

Catherine Scott

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Curriculum Vitae

EDUCATION

- 2015 – **PhD student**, Ecology and Evolutionary Biology, University of Toronto Scarborough
present *Supervisor*: Maydianne Andrade
- 2014 **MSc**, Biology, Simon Fraser University
Supervisor: Gerhard Gries
- 2008 **BSc**, Mathematics, Queen's University

GRANTS AND AWARDS

- 2018 Ontario Graduate Scholarship (\$15,000)
- 2018 General Motors Women in Science and Mathematics Award (\$5,000)
- 2018 Entomological Society of Canada PhD Scholarship (\$2,000)
- 2018 Entomological Society of Canada Danks Scholarship (\$1,000)
- 2018 International Society for Behavioural Ecology Travel Award (\$600)
- 2017 Toronto Entomologists' Association: W. John D. Eberlie Research Grant (\$400)
- 2016 International Congress of Arachnology: award for best student poster in Ecology and Behaviour (\$200)
- 2016 Experiment Arachnid Challenge Grant (USD 500 grant plus USD 5,700 raised via crowdfunding at Experiment.com)
- 2016 American Arachnological Society Student Travel Grant (\$550)
- 2015 NSERC Alexander Graham Bell Canada Graduate Scholarship – Doctoral (\$105,000 over 3 years)
- 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)
- 2012 SFU Graduate Fellowship (\$6,250)
- 2011 SFU Graduate Fellowship (\$6,250)
- 2007 Norman Miller Fellowship in Mathematics Education (\$1,000)

PUBLICATIONS

12. Rosario K, Mettel KA, Benner BE, Johnson R, **Scott C**, Yusseff-Vanegas SZ, Baker CCM, Cassill DL, Storer C, Varsani A, Breitbart M. Virus discovery in all three major lineages of terrestrial arthropods highlights the diversity of single stranded DNA viruses associated with invertebrates. *PeerJ* (Accepted 17 Sept. 2018) <https://peerj.com/preprints/27093/>
11. **Scott C**, Anderson A, Andrade MCB. A review of the mechanisms and functional roles of male silk use in spider courtship and mating. *Journal of Arachnology* 46(2): 173-206. doi:[10.1636/JoA-S-17-093.1](https://doi.org/10.1636/JoA-S-17-093.1)
10. **Scott C**, Gerak C, McCann S, Gries G. (2017). The role of silk in courtship and chemical communication of the false widow spider, *Steatoda grossa* (Araneae: Theridiidae) *Journal of Ethology* 36(2): 191-197. doi: [10.1007/s10164-017-0539-3](https://doi.org/10.1007/s10164-017-0539-3)
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* 149(3): 345-356. 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* 202(11): 749–758. 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)
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)
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)
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)

PRESENTATIONS AT SCIENTIFIC MEETINGS

- 2018 **Scott C**, McCann S & Andrade MCB. You take the high road and I'll take the silk road: scrambling male widow spiders find females faster by following silk trails of rivals. (Talk) 17th International Behavioral Ecology Congress, Minneapolis, MN, 11-16 Aug. 2018.
- 2018 **Scott C**, McCann S & Andrade MCB. The amazing race: how male black widows find females faster. (Talk) Toronto Entomologists' Association Student Symposium, Toronto, ON, 24 March 2018.
- 2017 **Scott C**, McCann S & Andrade MCB. Finding females in a sensory storm: How do male western widows localize mates? (Talk) 54th Annual Conference of the Animal Behavior Society, Scarborough, ON, 12–16 June 2017.
- 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 (Behaviour and Ecology)**
- 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.
- 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. (Talk) Annual Meeting of the Entomological Society of British Columbia, Burnaby, BC, 24 – 25 Oct. 2014. ***Invited symposium talk**
- 2014 ***Scott C**, Kirk D, McCann S & Gries G. Web reduction behaviour and the chemical communication system of the western black widow, *Latrodectus hesperus*. (Talk) Joint Annual Meeting of the Entomological Society of Saskatchewan and Entomological Society of Canada, Saskatoon SK, 28 Sept. – 1 Oct. 2014. ***Talk in the Graduate Student Showcase**
- 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 (Behaviour and Biological Control)**
- 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.

TEACHING

2018 TA: BIOD53 Special Topics in Behavioural Ecology (labs) at UTSC
Guest lecturer: Chemical Ecology; Introduction to the biology and diversity of spiders

2018 TA: BIOB51 Evolutionary Biology (marking) at UTSC

2017 TA: BIOD53 Special Topics in Behavioural Ecology (labs) at UTSC
Guest lecturer: Courtship behaviour and chemical communication in black widows

2017 TA: BIOC54 Animal Behaviour (tutorials) at UTSC

2017 TA: BIOC99 Team Research (supervising 5 undergraduate researchers) at UTSC

- Sumaya Dano, Ajay David, Nimra Javaid, Dilakshan Srikanthan, & Amanda Yee: Effects of cohabiting offspring on fitness of female western black widow spiders (presented a poster at the 2017 Animal Behaviour Meeting & won 2nd prize at the 2017 UTSC Undergraduate Research Poster Forum)

