

James S. Santangelo

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EDUCATION & APPOINTMENTS

| | | |
|----------------|--|--------------|
| Postdoc | <i>University of California Berkeley</i> Department of Integrative Biology Advisor: Rasmus Nielsen | January 2023 |
| PhD | <i>University of Toronto</i> Department of Ecology and Evolutionary Biology Advisors: Marc T. J. Johnson and Rob W. Ness Thesis: Evolutionary processes in urban environments | July 2022 |
| HBSc | <i>University of Toronto Mississauga</i> Department of Biology | June 2015 |

PUBLICATIONS

(First-authored = 10; [Google Scholar](#))

Published and Accepted Manuscripts [†]Student mentee authors

14. **Santangelo, J. S.**, [†]Roux, C., Johnson, M. T. J. (2022). The effects of environmental heterogeneity within a city on the evolution of clines. *Journal of Ecology* 100: 2950-2959. [PDF](#) [GitHub](#)
13. Verrelli, Brian C., Alberti, M., Des Roches, S., Harris, N. C., Hendry, A. P., Johnson, M. T. J., Savage, A. M., Chanrmantier, A., Gotanda, K. M., Govaert, L., Miles, L. S., Rivkin, L., R., Winchell, K. M., Brans, K. I., Correa, C., Diamond, S. E., Fitzhugh, B., Grimm, N. B., Hughes, S., Marzluff, J. M., Munshi-South, J., Rojas, C., **Santangelo, J. S.**, Schell, C., J., Schweitzer, J. A., Szulkin, M. C., Zhou, Y., and Ziter, C. (2022). A global horizon scan for urban evolutionary ecology. *Trends in Ecology & Evolution* 37: 1006-1019. [Access](#)
12. Innes, S. G., **Santangelo J. S.**, Kooyers, N. J., Olsen, K. M., Johnson, M. T. J. (2022). Evolution in response to climate in the native and introduced ranges of a globally distributed plant. *Evolution* 76: 1495-1511.
11. **Santangelo J. S.**, Rob W. Ness, Marc T. J. Johnson, and The Global Urban Evolution Project (GLUE). (2022). Global urban environmental change drives adaptation in white clover. *Science* 375: 1275-1281. [PDF](#) [GitHub](#) [Learn more about GLUE](#)
10. **Santangelo J. S.**, L. Ruth Rivkin, [†]Advenard, C., Thompson, K. A. (2020). Multivariate phenotypic divergence along an urbanization gradient. *Biology Letters* 16: 20200511. [PDF](#) [GitHub](#)
9. **Santangelo J. S.**, Thompson, K. A., [†]Cohan, B., [†]Syed, J., Ness, R. W., and Johnson, M. T. J. (2020). Predicting the strength of urban-rural clines in a Mendelian polymorphism along a latitudinal gradient. *Evolution Letters* 4: 212-225. [PDF](#) [GitHub](#)
8. Johnston L., Bonsma-Fisher M., Ostblom J., Hasan A., **Santangelo J. S.**, Tran L., Sales de Andrade E., Coome L., and Mahallati S. (2019). A graduate student-led participatory live-coding quantitative methods course in R: Experiences on initiating, developing, and teaching. *Journal of Open Source Education* 2: 6-11. [PDF](#) [GitHub](#)

7. L. Ruth Rivkin, **Santangelo J. S.**, Alberti M., Aronson M. F. J., de Keyser C. W., Diamond S. E., Fortin M.-J., Frazee L. J., Gorton A. J., Hendry A. P., Liu Y., Losos J. B., MacIvor J. S., Martin R. A., McDonnell M. J., Miles L. S., Munshi-South J., Ness R. W., Newman A. E. M., Stothart M. R., Theodorou P., Thompson K. A., Verrelli B. C., Whitehead A., Winchell K. M., and Johnson M. T. J. (2019). A roadmap for urban evolutionary ecology. Evolutionary Applications 12: 384-398. [PDF](#)
6. **Santangelo J. S.**, Thompson K. A., and Johnson M. T. J. (2019). Herbivores and plant defenses affect selection on plant reproductive traits more strongly than pollinators. Journal of Evolutionary Biology 32: 4-18. [PDF](#) [GitHub](#)
 ****This manuscript won ESEB's Stephen Stearns Prize*
5. **Santangelo J. S.**, L. Ruth Rikvin, and Johnson M. T. J (2018). The evolution of city life. Proceeding of the Royal Society B: Biological Sciences 285: 20181529. [PDF](#)
4. **Santangelo J. S.**, Johnson M. T. J., and Ness R. W. (2018). Modern spandrels: the roles of genetic drift, gene flow and selection in the evolution of parallel clines. Proceeding of the Royal Society B: Biological Sciences 285: 20180230. [PDF](#) [GitHub](#)
3. Cadotte M. W., Livingstone S. W. Yasui S.-L. E., Dinnage R. Li, J.-T., Marushia R. **Santangelo J. S.**, and Shu W. (2017). Explaining ecosystem multifunction with evolutionary models. Ecology 98: 3175-3187. [PDF](#)
2. **Santangelo J. S.**, and Kotanen P. M. K. (2016). Non-systemic fungal endophytes increase survival but reduce tolerance to simulated herbivory in subarctic *Festuca rubra*. Ecosphere 7: e01260. [PDF](#)
1. **Santangelo J. S.**, Turley N. E., and Johnson M. T. J. (2015). Fungal endophytes of *Festuca rubra* increase in frequency following long-term exclusion of rabbits. Botany 93(4): 233-241. [PDF](#)

