Megan E. Frederickson

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Academic History

2019-2020	Radcliffe Fellow, Radcliffe Institute for Advanced Study, Harvard University
2014-current	Associate Professor, Dept. of Ecology & Evolutionary Biology, University of Toronto
2015-2016	Sabbatical Visitor, Dept. of Evolution & Ecology, University of California, Davis
2009-2014	Assistant Professor, Dept. of Ecology & Evolutionary Biology, University of Toronto
2006-2009	Junior Fellow, Harvard Society of Fellows
2001-2006	Ph.D. in Biological Sciences, Stanford University
1997-2001	A.B. *magna cum laude* with Highest Honors in Biology, Harvard University

Publications

(For Frederickson lab members: undergraduate student authors are underlined, and **graduate student and postdoc authors are in bold**)

Published or in press:

1. **O'Brien AM, Laurich J,** Lash E, Frederickson ME. Mutualism outcome across plant populations, microbes, and environments in the duckweed *Lemna minor*. *Microbial Ecology,* in press.
2. **O'Brien AM,** Yu ZH, Luo D, **Laurich J,** Passeport E, Frederickson ME. 2019. Resilience to multiple stressors in an aquatic plant and its microbiome. *American Journal of Botany,* in press.
3. **Meadley Dunphy SA, Prior KM,** Frederickson ME. 2019. Variation in seed dispersal quality between native and invasive ants alters the spatial pattern of plant communities. *Oecologia,* in press.
4. Frederickson ME. 2019. No selection for cheating in a natural meta-population of rhizobia. *Ecology Letters,* in press.
5. **Kaur KM, Malé PJG,** Spence E, Gomez C, Frederickson ME. 2019. Using text-mining to test for cooperate-and-radiate coevolution between ants and plants. *PLOS Computational Biology,* 15: e1007323.
6. Gordon S, **Meadley Dunphy SA, Prior KM,** Frederickson ME. 2019. Asynchrony between ant seed dispersal activity and fruit dehiscence of myrmecochorous plants. *American Journal of Botany,* 106: 71-80.
7. **Harrison TL,** Simonsen AK, Stinchcombe JR, Frederickson ME. 2018. More partners, more ranges: generalist legumes spread more easily around the globe. *Biology Letters,* 14: 20180616.
8. **Batstone RT,** Carscadden KA, Afkhami ME, Frederickson ME. 2018. Using niche breadth theory to explain generalization in mutualisms. *Ecology,* 99: 1039-1050.
   - Top 5% of research outputs scored by Altmetric

9. **Arcila Hernández LM,** Sanders JG, Miller GA, Ravenscraft A, Frederickson ME. 2017. Ant-plant mutualism: a dietary by-product of a tropical ant's macronutrient requirements. *Ecology* 98: 3141-3151.

10. **Malé P-JG, Turner KM**, Doha M, Anreiter I, Allen AM, Sokolowski MB, Frederickson ME. 2017. An ant-plant mutualism through the lens of cGMP-dependent kinase genes. *Proceedings of the Royal Society B* 284: 20170896.

    - Top 5% of research outputs scored by Altmetric
    - Featured by NSERC's Research News website (05/10/2017), the Science Media Centre of Canada (21/09/2017), Science Newsline (18/09/2017), and other media outlets.

11. Frederickson ME. 2017. Mutualisms are not on the verge of breakdown. *Trends in Ecology & Evolution* 32: 727-734

    - Top 5% of research outputs scored by Altmetric

12. Sanders J, Lukasik P, Frederickson ME, Russell J, Koga R, Knight R, Pierce NE. 2017. Dramatic differences in gut bacterial densities correlate with diet and habitat in rainforest ants. *Integrative and Comparative Biology* 57: 705-722

    - Top 5% of research outputs scored by Altmetric

13. Barker JL, Bronstein JL, Friesen ML, Jones EI, Reeve HK, Zink AG, Frederickson ME. 2017. Synthesizing perspectives on the evolution of cooperation within and between species. *Evolution* 71: 814-825.

14. Baker CM, Martins DJ, Pelaez JN, Billen JPJ, Pringle A, Frederickson ME, Pierce NE. 2017. Distinctive fungal communities in an obligate African ant-plant mutualism. *Proceedings of the Royal Society B* 284: 20162501.

