



**Balzer ZS & Davis AR** (2019) Adaptive morphology of the host-seeking first-instar larva of *Stylops advarians* Pierce (Strepsiptera, Stylopidae), a parasite of *Andrena milwaukeensis* Graenicher (Hymenoptera, Andrenidae). *Arthropod Structure & Development* **52**: 100881.

### INVITED PRESENTATIONS

**Balzer ZS** The genomic impacts of range expansion on rapid adaptation potential in Canadian mountain pine beetle (*Dendroctonus ponderosae*). Movement Monday. Centre for Animals on the Move, London, ON. November 10, 2025.

**Balzer ZS, Roe A, Lucas M, Cullingham C, & Coltman D** Genomic regions influencing adaptation to extreme cold in the expanding native forest pest, *Dendroctonus ponderosae*. Entomological Society of Canada. Calgary, AB. October 7, 2025.

**Balzer ZS, Cullingham C, Roe A, & Coltman D** The promise of whole genome sequencing for understanding the dynamics and drivers of range expansions and the mountain pine beetle outbreak. TRIA-FoR Seminar Series. Online. September 27, 2024.

**Balzer ZS, Cullingham C, & Coltman D** Using genomics to measure range expansion and adaptation to assess mountain pine beetle persistence risk. Canadian Society of Ecology and Evolution. Vancouver, BC. May 29, 2024.

**Balzer ZS** The loss of pollinators in urban settings. Friends of the Gardens. Western University. June 16, 2022.

**Balzer ZS & Thompson GT** Molecular analysis of kinship and invasiveness in a northern population of urban-dwelling termites. International Union for the Study of Social Insects, North American Section. Online. November 2, 2021.

### PRESENTATIONS

**Balzer ZS, Roe A, Lucas M, Cullingham C, & Coltman D** Genomic regions influencing adaptation to extreme cold in the expanding native forest pest, *Dendroctonus ponderosae*. Canadian Society of Ecology and Evolution, Toronto, ON. May 12, 2026.

**Cullingham C, Balzer ZS, Moreton N, Grela C, Peery R, & Coltman D** Insights on range expansion routes of mountain pine beetle from genetic and genomic data. Entomological Society of Canada, Calgary, AB. October 6, 2025.

**Balzer ZS, Moreton N, Grela C, Cullingham C, & Coltman D** Using whole-genome sequence data to detect putatively adaptive loci in expansion range mountain pine beetle. Canadian Society of Ecology and Evolution, Sherbrooke, QC. July 9, 2025.

**Moreton N, Balzer ZS, Cullingham C, & Coltman D** Temporal dynamics of mountain pine beetle (*Dendroctonus ponderosae*) population structure over an outbreak. Canadian Society of Ecology and Evolution, Sherbrooke, QC. July 9, 2025.

**Balzer ZS, Grela C, Peery R, Cullingham C, & Coltman D** Assessing adaptation as a driver of range expansion in a changing climate. The European Meeting for PhD Students in Evolutionary Biology, Milovy, Czechia. June 5, 2025.

**Moreton N, Balzer ZS, Cullingham C, & Coltman D** Temporal dynamics of mountain pine beetle (*Dendroctonus ponderosae*) population structure over an outbreak. Ontario Biology Day, Ottawa, ON. March 22, 2025.

