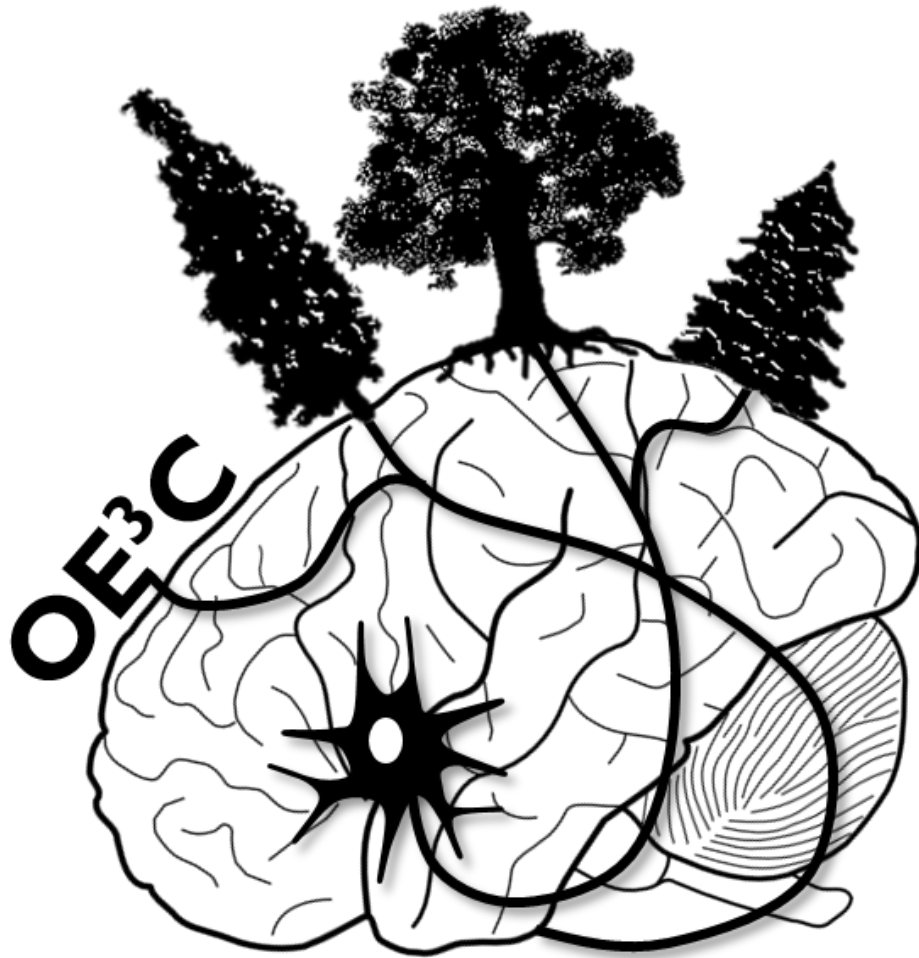


ONTARIO ECOLOGY, ETHOLOGY, AND EVOLUTION COLLOQUIUM



MAY 8-10, 2014

UNIVERSITY
of GUELPH

PROGRAM CONTENT

Introduction and Welcome	3
2014 Organizing Committee	4
Important Information	5
Campus Map	7
Plenary Speakers	8
Conference Schedule	9
Talk Sessions	11
Posters	16
Acknowledgements	18

INTRODUCTION AND WELCOME

Welcome to the 44th Ontario Ecology, Ethology, and Evolution Colloquium!

For decades, OE³C has brought together top researchers across Ontario to share findings in an intimate academic environment. Originally known as the Ontario Ecology and Ethology Colloquium, the recent addition of the third E – Evolution – significantly broadened the scope of this conference. This year, the Ontario Colloquium, with all of its three Es, is hosted by graduate students of the University of Guelph's Biology and Psychology departments.

We are happy to welcome over 120 top researchers to share their exciting findings. Presentation topics are highly diverse, ranging from animal welfare, climate change, and conservation biology, to evolutionary psychology and social behaviour. We are also proud to have four plenary speakers present the most recent and intriguing findings within the fields of ecology, ethology, and evolution.

OE³C is a great way for young researchers to receive constructive feedback about their research, and for faculty to recruit, and interact with, top prospective students. Like past OE³Cs, this conference was entirely organized by a subset of dedicated graduate students. Together, we strive to make this conference a friendly, collaborative, fun, and positive academic experience for all.

