**Entomological Society of Ontario 2017: Conference Schedule**

**Friday Evening, 29 September**

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| 5:00 - 7:00 PM | **ESO Board Meeting**, Rm. 3301 Graham Hall, University of Guelph Campus |
| 7:00 - 10:30 PM | **ESO Mixer and registration table**, Fion McCool’s, 494 Edinburgh Rd., Guelph (appetizers and 1 drink per person) |

**Saturday, 30 September: Plenary Session and Conference, Peter Clark Hall, University Centre**

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| 7:30 - 8:30 AM | **Registration**, corridor outside Peter Clark Hall (PCH); coffee and tea.  Hanging of posters: student competition and regular posters |
| **8:30-10:30** | **Plenary session, open to the public** |
| 8:30 AM | **Dr. Gard Otis**, Professor, President of the Entomological Society of Ontario (2016-2017) and Chair of the ESO 2017 Organizing Committee  **Welcome message and announcements** |
| 8:35 AM | **Dr. Rene Van Acker**, Dean of the Ontario Agricultural College, University of Guelph, Guelph, Ontario, N1G 2W1, Canada  **Welcome message to conference participants** |
| 8:40 AM | **Dr. Evan Fraser**, Canada Research Chair in Global Food Security and Director of the Arrell Food Institute, University of Guelph, Guelph, Ontario, N1G 2W1, Canada  **Introduction to the Arrell Food Institute of the University of Guelph** |
| **8:50 – 10:05 AM: Invited Plenary Speakers:** | |
| 8:50 AM | **Dr. Nigel E. Raine**, University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  **Bee-ing serious about pollinators and food.**  Roughly one third of the food we eat depends on pollinators. Economically sustainable yields for 75% of global crops are byproducts of pollinator foraging activity (most importantly bees), moving between flowers collecting food and also carrying pollen to facilitate seed, fruit and nut production. Beyond crops, almost 90% of flowering plant species worldwide rely on animal-vectored pollination, making pollinators an essential part of natural ecosystem function and wider cultural values. Reports of global pollinator declines raise concerns for agricultural  productivity, food security and reduced natural biodiversity. Pollinators are beautiful, fascinating, diverse and essential creatures that we cannot afford to lose.  e-mail address: nraine@uoguelph.ca; Twitter handle: @NigelERaine |

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| 9:15 AM  9:40 AM | **Dr. Gerhard Gries**, Simon Fraser University, Dept. of Biological Sciences, Burnaby, British Columbia, V5A 1S6, Canada  **Humans and human foods—gourmet meals for insects.**  *Abstract:*  The presentation will focus on common bed bugs, mosquitoes, blow flies and German cockroaches that use humans and human food, respectively, as “gourmet” meals. I will describe how we have identified the bed bug aggregation pheromone, and the experiments we have run in the laboratory and in bed bug-infested apartments to test the effect of synthetic pheromone as a trap lure. Shifting to mosquitoes, I will show that inflorescences of plants and human hosts provide similar cues that attract foraging mosquitoes, shedding light on the evolution of hemtophagy. Focusing on flies, it is well known that food soiled by regurgitate and feces of feeding flies is more attractive to flies then clean food. I will present the surprising mechanisms underlying this “fly factor” phenomenon. Finally, German cockroaches and humans savor similar types of food. I will present experiments showing how this phenomenon can be used to develop effective trap baits.  e-mail address: gries@sfu.ca  **Dr. Jade Savage**, Bishop’s University, Biological Sciences, Sherbrooke, Québec, J1M 1J7, Canada  **“The root of the problem: why identity matters when dealing with *Delia* root-maggot flies”**  *Abstract:*  It is a general misconception, even among scientists, that insects of high economic relevance are well known and easy to identify. Using root-maggot flies as an example we will review how poor taxonomic knowledge and inappropriate sampling procedures can hamper the development of effective pest management strategies. New identification tools for the group will be presented and plans to optimize the monitoring and management of these major pests of vegetable crops in Canada will be outlined.  e-mail address: jsavage@ubishops.ca |
| **10:05 - 10:30** | **Coffee break and viewing of posters**  Student presenters: please provide your presentation file to Andrew Frewin |

