:** *Rm 1103* Reproduction and Sexual Selection
12:45-2:00	**Lunch / Speakers Upload Talks:** *Biosciences Atrium*	
2:00-3:30	**Lightning Talks:** *Rm 1101*	
3:30-4:00	**Coffee Break:** *Biosciences Atrium*	
4:00-5:00	**Plenary 4:** *Rm 1101* **Dr. Fran Bonier** (Queen's University)	
5:00-5:30	**Student Awards & Closing Remarks:** *Rm 1101*	

Session 1A: Conservation Biology and Climate Change ***Friday May 19th, Biosciences Complex 1101***	
10:00	*Evaluation of bull trout (Salvelinus confluentus) passage behaviour at a nature-like fishway created following a partial dam removal at a headwater creek in a national protected area* **Brittany Sullivan- Carleton University**, Chris Carli, Taylor Ward, Robert J. Lennox, Mark K. Taylor, Steven J. Cooke
10:15	*A model species approach to cumulative effects assessment: Developing a metric for stress responses in lake trout (Salvelinus namaycush)* **Jeremy Ramshaw- University of Guelph**
10:30	*Batch photography as a novel, non-lethal method for identifying and vouchering fishes in freshwater fish biodiversity surveys* **Conrad Pratt- University of Toronto,** Nicholas Mandrak, Madolyn Mandrak
10:45	*Endangered endemic cyprinid minnow exhibits different spatial and temporal abundance patterns than other native and invasive species in a perennial desert stream* **Carolyn Trombley- University of Guelph**
11:00	*The effects of 'field realistic' neonic exposure on honey bees* **Nadia Tsvetkov- York University,** Amro Zayed
11:15	*Algal assemblages in subarctic lakes track 50 years of arsenic emissions from gold mining operations around Yellowknife (Northwest Territories, Canada)* **Branaavan Sivarajah- Queen's University,** Korosi JB2, Thienpont JR3, Blais JM3, and Smol JP1
11:30	*Constraints on treeline advance in a warming climate: a test of the reproduction limitation hypothesis* **Dasvinder Kambo- Queens's University,** Dr. Ryan Danby
11:45	*Impact of climate change on individual growth and survival* **Xueqi Wang- University of Guelph**
12:00	*Does high soil nitrate and potassium drive metabolic processes towards maximizing growth at the expense of drought tolerance?* **Harris Ivens- Queens University,** P. Grogan
12:15	*Reef flattening and coral erosion rate post-bleaching mass mortality in Maldives* **William Allison**

Session 1B: Genotype to Phenotype ***Friday May 19th, Biosciences Complex 1103***	
10:00	*The effects of ecological traits on the rate of molecular evolution in bony fish: a multivariate approach* **Jacqueline May- University of Guelph,** Dr. Zeny Feng, Dr. Sarah J. Adamowicz
10:15	*Genetic identity determines the relative effects of colonist demographics and genetics in the success of new populations* **James Sinclair- Queen's University,** Shelley E. Arnott, Katie L. Millette, and Melania E. Cristescu
10:30	*Using recursive dynamic Markov clustering for fine-grained classification of orthogroups* **Stephen Bond- National Human Genome Research Institute,** Andy Baxevanis

Session 1B: Genotype to Phenotype ***Friday May 19th, Biosciences Complex 1103***	
10:45	*Population genomic analysis reveals evidence of unidirectional, trans-Atlantic gene flow in a colonial seabird, the northern gannet (Morus bassanus)* **Nate Clark- Queen's University,** Timothy P. Birt, Gregory J. Robertson and Vicki L. Friesen
11:00	*An Assessment of Population Genomic Structure in Black Guillemots in North America* **Bronwyn Harkness- Queen's University,** Gregory J. Robertson, Vicki Friesen
11:15	*Protection from UV-induced DNA damage by melanin pigmentation in Daphnia melanica* **Cynthia Ulbing- Ithaca College,** Brooks Miner
11:30	*Transcriptomics of rapid development in a long-term evolution experiment* **Josh Alpern- Queen's University,** Dr. Tomas Babak, Dr. Adam Chippindale
11:45	*Habitat effects on brain form variation in polyphenic Pumpkinseed sunfish* **Caleb Axelrod- University of Guelph,** Beren Robinson, Frederic Laberge
12:00	*Phenological measurements of herbarium specimens reveal parallel clines in phenology of the invasive plant Lythrum salicaria in eastern and western North America* **Yihan Wu- Queen's University,** Rob Colautti
12:15	*Anthropogenic Debris, including Microplastics, found in Double-Crested Cormorants (Phalacrocorax auritus) from the Laurentian Great Lakes* **Monina Cepeda- University of Toronto,** Shane DeSolla, Kim Fernie, Chelsea Rochman