Please enjoy your stay at Guelph and welcome to OE³C 2014!

Sara Kafashan

OE³C 2014 Organizing Committee Member

2014 ORGANIZING COMMITTEE

OE³C 2014 would not be possible without the hard work and dedication of the following individuals:

Jamie Ahloy Dallaire

Kate Eisen

Kelsy Ervin

Sara Kafashan

Tony Kess

Heather Kinkaid

Richard Matta

Zachary Ramsay

IMPORTANT INFORMATION

Registration

On Thursday, registration will be open from 5:30pm-7pm in the Banquet hall. Finger foods and drinks will be served.

On Friday and Saturday, registration will be open from 7:30-8:30 am in the Thornborough Building.

Registration for OE³C 2014 includes a conference package, two dinnertime receptions, other meals, coffee breaks, and two drink tickets.

Oral Presentations

Please report to your scheduled room in the Thornborough Building 15 minutes *before* your session begins so a moderator can help you load your presentation onto the audio-visual equipment.

All presentations will be loaded onto the room computer prior to the beginning of the session. To avoid compatibility issues, presentations should be saved as a **powerpoint file (.ppt)**.

Oral presentations are 15 minutes maximum (12 minutes, with 3 minutes for questions). Moderators in your session will signal to you at 10 minutes, and will ask you to wrap up at 14 minutes.

Please be prompt and respectful to help us stay on schedule!

Poster Presentations

Poster boards will be set up in the atrium of the Science Complex. Please feel free to hang your poster anytime after 1pm with the materials provided.

Please ensure your poster is no more than 4ft by 3ft.

Light snacks and drinks will be served during the poster session.

Be sure to remove your poster after the session is over. Unclaimed posters will be discarded by the end of the conference.

T-Shirts

Pre-ordered t-shirts will be handed out with your registration package.

Extra t-shirts will be available for purchase (\$15 each) at the registration desk.

Parking

Parking is available on campus (see parking availability on the campus map).

Meals

The opening reception will be held from 5:30-7:00 pm on Thursday evening (during registration), in XXXXX (see campus map). Finger foods and drinks will be served.

Breakfast with coffee, tea, or juice, will be served from 7:30-8:30 am on Friday and Saturday (during morning registration), in the Thornborough Building (see campus map).

Lunches will be held on Friday and Saturday in XXXX (see campus map).

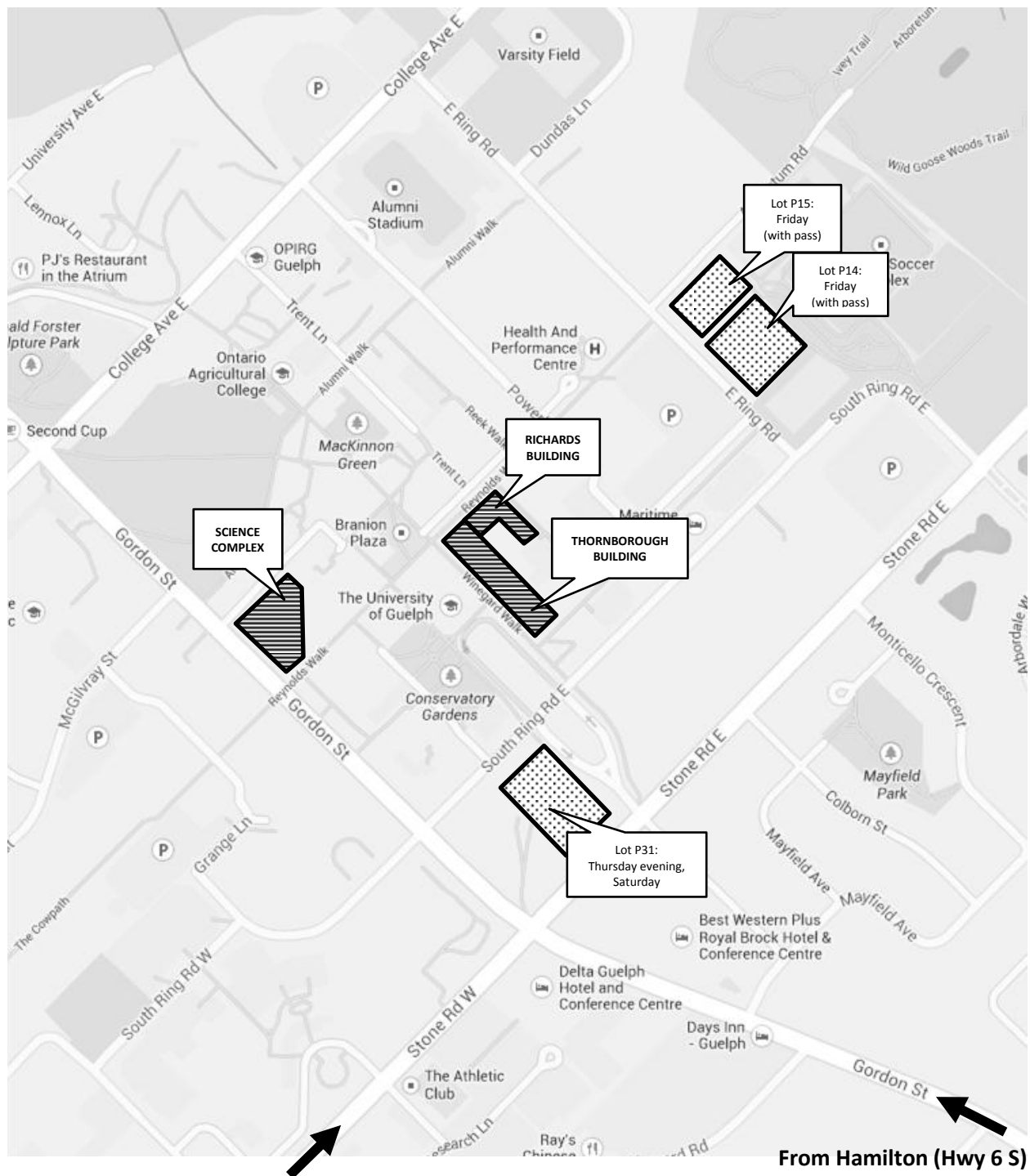
The poster session reception will be held from 4:30-7:00 pm on Friday evening, in the Science Complex (see campus map). Finger foods and drinks will be served.

