

# CURRICULUM VITAE

## Leanne A. Grieves

The University of Western Ontario  
Department of Biology  
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### EDUCATION:

**Candidate: Doctor of Philosophy** 2016/01 – Current  
Department of Biology, University of Western Ontario, London, Ontario, Canada.

**Thesis:** Chemical cues and spatiotemporal variation in major histocompatibility complex genotype, microbial communities, and haematozoan parasites in song sparrows, *Melospiza melodia*.

**Supervisor:** Dr. Beth MacDougall-Shackleton

**Master of Science** 2012/01 – 2014/04  
Department of Biology, McMaster University, Hamilton, Ontario, Canada.

**Thesis:** Acoustic communication in the joint-nesting, cooperatively breeding Smooth-billed Ani, *Crotophaga ani*

**Supervisor:** Dr. James Quinn

#### Key projects:

- Managed research project for three consecutive field seasons in Puerto Rico
- Participated in international outreach and education
- Managed molecular genetics laboratory, trained and mentored ten undergraduate students

**Honours Bachelor of Science** 2005/01 – 2011/05  
Department of Biology, University of Winnipeg, Manitoba, Canada.

**Thesis:** The effect of interspecific neighbours on nest predation in Red-winged Blackbirds

**Supervisor:** Dr. Scott Forbes

#### Key projects:

- Compiled 18 years of raw field data into digital database
- Trained field technicians, assisted M.Sc. and Ph.D. students with research
- Completed independent field project for honour's thesis research

### RESEARCH INTERESTS:

Broadly, I am interested in animal communication and mate choice. My BSc research focused on brood parasitism, brood reduction, and nest predation in red-winged blackbirds, *Agelaius phoeniceus*. During my MSc, I studied behavioural ecology, vocal communication, and the evolution and maintenance of a rare cooperative breeding system, joint nesting, in the smooth-billed ani, *Crotophaga ani*. My PhD research explores chemical communication and spatio-temporal variation in preen oil chemical composition, blood-borne parasites, and major histocompatibility complex genotypes in three Ontario breeding populations of song sparrows, *Melospiza melodia*.

**EMPLOYMENT HISTORY:**

- Management Internship Program, Government of Manitoba 2015\*
- Lead Biologist (Carden, ON), Wildlife Preservation Canada 2015/05 – 2015/12
- Bioacoustics Research Assistant, University of Manitoba 2014/12 – 2015/04
- Assistant Teaching Liason, St. Boniface Hospital 2014/12 – 2015/04
- Senior Field Technician, McMaster University Biology Dept. 2014/10 – 2014/11
- Laboratory Assistant, University of Winnipeg Biology Dept. 2011/05 – 2011/09
- Field Technician, University of Winnipeg Biology Dept. 2008/05 – 2011/08

\*I was offered this highly competitive position (only 8 of ~ 400 applicants selected) but declined to pursue doctoral studies at The University of Western Ontario.

**TEACHING EXPERIENCE:**

- University of Western Ontario Biology Teaching Assistant 2016/01 – 2017/12
- University of Winnipeg Field Course Co-instructor 2016/05 – 2016/06  
Behavioural Ecology and the Prairie Grasslands 2014/05 – 2014/06
- McMaster University Biology Teaching Assistant 2012/01 – 2013/12
- University of Winnipeg Biology Lab Demonstrator 2007/09 – 2011/04

**COURSES TAUGHT:**

- Cells and Cellular Processes (lab, level 1)
- Evolution, Ecology, and Biodiversity (lab, level 1)
- Biology for Science II (tutorial, level 1)
- Principles of Ecology (lab, level 2)
- Mammalogy (lab, level 3)
- Comparative Chordate Zoology (lab, level 3)
- Cell Biology (lab, level 3)
- Wildlife Management and Ecology (lab, level 3)
- Behavioural Ecology and the Prairie Grasslands (field course co-instructor, level 3)
- Conservation Biology (tutorial, level 4)

**INVITED PRESENTATIONS:**

- **L. Grieves.** May 2018. Gilles Brassard Doctoral Prize for Interdisciplinary Research acceptance speech. NSERC-CRSNG Top Researchers Awards Ceremony. Rideau Hall, Ottawa, Ontario.
- **L. Grieves.** May 2016. Conservation and behavioural ecology of burrowing owls and other grassland birds. Behavioural Ecology in the Prairie Grasslands Field Course.
- **L. Grieves.** May 2016. Song sparrows and their parasites: evidence for host-parasite co-adaptation? Behavioural Ecology in the Prairie Grasslands Field Course.
- **L. Grieves.** Jun. 2015. Eastern loggerhead shrike recovery in Ontario. Ontario Ministry of Natural Resources and Forestry, Midhurst Office. Carden, Ontario, Canada.
- **L. Grieves.** May 2014. Population dynamics, dispersal and conservation of the Burrowing Owl in North America. Behavioural Ecology in the Prairie Grasslands Field Course.