Session 2A: Behavioural Ecology and Evolution ***Friday May 19th, Biosciences Complex 1102***	
1:30	*Exploring the Evolution of Eusociality in a Primitively Eusocial Paper Wasp Using Population Genomics.* **Kathleen Dogantzis- York University,** Amy Toth, Amro Zayed
1:45	*Nocturnal flight and the origins of echolocation and diet in bats* **Jeneni Thiagavel- University of Toronto,** Clement Cechetto, Sharlene E. Santana, Lasse Jakobsen, Eric J. Warrant, John M. Ratcliffe
2:00	*Fear of predators has long-lasting effects on the brain and behaviour in wild animals* **Lauren Witterick- Western University,** Julia Hrynkiewicz, Scott MacDougall-Shackleton, Craig Bailey, Michael Clinchy, Liana Zanette
2:15	*Effects of corticosterone and social isolation on song stereotypy and the HVC in male zebra finches* **Pavlina Faltynek- Western University,** Kendra Sewall, Scott MacDougall-Shackleton
2:30	*Teaching a New Fish Old Tricks: A Novel Approach to Life Skills Training of Atlantic salmon (Salmo salar)* **Arun Dayanandan- Concordia University,** Dr. Grant E. Brown
2:45	*The Boys of Summer: Sex-Specific Patterns of Urban Habitat Use by Big Brown Bats* **Cylita Guy- University of Toronto**
3:00	*Anthropogenic effects on the perception of fear in African forest mammals* **Badru Mugerwa- Western University,** Michael Clinchy, David Macdonald and Liana Zanette
3:15	*Individual variation in Sea Lamprey behaviour has no implications on trapping success* **Emelia Myles-Gonzalez- University of Guelph**

Session 2A: Behavioural Ecology and Evolution ***Friday May 19th, Biosciences Complex 1102***	
3:30	*Fear of predators halves juvenile survival to recruitment and permanently handicaps the survivors* **Marek Allen- Western University,** M. Clinchy, and L.Y. Zanette

Session 2B: Community Ecology and Species Interactions ***Friday May 19th, Biosciences Complex 1103***	
1:30	*Assessing the effects of multiple stressors on zooplankton community structure in lakes of the Canadian Shield* **Erin Suenaga- Queen's University,** Dr. Shelley Arnott
1:45	*Assessing the capacity for phenotypic trait similarity to influence competition for limited resources* **Drew Anthony- University of Guelph,** Dr. Andrew MacDougall
2:00	*AM fungi and phosphorus availability do not modify root architecture independently of plant size* **Joshua Persi- University of Guelph,** Hafiz Maherali
2:15	*Comparison of Diets for Largemouth and Smallmouth Bass in Eastern Lake Ontario using DNA Barcoding and Stable Isotope Analysis* **Huck Nelson- Queen's University**
2:30	*Factors affecting decomposers and decomposition dynamics differ in boreal peatlands* **Carlos Barreto- Western University,** Dr. Zoë Lindo
2:45	*Population-Level Variation in Betula papyrifera Responses to Arbuscular and Ecto-Mycorrhizal Fungi* **Mackenzie Lauermeier- University of Guelph,** Dr. Hafiz Maherali
3:00	*Can a common invader impact community diversity by spreading shared enemies?* **Jason Verbeek- University of Toronto,** Dr. Peter Kotanen
3:15	*Frost stress susceptibility in an old field plant community* **Curtis Lubbe- Western University,** Dr. Hugh Henry
3:30	*Effects of resource manipulation on temperate grassland vegetation under a changing climate* **John Serafini- Queen's University,** Dr. Paul Grogan & Dr. Lonnie Aarssen

Session 3A: Selection, Adaptation, and Speciation ***Saturday May 20th, Biosciences Complex 1102***	
10:30	*Natural selection on phenology across the elevational range of an annual plant, Rhinanthus minor* **Dylan Sora- Queen's University,** Dr. Chris Eckert, Dave Ensing
10:45	*Selective consequences of herbivorous biological control agents in invasive populations of Lythrum salicaria* **Muzzammil Abdur-Razak- Queen's University,** Dr. Chris Eckert, Dr. Rob Colautti
11:00	*The Effects of Chance and Ancestry on Probability and Direction of Selection following an Ecological Niche Shift* **Andrea Lofano- McGill University,** Graham Bell
11:15	*Acclimation, body size, and thermal tolerance in a freshwater invertebrate* **Brooks Miner- Ithaca College,** Gabriella Ampem-Darko, Kathryn Dubyk