**10:30 - 11:54: Student oral presentations, President’s Prize Competition**

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| 10:30 AM | **“Hearing aids” in Satyrinae butterflies: using laser vibrometry to assess the hearing of *Cercyonis pegala.***  [**Penghui (Carrie) Sun**](mailto:pcareles@uoguelph.ca)**\***1, Natasha Mhatre2, Andrew C. Mason2, and Jayne E. Yack1  1 Carleton University, Department of Biology, 1125 Colonel By Drive, Ottawa, Ontario, K1S 5B6, Canada  2 University of Toronto Scarborough, Department of Biological Sciences, 1265 Military Trail, Scarborough, Ontario, M1C 1A4, Canada  \*e-mail address for corresponding author: carriesun@cmail.carleton.ca |
| 10:42 AM | **Ontogeny of social living in caterpillars and the role of vibratory communication.**  **Chanchal Yadav\*1** and Jayne E. Yack1  1 Carleton University, Department of Biology, Ottawa, Ontario, K1S 5B6, Canada  \*e-mail address for corresponding author: chanchalyadav@cmail.carleton.ca  Twitter Handle: @ChanchalYV |
| 10:54 AM | **Molecular phylogeny and biogeography of Panorpidae (Mecoptera).**  **Gui-Lin Hu\*1**, Gang Yan1, Hao Xu1, and Bao-Zhen Hua1  1 Key Laboratory of Plant Protection Resources and Pest Management, Ministry of Education, Institute of Entomology, Northwest A&F University, Yangling, Shaanxi, 712100, China  \*e-mail address for corresponding author: guilin@uoguelph.ca  Twitter Handle: @GuilinHu |
| 11:06 AM | **Investigating queen influence on worker behaviour using comparisons of queenless and queenright workers.**  **David N. Awde\*1** and Miriam H. Richards1  1 Brock University, Department of Biological Sciences, 1812 Sir Isaac Brock Way, St. Catharines, Ontario, L2S 3A1, Canada  \*e-mail address for corresponding author: david.awde@brocku.ca.ca  Twitter Handle: @DNAwdeBrockU |
| 11:18 AM | **RNA interference of worker sterility genes: testing mechanisms of reproductive regulation in honey bees (*Apis mellifera*).**  **Anthony Gallo\*1** and Graham Thompson1  1 Western University, Department of Biology, London, Ontario, N6A 3K7, Canada  \*e-mail address for corresponding author: agallo9@uwo.ca |
| 11:30 AM | **Studying the genetic underpinnings of innate immunity behavior in *Apis mellifera* (honey bee).**  **Tanushree Tiwari\*1**, Clement Kent1, Harshil Kumar Patel1, Stephen Rose1, Kathleen Dogantzis1, Alivia Dey1, and Amro Zayed1  1 York University, Department of Biology,4700 Keele Street, Toronto, M3J 1P3, Ontario, Canada  \*e-mail address for corresponding author: tiwari.tanushree@gmail.com |
| 11:42 AM | **GWAS for honey production and aggressive behaviour in honey bees.**  **Stephen Anthony Rose\*1**, Tanushree Tiwari1, Harshil Patel1, Alivia Dey1, Clement Kent1, and Amro Zayed1  1 York University, Department of Biology, 4700 Keele Street, Toronto, M3J 1P3, Ontario, Canada  \*email address for corresponding author: arose13@my.yorku.ca |
| **12:00 - 1:15** | **Lunch break and viewing of poster presentations.**  Students: **Workshop on Careers in Entomology**, Rm. 442 University Centre. Lunch provided to student participants at the conference.  The workshop was arranged by ESO student representatives Andrew Young and Catherine Scott. Several entomology graduates will be sharing info and answering questions about careers paths. Participants in the workshop are:   * Michelle Locke, MSc: Technician at the Canadian National Collection of Insects and Arthropods, Ottawa * Meredith Miller, MSc: Biodiversity Institute of Ontario * Hannah Fraser, MSc: OMAFRA * Brock Harpur, PhD: NSERC PDF. Donnelly Centre, University of Toronto * Sigrun Kullik, PhD: Canadian Food Inspection Agency   Non-students: Various food outlets are available in the Food Court, main floor of the University Centre. |