Accommodation

On-campus housing will be in the East side residence buildings (see campus map). Off-campus housing will be at the Delta Hotel (see campus map).

Check in is 3:00PM and check out is 11:00AM.

CAMPUS MAP



From Hanlon Pkwy (Hwy 6 N)
North from 401, exit 295
South from Hwy 7

From Hamilton (Hwy 6 S)
From 401, exit 299

CAMPUS MAP

Venues:

Science Complex Atrium



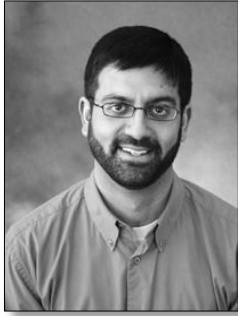
Thornborough Building



Richards Building



PLENARY SPEAKERS



Dr. Hafiz Maherali

Department of Integrative Biology, University of Guelph

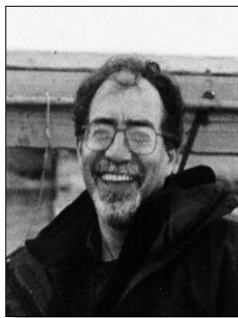
What maintains a 400 million year old trophic interaction? Exploring evolutionary causes and ecological consequences in the mycorrhizal symbiosis



Dr. Nicole Mideo

Department of Ecology and Evolutionary Biology, University of Toronto

Explaining the complex lives of malaria parasites



Dr. Bennett Galef

Department of Psychology, Neuroscience, & Behaviour, McMaster University

Social influences on the food choices of Norway rats: Behaviour, Neuroscience, and Molecular Biology



Dr. Amy Newman

Department of Integrative Biology, University of Guelph

Title TBA

CONFERENCE SCHEDULE

Thursday, May 8 <i>Science Complex Atrium</i>	
5:30-7:00	Registration and opening reception
7:00-8:00	Plenary speaker: Hafiz Maherali What maintains a 400 million year old trophic interaction? Exploring evolutionary causes and ecological consequences in the mycorrhizal symbiosis
Friday, May 9	
7:30-8:30	Registration and breakfast
8:30-9:30	Plenary speaker: Nicole Mideo Explaining the complex lives of malaria parasites <i>Room TBA</i>
9:30-10:00	Coffee break
10:00-12:00	Session 1A: Evolutionary Ecology <i>Room TBA</i>
	Session 1B: Aquatic Ecology <i>Room TBA</i>
12:00-1:15	Lunch
1:15-3:00	Session 2A: Conservation Biology and Biodiversity <i>Room TBA</i>
	Session 2B: Avian Ecology and Behaviour <i>Room TBA</i>
3:00-3:30	Coffee break
3:30-4:30	Plenary speaker: Bennett Galef Social influences on the food choices of Norway rats: Behaviour, Neuroscience, and Molecular Biology <i>Room TBA</i>
4:30-7:00	Poster Session and dinner reception <i>Science Complex Atrium</i>