15. **Batstone RT, Dutton EM,** Wang D, Yang M, Frederickson ME. 2017. The evolution of symbiont preference traits in the model legume *Medicago truncatula. New Phytologist* 213: 1850-1861.

16. Frederickson ME, Bronstein JL. 2016. From lichens to the law: cooperation as a theme in the diverse career of Roscoe Pound. *The American Naturalist* 188: ii-iii.

17. Pohl S, Frederickson ME, Elgar MA, Pierce NE. 2016. Colony diet influences ant worker foraging and attendance of myrmecophilous lycaenid caterpillars. *Frontiers in Ecology and Evolution* 4:114.

18. **Dutton EM,** Luo EY, **Cembrowski AR,** Shore JS, Frederickson ME. 2016. Three's a crowd: trade-offs between attracting pollinators and ant bodyguards with nectar rewards in *Turnera. The American Naturalist* 188: 38-51.

19. **Dutton EM,** Shore JS, Frederickson ME. 2016. Extrafloral nectar increases seed dispersal by ants in *Turnera ulmifolia. Biotropica* 48: 429-432.

20. **Meadley Dunphy SA, Prior KM,** Frederickson ME. 2016. An invasive slug exploits an ant-seed dispersal mutualism. *Oecologia* 181: 149-159.

21. Riehl C, Frederickson ME. 2016. Cheating and punishment in cooperative animal societies. *Philosophical Transactions of the Royal Society B* 371: 20150090.

22. Jones E, Afkhami M, Akcay E, Bronstein J, Bshary R, Frederickson M, Heath K, Hoeksema J, Ness J, Pankey S, Porter S, Sachs J, Scharnagl K, Friesen M. 2015. Cheaters must prosper: reconciling theoretical and empirical perspectives on cheating in mutualism. *Ecology Letters* 18: 1270-1284.

    - Featured on the journal cover, and in *Discovery News* (22/09/2015), *Science Newsline* (22/09/2015), and other media sources.

23. Frederickson ME. 2015. Some ants sterilize their host plants, but are they "cheaters"? In: *Mutualism* (ed: Bronstein JL), Oxford University Press, New York.

24. **Cembrowski AR,** Reurink G, **Arcila Hernandez LM,** Sanders JG, **Youngerman E,** Frederickson ME. 2015. Sporadic pollen consumption among tropical ants. *Insectes Sociaux* 62:379-382.

25. **Prior KM,** Robinson JM, Meadley Dunphy SA, Frederickson ME. 2015. Mutualism between co-introduced species facilitates invasion and alters plant community structure. *Proceedings of the Royal Society B* 282:20142846.

    - Featured in the *Toronto Star* (23/12/2014), *The Globe and Mail* (23/12/2014), CBC's Quirks & Quarks (10/01/2015), and other media sources.

26. Ho EKH, Frederickson ME. 2014. Alate susceptibility in ants. *Ecology and Evolution* 4:4209-4219.

27. Mayer V, Frederickson ME, McKey D, Blatrix R. 2014. Current issues in the evolutionary ecology of ant-plant symbioses. *New Phytologist* 202:749-764.

    - Featured on the journal cover.

28. Sanders JG, Powell S, Kronauer DJC, Vasconcelos H, Frederickson ME, Pierce NE. 2014. Stability and phylogenetic correlation in gut microbiota: lessons from ants and apes. *Molecular Ecology* 23:1268-1283.

29. **Prior KM,** Saxena K, Frederickson ME. 2014. Seed handling behaviors of native and invasive seed-dispersing ants differentially influence seedling emergence in an invasive plant. *Ecological Entomology* 39:66-74.

30. **Cembrowski AR,** Tan MGR, Thomson JD, Frederickson ME. 2014. Ants and ant scent reduce bumblebee pollination of artificial flowers. *The American Naturalist* 183:133-139.

31. Frederickson ME. 2013. Rethinking mutualism stability: cheaters and the evolution of sanctions. *The Quarterly Review of Biology* 88:269-295.

32. Turner KM, Frederickson ME. 2013. Signals can trump rewards in attracting seed-dispersing ants. *PLoS One* 8:e71871.

33. Frederickson ME, Ravenscraft A, **Arcila Hernandez LM**, Booth G, Astudillo V, Miller GA. 2013. What happens when ants fail at plant defense? *Cordia nodosa* dynamically adjusts its investment in both direct and indirect resistance traits in response to herbivore damage. *Journal of Ecology* 100:401-409.