**1:15-4:08 PM: Student oral presentations, President’s Prize Competition**

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| 1:15 PM | **The effects of stand diversification on neotropical beetle assemblages.**  **Anne-Sophie Caron\*1,2**, Christopher M. Buddle1, Donald Windsor2, and Catherine Potvin2,3  1 McGill University, Department of Natural Resource Sciences, Macdonald Campus, 21, 111 Lakeshore Road, Ste-Anne-de-Bellevue, Québec, H9X 3V9, Canada  2 Smithsonian Tropical Research Institute, Panama City, Panama  3 McGill University, Department of Biology, 1205 Dr Penfield, Montréal, Québec, H3A 1B1, Canada  \*e-mail address for corresponding author: anne-sophie.caron@mail.mcgill.ca  Twitter Handle: @AnneSoCaron |
| 1:27 PM | **Rove beetle diversity and community structure across a neotropical elevation gradient.**  **Sarah Dolson1**, Elyssa Loewen1, and M. Alex Smith\*1  1 University of Guelph, Department of Integrative Biology, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: [salex@uoguelph.ca](mailto:dolsons@uoguelph.ca)  Twitter Handle: @SarahDolson |
| 1:39 PM | **What effect does temperature have on the body length of Neotropical Staphylinidae?**  **Julianna Alaimo1, Tommy Do1, Lauren Janke1**, Sarah Dolson1, Elyssa Loewen1, and M. Alex Smith\*1  1 University of Guelph, Department of Integrative Biology, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: [salex@uoguelph.ca](mailto:salex@uoguelph.ca)  Twitter Handle: @Alex\_Smith\_Ants |
| 1:51 PM | **Niche or neutral? Wetland permanence influences aquatic macroinvertebrate diversity and community assembly.**  **Jennifer Erin Gleason\*1,2** and Rebecca Rooney1  1 University of Waterloo, Department of Biology, 200 University Ave W, Waterloo, Ontario, N2L 3G1, Canada  2 University of Guelph, Department of Integrative Biology, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: [jgleason@uoguelph.ca](mailto:jgleason@uoguelph.ca)  Twitter Handle**:** @j\_erin\_g |
| 2:03 PM | **Examining changes in the wild bee fauna of south-central Ontario: a long-term analysis of community composition and structure.**  **Claire Rubens\***1, Alana Pindar1, Ellen Richard1, Emily Agar1, Sage Handler1, and Nigel E. Raine1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author:crubens@uoguelph.ca |
| 2:15 PM | **Fantastic pollinators and where to find them.**  **Ellen Richard\*1**, Claire Rubens1, Emily Agar1, and Nigel E. Raine1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: ericha03@uoguelph.ca  Twitter Handle: @entoellen |
| 2:27 PM | **Predator diversity and predation rate: results of a mesocosm experiment in the Yukon, Canada.**  **Shaun Turney**\*1 and Christopher M. Buddle1  1 Department of Natural Resource Sciences, McGill University Macdonald Campus, 21 111 Lakeshore Road, St. Anne de Bellevue, Québec, H9X 3V9, Canada  \*e-mail address for corresponding author:shaun.turney@mail.mcgill.ca  Twitter Handles: @shaunturney @CMBuddle |
| 2:39 PM | **Distribution, abundance and biological control potential of the swede midge parasitoid, *Synopeas myles.***  **Charles-Étienne Ferland\*1**, Spencer McGregor1, Jon Williams2, James D. Heal1, Boyd Mori2, Peter Buhls3, and Rebecca H. Hallett1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  2 Agriculture and Agri-Food Canada, Saskatoon, Saskatchewan, S7N 0X2, Canada  3 Natural History Museum of Denmark, Universitetsparken 15, DK-2100, Copenhagen, Denmark  \*e-mail address for corresponding author: [cferland@uoguelph.ca](mailto:cferland@uoguelph.ca) |
| 2:51 PM | **Establishing and observing the squash bee (*Peponapis pruinosa*) in captivity.**  **D. Susan Willis Chan\*1**, Bea Chan1, Dillon Muldoon1, and Nigel E. Raine1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: dchan05@uoguelph.ca  Twitter Handle: @squash\_bee |
| **3:05 - 3:20 PM** | **Coffee break and viewing of posters** |
| 3:20 PM | **Yellow or blue? Analyzing optimal colour of mass trapping of western flower thrips (*Frankliniella occidentalis*) in Canadian greenhouses.**  **Caitlin M. MacDonald\*1**, Sarah Jandricic2, and Megan Monteith3  1 University of Guelph, Department of Integrative Biology, University of Guelph, Guelph, Ontario, N1G 2W1, Canada  2 Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), Vineland Station, Ontario, L0R 2E0  3 Boekestyn Greenhouses Ltd., Jordan Station, Ontario, L0R 2C0  \*e-mail address for corresponding author: [cmacdo14@uoguelph.ca](mailto:cmacdo14@uoguelph.ca)  Twitter Handle: @Caitiemacdo |
| 3:32 PM | **Bumblebee risk assessment flawed from tier-one: how disparate methodologies raise questions about comparability of LD50 data.**  **Kayla Mundy-Heisz\*1** andNigel E. Raine1 1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada\*e-mail address for corresponding author: kmundy03@uoguelph.ca Twitter Handle: @ KaylaMundyHeisz |
| 3:44 PM | **Assessing dimethoate as a toxic standard for use in semi-field pesticide toxicity studies with *Bombus impatiens*(Cresson).**  **Tara Celetti\*1**, Angela Gradish1, Chris Cutler2, Paul Sibley1, and Cynthia Scott-Dupree1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  2 Dalhousie University, Department of Plant, Food and Environmental Sciences, Truro, Nova Scotia, B2N 5E3, Canada  \*email address for corresponding author: tceletti@uoguelph.ca |
| 3:56 PM | **Field realistic neonicotinoid exposure reduces honey bee health.**  **Nadejda Tsvetkov\*1,** Oliver Samson-Robert2, Valerie Fournier2, and Amro Zayed1  1 York University, Department of Biology, 4700 Keele Street, Toronto, Ontario, M3J 1P3, Canada.  2 Université Laval, Centre de recherche en innovation sur les végétaux, 2480 boulevard Hochelaga, Québec, G1V 0A6, Canada. \*e-mail address for corresponding author: nadiats@yorku.ca Twitter Handle**:** @NadiaTsvet |

**4:08 - 6:15 PM: Viewing of posters;** coffee and drinks from coffee break still available

**Student Posters: President’s Prize Competition (P1 - P18)**

**P1 Freezing tolerance and the molecular mechanism in the Andean stick insect *Agathemera crassa* (Phasmatodea: Agathemeridae).**

**Claudio Cubillos\*1,2,** Juan C. Caceres3, Ricardo Cabrera3, Claudio Veloso2, and Steffen Graether1

1 University of Guelph, Department of Molecular and Cellular Biology, Guelph, Ontario, N1G 2W1, Canada

2 University of Chile, Department of Ecological Science, Santiago, RM, 7750000, Chile

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**P2 The effect of environmental stressors on brown marmorated stink bug (*Halyomorpha halys*) overwintering physiology.**