CONFERENCE SCHEDULE

Saturday, May 10	
7:30-8:30	Registration and breakfast
8:30-9:45	Session 3A: Animal Welfare and Enrichment <i>Room TBA</i>
	Session 3B: Evolution of Behaviour <i>Room TBA</i>
9:45-10:15	Coffee break
10:15-12:15	Session 4A: Social Behaviour and Mate Selection <i>Room TBA</i>
	Session 4B: Climate Change and Invasion Biology <i>Room TBA</i>
12:15-1:30	Lunch
1:30-3:45	Session 5A: Community Ecology <i>Room TBA</i>
	Session 5B: Insect Ecology and Behaviour <i>Room TBA</i>
3:45-4:15	Coffee break
4:15-5:15	Plenary speaker: Amy Newman Title TBA <i>Room TBA</i>
5:15-5:30	Student awards

TALK SESSIONS

Session 1A: Evolutionary Ecology	
<i>Friday May 9, Room TBA</i>	
10:00	Kate Eisen, Andrea L. Case, and Christina M. Caruso <i>A phylogenetic analysis of gynodioecy and its correlates in the flowering plants</i>
10:15	L. Ruth Rivkin, Andrea L. Case, and Christina M. Caruso <i>The mechanisms of frequency-dependent selection in gynodioecious <i>Lobelia siphilitica</i></i>
10:30	Harrish Nithianandan, Kemavijojana Rajkumar, Gausiha Rathitharan, Charmaine Condy, and Maydianne C. B. Andrade <i>Efficacy of DNA extractions across various developmental stages in black widow spiders</i>
10:45	Nathan S. Upham, Benjamin J. Evans, and Bruce D. Patterson <i>Testing for adaptive radiation and ecological constraint in a major lineage of rodents (Hystricomorpha, Caviomorpha)</i>
11:00	Joseph Anthony (Tony) Kess, Fiona Harper, and Elizabeth Boulding <i>Detecting genomic patterns of ecological adaptation in Galician <i>Littorina saxatilis</i> ecotypes through QTL mapping</i>
11:15	Jessica L. Zung, Jessica R. K. Forrest, Maria Clara Castellanos, James D. Thomson <i>Bee- to bird-pollination shifts in <i>Penstemon</i>: Effects of floral-lip removal and corolla constriction on bumble bee preference</i>
11:30	Dylan Sora and Brian Husband <i>Using flow cytometry to access the genetic and environmental factors influencing unreduced gamete production in <i>Brassica</i></i>
11:45	Benjamin L. S. Furman and Ben Evans <i>Phylogenomics of African clawed frogs (<i>Xenopus</i>): Implications for evolutionary dynamics of sex chromosomes</i>
Session 1B: Aquatic Ecology	
<i>Friday May 9, Room TBA</i>	
10:00	Matthew Hryciyshyn, Jonathan Witt, and Teresa Crease <i>Molecular biogeography of the amphipod genus <i>Hyalella</i> in North America</i>
10:15	Jillian Moran, Natalie Jones, and Benjamin Gilbert <i>Are species larger at high latitudes? Testing latitude-body size relationships in ectotherms</i>
10:30	Viviana Astudillo-Clavijo and Hernan Lopez-Fernandez <i>Ecomorphological diversification of neotropical cichlids</i>
10:45	C. S. Mesher and J. D. Ackerman <i>Title TBA</i>
11:00	Rakesh Mistry and Josef Ackerman <i>The selective feeding behaviours of adult and juvenile freshwater mussels under flowing conditions</i>
11:15	István Imre, Grant E. Brown, and Nicholas S. Johnson <i>Ring the alarm: Behavioural manipulation of sea lamprey populations with damage-released alarm cues and predator cues</i>
11:30	S. Tuttle-Raycraft and J. D. Ackerman <i>The effects of suspended sediment on the suspension feeding of unionid mussels</i>
11:45	Dori Gao and Josef D. Ackerman <i>Including ecology to particle capture mechanisms: The effects of oscillation on particle capture</i>