    - Profiled in *The Economy of Nature, Canadian Edition* (Ricklefs RE et al., W.H. Freeman, p. 411).

34. **Arcila Hernández LM**, Todd EV, Miller GA, Frederickson ME. 2012. Salt intake in Amazonian ants: too much of a good thing? *Insectes Sociaux* 59:425-432.

35. Dutton EM, Frederickson ME. 2012. Why ant pollination is rare: new evidence and implications of the antibiotic hypothesis. *Arthropod-Plant Interactions* 6:561-569.

36. Frederickson ME, Ravenscraft A, Miller GA, **Arcila Hernández LM**, Booth G, Pierce NE. 2012. The direct and ecological costs of an ant-plant symbiosis. *The American Naturalist* 179:768-778.

37. Archetti M, Scheuring I, Hoffman M, Frederickson ME, Pierce NE, Yu DW. 2011. Economic game theory for mutualism and cooperation. *Ecology Letters* 14:1300-1312.

    - Featured on the journal cover.

38. Weyl EG, Frederickson ME, Yu DW, Pierce NE. 2011. Reply to Kiers *et al.*: Economic and biological clarity in the theory of mutualism. *Proceedings of the National Academy of Sciences of the United States of America* 108:E8.

39. Weyl EG, Frederickson ME, Yu DW, Pierce NE. 2010. Economic contract theory tests models of mutualism. *Proceedings of the National Academy of Sciences of the United States of America* 107:15712-15716.
    - Featured on the journal cover and a Faculty of 1000 "Must-read."
40. Debout GDG, Frederickson ME, Aron S, Yu DW. 2010. Unexplained split sex ratios in the Neotropical plant-ant *Allomerus octoarticulatus* var. *demerarae* (Myrmicinae): a test of hypotheses. *Evolution* 64:126-141.
41. Edwards DP*, Frederickson ME*, Shepard GH, Yu DW. 2009. A plant needs ants like a dog needs fleas: *Myrmelachista schumanni* ants gall many tree species to create housing. *The American Naturalist* 174:734-740. *These two authors contributed equally to this publication.
    - Featured in a *Science* news story (16/09/2009).
42. Frederickson ME. 2009. Conflict over reproduction in an ant-plant symbiosis: why *Allomerus octoarticulatus* ants sterilize *Cordia nodosa* trees. *The American Naturalist* 173:675-681.
    - Featured in *BBC Wildlife Magazine* (Apr./2010), the Smithsonian's *Natural History Magazine* (Jul.-Aug./2009), *LiveScience* (Aug./2009), and *Science Daily* (May/2009).
43. Frederickson ME, Gordon DM. 2009. The intertwined population biology of two Amazonian myrmecophytes and their symbiotic ants. *Ecology* 90:1595-1607.
44. Frederickson ME. 2009. Ecological models of mutualism, exemplified by interactions between ants and myrmecophiles. *Ecology* 90:2336-2337. (Book review)
45. Frederickson ME. 2008. The ecology and evolution of ant-plant interactions. *Ecoscience* 15:290-291. (Book review)
46. Frederickson ME. 2008. The evolutionary biology of herbivorous insects: specialization, speciation, and radiation. *The Quarterly Review of Biology* 83:413. (Book review)
47. Frederickson ME, Gordon DM. 2007. The devil to pay: a cost of mutualism with *Myrmelachista schumanni* ants in 'devil's gardens' is increased herbivory on *Duroia hirsuta* trees. *Proceedings of the Royal Society B* 274:1117-1123.
    - Featured in *Nature*'s Research Highlights (22/02/2007), v. 445, p. 799.
48. Frederickson ME. 2006. The reproductive phenology of an Amazonian ant species reflects the seasonal availability of its nest sites. *Oecologia* 149:418-427.
49. Frederickson ME, Greene MJ, Gordon DM. 'Devil's gardens' bedevilled by ants. 2005. *Nature* 437:495-496.
    - Featured in the BBC documentary "Life in the Undergrowth" with Sir David Attenborough, *The New York Times* (27/09/2005), *The Boston Globe* (26/09/2005), *The Baltimore Sun, The London Daily Telegraph, National Geographic News, Discovery Channel News,* the Smithsonian's *Natural History Magazine,* and other media sources.
50. Frederickson ME. 2005. Ant species confer different partner benefits on two Neotropical myrmecophytes. *Oecologia* 143:387-395.
51. Yu DW, Wilson HB, Frederickson ME, Palomino W, De la Colina R, Edwards DE, Balareso AA. 2004. Experimental demonstration of species coexistence enabled by dispersal limitation. *Journal of Animal Ecology* 73:1102-1104.