Book chapters

1. **Santangelo J. S.**, Miles L. M., Breitbart S. T., Murray-Stoker D., L. Ruth Rivkin, Johnson M. T. J., and Ness R. W. (2020). Urban environments as a framework to study parallel evolution. In: *Urban Evolutionary Biology*, pp. 36-53. M. Szulkin, J. Munshi-South, and A. Charmantier, Eds. Oxford University Press, Oxford, UK. [PDF](#)

Educational resources (not peer reviewed)

1. **Santangelo J. S.** (2019). Data simulation and randomization tests. *NEON Faculty Mentoring Network, QUBES Educational Resources*. [Access](#).

FUNDING & FELLOWSHIPS

(Total Funding = \$502,600 CAD)

| | |
|---|------|
| Miller Postdoctoral Fellowship , Miller Institute, UC Berkeley (\$225,000 USD) | 2023 |
| NSERC PDF , National Engineering and Research Council of Canada (\$90,000) | 2022 |
| NSERC CGS-D , National Engineering and Research Council of Canada (\$35,000) | 2020 |
| NSERC PGS-D , National Engineering and Research Council of Canada (\$42,000) | 2018 |
| Ontario Graduate Scholarship , Government of Ontario, Canada (\$15,000) | 2017 |
| NSERC CGS-M , National Engineering and Research Council of Canada (\$17,500) | 2016 |

PRIZES, HONORS & AWARDS

(Total Awards = \$18,056 CAD)

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| Hamilton Award Finalist , Society for the Study of Evolution (\$624) | 2022 |
| Doctoral Excellence Award , Canadian Society for Ecology and Evolution (\$600) | 2022 |
| Peter Abrams Award , University of Toronto Ecology and Evolutionary Biology Department (\$500) | 2022 |
| Roberta Bondar Graduate Student Excellence Award , University of Toronto Mississauga Department of Biology (\$2452) | 2021 |
| Doctoral excellence scholarship , University of Toronto Faculty of Arts and Science (\$5000) | 2020 |
| Rustom H. Dastur Graduate Scholarship , University of Toronto Ecology and Evolutionary Biology Department (\$2602) | 2020 |
| R. Ramsay Wright Graduate Scholarship , University of Toronto Ecology and Evolutionary Biology Department (\$1000) | 2020 |
| Robert L. Jefferies Graduate Scholarship , University of Toronto Ecology and Evolutionary Biology Department (\$396) | 2020 |
| Stephen Stearns Graduate Student Prize , European Society for Evolutionary Biology (\$375) | 2019 |
| Frederick P. Ide Graduate Award , University of Toronto Ecology and Evolutionary Biology Department (\$3000) | 2019 |
| ASN 1st place presentation , Ontario Ecology, Ethology, and Evolution colloquium (OE3C), Kingston, Canada (\$125) | 2017 |
| CSPB best talk in botany , Ontario Biology Day (OBD), Ottawa, Canada (\$100) | 2015 |
| New Phytologist Prize for best presentation in botany , Canadian Society for Ecology and Evolution (CSEE), Saskatoon, Canada (\$100) | 2015 |
| Award for research excellence in evolution , Ontario Biology Day (OBD), Mississauga, Canada | 2014 |
| Undergraduate research grant , University of Toronto Mississauga (\$500) | 2014 |
| Alan F. Coventry Memorial Scholarship , University of Toronto Mississauga Biology Department (\$782) | 2013 |