Session 2A: Conservation Biology and Biodiversity	
<i>Friday May 9, Room TBA</i>	
1:15	S. Cotroneo U. G. Wortmann, and Marc Laflamme <i>A window into our evolutionary past: Mazon Creek Lagerstätten siderite concretions</i>
1:30	Sara J. Mason and Guy M. Narbonne <i>Small Ediacaran fronds of Mistaken Point</i>
1:45	M. Alex Smith, Winnie Hallwachs, and Daniel H. Janzen <i>Elevation and phylogenetic diversity on neotropical arthropods</i>
2:00	S. K. Monckton <i>Describing a group of Chilean bees, Chilicola (Heteroediscelis)</i>
2:15	Toby J. Thorne and M. Brock Fenton <i>The use of Great Lakes islands by migrating bats</i>
2:30	Kayla J. Gradil, Chris C. Wilson, Anthony P. Farrell, and Bryan D. Neff <i>The adaptive capacity of thermal tolerance: Reintroduction of Atlantic salmon into Lake Ontario</i>
2:45	J. Gibson, S. Shokralla, D. J. Baird, T.M. Porter, and M. Hajibabaei <i>Improving the power and efficiency of biodiversity assessment through the use of DNA metasytematics and next-generation sequencing</i>
Session 2B: Avian Ecology and Behaviour	
<i>Friday May 9, Room TBA</i>	
1:15	Tara M. Farrell, Alice Cui, and Scott A. MacDougall-Shackleton <i>Do stressful conditions in early-life affect song preferences in adult female European starlings (Sturnus vulgaris)?</i>
1:30	Pavlina Faltynek <i>The effects of corticosterone on birdsong in the adult zebra finch</i>
1:45	Adam Piraino, David Sherry, and Scott MacDougall-Shackleton <i>Sex differences in myelination of the song control system</i>
2:00	Shannon K. Mischler and Scott A. MacDougall-Shackleton <i>HVC is activated by the production of the gargle call in the black-capped chickadee (Poecile atricapillus)</i>
2:15	L. A. Grieves, D. M. Logue, and J. S. Quinn <i>Ready to fight: Reliable predictors of aggression in a joint-nesting nonpasserine bird</i>
2:30	Cody J. Dey and James S. Quinn <i>Self-organization and individual attributes influence the formation of dominance hierarchies in a group-living bird</i>
2:45	E. Bothwell, R. Montgomerie, S. C. Loughheed, and P. R. Martin <i>Body size divergence is greater among sympatric species of birds in warm, but not cool, environments</i>

Session 3A: Animal Welfare and Enrichment	
<i>Saturday May 10, Room TBA</i>	
8:30	Heather Y. McDonald Kinkaid, Yvonne van Zeeland, Nico J. Schoemaker, and Georgia J. Mason <i>Using comparative methods to investigate welfare in captive Psittaciformes: Are there ecological determinants?</i>
8:45	Jamie Ahloy Dallaire and Georgia J. Mason <i>Rough-and-tumble play prepares juvenile male mink for adult sexual behaviour by masculinizing them</i>
9:00	Georgia Mason and Rebecca Meagher <i>Having a ball: Mink given simple environmental enrichments are calmer and more fertile</i>
9:15	Tyler Pollock, Christian Moreno, Lida Sanchez, and Emanuel Mora <i>Wound healing in the wing membrane of the Cuban big fruit-eating bat (Artibeus jamaicensis)</i>
9:30	Cordellie C. N. DuBois, Emily M. Zakrajsek, Derek. B. Haley, and Katrina Merkies <i>Validation of triaxial accelerometers to measure the lying behaviour of adult domestic horses</i>
Session 3B: Evolution of Behaviour	
<i>Saturday May 10, Room TBA</i>	
8:30	Sara Kafashan <i>Biological markets: A paradigm for understanding human friendships</i>
8:45	Joshua Gonzales and Sandeep Mishra <i>For the win: Risk-sensitivity theory in football decision-making</i>
9:00	Amanda M. Rotella <i>Skepticism of the predictive value of cooperative acts</i>
9:15	Kevin R. Abbott and Thomas N. Sherratt <i>Predator decision-making and the evolution of imperfect Batesian mimicry</i>
9:30	Adam Sparks and Larry Fiddick <i>Strategic morality: Who condemns infidelity?</i>