- **L. Grieves.** Feb. 2014. Understanding acoustic communication in the Smooth-billed Ani: Repertoire, referential alarm calls and signals of aggressive intent. University of Winnipeg, Manitoba.
- **L. Grieves.** Dec. 2013. Acoustic communication in a joint-nesting cuckoo, the Smooth-billed Ani (*Crotophaga ani*). University of Puerto Rico, Mayagüez, USA.
- **L. Grieves.** Nov. 2013. Breeding biology and social behaviour of the Smooth-billed Ani. Cabo Rojo National Wildlife Refuge, Puerto Rico.

#### CONFERENCE PRESENTATIONS:

- **L. Grieves,** Bernards, M.A., Gloor, G.B, MacDougall-Shackleton, E.A. 2018. Songbird infochemicals: Do song sparrows attend to the information content of preen oil? International Ornithology Congress. Vancouver, British Columbia, Canada.
- **L. Grieves\***, Bernards, M.A., MacDougall-Shackleton, E.A. 2018. Do song sparrows attend to the information content of preen oil? Ontario Ecology, Ethology & Evolution Colloquium (OE<sup>3</sup>C). Western University, London, Ontario, Canada.  
\*Awarded best student talk
- **L. Grieves,** Kelly, T.R., Bernards, M.A., MacDougall-Shackleton, E.A. 2018. Malarial infection alters preen oil composition in a songbird. Fallona Interdisciplinary Research Showcase. Western University, London, Ontario, Canada. (Poster)
- **L. Grieves,** Kelly, T.R., Bernards, M.A., MacDougall-Shackleton, E.A. 2018. Sick birds don't smell: preen oil composition does not signal malarial infection. Society for Integrative and Comparative Biology Conference, San Francisco, California, USA.
- **L. Grieves,** Bernards, M.A., MacDougall-Shackleton, E.A. 2017. Age, sex, and population variation in song sparrow preen oil composition. Animal Behaviour Society Conference, University of Toronto, Scarborough, Canada.
- **L. Grieves.** Oct. 2016. MHC diversity, parasitism, and olfactory-based mate choice in a migratory songbird. Biology Graduate Research Forum. The University of Western Ontario. London, Ontario, Canada.
- **L. Grieves,** D.M. Logue & J.S. Quinn. Feb. 2015. Reliable signals of aggressive intent in a cooperatively breeding bird. Prairie University Biology Symposium. Winnipeg, Manitoba, Canada.
- **L. Grieves,** D.M. Logue & J.S. Quinn. Jul. 2014. Threat-specific alarm signaling in a joint-nesting nonpasserine. International Society for Behavioral Ecology Conference, New York City, USA. (Poster)
- **L. Grieves\*\***, D.M. Logue & J.S. Quinn. May 2014. Ready to fight: Reliable predictors of aggression in a joint-nesting nonpasserine bird. Ontario Ecology, Ethology & Evolution Colloquium (OE<sup>3</sup>C). University of Guelph, Ontario, Canada.  
\*\*Runner up for best graduate student talk
- **L. Grieves,** J.S. Quinn & D.M. Logue. Jul. 2013. Smooth-billed Anis respond appropriately to two different classes of alarm call. Animal Behaviour Society Conference, University of Colorado, Boulder, USA. (Poster)

- **L. Grieves**, J.S. Quinn & D.M. Logue. May 2013. An experimental test of functional reference in avian alarm calls. Ontario Ecology, Ethology & Evolution Colloquium (OE<sup>3</sup>C). Western University, London, Ontario.
- **L. Grieves**, J.S. Quinn & D.M. Logue. April 2013. Alarm call specificity in a cooperatively breeding bird. Current Research in Engineering, Science & Technology Conference (CREST). McMaster University, Hamilton, Ontario.

**SCIENCE COMMUNICATION:**

- 2018. Interviewed by Western News  
<<https://news.westernu.ca/2018/09/research-explores-smells-role-bird-mating/>>
- 2018. Interviewed by CBC London  
<https://www.cbc.ca/news/canada/london/western-birds-chemical-research-1.4798237>
- 2018. Western News  
<<https://news.westernu.ca/2018/04/taps-two/>>
- 2017. Western News  
<<https://news.westernu.ca/2017/06/vanier-celebrates-nations-finest-graduate-students/>>
- 2015. Interviewed by Dr. Hanna Rowland (University of Cambridge) for The Behavioural Ecology and Evolution Podcast (The Bleepcast)  
<<http://ia600303.us.archive.org/17/items/BeepcastJanuary2015/Beepcast201501.mp3>>