**John J. Ciancio\*1,** Brent J. Sinclair1, and Tara D. Gariepy1,2

1 Western University, Department of Biology, 1151 Richmond Street, London, Ontario, N6A 3K7, Canada

**2** Agriculture and Agri-Food Canada, London Research and Development Centre, 1391 Sandford Street, London, Ontario, N5V 4T3, Canada

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**P3 Sampling Syrphidae using Malaise and Nzi traps on Akimiski Island, Nunavut.**

**Kathryn A. Vezsenyi\*1**,Jeffrey H. Skevington2, James A. Schaefer1, and David V. Beresford1

1 Trent University, Biology Department, 1600 West Bank Drive, Peterborough, Ontario, K9L 1Z8, Canada

2 Agriculture and Agri-Food Canada, Canadian National Collection of Insects, Arachnids and Nematodes, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada

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**P4 Brown marmorated stink bug distribution and phenology in Ontario.**

**Kevin Scaife\*1**, Cynthia Scott-Dupree1**,** Andrew Frewin1, and Hannah Fraser2

1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada

2Ontario Ministry of Agriculture, Food and Rural Affairs, E. C. Bovey Bldg., University of Guelph, Guelph, Ontario, N1G 2W1, Canada

\*e-mail address for corresponding author: scaifek@uoguelph.ca

**P5 The effect of abiotic factors on carabid diversity and distribution in northern Ontario**

**Kaitlyn J. Fleming\*1**, James A. Schaefer2, Ken F. Abraham3, and David V. Beresford2

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2 Trent University, Department of Biology, 1600 West Bank Drive, Peterborough, ON, K9L 0G2, Canada

3 Trent University, Ontario Ministry of Natural Resources and Forestry, DNA Building, 2140 East Bank Drive, Peterborough, Ontario, K9L 1Z8, Canada

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**P6 Is molecular evolution faster in the tropics?**

**Matthew G. Orton\*1**, Winfield Ly2, Jacqueline A. May1, David J. Lee2, and Sarah J. Adamowicz1

1 University of Guelph, Biodiversity Institute of Ontario & Department of Integrative Biology, 50 Stone Road East, Guelph, Ontario, N1G 2W1, Canada.

2 Seneca College, School of Biological Sciences and Applied Chemistry, 1750 Finch Ave E, North York, Ontario M2J 2X5, Canada.

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**P7 Demographic and genetic effects on social spacing: lessons from fruit flies.**

**Christy T Scharf**\*1, Anne F Simon1, and Graham J Thompson1

1 Western University, Department of Biology, London, Ontario, N6A 3K7, Canada

\*e-mail address for corresponding author: cscharf3@uwo.ca

**P8 Soy-bees: targeting soybean field hedgerows for pollinator conservation may lead to increases in yield and biodiversity.**

**Sage Handler\*1** and Nigel E. Raine1

1 University of Guelph, School of Environmental Sciences, Guelph, ON, N1G 2W1

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**P9 New record and range extensions of bumble bees (*Bombus* spp.) in previously unsampled areas of northern Ontario and Akimiski Island, Nunavut.**

**Shelby D. Gibson\*1,** Ken Bennett2, Rob W. Brook2, Sarah V. Langer3,4, Victoria J. MacPhail1, and David V. Beresford3,5

1 York University, Faculty of Environmental Studies, 4700 Keele Street, North York, Ontario, M3L 1P3, Canada,

2 Ontario Ministry of Natural Resources and Forestry, Wildlife Research and Monitoring Section, Trent University, DNA Building, 2140 East Bank Drive, Peterborough, Ontario, K9L 1Z8, Canada

3 Ontario Ministry of Natural Resources and Forestry, Northeast Biodiversity and Monitoring Unit, 5520 Highway 101 East, South Porcupine, Ontario, P0N 1H0,Canada

4 Trent University, Environmental and Life Sciences, 2089 East Bank Drive, Peterborough, Ontario, K9L 1Z8, Canada

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**P10 Queen bumblebee-pollen networks across a latitudinal gradient.**

**Vickie Do\*1, 2** and J. Scott MacIvor3

1 University of Toronto Scarborough, Department of Physical & Environmental Sciences, Scarborough, Ontario, M1C 1A4, Canada

2 Wildlife Preservation Canada, 5420 Highway 6 North, Guelph, Ontario, N1H 6J2, Canada

3 University of Toronto Scarborough, Department of Biological Sciences, Scarborough, Ontario, M1C 1A4, Canada

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**P11 Can you have it all? Assessing links between plastic growth and reproductive traits in *Latrodectus hasselti* males.**

**Vighnesh Sukhu\***1, **Yousef Safar1**, Laini Taylor1, Luciana Baruffaldi1 and Maydianne C.B. Andrade1

1 University of Toronto Scarborough, Department of Biological Sciences, 1265 Military Trail, Scarborough, Ontario, M1C 1A4, Canada

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**P12 The effect of dog-strangling vine invasion on bee diversity and abundance along an invasion gradient in Rouge Park.**