Session 4A: Social Behaviour and Mate Selection	
<i>Saturday May 10, Room TBA</i>	
10:15	R. Matta, A. N. Tiessen, M. M. Kivlenieks, A. M. Meersseman, Y. O. Adjei-Afriyie, and E. Choleris <i>The effects of dorsal hippocampal dopamine D1-type receptor inhibition on social learning, food intake, and social interactions in male and female mice</i>
10:30	Carling M. Baxter and Reuven Dukas <i>Factors affecting male mate choosiness in fruit flies</i>
10:45	Trinh Nguyen and Amanda Moehring <i>Battle of the sexes: May the best fly win in reproduction</i>
11:00	Emily Martin and Tristan Long <i>More than kin and less than kind: Preferences and consequences of consanguineous matings</i>
11:15	Adam R. Reddon, Constance O'Connor, Susan Marsh-Rollo, Sigal Balshine, Magdalena Gozdowska, and Ewa Kulczykowska <i>Brain levels of isotocin and vasotocin are related to status and social behaviour in a cooperatively breeding cichlid fish</i>
11:30	Constance O'Connor, Susan Marsh-Rollo, Sergio Cortez Ghio, Kristina Hick, Joanne Tan, Marian Wong, Adam Reddon, Sigal Balshine, Nadia Aubin-Horth <i>The evolution of sociality: Differences in molecular pathways between social and non-social cichlids</i>
11:45	Humera Siddiqui, Luciana Baruffaldi, and Maydianne C. B. Andrade <i>Chemical confusion: Sex pheromones trigger mistaken identity by male widow spiders</i>
12:00	Patrick D. Moldowan, Ronald J. Brooks, and Jacqueline D. Litzgus <i>Turtles with teeth: Tomiodont morphology and functional significance in the painted turtle (Chrysemys picta)</i>
Session 4B: Climate Change and Invasion Biology	
<i>Saturday May 10, Room TBA</i>	
10:15	Nicola Day, Kari E. Dunfield, and Pedro M. Antunes <i>Plant soil feedbacks along an invasion chronosequence</i>
10:30	Miranda Chen and Sapna Sharma <i>Predicting the effects of climate change on lake trout (Salvelinus namaycush) distributions in Ontario</i>
10:45	Thomas Van Zuiden and Sapna Sharma <i>Predicting the effects of climate change on walleye (Sander vitreus) distributions in Ontario lakes</i>
11:00	Zachary Teitel and Lesley G. Campbell <i>Demographic consequences of soil moisture variation for an invasive, hybridizing weed</i>
11:15	Nao Ito, Laurence Packer, and Gail Fraser <i>Application of species distribution models for the management of the European fire ant</i>
11:30	Michael J. L. Peers, Morgan Wehtje, Daniel H. Thornton, and Dennis L. Murray <i>Effects of climate change on Canada lynx at their southern edge</i>
11:45	Cordero, L. <i>Can globally noxious species be controlled?: Some insights from southern Brazil</i>
12:00	Ken A. Thompson, Brian C. Husband, and Hafiz Maherali <i>The influence of physiological traits on climatic niche occupancy and competitive ability in the polyploid plant, Chamerion angustifolium (Onagraceae)</i>

