

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 communication in songbirds: variation in preen oil chemical cues and behavioural responses to preen oil odour 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
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 research project for BSc thesis research

RESEARCH INTERESTS:

Broadly, I am interested in animal communication and mate choice. My **PhD** research explores songbird chemical communication and spatiotemporal variation in preen oil chemical composition, preen gland microbial communities, blood-borne parasites, and major histocompatibility complex genotypes in three Ontario breeding populations of song sparrows. 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. My **BSc** research focused on brood parasitism, brood reduction, and nest predation in red-winged blackbirds.

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. 2011/10 – 2014/12
- 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 (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 2019/05 – 2019/06
- Behavioural Ecology and the Prairie Grasslands 2016/05 – 2016/06
- 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 2019. Grassland bird conservation and birding 101. Behavioural Ecology in the Prairie Grasslands Field Course.
- **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:

- R. Boyd, Denommé, M. R., **Grieves, L.**, MacDougall-Shackleton, E.A. 2019. Candidate loci for geographic differences in disease resistance in song sparrows (*Melospiza melodia*). Canadian Society of Zoologists Meeting, University of Windsor, Ontario, Canada.
- **L. Grieves**, Bernards, M.A., Gloor, G.B, MacDougall-Shackleton, E.A. 2019. Odour-based discrimination of similarity and diversity at MHC in songbirds. Ontario Ecology, Ethology & Evolution Colloquium (OE³C). McMaster University, Hamilton, Ontario, Canada.
- L. Balogh, **Grieves, L.** MacDougall-Shackleton, E.A. 2019. Variation in avian malarial infections among song sparrow (*Melospiza melodia*) populations in Ontario. Ontario Ecology, Ethology & Evolution Colloquium (OE³C). McMaster University, Hamilton, Ontario, Canada.
- **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 Ornithological 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 (OE³C). 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 (OE³C). 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 (OE³C). 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:

- 2014-Present. Academic Twitter account (@LeaGrie). Focus on biology, environment, and academia. Social Media Ambassador for Western Science and Ontario Nature.
- 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/>
- 2017. Global News
<<https://globalnews.ca/news/3747569/western-researchers-get-20m-boost-from-the-federal-government/>>
- 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:

- 2018-2019. Ethology (2)
- 2018. Animal Behaviour (2)
- 2018. Bioacoustics (2 pre-reviews)

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

Biology Honours Thesis examiner:

- April 2019. Biology Thesis Day

PROFESSIONAL AFFILIATIONS

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

MENTORSHIP:

- **Advisor.** 2018-2019. Western University. Undergraduate Honours Research Thesis supervisory committee member for Nikita Frizzelle (Keyghobadi lab). **Project:** Flight morphology and dispersal of *Parnassius smintheus* butterflies. **HQP:** Msc student in Biology at Western University.
- **Mentor.** 2018-2019. Western University. Train and mentor undergraduate thesis student Rachel Boyd. **Project:** Population genetic structure and innate immune genes in song sparrows, *Melospiza melodia*. **HQP:** PhD student in Human Genetics at Johns Hopkins University.
- **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*. **HQP:** MSc student at University of Guelph
- **Supervisor.** 2017-2019. Western University. Train and mentor undergraduate volunteer & work study student Lydia Balogh. **Project:** Variation in malarial infection prevalence among song sparrows, *Melospiza melodia*.
- **Mentor.** 2014. McMaster University. Mentored Undergraduate Honours Thesis student Ryan Caldwell. **Project:** Male dominance and reproductive skew in joint-nesting groups of the smooth-billed ani, *Crotophaga ani*. **HQP:** MSc at McGill University. Business Development Specialist with Mitacs & McMaster Industry Liason Office.
- **Mentor.** 2013. McMaster University. Mentored Undergraduate Honours Thesis student Colleen Bobbie. **Project:** Synchronized nestling provisioning in a communally nesting passerine. **HQP:** MSc at Laurentian University (2016). Data analysis professional with Ontario Ministry of Environment and Climate Change.

- **Mentor.** 2012. McMaster University. Advised 4th year senior biology project student Ashley Cantwell. **Project:** Effects of group size and rainfall on fledgling success in smooth-billed anis, *Crotophaga ani*. **HQP:** Biologist at Natural Resource Solutions Inc.
- **Mentor.** 2012. McMaster University. Advised independent research project student Sonya Elango. **Project:** Effect of relatedness on breeding group distribution in smooth-billed anis, *Crotophaga ani*. **HQP:** MSc in Human Genetics at Sarah Lawrence College, Astoria NY, USA.

LEADERSHIP & OUTREACH:

- 2019-Present. Member. *Environmental and Ecological Planning Advisory Committee* for the City of London, Ontario, Canada.
- 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. 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.
- 2017-2019. Graduate student member of the *University Council on Animal Care* at Western University.
- 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 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. Participated in *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 *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 MSc student in Puerto Rico. Assisted with graduate program and scholarship applications, acted as a referee for several students.

AWARDS & SCHOLARSHIPS:

2019

Finalist. Let's Talk Science National Volunteer Award, CurioCity
<<https://letstalkscience.ca/News-Events/ArticleId/1643/announcing-the-2019-national-lets-talk-science-award-finalists>>

2018

- NSERC Gilles Brassard Doctoral Prize for Interdisciplinary Research, University of Western Ontario (UWO)
- J. D. Detwiler Award, UWO
- Best Graduate Student Talk, Ontario Ecology, Ethology and Evolution Conference, 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

PEER-REVIEWED PUBLICATIONS:

11. Zitani N. M., **L. A. Grieves** & R. G. Thorn. A successfully breeding partially leucistic American Robin, *Turdus migratorius*. Canadian Field Naturalist. *In Review*.
10. **Grieves L. A.**, G. B. Gloor, M. A. Bernards & E. A. MacDougall-Shackleton. Songbirds show odour-based discrimination of similarity and diversity at the major histocompatibility complex. Animal Behaviour. *Accepted*.
9. **Grieves L. A.**, M. A. Bernards & E. A. MacDougall-Shackleton. Behavioural responses of songbirds to preen oil odour cues of sex and species. Animal Behaviour. *In Press*.
8. **Grieves L. A.**, M. A. Bernards & E. A. MacDougall-Shackleton. 2019. Wax ester composition of songbird preen oil varies seasonally and differs between sexes, ages, and populations. Journal of Chemical Ecology 45:37-45.
7. **Grieves L.A.** & J.S. Quinn. 2018. Group size, but not manipulated whole-clutch egg colour, contributes to ovicide in joint-nesting Smooth-billed Anis (*Crotophaga ani*). The Wilson Journal of Ornithology 130:479-484.
6. **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.
4. **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.
3. **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.
2. **Grieves L.A.**, D.M. Logue & J.S. Quinn. 2014. Joint-nesting smooth-billed anis, *Crotophaga ani*, use a functionally referential alarm call system. Animal Behaviour 89:215-221.
1. **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.
<<http://explorecuriocity.org/Explore/ArticleId/6733/canadian-invaders.aspx>>
- **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.
<<http://explorecuriocity.org/Explore/ArticleId/6309/alien-invasion-understanding-invasive-species.aspx>>

- **Grieves L.** 2017. Researcher profile. Let's Talk Science CurioCity.
<<http://explorecuriocity.org/Explore/ArticleId/6093/leanne-grieves.aspx>>
- **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).