2017 Supervisor: BIOD98 Directed Research (1 undergraduate researcher) at UTSC

2017 Supervisor: BIOB98 Supervised Introductory Research (1 undergraduate) at UTSC

2016 TA: BIOA01 Life on Earth: Unifying Principles (labs) at UTSC

2015 TA: BISC 102 General Biology (labs and tutorials) at SFU

2014 TA: BISC 204 Introduction to Ecology (tutorials) at SFU
Guest lecturer: Ecology of Spiders

2013 Supervisor: BISC 498 Undergraduate Research Projects at SFU (2 undergraduates)

- Chloe Gerak: Chemical communication and courtship behaviour in the false widow, *Steatoda grossa* (coauthored paper in Journal of Ethology; won President's Prize for best undergraduate student talk at 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: BISC 101 General Biology (labs and tutorials) at SFU

2007 Undergraduate TA: MATH 121/122 Math Investigations Calculus Program (tutorials and co- course coordinator) at Queen's University

2007 Undergraduate TA: drop-in Math Help Centre (office hours) at Queen's

2006 Undergraduate TA: MATH 121/122 Math Investigations (tutorials) at Queen's

SCIENCE COMMUNICATION AND OUTREACH

Invited public talks:

- 2018 **Scott C.** The Secret Lives of Spiders. Pickering Naturalists' Speaker Series, Pickering, ON, 7 June 2018.
- 2018 **Scott C.** Eat Prey Love: The Secret Lives of Spiders. Upper Credit Field Naturalists' Speaker Series, Orangeville, ON, 27 Mar. 2018.
- 2017 **Scott C & McCann S.** The secret lives of spiders in Ontario and beyond. Durham Region Field Naturalists' Lecture Series, Durham, ON, 27 Mar. 2017.
- 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.

Online writing and social media:

- **Maintain a blog** ([spiderbytes](#)) about spiders for a general audience (with on average 10,000 views per week in 2018), where I write about spider biology, diversity, and natural history, and post lay summaries of my research publications. (Nov. 2013 – present)
- **Maintain a personal twitter account** ([@Cataranea](#)) with ca. 6000 followers where I tweet and answer questions about spider biology and engage in spider identification. (Apr. 2013 – present)
- **Co-maintain a twitter account** ([@RecluseOrNot](#)) associated with the [Recluse Or Not?](#) outreach campaign in collaboration with Dr. Eleanor Spicer Rice and Dr. Matt Bertone. We identify spiders suspected to be recluses and provide resources about the identification, range, and risks associated with these misunderstood spiders. (Sept. 2017 – present)

Radio Interviews and Podcasts

- *Science Friday*, NPR, 27 Oct. 2017. “In defense of spiders” ([link](#))
- *Science Friday*, NPR, 30 Oct. 2015. “Spider stories that will stick with you” ([link](#))
- *What She Said*, Sirius Radio, 27 Oct. 2015. “Spider expert Catherine Scott” ([link](#))
- *Scientific American 60-second Science Podcast*, 16 July 2015. “Male black widows strive for mate's monogamy” ([link](#))

Other 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: *Acta Ethologica*, *Animal Behaviour*, *Biotropica*, *Ethology*, *Journal of Arachnology*, *Journal of Ethology*, *Journal of Insect Behaviour*, *Journal of Agricultural and Food Chemistry*, and *New Zealand Journal of Zoology*.
- **Symposium co-organizer** (with Robb Bennett, Claudia Copley, and Heather Proctor): “Crossing Taxonomic Borders: Challenging Arachnological Traditions in North America” at the upcoming joint meeting of the Entomological Societies of America, Canada, and British Columbia in Vancouver BC (11 – 14 Nov. 2018).
- **Volunteer** AV operator at the annual meeting of the Animal Behaviour Society in Toronto, ON (12 – 16 Jun. 2017).
- Entomological Society of Ontario board member:
 - **Student Representative** to the board (2016 – present)
 - **Outreach Committee member** (2016 – present)
 - **Scholarship Committee member** (2016 – present)
 - **Bug Eye Photo Competition coordinator** (2018)
- **Vice-president** of Toronto chapter of Sigma Xi (2017 – present)
- **Student representative** on the board of the Toronto chapter of Sigma Xi (2016 – 2017).
- Maintained the twitter account (@EntSocOnt) for the Entomological Society of Ontario (2015 – 2017).
- **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 in 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).
- **Volunteer** AV operator, Joint Annual Meeting of the Entomological Societies of Canada and Alberta, in Edmonton, AB (4 – 7 Nov. 2012).
- SFU Biological Sciences Graduate Student Caucus Executive member:
 - **Teaching Support Staff Union Representative** (2012 – 2013)
 - **Events Committee Officer** (2011 – 2012)

MEMBERSHIPS

- Entomological Society of Canada (2010 – present)
- Entomological Society of BC (2013 – present)
- Entomological Society of Ontario (2015 – present)
- Toronto Entomologists’ Association (2015 – present)
- Sigma Xi (2016 – present)
- International Society of Arachnology (2018 – present)