Session 3A: Selection, Adaptation, and Speciation ***Saturday May 20th, Biosciences Complex 1102***	
11:30	*The impact of a novel biotic interaction upon adaptation of phenology across a latitudinal cline* **Eugene Sit- Queen's University,** Dr. Rob Colautti, Dr. Chris Eckert
11:45	*Are Soldiers a Source of Genetic Novelty in Termites?* **Supriya Behl- Western University,** Graham Thompson
12:00	*The effect of city size on gene flow between urban and rural populations of Trifolium repens* **Cindy Prashad- University of Toronto**
12:15	*Glacial cycling drives rapid genomic divergence in the field vole (Microtus agrestis)* **Nicholas Fletcher- Cornell University,** Jeremy Searle, Jeremy Herman, Pelayo Acevedo, Joana Pauperio
12:30	*The role of allochrony in speciation* **Rebecca Taylor- Queen's University,** Vicki Friesen

Session 3B: Reproduction and Sexual Selection ***Saturday May 20th, Biosciences Complex 1103***	
10:30	*Intraspecific call divergence in the Spring Peeper* **Amanda Cicchino- Queen's University**, Nicholas A. Cairns, Stephen C. Lougheed
10:45	*The importance of egg size for variation in life history traits and behaviour of individuals in a polymorphic fish* **Louise Vernier- Hólar University College,** David Benhaïm, Bjarni Kristófer Kristjánsson & Camille Leblanc
11:00	*The effects of plant sex on the evolution of phenotypic plasticity in plant defences* **Bailey Ley- University of Toronto Mississauga,** Diego Carmona, Marc T.J. Johnson
11:15	*Gene regulatory context of honey bee worker sterility* **Raul Choorakkat Unnikrishnan- Western University,** Graham Thompson
11:30	*Flexible mate choice may contribute to ecotype assortative mating in pumpkinseed sunfish (Lepomis gibbosus)* **Will Jarvis- University of Guelph,** Shevon M. Comeau, Scott F. Colborne, Beren W. Robinson
11:45	*Coevolution between plant reproductive traits and defence* **James Santangelo- University of Toronto,** Dr. Marc T.J. Johnson
12:00	*Does hybridization contribute to range-wide population genetic structure in a coastal dune plant?* **Adriana Lopez-Villalobos- Queen's University,** Christopher G. Eckert
12:15	*Molecular Approach to Sperm Heteromorphism* **Emma Whittington- Syracuse University**
12:30	*Life history trade-offs in extreme conditions of long-term laboratory evolved populations selected for early and late life fertility.* **Anastasia Shavrova- Queen's University,** Adam Chippindale

Lightning talks ***Saturday May 20th, Biosciences Complex 1101***	
2:00	*Can herbivores affect the evolution of floral traits in response to pollinator declines?* **Hazel Panique- University of Guelph**
2:07	*Investigating genomic factors that promote speciation in Willow and Alder flycatchers* **Ashley Bramwell- University of Toronto Scarborough**
2:14	*Testing Mechanisms of Phenotypic Plasticity in Facilitating Survival in a Novel Environment* **Shengpei Wang- Syracuse University**
2:21	*On the genetic basis of hygienic and overwintering behaviour in the Honeybee* **Harshilkumar Patel- York University,** Clement Kent, Tanushree Tiwari, Stephen Rose, Kathleen Dogantzis, Alicia Dey, Amro Zayed
2:28	*Evaluation of Flower Visitor Populations of Pumpkin and Squash (Cucurbita spp.) Crops in Ontario* **Susan Willis Chan- University of Guelph,** Elaine Roddy, Jim Chaput, Beatrice Chan, Nigel E. Raine
2:35	*Effects of late social exposure to conspecific males on response to courtship song in isolate-reared female zebra finches* **Helen Lai- McGill University**
2:42	*Insights into post-glacial colonization of northern environments: Using insect phylogeny to determine the role of biological traits* **Michelle Pyle- University of Guelph,** Sarah J. Adamowicz, Karl Cottenie
2:49	*Assessing the effectiveness of remote sensing in creating Essential Biodiversity Variables to monitor biodiversity change* **Marie-BÃ Leduc- University of Ottawa**
3:56	*Dissecting the genetic underpinnings of innate immunity behavior in Apis mellifera (honey bee)* **Tanushree Tiwari- York University,** Clement Kent, Harshil Kumar Patel, Stephen Rose, Kathleen Dogantzis, Alivia Dey, Amro Zayed
3:01	*Understanding multitrophic interactions in vineyards exposed to different diversification and alternative ecological systems* **Heather VanVolkenburg- Brock University**
3:09	*Determining if Ntu affects female rejection of heterospecific males during courtship in Drosophila species* **Joshua Isaacson- Western University**