Submitted:

1. Zhang X, Wang L, Li J, **Batstone R,** Frederickson ME. *Medicago truncatula* adjusts root proliferation, nodule formation, and partner choice to cope with local N-heterogeneity. Under review at *Plant and Soil.*
2. **Malé PJG, Youngerman E,** Pierce NE, Frederickson ME. Mating system, population genetics, and phylogeography of the devil's garden ant, *Myrmelachista schumanni,* in the Peruvian Amazon. Under review at *Insectes Sociaux*.
3. **Batstone RT,** Peters MAE, Simonsen AK, Stinchcombe JR, Frederickson ME. Environmental variation impacts trait expression and selection in the legume-rhizobium symbiosis. Under review at *American Journal of Botany.*

Research Support

(All funding is as principal investigator, unless otherwise specified)

Current grants:

2019-2020	Natural Sciences and Engineering Research Council of Canada (NSERC), Research Tools and Instruments Grant, $150,000 (co-applicant: A. Cutter)
2015-2020	Natural Sciences and Engineering Research Council of Canada (NSERC), Discovery Grant, $295,000
2018-2020	University of Toronto, XSeed: Expanding Our Research Impact Through Inter-Disciplinary Collaboration, $120,000 (co-PI: E. Passeport)

Past grants:

2010-2019	University of Toronto, Faculty of Arts and Science Undergraduate Research Excursion and Research Opportunity Programs, $23,810
2015-2018	Natural Sciences and Engineering Research Council of Canada (NSERC), Discovery Accelerator Supplement, $120,000 (One of only 10 awarded across Canada in Evolution and Ecology that year)
2012-2017	Ontario Ministry of Economic Development and Innovation, Early Researcher Award, $140,000
2010-2015	Natural Sciences and Engineering Research Council of Canada (NSERC), Discovery Grant, $130,000
2012-2014	Templeton Foundation, Foundational Questions in Evolutionary Biology Grant, US$197,613 (co-PIs: N.E. Pierce & A. Pringle)
2010-2014	CFI Infrastructure Operating Fund, $31,236
2011-2013	Connaught Fund, New Researcher Award, $50,000 (One of only 9 awarded across the university at the highest funding level)
2009-2011	Canada Foundation for Innovation, Leaders Opportunity Fund Award, $109,600
2009-2011	Ontario Ministry of Research and Innovation, Ontario Research Fund Award, $109,600
2009-2011	Connaught Fund, Start-up Award, $10,000
2007	William F. Milton Fund of Harvard University, Award, US$35,000

Fellowships and Prizes

2019-2020	Radcliffe Fellow, Radcliffe Institute for Advanced Study, Harvard University
2006-2009	Junior Fellow, Harvard Society of Fellows
2006	Frances Lou Kallman Award for excellence in coursework, teaching, and research from Stanford University's Dept. of Biological Sciences
2003-2005	NSERC Post-Graduate Studies B Scholarship
2003	NSERC Canada Graduate Scholarship (declined)
2001-2004	Stanford Graduate Fellowship, Gabilan Fellow
2001-2003	NSERC Post-Graduate Studies A Scholarship
2001	Thomas Temple Hoopes Prize for Undergraduate Honors Thesis at Harvard College
2001	Certificate in Latin American Studies from Harvard University's David Rockefeller Center for Latin American Studies