**Caroline Mitchell\*1**, J. Scott MacIvor1, and Marc Cadotte1

1 University of Toronto Scarborough, Department of Biological Sciences, 1265 Military Trail, Scarborough, Ontario, M1C 1A4, Canada

\*e-mail address for corresponding author: caroline.mitchell@mail.utoronto.ca

**P13 Energetics of overwintering in the soil in the western bean cutworm, *Striacosta albicosta.***

**Kurtis F. Turnbull\*1**, Jeremy N. McNeil1, and Brent J. Sinclair1

1 University of Western Ontario, Department of Biology, 1151 Richmond Street, London, Ontario, N6A 5B7, Canada

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**P14 & 15 Preliminary steps to understanding the decline of native bumble bee (*Bombus* spp.) pollinators in Canada using citizen science data.**

**Victoria J. MacPhail\*1**, Rich Hatfield2, and Sheila R. Colla1

1 Faculty of Environmental Studies, York University, 4700 Keele Street, North York, Ontario, M3J 1P3, Canada

2 The Xerces Society for Invertebrate Conservation, 628 NE Broadway, Ste 200, Portland, Oregon, 97232-1324, United States of America

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**P16 Dose responses to a range of pesticides by *Megachile rotundata*, a representative solitary bee**.

**Graham R. Ansell\*1**, Andrew J. Frewin1, Angela E. Gradish1, and Cynthia D. Scott-Dupree1.

1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada

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**P17 Demographic and genetic effects on social spacing: lessons from fruit flies.**

**Christy T Scharf**\*1, Anne F Simon1, and Graham J Thompson1

1 Western University, Department of Biology, London, Ontario, N6A 3K7, Canada

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**P18 Culicids on the move: a population genetic analysis of *Aedes japonicus japonicus* (Diptera: Culicidae) in Newfoundland, Canada.**

**Andrew Chaulk\*1** and Thomas C. Chapman2

1 University of Western Ontario, Department of Biology, London, Ontario, N6A 3K7, Canada

2 Memorial University of Newfoundland,Department of Biology, St. John's, Newfoundland, A1B 3X9, Canada

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**Regular Posters**

**P20 Putting monarchs on the map: Using spatial analysis to inform habitat creation efforts.**

**Kathleen Law1**

1 Pollinator Partnership Canada, 40 Lauder Avenue, Toronto, Ontario, M6H 3E3, Canada

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**P21 Landscape composition and configuration affect genetic differentiation in the alpine butterfly *Parnassius smintheus.***

**Melissa Lucas\***1, Gordana Rašić2, Ary Hoffmann2, and Nusha Keyghobadi1

1 Department of Biology, University of Western Ontario, London, ON, N6A 3K7, Canada

2 Pest and Disease Vector Group, Department of Genetics, Bio21 Institute, University of Melbourne, Parkville, VIC, 3010, Australia

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**P22 Impact of invasive dog-strangling vine on urban plant-pollinator networks.**

**Adriano N. Roberto\*1,** J. Scott MacIvor1,2, Thomas M. Onuferko3, and Marc W. Cadotte1,2

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2 University of Toronto, Department of Ecology and Evolutionary Biology, 27 King’s College Circle, Toronto, Ontario, M5S 1A1, Canada

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**P23 You are what your mother eats: maternal rearing condition impacts future larval growth trajectory in Asian longhorned beetle.**

**Alex S. Torson\*1,** Sarah Crispell2, Drake Martin2, Lamees Mohammad1, Adam Smith1, Menglei Zhang1, Brent J. Sinclair1, and Amanda D. Roe2

1 Western University, Department of Biology, London, Ontario, N6A 5B7, Canada

2 Natural Resources Canada, Great Lakes Forestry Centre, Canadian Forest Service, Sault Ste. Marie, Ontario, P6A 2E5, Canada

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***P24 Megachile rotundata*: *­*a potential model for non-*Apis* bee risk assessment.**

**Andrew J. Frewin\*1**, Angela E. Gradish1, Graham R. Ansell1, and Cynthia D. Scott-Dupree1

1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada.

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**P25 Efficacy of insecticides for management of brown marmorated stink bug (*Halyomorpha halys* Stål) in Ontario.**

**Angela E. Gradish\*1**, Kevin Scaife1, Hannah Fraser2, Tara Gariepy3, and Cynthia D. Scott-Dupree1

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2 Ontario Ministry of Agriculture, Food, and Rural Affairs, E.C. Bovey Bldg., University of Guelph, Guelph, Ontario, N1G 2W1

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**P26 Specialist vs. generalist: which is the best pollinator? The reproductive biology and pollination ecology of the Nevada peavine (*Lathyrus lanszwertii*)**

**Vinko Culjak Mathieu**\*1 and Jessica R. K. Forrest2

1 McGill University–Macdonald Campus, Natural Resource Sciences, Sainte-Anne-de-Bellevue, Québec, H9X 3V9, Canada

2 University of Ottawa, Department of Biology, Ottawa, Ontario, K1N 6N5, Canada

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**P27 Insect ID: using convolutional neural networks (CNNs) to photo identify insects on any mobile device.**