INVITED TALKS

| | | |
|---|--|------|
| University of Louisiana Lafayette | Departmental seminar series | 2022 |
| NSF RCN on Urban Eco-Evo | Virtual seminar series | 2022 |
| University of Toronto Mississauga | Departmental seminar series | 2021 |
| Radcliffe Institute, Harvard University | Next in Evolution | 2018 |
| University of Toronto Mississauga | 19 th annual New Phytologist Workshop | 2017 |

CONTRIBUTED PRESENTATIONS

(# Contributed Talks/Posters = 14; # Talk/Poster Awards = 5)

(*Poster presentation; †Award)

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| ESEB, Prague, Czech Republic | 2022 |
| †CSEE, Montréal, Canada | 2022 |
| Evolution meeting, Cleveland, Ohio | 2022 |
| VIII Congreso Mexicano de Ecología, Oaxaca, Mexico | 2022 |
| Atwood Colloquium, University of Toronto, Toronto | 2022 |
| †ESEB, Turku, Finland | 2019 |
| Evolution meeting, Providence, Rhode Island | 2019 |

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| *Evolution joint congress, Montpellier, France | 2018 |
| Evolution meeting, Portland, Oregon | 2017 |
| †Ontario Ecology, Ethology, and Evolution Colloquium (OE3C), Kingston, Canada | 2017 |
| †Ontario Biology Day (OBD), Ottawa, Canada | 2015 |
| †Canadian Society for Ecology and Evolution (CSEE), Saskatoon, Canada | 2015 |
| †Ontario Biology Day (OBD), Mississauga, Canada | 2014 |
| *Canadian Society of Plant Biologists (CSPB), Mississauga, Canada | 2013 |

SERVICE, LEADERSHIP, & PROFESSIONAL EXPERIENCE

(# Unique Positions = 13)

| | |
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| Grad student rep , UTM Systems Biology Faculty Search | 2019 - 2020 |
| Editor , UofT EEB Quarterly Review magazine | 2018 - 2020 |
| Co-organizer/instructor , UTM Bi-weekly Graduate Student Programming Workshops | 2018 - 2019 |
| Member , UTM Biology Executive Committee | 2017 - 2019 |
| Member , UTM Biology Seminar Committee | 2017 - 2019 |
| Member , Tri-campus Graduate Chair Search Committee | 2018 |
| Member , Ecology and Evolutionary Biology Chair Search Committee | 2018 |
| UTM campus representative , EEB Graduate Student Association | 2018 |
| Guest Editor , <i>Proceedings B</i> Special Issue: "The Evolution of City Life" | 2017 - 2018 |
| Organizer , 19 th annual New Phytologist Workshop: "Synthesis in the City: Urban Evolutionary Ecology" | 2017 |
| Co-president , UTM Biology Graduate Student Society | 2017 |
| Treasurer , UTM Biology Graduate Student Society | 2016 |
| Member , UTM Biology Chair Search Committee | 2018 |

TEACHING EXPERIENCE

(# Unique Courses = 6; Total Students Taught = 857)

Course instructor & developer

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| EEB313: Quantitative methods in R for biology | 2018 - 2019 |
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Administrative teach assistant

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| BIO259: Introduction to biological data | 2022 |
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Teaching assistant

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| BIO259: Introduction to biological data | 2022 |
| BIO152: Introduction to evolution and genetics | 2020 |
| BIO342: Evolutionary biology | 2017 - 2022 |
| BIO205: Ecology | 2017 |

Guest lectures

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| HSC302: Biocommunication visualization | 2018 - 2020 |
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MENTORSHIP & ADVISING

(# Students = 5; # Co-authors on published manuscripts = 4)

| | |
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| Cindy Roux , Visiting graduate student from France | Summer 2019 |
| Trevor Schmahl , Undergraduate thesis student | Sept. 2018 - April 2019 |
| Beata Cohan , Undergraduate thesis student | Sept. 2017 - Dec. 2018 |
| Carole Advenard , Visiting graduate student from France | Summer 2017 |
| Jibran Syed , Undergraduate thesis student | Sept. 2016 - April 2017 |

REVIEWER

(Total Reviews = 21; # Unique Journals = 10)

Annals of Botany, Ecology, Ecology and Evolution, Evolution, Evolutionary Applications, Frontiers Ecology and Evolution, Journal of Evolutionary Biology, Journal of Urban Evolution, Proceedings of the Royal Society B, Science, Scientific Reports

SOCIETY MEMBERSHIPS

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| European Society for Evolutionary Biology (ESEB) | 2022 - present |
| Society for the Study of Evolution (SSE) | 2017 - present |
| Canadian Society of Ecology and Evolution (CSEE) | 2015 - present |