

Catherine Scott

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EDUCATION

- 2015 – **PhD student**, Ecology and Evolutionary Biology, University of Toronto Scarborough
present *Supervisor*: Maydianne Andrade
Male silk pheromones in inter- and intra-sexual communication in western black widows
(*Latrodectus hesperus*)
- 2014 **MSc**, Biology, Simon Fraser University
Supervisor: Gerhard Gries
Web reduction behaviour and the chemical communication system of the western black widow,
Latrodectus hesperus ([pdf](#))
- 2008 **BSc**, Mathematics, Queen's University

PUBLICATIONS

9. Vibert S, Salomon M, **Scott C**, Blackburn GS, Gries G. (2017). Life-history data for the funnel weavers *Eratigena agrestis* and *Eratigena atrica* (Araneae: Agelenidae) in the Pacific Northwest of North America. *The Canadian Entomologist*. doi: [10.4039/tce.2016.73](https://doi.org/10.4039/tce.2016.73)
8. Vibert S, **Scott C**, Gries G. (2016). Vibration transmission through sheet webs of hobo spiders (*Eratigena agrestis*) and tangle webs of western black widow spiders (*Latrodectus hesperus*). *Journal of Comparative Physiology A*. doi:[10.1007/s00359-016-1113-0](https://doi.org/10.1007/s00359-016-1113-0)
7. **Scott C**, Kirk D, McCann S, Gries G. (2015). Web reduction by male black widows renders pheromone-emitting females' webs less attractive to rivals. *Animal Behaviour*. 107: 71-78. doi:[10.1016/j.anbehav.2015.06.009](https://doi.org/10.1016/j.anbehav.2015.06.009) ([pdf](#))
6. **Scott C**, McCann S, Gries R, Khaskin G, Gries G. (2015). *N*-3-Methylbutyryl-*O*-methylpropanoyl-*L*-serine methyl ester – pheromone component of western black widow females. *Journal of Chemical Ecology*. 41(5): 465-472. doi:[10.1007/s10886-015-0582-x](https://doi.org/10.1007/s10886-015-0582-x) ([pdf](#))
5. McCann S, **Scott C**, Moeri O, Jones T, O'Donnell S, Gries G. (2015). Red-throated Caracara, a falconid raptor, rivals predatory impact of army ants on social wasps. *Insectes Sociaux*. 62(1): 101-108. doi:[10.1007/s00040-014-0384-0](https://doi.org/10.1007/s00040-014-0384-0) ([pdf](#))
4. McCann S, Moeri O, Ibarra Jiminez S, **Scott C**, Gries G. (2015). Developing a paired-target apparatus for quantitative testing of nest defense behavior by vespine wasps in response to con- or heterospecific nest defense pheromones. *Journal of Hymenoptera Research*. 46: 151-163 doi:[10.3897/JHR.46.6585](https://doi.org/10.3897/JHR.46.6585)
3. Vibert S, **Scott C**, Gries G. (2014). A meal or a male: the 'whispers' of black widow males do not trigger a predatory response in females. *Frontiers in Zoology*. 11(1): 4. doi:[10.1186/1742-9994-11-4](https://doi.org/10.1186/1742-9994-11-4)
2. McCann S, Moeri O, Jones T, **Scott C**, Gries R, Khaskin G, O'Donnell S, Gries G. (2013). Strike fast, strike hard: the Red-throated Caracara exploits absconding behavior of social wasps during nest predation. *PLOS ONE*. 8(12): e84114. doi:[0.1371/journal.pone.0084114](https://doi.org/10.1371/journal.pone.0084114)
1. **Scott C**, Vibert S & Gries G. (2012). Evidence that web reduction by western black widow males functions in sexual communication. *The Canadian Entomologist*. 144(5): 672-678. doi:[10.4039/tce.2012.56](https://doi.org/10.4039/tce.2012.56) ([pdf](#))

GRANTS AND AWARDS

- 2017 Toronto Entomologists' Association: W. John D. Eberlie Research Grant (\$400)
- 2016 International Congress of Arachnology: best student poster in ecology and behaviour (\$200)
- 2016 Experiment Arachnid Challenge Grant (USD 500 grant plus USD 5,700 raised via Experiment.com)
- 2016 American Arachnological Society Student Travel Grant (\$550)
- 2015 NSERC Alexander Graham Bell Canada Graduate Scholarship – Doctoral (\$105,000 over 3 years)
- 2014 Simon Fraser University (SFU) Biological Sciences Travel and Minor Research Award (\$400)
- 2013 SFU Graduate Fellowship (\$6,250)
- 2013 Entomological Society of BC Graduate Student Scholarship (\$400)
- 2013 Entomological Society of Canada: President's Prize for best student talk (\$150)
- 2013 SFU Biological Sciences Travel and Minor Research Award (\$500)
- 2012 SFU Graduate Fellowship (\$6,250)
- 2012 SFU Biological Sciences Travel and Minor Research Award (\$500)
- 2011 SFU Graduate Fellowship (\$6,250)
- 2007 Norman Miller Fellowship in Mathematics Education (\$1,000)