**SERVICE:**

**Reviewed manuscripts for:**

- 2018. Ethology (1)
- 2018. Animal Behaviour (2)

**Workshop panelist at Western University for:**

- March 2018. How to write and defend your PhD proposal
- March 2017. MSc to PhD transition: paths and options, pros and cons

**MENTORSHIP:**

- **Advisor**. 2018-Present. Western University. Undergraduate Honour's thesis supervisory committee member for Nikita Frizzelle (Keyghobadi lab). **Project**: Flight morphology and dispersal of *Parnassius smintheus* butterflies.
- **Mentor**. 2017-Present. Western University. Train and mentor undergraduate volunteer & work study student Lydia Balogh. **Project**: Population variation and sex differences in malaria infection among song sparrows, *Melospiza melodia*.
- **Mentor**. 2018. Western University. Train and mentor undergraduate NSERC USRA student Melanie Denommé. **Project**: Population variation in avian beta-defensin immune genes in song sparrows, *Melospiza melodia*.

- **Mentor.** 2014. McMaster University. Advised undergraduate student Ryan Caldwell on his honour's thesis project. **Project:** Male dominance and reproductive skew in joint-nesting groups of the smooth-billed ani, *Crotophaga ani*. **HQP:** Ryan completed his MSc at McGill University and is now a Business Development Specialist with the Mitacs & McMaster Industry Liason Office in Ontario.
- **Mentor.** 2013. McMaster University. Advised undergraduate student Colleen Bobbie on her honour's thesis project. **Project:** Synchronized nestling provisioning in a communally nesting passerine. **HQP:** Colleen completed her MSc at Laurentian University in 2016 and is now a data analysis professional with the Ontario Ministry of the Environment and Climate Change via Laurentian University.
- **Mentor.** 2012. McMaster University. Advised undergraduate student Ashley Cantwell on her 4<sup>th</sup> year senior biology project. **Project:** Effects of group size and rainfall on fledgling success in smooth-billed anis, *Crotophaga ani*. **HQP:** Ashley is now a Biologist at Natural Resource Solutions Inc. in Waterloo, ON.
- **Mentor.** 2012. McMaster University. Advised undergraduate student Sonya Elango on her independent research project. **Project:** Effect of relatedness on breeding group distribution in smooth-billed anis, *Crotophaga ani*. **HQP:** Sonya is now an MSc Candidate in Human Genetics/Genetic Counseling at Sarah Lawrence College, Astoria NY, USA.

#### **LEADERSHIP & OUTREACH:**

- 2018-Present. Organize & lead monthly Wellness Walks on Western University campus.
- 2018-Present. Ontario SwiftWatch Volunteer. Conduct bi-monthly monitoring of chimney swift roosts in London, Ontario to assess population of this threatened species.
- 2017-Present. Graduate student member of the *University Council on Animal Care* at Western University.
- 2017-Present. Volunteer Science Writer with *Let's Talk Science's* CurioCity program.
- 2017-Present. Volunteer with *ReForest London*, ON as a Tree Specialist educating the public about the benefits of trees and native species. Assist in tree planting and after care.
- 2016-2017. Volunteer at the *rare Charitable Research Reserve* in Cambridge, ON. Lead birding hikes during annual BioBlitz events. Provide research presentations and research activities for ECO-camp participants aged 6–12.
- 2016-2017. Member of the Western University *Society of Biology Graduate Students Seminar Committee*. Worked as a team to coordinate departmental seminar series, guest speaker lunches with graduate students, and special events.
- 2017. My lab participated in the *Animal Behaviour Society Outreach Fair* at the University of Toronto, Scarborough by teaching elementary school students about our research program and about song sparrow life history, ecology, and behavior.
- 2015. Worked with youth aged 9–19 in Winnipeg, MB at the *St. Boniface Hospital Research Centre Youth Biology lab* to educate and engage students on human body systems, health and wellness, heart health, and disease.

- 2012-2014. Volunteered with the *Hamilton Naturalists Club*, ON to engage inner city youth during workshops on habitat restoration, native species, plants, and pollinators. Led nature walks, games, and native species planting events during class field trips.
- 2012-2014. Participated in international education and outreach by presenting my MSc research in public lectures at *Mayaguez University*, P.R. and the *U.S. Fish & Wildlife Refuge Visitor Centre* in Cabo Rojo, P.R. (Refugio Nacional de Vida Silvestre de Cabo Rojo).
- 2012-2014. Mentored and trained ten undergraduate students at *McMaster University*, six field research assistants, and one incoming master's student in Cabo Rojo, Puerto Rico. Assisted with graduate program and scholarship applications and acted as a referee for several students.