**Jarrett Blair\*1** and Charles-Etienne Ferland2

1 University of Guelph, Department of Integrative Biology, University of Guelph, Guelph, Ontario, N1G 2W1, Canada

2 University of Guelph, School of Environmental Sciences, University of Guelph, Guelph, Ontario, N1G 2W1, Canada

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**P28 Effect of vertical stratification and forest management practices on spider (Araneae) communities in temperate forests.**

**Jessica Turgeon\*1** andChristopher M. Buddle1

1 McGill University, Department of Natural Resource Sciences, 21111 Lakeshore Road, Sainte-Anne-de-Bellevue, Québec, H9X 3V9, Canada

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**P29 Relatedness among dominant, territory-holding males in a large carpenter bee, *Xylocopa virginica*: do related males compete?**

**Lyndon B Duff\*1,** Andrea K Cardama1, Raadhiyah Zowmi1, and Miriam H Richards1.

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**P30 The differing effects of landscape on the genetic differentiation and dispersal of the Rocky Mountain apollo butterfly *Parnassius smintheus***.

**Helen Chen**\*1, Jens Roland2, Stephen F. Matter3, and Nusha Keyghobadi1

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**P31 Toxicity of three plant compounds to the parasitic mite *Varroa destructor* and their selectivity for honey bee (*Apis mellifera*)** **workers and larvae.**

**Qodratollah Sabahi\***,1,2, Mollah Md. Hamiduzzaman1, Juan S. Barajas-Pérez3, Jose M. Tapia-Gonzalez3, and Ernesto Guzman-Novoa1

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3 Universidad de Guadalajara, CUSUR, E. Arreola Silva 883, Centro, Ciudad Guzmán, Jalisco, 49000, Mexico

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**P32 Predacious diving beetle records from Akimiski Island, Nunavut (Coleoptera: Dytiscidae).**

**Sherri L. DeGasparro\***1**,** Glen Brown2, Paul C. Frost3, and David V. Beresford3

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**P33 Species-specific responses of pest flies to repellents applied on livestock animals.**

**Simon Lachance\*1**

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**P34 Effects of introduced honey bees on native stem-nesting bees (Hymenoptera: Megachilidae) in temperate mixed-wood deciduous forests.**

**Susan M. Frye\*1,** Sandy M. Smith1, and Sean C. Thomas1

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**P35 Assessing the potential of common cover crops to provide seasonal forage to managed and wild bees in Southern Ontario.**

Victoria Wojcik\*1, Laurissa Christie2, Maryam Sultan3, and **Anthony Colangelo1**

1 Pollinator Partnership, 40 Lauder Avenue, Toronto, Ontario, M6H 3E3, Canada

2 Bayer CropScience, 679 Southgate Dr., 2nd Floor, Guelph, Ontario, N1G 4S2, Canada

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Twitter Handle**:** pollinators

**6:45 - 10:30 PM: Banquet at The Arboretum Centre, The Arboretum, University of Guelph**

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| 6:45 PM | Informal discussion and interactions; cash bar open |
| 7:30 | Banquet |
| 8:15 | Awards: Best oral presentation; best poster; travel awards; Bug Eye Photo Contest |
| 8:30 | **Dr. David Waltner-Toews**, Professor Emeritus, Department of Population and Medicine, Ontario Veterinary College, University of Guelph, Guelph, Ontario, N1G 2W1, Canada.  David is the author of a number of books, including his most recent entitled “Eat the Beetles! An Exploration into our Conflicted Relationship with Insects”.  **Banquet Presentation: “Eating beetles: Fears, fantasies, and the future of food.”** |
| 9:15 - 10:30 | Visit the black lights to view late season moths and other insects with moth experts Andrew Bendall and Andalyne Toffelmire. |