TEACHING EXPERIENCE

- 2017 TA for BIOD53 Special Topics in Behavioural Ecology (labs) at UTSC
- 2017 TA for BIOC54 Animal Behaviour (tutorials) at UTSC
- 2017 TA for BIOC99 Team Research (supervising 5 undergraduate researchers) at UTSC
- 2017 Supervisor for BIOD98 Directed Research in Biology (1 undergrad researcher) at UTSC
- 2017 Supervisor for BIOB98 Supervised Introductory Research (1 undergrad researcher) at UTSC
- 2016 TA for BIOA01 Life on Earth: Unifying Principles (labs) at UTSC
- 2015 TA for BISC 102 General Biology (labs and tutorials) at SFU
- 2014 TA for BISC 204 Introduction to Ecology (tutorials) at SFU
Guest lecturer: Ecology of Spiders (25 Nov. 2014)
- 2013 Supervisor for two BISC 498 Undergraduate Research Projects at SFU
 - Chloe Gerak: Chemical communication and courtship behaviour in the false widow, *Steatoda grossa* (won President's Prize for best undergraduate student talk the the AGM of the Entomological Society of BC in 2014)
 - Devin Kirk: Chemical communication and web reduction behaviour in the western black widow, *Latrodectus hesperus* (coauthored paper in Animal Behaviour)
- 2013 TA for BISC 101 General Biology (labs and tutorials) at SFU
- 2007 Undergraduate TA for MATH 121/122 Math Investigations Calculus Program (tutorials and co- course coordinator) at Queen's

- 2007 Undergraduate TA in the drop-in Math Help Centre (office hours)
- 2006 Undergraduate TA for MATH 121/122 Math Investigations (tutorials) at Queen's

INVITED TALKS AT CONFERENCES

- 2014 **Scott C.** The truth about spider bites: “Aggressive” spiders and the threat to public health. Symposium: *Dangerous Creatures? Arthropods affecting human health: fact and fiction*. Annual Meeting of the Entomological Society of British Columbia, Burnaby, BC, 24 – 25 Oct. 2014.
- 2014 **Scott C, Kirk D, McCann S & Gries G.** Web reduction behaviour and the chemical communication system of the western black widow, *Latrodectus hesperus*. Symposium: *Graduate Student Showcase*. Joint Annual Meeting of the Entomological Society of Saskatchewan and Entomological Society of Canada, Saskatoon SK, 28 Sept. – 1 Oct. 2014.

PRESENTATIONS AT CONFERENCES

- 2016 **Scott C, McCann S & Andrade MCB.** The mating dynamics of western black widows: new insights from field observations. (Talk) Annual General meeting of the Entomological Society of Ontario, Sault Ste. Marie, ON, 14–16 Oct. 2016.
- 2016 ***Scott C, Kirk D, McCann S & Gries G.** Male black widows decrease competition via web reduction. (Poster) International Congress of Arachnology, Golden, CO, 2–9 July 2016.
***Prize for best student poster in the Behaviour and Ecology category.**
- 2016 **Scott C, Kirk D, McCann S & Gries G.** Web reduction behaviour in black widows: a story of attraction, courtship, manipulation, and rivalry. (Talk) Toronto Entomologists' Association Student Symposium, Toronto, ON, 19 Mar. 2016.
- 2015 **Scott C & Gries G.** Factors affecting web reduction behaviour, a mate-monopolization tactic of male western black widow spiders. (Talk) Annual Meeting of the Entomological Society of Canada and the Société d'entomologie du Québec, Montréal, QC, 8–11 Nov. 2015.
- 2015 **Scott C.** #NotABrownRecluse: adventures in (mis)identification of arthropods online, and why Twitter is an excellent tool for entomological outreach. (Talk) Annual Meeting of the Entomological Society of Ontario, Elgin, ON, 18–20 Sept. 2015.
- 2013 **Scott C, Kirk D, McCann S & Gries G.** Web reduction behaviour in black widows: a story of attraction, courtship, manipulation, and rivalry. (Talk) Annual General Meeting of the Entomological Society of BC, Victoria BC, 1 Nov. 2013.
- 2013 ***Scott C, Kirk D, McCann S & Gries G.** Web reduction behaviour in black widows: a story of attraction, courtship, manipulation, and rivalry. (Talk) Joint Annual Meeting of the Entomological Society of Ontario and the Entomological Society of Canada, Guelph ON, 20–23 Oct. 2013.
***President's Prize for best student talk in the Behaviour and Biological Control session.**
- 2012 **Scott C, Gries R, Khaskin G & Gries G.** Identification of a silk-borne pheromone component of the western black widow *Latrodectus hesperus*. (Talk) Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Alberta, Edmonton AB, 4–7 Nov. 2012.
- 2011 ***Scott C, Vibert S & Gries G.** Analysis of courtship behaviour in the western black widow, *Latrodectus hesperus*, with insights into vibratory and chemical signals. (Poster) Annual meeting of the International Society of Chemical Ecology, Burnaby BC, 24–28 July. 2011.
***Honorable mention, student poster competition.**
- 2010 **Scott, C., Vibert, S. & Gries, G.** Courtship behavior and mating success in the black widow *Latrodectus hesperus*. (Talk) Joint Annual Meeting of the Entomological Societies of BC and Canada,