Seminars and Conference Presentations

2019	Invited Seminar, Western University, Dept. of Biology
2019	Conference Talk, Canadian Society for Ecology and Evolution Meeting
2019	Invited Seminar, McGill University, Dept. of Biology
2018	Invited Seminar, Smithsonian Tropical Research Institute, Panama
2018	Invited Seminar, Princeton University, Dept. of Ecology & Evolutionary Biology
2018	Invited Seminar, Binghamton University, Dept. of Biological Sciences
2018	Contributed Talk, 3rd Annual Rotman Research Roundtable on Gender + the Economy, University of Toronto, Rotman School of Management
2017	Invited Seminar, Max Planck Institute for the Science of Human History, Jena, Germany
2017	Invited Plenary Lecture, Max Planck Institute for Evolutionary Biology, Biology and Economics of Mutualism Meeting, Plön, Germany
2017	Invited Seminar, Michigan State University, Plant Molecular Seminar Series
2017	Conference Talk, Canadian Society for Ecology and Evolution Meeting
2017	Invited Seminar, York University's 43rd Annual Biology Symposium
2017	Invited Seminar, Concordia University, Dept. of Biology
2017	Invited Seminar, University of Pennsylvania, Dept. of Biology
2016	Invited Seminar, Exploitation and Cheating in Mutualism: Syntheses, Challenges, & New Directions, Maison des Océans et de la Biodiversité, Paris, France
2016	Invited Seminar, University of California, Berkeley, Dept. of Integrative Biology
2016	Invited Seminar, University of California, Davis, Animal Behavior Graduate Group
2016	Conference Talk, American Society of Naturalists Meeting
2015	Invited Seminar, University of Tennessee, Knoxville, Dept. of Ecology & Evolutionary Biology
2015	Invited Seminar, University of California, Davis, Dept. of Evolution and Ecology

2015	Biodiversity Research Seminar, University of British Columbia
2015	Conference Talk, Ecological Society of America Meeting
2015	Invited Seminar, Queen's University, Dept. of Biology
2015	Invited Seminar, SUNY Buffalo State, Biology Dept.
2015	Symposium Talk, NomiFest (a celebration of the life and work of Prof. Naomi Pierce), Harvard University
2014	Invited Talk, International Society for Behavioral Ecology Meeting
2014	Invited Seminar, University of Buffalo, Dept. of Biological Sciences
2014	Invited Seminar, University of Central Florida, Dept. of Biology
2014	Invited Seminar, McMaster University, Dept. of Biology
2014	Invited Seminar, University of Victoria, Dept. of Biology
2013	Invited Seminar, Stanford University, Dept. of Biology
2013	Invited Seminar, UC Davis, Center for Population Biology
2013	Poster presentation at the Gordon Research Conference on Plant-Herbivore Interactions
2012	Invited Participant, National Center for Ecological Analysis and Synthesis (NCEAS) Working Group on "Cheating in Mutualisms"
2012	Invited Seminar, University of Arizona, Dept. of Ecology & Evolutionary Biology
2012	Invited Seminar, Brown University, Dept. of Ecology & Evolutionary Biology
2012	Conference Talk, First Joint Congress on Evolutionary Biology
2012	Invited Talk, Centro de Ecología y Biodiversidad, Lima, Peru
2012	Invited Seminar, University of Guelph, Dept. of Integrative Biology
2012	Invited Seminar, University of Ottawa, Dept. of Biology
2011	Invited Seminar, York University, Dept. of Biology
2011	Conference Talk, Ecological Society of America Meeting
2010	Invited Seminar, University of Toronto Mississauga, Dept. of Biology
2009	Invited Seminar, University of Toronto Scarborough, Dept. of Biology
2009	Invited Speaker, Mutualism Symposium, Harvard University
2008	Invited Seminar, Pennsylvania State University, Dept. of Entomology
2008	Invited Seminar, Boston University, Dept. of Biology
2008	Invited Speaker, Interdisciplinary Studies in the Chemical Biology of the Tropics Conference, Pan-American Advanced Studies Institute, Tambopata, Peru
2008	Invited Participant, Life History of Ant-Plant Interactions Workshop, Santa Fe Institute
2008	Invited Speaker, The Evolution of Cooperation and Trading (TECT) Conference, Gulbenkian Institute, Lisbon, Portugal
2007	Invited Seminar, University of Toronto, Dept. of Ecology and Evolutionary Biology
2007	Invited Seminar, University of Connecticut, Dept. of Ecology and Evolutionary Biology

2007 Invited Seminar, University of California, Davis, Dept. of Entomology

2007 Invited Seminar, Cambridge Entomological Club

Teaching and Training

Undergraduate and graduate courses:

(Course codes EEB299/397/399/497/498/499 are independent project courses)

2019-2020 BIO120: Adaptation and Biodiversity (first-year biology course with ~1700 students)

2019-2020 EEB498: Advanced Research Project in Ecology and Evolutionary Biology

2019-2020 EEB397: Research Project in Ecology and Evolutionary Biology

2018-2019 BIO120: Adaptation and Biodiversity (first-year biology course with ~1700 students)

2018-2019 EEB299: Research Opportunity Program

2018-2019 EEB403: Tropical Field Biology (field course in Peru)

2018-2019 EEB440: Ecology and Evolution of Plant-Animal Interactions

2018-2019 EEB498: Advanced Research Project in Ecology and Evolutionary Biology

2017-2018 EEB299: Research Opportunity Program

2017-2018 EEB321: Community Ecology

2017-2018 EEB440: Ecology and Evolution of Plant-Animal Interactions

2017-2018 EEB495: Seminar in Ecology

2017-2018 EEB498: Advanced Research Project in Ecology and Evolutionary Biology

2016-2017 EEB299: Research Opportunity Program

2016-2017 EEB397: Research Project in Ecology and Evolutionary Biology

2016-2017 EEB403: Tropical Field Biology (field course in Peru)

2016-2017 EEB440: Ecology and Evolution of Plant-Animal Interactions

2016-2017 EEB1421: Special Topics in Ecology: Plant-animal Interactions

2015-2016 On sabbatical

2014-2015 EEB299: Research Opportunity Program

2014-2015 EEB321: Community Ecology

2014-2015 EEB440: Ecology and Evolution of Plant-Animal Interactions

2014-2015 EEB498: Advanced Research Project in Ecology and Evolutionary Biology

2014-2015 EEB1423: Special Topics in Ecology (graduate course)

2013-2014 On maternity leave

2013-2014 EEB299: Research Opportunity Program

2013-2014 EEB397: Research Project in Ecology and Evolutionary Biology

2013-2014 EEB399: Research Excursions

2013-2014 EEB498: Advanced Research Project in Ecology and Evolutionary Biology

2012-2013	EEB321: Community Ecology
2012-2013	EEB403: Tropical Field Biology (field course in Peru)
2012-2013	EEB440: Ecology and Evolution of Plant-Animal Interactions
2012-2013	EEB495: Seminar in Ecology
2012-2013	EEB299: Research Opportunity Program
2012-2013	EEB399: Independent Experiential Study Project
2012-2013	EEB498: Advanced Research Project in Ecology and Evolutionary Biology
2011-2012	EEB321: Community Ecology
2011-2012	EEB403: Tropical Ecology and Evolution (field course in Peru)
2011-2012	EEB440: Ecology and Evolution of Plant-Animal Interactions
2011-2012	EEB495: Seminar in Ecology
2011-2012	EEB399: Independent Experiential Study Project
2011-2012	EEB497: Research Studies in Ecology & Evolutionary Biology
2010-2011	EEB321: Community Ecology
2010-2011	EEB440: Ecology and Evolution of Plant-Animal Interactions
2010-2011	EEB399: Independent Experiential Study Project
2010-2011	EEB499: Advanced Research Project in Ecology and Evolutionary Biology II
2009-2010	EEB495: Seminar in Ecology
2009-2010	EEB1320: Ecology (graduate course)

Short courses:

2012	Introduction to the Biology and Systematics of Neotropical Ants (Spanish-language, Tambopata, Peru, July 19-31)

Graduate theses supervised (all sole supervisions, except as noted):

(*authorship on a peer-reviewed publication)

1. Pooja Nathan, Ph.D. in progress, 2019-present.
2. Tia Harrison*, Ph.D. in progress, 2017-present (co-supervised with J. Stinchcombe)
3. Jason Laurich*, Ph.D. in progress, 2015-present.
4. Julia Boyle, M.Sc. in progress, 2019-present (co-supervised with J. Stinchcombe)
5. Chris Reid, M.Sc. in progress, 2016-present.
6. Rebecca Batstone*, Ph.D., 2012-2018
7. Mitch Trychta, M.Sc. 2016-2018.
8. Katrina Kaur*, M.Sc. 2016-2018.
9. Shannon Meadley Dunphy*, M.Sc. 2014-2016.
10. Emily Dutton*, M.Sc. 2013-2015.
11. Adam Cembrowski*, M.Sc. 2011- 2013.