**Sunday, 1 October: Regular Oral Presentations, Peter Clark Hall, University Centre**

|  |  |
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| 8:30 AM | **Flower Fly (Diptera: Syrphidae) phylogenetics and beyond: challenges and opportunities presented by next-gen sequencing.**  **Andrew D. Young\*1,2**, K. Moran1,2, J. H. Skevington1,2, T. R. Burt3, X. Mengual3, G. Ståhls4, K. Jordaens5, S. Bot6, M. Reemer7, M. Hauser8, M. van Zuijen9, C. Palmer10, J. van Steenis7, W. van Steenis7, A. Ssymank11, G. F. G. Miranda12, F. C. Thompson13, K. M. Bayless14, B. Wiegmann14, and B. Cassel14  1 Agriculture and Agri-Food Canada, Canadian National Collection of Insects, Arachnids and Nematodes, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada  2 Carleton University, Department of Biology, 1125 Colonel By Drive, Ottawa, Ontario, K1S 5B6, Canada  3 Zoologisches Forschungsmuseum Alexander Koenig, Adenauerallee 160,  Bonn, North Rhine-Westphalia, 53113, Germany  4 Finnish Museum of Natural History, Pohjoinen Rautatiekatu 13, Helsinki, Uusimaa, 00100, Finland  5 Royal Museum for Central Africa, Leuvensesteenweg 13, Tervuren, Flemish Brabant, 3080, Belgium  6 Holland, The Netherlands [private address]  7 Naturalis Biodiversity Center, Darwinweg 2, Leiden, South Holland, 2333 CR, The Netherlands  8 California Department of Food and Agriculture, Plant Pest Diagnostics Branch, 3294 Meadowview Rd., Sacramento, California, 95832-1448, USA  9 Breukelen, The Netherlands [private address]  10 London, England, United Kingdom [private address]  11 Federal Agency for Natural Conservation, Konstantinstraße 110, Bonn, North Rhine-Westphalia, 53179, Germany  12 Instituto Nacional de Pesquisas da Amazônia, Av. André Araújo, 2936, Manaus, Amazonas, 69067-375, Brazil  13 Ponte Vedra, Florida, USA [private address]  14 North Carolina State University, Department of Entomology, Gardner Hall, 100 Pilsbury Cir, Raleigh, North Carolina, 27695, USA  \*e-mail address for corresponding author: adyoung@gmail.com |
| 8:42 AM | **A review of the cleptoparasitic bee genus *Epeolus* Latreille in the Nearctic region.**  **Thomas M. Onuferko\*1**  1 York University, Department of Biology, 4700 Keele Street, Toronto, Ontario, M3J 1P3, Canada  \*e-mail address for corresponding author:[onuferko@yorku.ca](mailto:onuferko@yorku.ca) |
| 8:54 AM | **Field Guide to the Hover Flies (Syrphidae) of Northeastern North America.**  **Jeffrey H. Skevington\*1**, Michelle M. Locke1, Andrew D. Young1, Kevin Moran1, William J. Crins2, and Stephen A. Marshall3  1 Agriculture and Agri-Food Canada, Canadian National Collection of Insects, Arachnids and Nematodes, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada  2 Trent University, School of the Environment, 1600 West Bank Drive, Peterborough, Ontario, K9L 0G2, Canada  3 University of Guelph, School of Environmental Sciences, University of Guelph, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author:jhskevington@gmail.com |
| 9:00 AM | **Identifying and synthesizing pheromones of the *Anopheles* genus to be used in controlling the spread of Malaria.**  **Brad Howie\*1**  1 University of Waterloo, Waterloo, Ontario, N2L 3G1, Canada  \*e-mail address for corresponding author: b2howie@edu.uwaterloo.ca |
| 9:12 AM | **InscalisTM insecticide: a novel insecticide for management of piercing-sucking pests.**  **Lindsey A. Goudis\***1, R. Scott MacDonald1, Jessica L. Rush\*1, Wayne R. Barton1, and Joseph M. Stout2  1 BASF Canada Inc., 100 Milverton Drive, 5th Floor, Mississauga, Ontario, L5R 4H1, Canada  2 BASF Corporation, 26 Davis Drive, 27709-3528 Research Triangle Park, 27709, United States  \*e-mail address for corresponding author: Jessica.rush@basf.com |
| 9:24 AM | **GPA2/GPB5: a novel glycoprotein hormone with an unknown function.**  **David A. Rocco\*1**, Daniel Correia1, and Jean-Paul V. Paluzzi1  1 York University, Department of Biology, Toronto, Ontario, M3J 1P3, Canada  \*e-mail address for corresponding author: davrocco@yorku.ca  Twitter Handle**:** @JPPaluzzi |
| 9:36 AM | **Identification, expression, and functional characterization of the adipokinetic hormone/corazonin-related peptide receptor in *Aedes aegypti*.**  **Azizia Wahedi1** and Jean-Paul V. Paluzzi\*1  1 York University, Department of Biology, 221 Lumbers Building, 4700 Keele St., Toronto, Ontario, M3J 1P3, Canada  \*e-mail address for corresponding author:paluzzi@yorku.ca  Twitter Handle: @JPPaluzzi |
| 9:48 AM | **Live yeasts determine development time in *Drosophila melanogaster.***  **Yanira Jiménez Padilla\*1**, Mark-André Lachance1, and Brent J. Sinclair1  University of Western Ontario, Department of Biology, London, Ontario, N6A 5B7, Canada  \*e-mail address for corresponding author: yjimenez@uwo.ca |
| **10:00 AM** | **Coffee break and viewing of posters** |
| **10:20 - 10:50**  **10:50-12:32** | **ESO Annual General Business Meeting**  **Regular Oral Presentations** |