Poster Session ***Friday May 19th, Biosciences Atrium***	
1	*Relation of Chorusing Intensity to Temperature Across Latitudes of Temperate Frogs* **Ying Chen- Queen's Univeristy**
2	*Effects of Urbanization on Fish Community Distribution in the Rouge Watershed* **Russell Turner- University of Toronto,** Marie-Jose Fortin and Chris Edge
3	*Measuring the impact of climate change on temperate forest growth in the Algonquin-to-Adirondack region* **Mike Stefanuk- Queen's University - School of Environmental Studies,** Ryan Danby
4	*Modeling Caribou Populations using a Spatial Population Viability Analysis Model in a Heterogeneous Landscape* **Boyan Liu- University of Guelph**

5	*Genetic and Morphological insights into Lake Whitefish of the Lower Northwest Passage* **Rute Carvalho- Queen's University,** F Fan, P Li, P van Coeverden de Groot, G Element, and S Lougheed
6	*Investigating the Effects of Climate Change on the Diversity of Quebec Mammals* **Cassia Foley- McGill University**
7	*Elevated CO2 alleviates decreased freezing tolerance under high nitrogen in the grass, Poa pratensis* **Ricky Kong- Western University,** Hugh Henry
8	*Thermal reaction norms of parental behavior in the biparental burying beetle* **JieYuen Ong- Queen's University,** Fran Bonier
9	*Is Seed Count an Appropriate Estimation of Fitness?* **Lina Wen- Carleton University**
10	*Assessing the potential bioremediation of cyanobacterial blooms, Microcystis aeruginosa, by the use of Viviparus georgianus* **Sofia Kokkinakis - Queen's University**
11	*Ultrastructural Characteristics of bundle Sheath Cells in NADP-ME and NAD-ME Subtypes of C4 Photosynthesis: A comparative Approach* **Natalia Robert-Nunez- University of Toronto,** Rowan Sage, Matt Stata
12	*Meta-analysis of functional diversity of root endophytes* **Katherine Duchesneau- Queen's University**
13	*Investigating the natural movements of Smallmouth Bass in Lake Ontario and their response to displacement* **Adam Rupnik- Queen's University**
14	*Behavioral Ecology of an Invasive Pest: Nutritional Geometry of Drosophila suzukii* **Yvonne Young- Wilfrid Laurier University,** Tristan Long
15	*Colony-specific genetic markers for the assessment of hunting impact on thick-billed (Uria lomvia) and common (Uria aalge) murres* **Brody Crosby- Queen's University,** Anna Tigano (Tigano A.), Greg Robertson (Robertson G.J.), and Vicki Friesen (Friesen V.L.)
16	*How Big is Too Big? The Effect of Tracking Device Size and Antenna Length on Profile Drag of Trout* **Rebecca Manouchehri- Carleton University,** R.J. Chlebak, S.J. Cooke, J.W. Dawson
17	*Plant stimuli-responsive biodegradable polymers for the use in timed release fertilizer coatings* **Spencer Heuchan- Western University,** Hugh Henry, Elizabeth Gillies
18	*Social learning and microbiome in Drosophila melanogaster* **Heather Malek- Wilfrid Laurier University,** Tristan AF Long
19	*Trail Impacts along the K & P Trail and the Cataraqui Trail* **Zili Xie- School of Environmental Studies, Queen's University**
20	*A Search for Signal for Nectarivory in Avian Glucose Transporter 2* **Tooba Shah- University of Toronto Scarborough,** Alex M. Mykra, Kenneth C. Welch Jr.
21	*Characterization of novel hypothetical proteins in enterobacteria phag* **Jordan Silke- University of Ottawa,** Xuhua Xia
22	*The Effects of Fear Mediated Immune Response in Dragonfly Larvae (leucorrhinia intacta)* **Sunanda Tah- University of Toronto Mississauga,** Shannon J. McCauley
23	*Risk-based reproductive allocation across an elevational gradient in seasonality* **Sydney Rotman- Queen's University,** Dr. Chris Eckert, Dave Ensing

ACKNOWLEDGEMENTS

OE3C would not be possible without the generous support of numerous organizations. The organizers of OE3C would like to extend a special thanks to our sponsors. We would also like to extend a special thank-you to members of the Department of Biology who supported this event through contribution of their valuable time, namely: Davin Carlson and Dr. Brian Cumming, as well as all faculty who volunteered as adjudicators.

School of Graduate Studies

Office of The Vice Provost and
Dean of Student Affairs

Canadian Society for
Ecology and Evolution