12. Eric Youngerman*, M.Sc. 2012-2014.
13. Kyle Turner*, M.Sc. 2011-2013.
14. Lina Arcila Hernández*, M.Sc. 2010-2012.

Postdoctoral supervision:

1. Dr. Anna O'Brien*, 2017-present.
2. Dr. Pierre-Jean Malé*, 2013-2016. Now a Marie Sklodowska-Curie postdoc at the Max Planck Institute for Chemical Ecology (Germany).
3. Dr. Kirsten Prior*, EEB and Ontario MRI Postdoctoral Fellow 2011-2013. Now an Assistant Professor at Binghamton University (SUNY).

Technicians/research assistants:

1. Meghan Huskisson-Snider, 2017-2018.
2. Shannon Meadley Dunphy*, 2016-2017.
3. Susan Gordon*, 2015-2016.
4. Emily Dutton*, 2015-2016.
5. Adam Cembrowski*, 2013-2014.
6. Jackie Day, 2012-2013.
7. Emma Hodgson, 2011.
8. Alison Ravenscraft*, 2009-2010.

Undergraduate research project supervisions:

(*undergraduate co-author on a peer-reviewed publication, ^student who went on to graduate school)

Centre for Global Change Science Interns

Summer 2018	Christopher Knox
Summer 2017	Emma Lash*^
Summer 2016	Luxiang Wang*

NSERC Undergraduate Student Research Awards

Summer 2019	Julia Boyle^
Summer 2018	Chris Reid^
Summer 2018	Luxiang Wang*
Fall 2016	Meghan Huskisson-Snider
Summer 2015	Susan Gordon*^
Summer 2014	Shannon Meadley Dunphy*^
Summer 2013	Shannon Meadley Dunphy*^
Summer 2012	Jennifer Robinson*
Summer 2011	Emily Dutton*^
Summer 2010	Kyle Turner*^

4th-year Research Projects (EEB497/498/499)

2019-2020	Sabina Pang
2019-2020	Zoe Parshuram
Summer 2019	Jesse Huisken^
2018-2019	Dianya Luo
2018-2019	Clara Pencer
2018-2019	Julia Boyle^
2017-2018	Nathaniel (Atticus) Murphy^
2017-2018	Chris Reid^
Summer 2017	Tianbi (Abby) Wu
2014-2015	Aadiyat Ahmad
2013-2014	Elaine Luo*^
2013-2014	Shannon Meadley Dunphy*^
2012-2013	Kyle Gaynor^
Winter 2012	Stephanie Fox^
2010-2011	Kyle Turner*^

3rd-year Research Projects (EEB397/399)

2019-2020	Mila Gorchkova
2017-2018	Daniel Li
Summer 2017	Judith Li*
2016-2017	Xue Zhang*
2013-2014	Shreeram Senthivasan^
Summer 2013	Lauren Moretto^
Summer 2013	Hyun (Gloria) Cho^
Summer 2012	Jacqueline Awad^
Summer 2012	Shannon Meadley-Dunphy^
Summer 2011	Erinn Todd*^
Summer 2010	Gregory Booth*^

2nd-year Research Projects (EEB299)

2018-2019	Maryam Wasim
2018-2019	Avery Schwarz
2017-2018	Caroline Biel
2016-2017	Xin (Carol) Chen
2016-2017	Christopher Knox
2014-2015	Madeline Peters*^
2014-2015	Michael Liu
2013-2014	Neil Macalasdair^
2013-2014	Zhiyi (Molly) Yang*
2012-2013	Harry Rusnock^
2012-2013	Kriti Saxena*

Other

Summer 2019	Theodora Udounwa
2013-2014	Donglin Wang*^
2011	Eddie Ho*^
2010-2011	Viviana Astudillo*^

Professional Service

External:

2019	Judge, Student Awards, Canadian Society for Ecology and Evolution Meeting in Fredericton, NB
2019	Organizer, NSERC Discovery Grant Mock Review at Canadian Society for Ecology and Evolution Meeting in Fredericton, NB
2018-2019	Chair, Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grants Program, Evolution and Ecology (1503) Evaluation Group
2017-2020	Nominating Committee, American Society of Naturalists
2016-2019	Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grants Program, Evolution and Ecology (1503) Evaluation Group Member
2015-ongoing	Editorial Board Member, *The American Naturalist*
2014-ongoing	Editorial Board Member, *Proceedings of the Royal Society B*
2014, 2016	Ontario Early Researcher Awards Adjudication Panel Member (Environmental and Natural Sciences)
2013-2016	Editorial Board Member, *Biology Letters*
2016	Co-organized a meeting on Exploitation and Cheating in Mutualism: Syntheses, Challenges & New Directions that was part of the 2016 program of Pépinière interdisciplinaire CNRS "Eco-Evo-Devo" hosted at Paris Sciences-Lettres Research University on May 30-31
2012-2015	Schad Foundation Conservation Biology Grants Selection Committee
Ongoing	Ad hoc manuscript reviewer for many journals, including *Science, PNAS, Current Biology, Ecology Letters, Nature Ecology & Evolution, New Phytologist,* and many others
Ongoing	Ad hoc grant proposal reviewer for the Canada Foundation for Innovation, Killam Research Fellowships, National Geographic, and the Netherlands Organisation for Scientific Research
2009	Co-organized the Mutualism Symposium held May 7-9 at Harvard University

Internal:

Ongoing	Various departmental committees, including three faculty search committees, a departmental chair search committee, a tenure committee, graduate admissions, undergraduate affairs, graduate affairs, graduate academic appeals, space, workload, progress through the ranks (i.e., merit pay), gender and parents/families in science, etc.

2010-2013, 2015 Faculty Coordinator, EEB Graduate Student Journal Club

2012, 2014 Speaker, New Faculty Orientation at the University of Toronto

Media Appearances and Outreach

(See also Publications, above)

2019 Interviewed for a *Quanta Magazine* story on plant-microbe interactions

2018 Discovery Channel television program interview (on ants)

2018 Research profiled in *Discover Magazine*

2018 I wrote a news story, "Canadian professors still face a gender pay gap," published by *The Conversation* and re-published by *Macleans*

2013, 2016, 2018 University of Toronto news stories about the field course I teach in Peru

2017 Canadian Broadcasting Corporation (CBC) radio program interview with Torah Kachur (on deception & lying)

2017 Research profiled in *Muse Magazine,* a children's science magazine

2015 Featured on the Royal Society Publishing Blog "Meet our Editors"

2015 Canadian Broadcasting Corporation (CBC) "Quirks & Quarks" radio program

2015 Outreach events for kindergarten students at Shelter Bay Public School in Mississauga and Cottingham Junior Public School in Toronto

2015 Spoke to a science journalism class taught by *The Globe and Mail*'s Ivan Semeniuk

2015 Research profiled twice on Fairchild TV

2014 Research profiled in *The Economy of Nature, Canadian Edition* (Ricklefs RE et al., W.H. Freeman, p. 411)

2013 University of Toronto Science Leadership Program Fellow

2013 Contributed a live ant colony to an installation art exhibit entitled Oh!m1gas by Kuai Shen, InterAccess Electronic Media Arts Centre

2012 University of Toronto news interview on Amazonian ants

2012 Invited Public Lecture, Exploring Evolution Series, Toronto Public Library

2012 Invited Talk, Brodie Club, Toronto

2011 Australian Broadcasting Corporation (ABC) "The Science Show" radio program

2010 Interviewed by novelist Ed Docx for his latest book, *The Devil's Garden,* published in 2011

2009 A chapter about my work appears in *Secret of the Plant-killing Ants … and More!* (Rodríguez AM, Enslow Publishers, Inc., Berkeley Heights, USA)

2008 Research profiled in *Biology, 8th edition* (Campbell NA, Reece JB. Pearson Education, San Francisco, USA, pp. 29-31)

2007 Cambridge Community Television Network documentary, "Ants"

2007 Korean Broadcasting System documentary on poisonous plants and animals

2005 British Broadcasting Corporation (BBC) Natural History Unit documentary, "Life in the Undergrowth" with Sir David Attenborough

2005 Canadian Broadcasting Corporation (CBC) "Quirks & Quarks" radio program

2005 National Public Radio (NPR) "Pulse of the Planet" radio program

2005 British Broadcasting Corporation (BBC) "The Naked Scientists" radio program