| 10:50 AM | **Are soldiers a source of genetic novelty in termites?**  Supriya Behl1, Tian Wu1, and **Graham J. Thompson\*1**  1 Western University, Biology Department, London, Ontario, N6A 5B7, Canada  \*e-mail address for corresponding author: graham.thompson@uwo.ca  Twitter Handle**:** @termiteGT |
| 10:56 AM | **Looking deeper into pollinator food webs using DNA barcoding: applications for the agri-environment.**  **Elizabeth Franklin**1, 2**,** Caitlin Potter\*1, 3, Natasha de Vere1, 4, Laura E. Jones4, 5, Col R. Ford4, Matthew J. Hegarty1, Kathy Hodder3, and Anita Diaz1  1 Aberystwyth University, Institute of Biological, Environmental & Rural Sciences (IBERS), Penglais, Aberystwyth, Ceredigion, SY23 3DA, United Kingdom  2 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  3 Bournemouth University, Department of Life and Environmental Sciences, Fern Barrow, Poole, BH12 5BB, United Kingdom  4 National Botanic Garden of Wales, Llanarthne, Carmarthenshire, SA32 8HG, United Kingdom  5 Bangor University, Molecular Ecology and Fisheries Genetics Laboratory, School of Biological Sciences, Environment Centre Wales, Gwynedd, LL57 2UW, United Kingdom  \*e-mail address for corresponding author: elizabeth.franklin@uoguelph.ca  Twitter Handle: @Drlizfranklin1 |
| 11:08 AM | **Recovery of the endangered mottled duskywing (Hesperiidae: *Erynnis martialis*), a candidate species to re-establish at Pinery Provincial Park.**  **Jessica Linton\*1** and Gard W. Otis2  1 Natural Resource Solutions Inc., 225 Labrador Dr., Unit 1, Waterloo, Ontario, N2K 4M8, Canada  2 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author**:** jlinton@nrsi.on.ca  Twitter Handle: jessicalinton86 |
| 11:20 AM | **Differential gene expression patterns associated with dispersal ability in the alpine butterfly, *Parnassius smintheus.***  **Maryam Jangjoo\*1**, Stephen F. Matter2, Joshua B. Benoit2, and Nusha Keyghobadi1  1 Western University, Department of Biology, 1151 Richmond St., London, Ontario, N6A 5B7, Canada  2 University of Cincinnati, Department of Biological Sciences, 155 B McMicken Hall, Cincinnati, Ohio, 45221, USA  \*e-mail address for corresponding author: [mjangjoo@uwo.ca](mailto:mjangjoo@uwo.ca) |
| 11:32 AM | **On the genetic basis of hygienic and overwintering behaviour in the honeybee.**  **Harshilkumar Patel\*¹**, Clement Kent¹, Tanushree Tiwari¹, Stephen Rose¹, Alivia Dey¹, Kathleen Dogantzis¹, and Amro Zayed¹  1 York University, Department of Biology, 4700 Keele Street, Toronto, Ontario, M3J 1P3, Canada  \*e-mail address for corresponding author: [harshill@my.yorku.ca](mailto:harshill@my.yorku.ca) |
| 11:38 AM | **Exploring poisonous mechanism of honeybee, *Apis mellifera* *ligustica* Spinola, caused by pyrethroids.**  **Qiang Wang**1,2 , Ernesto Guzman-Novoa3, Ting Zhou1,2 , Ping-li Dai1,2 , Yan-yan Wu1,2 and Qing-Yun Diao\*1,2  1 Chinese Academy of Agricultural Sciences, Bee Research Institute, Beijing, 100093, P.R. China  2 Ministry of Agriculture, Key Laboratory of Pollinating Insect Biology, Beijing 100093, P.R.China  3 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: dqyun1@126.com |
| 11:44 AM | **Prebiotics and probiotics for the control of the intestinal parasitic fungus *Nosema ceranae* in the honey bee *(Apis mellifera)* at the colony level.**  **Shane Klassen\*1**, Ernesto Guzman-Novoa1, Paul H. Goodwin1, and Paul G. Kelly1  **1** University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: [sklassen@uoguelph.ca](mailto:sklassen@uoguelph.ca) |
| 11:56 AM | **Structural characterization of RdRp and pseudoknot (PK) I of Israeli acute paralysis virus isolated in China.**  **Qingyun Diao\***1,2, Shuai Deng1, Beibei Li1, and Chunsheng Hou1  1 Institute of Apicultural Research, Chinese Academy of Agricultural Sciences, Beijing 100093, P. R. China.  2 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  \*e-mail address for corresponding author: dqyun1@126.com |
| 12:08 PM | **Effect of *Varroa destructor* homogenate and parasitism on haemocyte concentrations and gene expression in honey bees.**  **Mollah Md. Hamiduzzaman\*1**, Gun Koleoglu2, Paul H. Goodwin1, Mariana Reyes-Quintana1, and Ernesto Guzman-Novoa1  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada.  2 2191 – 3108 Yonge St., Toronto, Ontario, M4S 3H8, Canada.  \*e-mail address for corresponding author:[mhamiduz@uoguelph.ca](mailto:mhamiduz@uoguelph.ca) |
| 12:20 PM | **Effect of *Varroa destructor* parasitism and sublethal doses of clothianidin on honey bee (*Apis mellifera*) behavior.**  **Nuria Morfin R.\*1**, Ernesto Guzman-Novoa1, Paul H. Goodwin1, Nigel E. Raine1, and Greg J. Hunt2.  1 University of Guelph, School of Environmental Sciences, Guelph, Ontario, N1G 2W1, Canada  2 Purdue University, Department of Entomology, West Lafayette, Indiana, 47907, USA  \*e-mail address for corresponding author: nmorfinr@uoguelph.ca |
| **12:32 PM** | **Conference adjournment and farewell: Antonia Guidotti**, 2017-18 ESO President |