Session 5A: Community Ecology	
<i>Saturday May 10, Room TBA</i>	
1:30	Eric Harvey and Andrew MacDougall <i>The interactive effect of nutrient enrichment and habitat destruction on consumer-resource alpha and beta-diversity across habitat sizes.</i>
1:45	Rebecca J. Parker, Lesley G. Campbell, and Eric De Noronha Vaz <i>The nettle in the hay stack: Tracking pollen abundance to locate small plant populations</i>
2:00	Christopher Blackford and Benjamin Gilbert <i>The effects of germination segregation on plant height between two native Californian grasses</i>
2:15	Deirdre E. Loughnan and Benjamin Gilbert <i>The effects of competition and soil moisture on variation in physiological traits in community assembly</i>
2:30	Susan Hensen <i>NO TITLE</i>
2:45	Paul B. L. George and Zoë Lindo <i>Wood ash and nematodes: Dishing the dirt on silvicultural community change</i>
3:00	Phil Rekret, Anna Simonsen, and John Stinchcombe <i>Rhizobial tolerance to fertilizer leads to modifications of the relationship dynamics in the Medicago lupulina-rhizobium mutualism</i>
3:15	K. Thompson, W. Deen, K. Dunfield <i>Effects of biomass cropping systems on soil denitrifier community abundance in Ontario soils</i>
3:30	Yi An Lin and Liette Vasseur <i>How do interactions drive productivity in diverse crop fields?</i>
Session 5B: Insect Ecology and Behaviour	
<i>Saturday May 10, Room TBA</i>	
1:30	M. M. Hamiduzzaman, E. Guzman-Novoa, B. Emsen, A. Sinia, G. Koleoglu, and P. H. Goodwin <i>Role of varroa mites to transfer honey bee viruses and their control strategies</i>
1:45	Caryn Dooner and Amanda Moehring <i>The effects of accessory proteins on sperm survivability in Drosophila pseudoobscura</i>
2:00	Blake Anderson and Reuven Dukas <i>Genetic influences on social behaviour in fruit fly larvae</i>
2:15	David Awde, Adonis Skandalis, and Miriam Richards <i>Foraging and vitellogenin gene expression patterns in eusocial sweat bees using qRT-PCR</i>
2:30	Kiera Newman and L. Vasseur <i>Food and oviposition preference of diamondback moth</i>
2:45	Shane Golden and Reuven Dukas <i>Do groups really make better foraging decisions than individuals?</i>
3:00	N. Tsvetkov and A. Zayed <i>Effects of social interactions of learning and memory in honey bees</i>
3:15	E. W. Service and C. M. S. Plowright <i>Both food restriction and risk of predation trigger social preferences by flower-naïve bumblebees</i>
3:30	Caroline Strang and David Sherry <i>Problem solving in bumblebees</i>

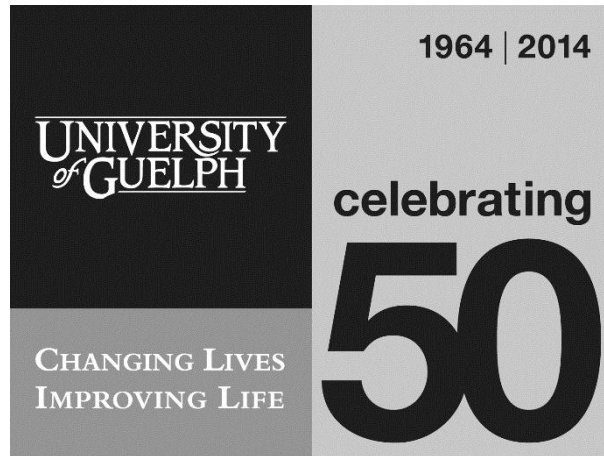
POSTERS

Poster Session	
<i>Friday May 9, Science Complex Atrium</i>	
1	Gina Capretta and Mehrdad Hajibabaei <i>Targeting the xenobiotic-responsive transcriptome: In silico identification and analysis of PCB-interacting genes conserved across taxa</i>
2	Farzeen Daruwalla and Nathan Lovejoy <i>Phylogentic analysis of weak electric knifefish of the family Apterontidae (Teleostei: Gymnotiformes: Apterontidae)</i>
3	Anastasia Savrova and Stephen C. Loughheed <i>Does habitat heterogeneity affect tadpole development?</i>
4	M. Miklasevskaja and L. Packer <i>Fluctuating asymmetry of Chilean Xeromelissa rozeni mouthparts</i>
5	Michael Dobrovetsky, Matthew A. Kolmann, Devin D. Bloom, and Nathan R. Lovejoy <i>Body shape diversification in freshwater anchovies</i>
6	G. E. Fuss and H. Lopez-Fernandez <i>Ecomorphological diversification in the Lost World</i>
7	Lisa Ledger, Shadi Shokralla, Joel F. Gibson, and Mehrdad Hajibabaei <i>Assessing the potential of metabarcoding for measuring beta diversity using three plots of Costa Rican dry forest</i>
8	Nicole Fahner, Mehrdad Hajibabaei, and Donald Baird <i>Assessment of below-ground plant diversity in wetland soil through environmental DNA</i>
9	Meghan Krajchi, Lisa Derickx, and Pedro M. Antunes <i>Diversity of exotic and native plant species in urban forests of varying size</i>
10	Samantha Stefanoff and Sapna Sharma <i>Predicting the occurrence of a non-native warm water fish species, smallmouth bass (Micropterus dolomieu), in Ontario lakes under future climate change scenarios</i>
11	Narisha E. Ali <i>The European fire ant in Canada</i>
12	Shannon Meadley Dunphy, Kirsten Prior, and Megan Frederickson <i>Effects of an invasive slug on native ant-plant seed disperser mutualisms</i>
13	Sara Masood, Jonathan Ruppert, Arthur Rodgers, and Sapna Sharma <i>Impacts of altered landscapes and future climate on the distribution of woodland caribou (Rangifer tarandus caribou) in Ontario</i>
14	Guang Zhang, Jonathan Ruppert, Sapna Sharma, Bridget Stutchbury, and Emily McKinnon <i>The impacts of climate change, habitat alterations, human disturbance, and biotic interactions on wood thrush populations</i>
15	Emily Krutzelmann, Erin McCallum, and Sigal Balshine <i>Effect of chronic wastewater exposure on aggression in the round goby</i>