### PEER-REVIEWED PUBLICATIONS:

1. **Grieves L. A.** & E. A. MacDougall-Shackleton. Sex and species preferences for preen oil odour cues expressed by song sparrows (*Melospiza melodia*). *In Prep.*
2. **Grieves L. A.**, M. A. Bernards, & E. A. MacDougall-Shackleton. 2018. Wax ester composition of songbird preen oil varies seasonally and differs between sexes, ages, and populations. *Journal of Chemical Ecology*. *In Review.*
3. **Grieves L.A.** & J.S. Quinn. 2018. Group size, but not manipulated whole-clutch egg colour, contributes to ovicide in joint-nesting Smooth-billed Ani (*Crotophaga ani*). *The Wilson Journal of Ornithology* 130:479-484.
4. **Grieves L. A.**, T. R. Kelly, M. A. Bernards & E. A. MacDougall-Shackleton 2018. Chemical composition of preen oil signals malarial infection status in songbirds: results from an experimental study. *The Auk* 135:767-776.
5. Robertson, J.K., J. R. Caldwell, **L. Grieves**, A. Samuelsen, G. Schmaltz & J.S. Quinn. 2017. Male parental effort predicts reproductive contribution in the joint-nesting smooth-billed ani. *Journal of Ornithology* 159:471-481.
6. **Grieves L.A.**, D.M. Logue & J.S. Quinn 2015. Ready to fight: reliable predictors of attack in a cooperatively breeding, non-passerine bird. *Ethology* 121:1-12.
7. **Grieves L.A.**, D.M. Logue & J.S. Quinn 2015. Vocal repertoire of the cooperatively breeding Smooth-billed Ani, *Crotophaga ani*. *Journal of Field Ornithology* 86:130-143.
8. **Grieves L.A.**, D.M. Logue & J.S. Quinn. 2014. Joint-nesting smooth-billed ani, *Crotophaga ani*, use a functionally referential alarm call system. *Animal Behaviour* 89:215-221.
9. **Grieves L.** & S. Forbes. 2012. Do sora nests protect red-winged blackbirds from marsh wren predation? *The Wilson Journal of Ornithology* 124:188-190.

**OTHER PUBLICATIONS:**

- **Grieves L.** 2018. Canadian Invader: Beavers Hit Hard In South America. Let's Talk Science CurioCity article series on invasive species.
- **Grieves L.** 2018. Alien Invasion: What are invasive species and what can we do about them? Let's Talk Science CurioCity article series on invasive species.
- **Grieves L.** 2013. Smooth-billed Ani (*Crotophaga ani*) research in Puerto Rico. *Picoides* 26:15-17.
- **Grieves L.** 2009 – 2012. Zoological investigations. *The Manitoban*. 97-100. (33 contributions).

**AWARDS & SCHOLARSHIPS:**

**2018**

- NSERC Gilles Brassard Doctoral Prize for Interdisciplinary Research, University of Western Ontario (UWO)
- J. D. Detwiler Award, UWO
- Biology Graduate Student Travel Award, UWO
- Student Travel Award for attendance at the 2018 International Ornithological Congress, Bird Studies Canada/Society of Canadian Ornithologists, UWO

**2017**

- Vanier Canada Graduate Scholarship (NSERC), UWO
- NSERC, Canada Graduate Scholarship (CGS D), UWO (Declined)
- QEII Graduate Scholarship in Science and Technology, UWO (Declined)
- Fred Cooke Student Award, Bird Studies Canada/Society of Canadian Ornithologists
- Biology Graduate Student Travel Award, UWO
- David E Laudenbach Scholarship, UWO

**2016**

- QEII Graduate Scholarship in Science and Technology, UWO
- Dean's Doctoral Scholarship, UWO
- Ruth H. Arnold Fellowship in Biology, UWO

**2013**

- QEII Graduate Scholarship in Science and Technology, McMaster University (MU)
- Biology Travel Scholarship, MU
- NSERC Michael Smith Foreign Study Supplement (NSERC MSFSS), MU

**2012**

- NSERC, Canada Graduate Scholarship (CGS M), MU

**2011**

- NSERC Undergraduate Student Research Award (USRA), University of Winnipeg (UW)
- Academic Proficiency Scholarship, UW

**2010 – 2006**

- NSERC Undergraduate Student Research Award (USRA), UW
- Manitoba Bursary, UW
- Academic Proficiency Scholarship, UW
- Bill Riley Memorial Bursary, UW

- Bill Evans Scholarship in Biology, UW
- Board of Regents Undergraduate Bursary, UW
- The Winnipeg Grenadiers Hong Kong Trust Fund, UW

**PROFESSIONAL AFFILIATIONS**

- Animal Behaviour Society
- Society of Canadian Ornithologists
- Nature London