- Balzer ZS, Grela C, Peery R, Cullingham C, & Coltman D** Untangling the origin of *Dendroctonus ponderosae* in Cypress Hills. Entomological Society of Canada. Saskatoon, SK. October 16, 2023.
- Balzer ZS, Grela C, Peery R, Cullingham C, & Coltman D** Untangling the origin of *Dendroctonus ponderosae* in Cypress Hills. Canadian Society of Ecology and Evolution. Winnipeg, MB. June 13, 2023.
- Balzer ZS & Thompson GT** Anti-social behaviour in a social insect: termites turn on each other in a hypoxic environment. Toronto Entomologists' Association Student Symposium. Online. March 26, 2022.
- Balzer ZS & Thompson GT** A novel anti-social response to CO<sub>2</sub> narcosis in a subterranean termite: implications for studies of kin recognition. Entomological Society of Canada-Entomological Society of Ontario Joint Annual Meeting. Online. November 15, 2021
- Balzer ZS** Impact of strepsipteran parasitism on solitary bees. Biology Club Research Showcase, Saskatoon, SK. November 28, 2019.
- Balzer ZS & Davis AR** Examination of the host-seeking first instar larvae of *Stylops advarians*. Biology 990 Symposium, Saskatoon, SK. April 9, 2019.
- Balzer ZS & Davis AR** Morphology of the first instar larva of *Stylops advarians* (Strepsiptera) and the discovery of the elusive adult male. Entomological Society of Saskatchewan Fall Meeting, Saskatoon, SK. December 21, 2018.
- Balzer ZS & Davis AR** Morphology of the host-seeking first instar larva of *Stylops advarians* (Strepsiptera), a parasitic insect attacking *Andrena milwaukeensis* (Hymenoptera). Entomological Society of Canada-Entomological Society of British Columbia-Entomological Society of America Joint Annual Meeting, Vancouver, BC. November 12, 2018.
- Balzer ZS & Davis AR** Morphology of the host-seeking first instar larvae of *Stylops* sp. (Strepsiptera), a parasite of solitary bees (Andrenidae). Biology 990 Symposium, Saskatoon, SK. April 10, 2018.
- Balzer ZS & Davis AR** Morphology of the first instar larvae of *Stylops* sp. (Strepsiptera), which infects *Andrena milwaukeensis* (Hymenoptera). Prairie University Biology Symposium, Calgary, AB. February 23, 2018.
- Balzer ZS & Davis AR** Prevalence and orientation of *Stylops* sp. (Strepsiptera: Stylopidae) within its host, *Andrena milwaukeensis* (Hymenoptera: Andrenidae). Entomological Society of Saskatchewan Fall Meeting, Saskatoon, SK. December 15, 2017.
- Balzer ZS & Davis AR** Prevalence and anatomical investigation of a *Stylops* sp. (Strepsiptera) attacking *Andrena milwaukeensis* in Saskatoon, Saskatchewan. Entomological Society of Canada-Entomological Society of Manitoba Joint Annual Meeting, Winnipeg, MB. October 23, 2017.
- Balzer ZS & Davis AR** Prevalence of *Stylops* sp. (Strepsiptera: Stylopidae) in *Andrena milwaukeensis* (Hymenoptera: Andrenidae) in Saskatoon. Prairie University Biology Symposium, Saskatoon, SK. February 24, 2017.

### **ADVISORY COMMITTEES**

Ahmed Al-Mohammed (honour's thesis project)

### **MANUSCRIPT REVIEWS**

## **EMPLOYMENT**

### **Research Assistant**, University of Saskatchewan

- September 2019-December 2019
- May 2016-August 2016

## **TEACHING**

### **Lecturer**, University of Western Ontario

- Molecular Ecology: September 2025 – December 2025

### **Graduate Teaching Assistant**, University of Western Ontario

- Evolutionary Genetics: January 2025 – April 2025
- Molecular Ecology: September 2024 – December 2024
- Animal Ecology: January 2023 – April 2023; January 2024 – April 2024
- Biology for Science II: January 2022 – April 2022
- Insect Structure and Function: September 2021–December 2021
- Biology for Science I & II: September 2020 – April 2021

### **Graduate Head Teaching Assistant**, University of Saskatchewan

- The Nature of Life: September 2018 – April 2019

### **Graduate Teaching Assistant**, University of Saskatchewan

- The Nature of Life: September 2017 – April 2018
- Insect Diversity and Evolution: September – December 2017

### **Mentorship**

- Niamh Moreton – honour’s thesis project (September 2024 – April 2025)  
Thesis title: *Temporal dynamics of mountain pine beetle (Dendroctonus ponderosae) population structure over an outbreak*

## **HONOURS/AWARDS**

<b>Funding Source</b>	<b>Amount</b>	<b>Duration</b>
Janice Bosley Graduate Award	CD \$2000	August 2025
UWO Travel Award	CD \$410	June 2025
Queen Elizabeth II Graduate Scholarship in Science and Technology	CD \$15,000	September 2024 – August 2025
UWO Travel Award	CD \$250	May 2024
UWO Travel Award (Declined)	CD \$300	July 2022
Glenn Richardson Research Award	CD \$800	April 2022

William L. and Ruth D. Nutting Research Grant	US \$2,500	May 2021
Queen Elizabeth II Graduate Scholarship in Science and Technology (Declined)	CD \$15,000	September 2021 – August 2022
NSERC Postgraduate Doctoral Scholarship	CD \$63,000	September 2021 – August 2024
Queen Elizabeth II Graduate Scholarship in Science and Technology	CD \$15,000	September 2020 – August 2021
University of Saskatchewan Images of Research	CD \$300	April 2019
Entomological Society of Saskatchewan Brooks Scholarship	CD \$500	December 2018
University of Saskatchewan Travel Award	CD \$350	November 2018
University of Saskatchewan Graduate Scholarship	CD \$17,000	September 2018 – August 2019
University of Saskatchewan Travel Award	CD \$250	October 2017
University of Saskatchewan Summer Research Internship	CD \$8,144	May 2016 – August 2016

### **ORGANIZATION MEMBERSHIPS**

- Entomological Society of Canada
- Entomological Society of Ontario
- Canadian Society of Ecology and Evolution

### **VOLUNTEER POSITIONS**

- Challenger Baseball London (2025)
- Lead Symposium Organizer at CSEE (2024)
- London Bug Day Organization Co-Leader (2022)
- Prairie University Biology Symposium Organizer (2016–2017)