16	Teresa J. Didiano and Tim P. Duval <i>Summer extreme precipitation events drive changes in soil moisture and growth traits in multiple southern Ontario wetland species</i>
17	Teresa Maddison and Spencer Barrett <i>Environmental influence on sexual dimorphism and sex ratio in a dioecious plant</i>
18	Andrea Boyer and Scott MacDougall-Shackleton <i>Effects of simulated recurrent inclement winter weather on the stress response and feeding behaviour of white-throated sparrows (Zonotrichia albicollis)</i>
19	Ahmed Elbassiouny, Tan Heok Hui, Devin D. Bloom, and Nathan R. Lovejoy <i>Molecular phylogenetics and the evolution of reproductive mode in halfbeak fishes from Southeast Asia</i>
20	J. W. MacLeod, S. P. Roach, and L. S. Phillmore <i>A longitudinal examination of hermit thrush (Catharus guttatus) singing behaviour</i>
21	Jennifer Foote, Adrianna Bruni, and Dan Mennill <i>The timing of the dawn chorus in a temperate bird community is related to both moonlight and meteorological conditions</i>
22	Ashley Hunter and Jennifer Foote <i>Circadian variation in ovenbird song rate for two song types</i>
23	Adriana Diez and Scott MacDougall-Shackleton <i>Cultural evolution of song: Do zebra finches go wild?</i>
24	Mandy Ehnes and Jennifer Foote <i>Can automated recording be used to discriminate among male ovenbird songs?</i>
25	Imane Meddah, Mukund Jha, and Reehan Mirza <i>Identification and characterization of Ostariophysan alarm cues</i>
26	Aderinsola Odetunde, Constance O'Connor, Adam Reddon, and Sigal Balshine <i>Safety in numbers? An investigation of anti-predator behaviour in a social fish</i>
27	Sara Pishdadian, Alex De Serrano, and Helen Rodd <i>The role of dopamine manipulation on the life history traits and colouration of male guppies</i>
28	Emily Xie <i>The effects of L-DOPA on exploratory behaviour in Poecilia reticulata (guppy)</i>
29	M. M. Kivlenieks, R. Matta, A. N. Tiessen, A. M. Meersseman, Y. O. Adjei-Afriyie, and E. Choleris <i>Influence of intrahippocampal D1-type antagonist, SCH23390, on olfactory discrimination abilities in male and female mice</i>
30	J. B. Thorpe, K. E. Gould, E. D. Borman, D. deCatanzaro <i>Circulating and urinary adrenal corticosterone, progesterone, and estradiol in response to acute stress in female mice (Mus musculus)</i>
31	Kelsy Ervin, Amy Moore, Kathryn Sinclair, and Elena Choleris <i>Does hippocampal estradiol play a role in the rapid estrogenic improvement of social learning?</i>
32	Jennifer Lymer, Christopher Gabor, Anna Phan, Fiona Young-MacDonald, Heather Morris, and Elena Choleris <i>Rapid effects of hippocampal G-protein coupled estrogen receptor on social and object recognition learning in the absence of spatial cues in female mice</i>
33	Amanda Caskenette <i>Community Engaged Research</i>

ACKNOWLEDGEMENTS

OE³C 2014 would not be possible without the generous help from several sponsors. We greatly appreciate the support from the following:



College of Biological Science
College of Social and Applied Human Sciences
Department of Psychology
Office of Research
Department of Animal and Poultry Science
Office of Graduate Studies
School of Environmental Science
Department of Integrative Biology
Campbell Centre for the Study of Animal Welfare