Vancouver BC, 31 Oct.–3 Nov. 2010.

INVITED PUBLIC TALKS

- 2016 **Scott C.** Untangling the Web-Based Communication System of Black Widow Spiders. Sigma Xi Toronto Distinguished Lecture Series, Toronto, ON, 8 Dec. 2016.
- 2016 **Scott C.** Eat Prey Love. The lives of the black widow spiders. Victoria Natural History Society, Victoria, BC, 13 Sept. 2016.
- 2016 **Scott C.** From web-based personal ads to sex under silk sheets: courtship and communication in black widows. Royal Canadian Institute for the Advancement of Science Lecture Series, Toronto, ON, 14 Feb. 2016.

SCIENCE COMMUNICATION AND OUTREACH

Writing and Social Media

- Maintain a blog about spiders for a general audience: www.spiderbytes.org (Nov. 2013 – present)
- Maintain a personal twitter account (@Cataranea) with ~ 3500 followers where I tweet about spider biology and engage in spider identification via the #NotABrownRecluse hashtag (Apr. 2013 – present)
- Guest posts on Professor Chris Buddle’s [SciLogs](#) blog *Expiscor*:
 - 4 Sept. 2014 “The truth about spider bites: aggressive spiders and the threat to public health” ([link](#))
 - 31 Jan. 2014 “What happens when you poke, prod, and pinch black widow spiders? You might be surprised...” ([link](#))

Outreach Activities

- Guest speaker (entomology and arachnology) for careers class at The Study Academy, Toronto, ON, 15 Jan. 2016.
- Led a discussion and activity about spider biology for grade 2 and 3 students as a Science Mentor for SFU Science Alive Quarks camp 2 July 2015.
- Organized and presented an interactive educational display communicating information about spiders at the Iona Beach Regional Park ‘Spiders Unraveled’ event, 13 Sept. 2014.
- Organized and presented an interactive educational display communicating information about arthropods to families at the Richmond Nature Park ‘Bugs Galore!’ event, 8 Sept. 2013 and 7 Sept. 2014.
- Guest speaker at spider club for grade 2 and 3 students at Upper Lynn elementary school, 7 and 21 May 2014.
- Organized and presented an interactive educational display about arthropods and science to children at SFU’s Halloween ‘Science Spooktacular’ event, 26 Oct. 2013.

SERVICE

- Reviewer for the following journals: *Animal Behaviour*, *Biotropica*, *Ethology*, *Journal of Arachnology*, *Journal of Ethology*, *Journal of Insect Behaviour*, and *Journal of Agricultural and Food Chemistry*.
- Student representative on the board of the Entomological Society of Ontario (2016 – present)
- Student representative on the board of the Toronto chapter of Sigma Xi (2016 – present)
- Maintain the twitter account for the Entomological Society of Ontario (@EntSocOnt)
- Organizing committee member for Ontario Ecology Ethology and Evolution Colloquium (OE3C) 2016 meeting at the University of Toronto.

- Volunteer moderator and AV operator at the Joint Annual Meeting of the Entomological Societies of Canada and Quebec, Montréal QC, 8 – 11 Nov. 2015.
- Volunteer project: scanning and uploading back issues of the Bulletin of the Entomological Society of Canada to make them available and searchable online (2013 – current).
- Volunteer AV operator, Joint Annual Meeting of the Entomological Societies of Canada and Alberta, Edmonton AB, 4 – 7 Nov. 2012.
- SFU Biological Sciences Graduate Student Caucus Executive member:
 - Events Committee Officer (2011 – 2012)
 - Teaching Support Staff Union Representative (2012 – 2013)

MEMBERSHIPS

- Animal Behavior Society (2017 – present)
- Entomological Society of Canada (2010 – present)
- Entomological Society of Ontario (2015 – present)
- Entomological Society of BC (2013 – present)
- Sigma Xi (2016 – present)
- Toronto Entomologists' Association (2015 – present)