

Dr Amanda Liczner

University of British Columbia Okanagan
Biodiversity, Resilience, and Ecosystem Services (BRAES) Institute Postdoctoral Fellow in Landscape Ecology
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FELLOWSHIPS

Postdoctoral Research Fellow

Sept 2020-Jan 2021

University of British Columbia Okanagan, BRAES Institute

Supervisors: Dr. Jason Pither, Dr. Adam Ford, Dr. Lael Parrot, Dr. Josie Hughes,
Dr. Richard Pither

Research topic: Connectivity conservation challenges in landscape ecology

EDUCATION

PhD in Biology

2020

York University, Toronto, ON

Supervisor: Dr. Sheila Colla

“The conservation management and ecology of Northeastern North American bumble bees.”

MSc in Biology

2016

York University, Toronto, ON

Supervisor: Dr. Christopher Lortie

“Nursing back to health: Shrubs facilitate the restoration of native forbs with reductions in non-native competition in an invaded arid shrubland.”

BSc (Specialized Honors) in Biology

2014

York University, Toronto, ON

Supervisor: Dr. Christopher Lortie

Honors thesis: *“A desert nurse plant (Larrea tridentata) facilitates the germination and seed characteristics of winter annuals in California.”*

PUBLICATIONS

A. Under Review

1. **Liczner AR**, MacPhail VP, Woollett (Smith) DA, Richards NL, Colla SR. 2020. Training and usage of detection dogs to better understand bumble bee nesting habitat: Challenges and opportunities. PLoS ONE *Under Review* PONE-D-20-37966
2. **Liczner AR**, Richardson L, Schuster R, Colla SR. 2020. Conservation planning for native bumble bees under current and future climate scenarios. Ecological Applications *Under Review* EAP20-0790

B. Published

1. **Liczner AR**, Colla SR. 2020. One-size does not fit all: Bumble bee conservation requires landscape-scale and species-specific habitat considerations. Journal of Insect Conservation and Diversity. 13(6): 558-570

2. **Liczner AR**, Colla SR. 2019. A systematic review of the nesting and overwintering habitat of bumble bees globally. *Journal of Insect Conservation*. 23 (5-6): 787-801
3. **Liczner AR**, Filazzola A, Westphal M, Lortie CJ. 2019. Shrubs facilitate native forb re-establishment in an invaded arid shrubland. *Journal of Arid Environments*. 17 (103998): 1-9
4. Filazzola A, **Liczner AR**, Westphal M, Lortie CJ. 2019. Shrubs indirectly increase desert seedbanks through facilitation of the plant community. *PloS One*. 14 (4): e0215988
5. Gibson SD, **Liczner AR**, Colla SR. 2019. Conservation Conundrum: At-risk bumble bees (*Bombus* spp.) show preference for invasive tufted vetch (*Vicia cracca*) while foraging in protected areas. *Journal of Insect Science*. 19 (2): 1-10
6. Filazzola A, **Liczner AR**, Westphal M, Lortie CJ. 2018 The effect of consumer pressure and abiotic stress on positive plant interactions are mediated by extreme climatic events. *New Phytologist* 217 (1): 140-150
7. Filazzola, A, Westphal M, Powers M, **Liczner AR**, Woollett DAS, Johnson B, Lortie CJ. 2017. Non-trophic interactions in deserts: Facilitation, interference, and an endangered lizard species. *Basic and Applied Ecology* 20 (1): 51-61
8. **Liczner AR**, Sotomayor DA, Filazzola A, Lortie CJ. 2017 Germination response of desert annuals to shrub facilitation is species specific but not ecotypic. *Journal of Plant Ecology* 10 (2): 364-374
9. **Liczner AR**, Lortie CJ. 2014. A global meta-analytic contrast of cushion-plant effects on plants and on arthropods. *Peerj*, 2: e265

CONFERENCE PRESENTATIONS

1. **Liczner AR***, Richardson L, Schuster R, Colla SR. 2021. Conservation priority areas for Canadian bumble bee species under current and future climate scenarios. Canadian Parks Collective for Innovation and Leadership (CPCIL) Research Summit. Virtual Conference. Eposter.
2. **Liczner AR***, Richardson L, Schuster R, Colla SR. 2020. Conservation priority areas for Canadian bumble bee species under current and future climate scenarios. BeeCon 2020. Virtual Conference. Oral presentation.
3. **Liczner AR***, Richardson L, Schuster R, Colla SR. 2020. Conservation priority areas for Canadian bumble bee species under current and future climate scenarios. North American Congress for Conservation Biology Conference. Virtual Conference. Oral presentation.
4. **Liczner AR***, MacPhail V, Colla SR. 2019. Using detection dogs to find bumble bee nests: Lessons learned. Credit Valley Research Colloquium. Mississauga, Ontario. Oral Presentation.
5. **Liczner AR***, MacPhail V, Colla SR. 2019. Using detection dogs to find bumble bee nests: Lessons learned. BOMBUSS 2.0. Toronto, Ontario. Oral Presentation.
6. **Liczner AR**, Colla SR*. 2019. Think big: Landscape-scale habitat variables are more important than local-scale factors for determining at-risk bumble bee habitat. International Pollinator Conference University of California Davis, Sacramento, California. Poster Presentation

7. **Liczner AR***, Colla SR. 2019. Think big: Landscape-scale habitat variables are more important than local-scale factors for determining at-risk bumble bee habitat. 45th Annual Association of Graduate Students in the Biological Sciences Symposium. Toronto, Ontario. Poster Presentation
8. **Liczner AR***, Colla SR. 2018 Using citizen scientists and detection dogs to locate bumble bee nests. BeeCon. Toronto, Ontario. Oral Presentation
9. **Liczner AR***, Colla SR. 2018 Determining the habitat for at-risk bumble bee species in Southern Ontario. Society for Conservation Biology North American Congress for Conservation Biology Conference. Toronto, Ontario. Oral Presentation.
10. **Liczner AR***, Colla SR. 2018 Determining the habitat for at-risk bumble bee species in Southern Ontario. Canadian Society for Ecology and Evolution Conference. Guelph, Ontario. Poster Presentation.
11. **Liczner AR***, Colla SR. 2017. Assessing at-risk bumble bee habitat in Ontario for the conservation of declining species. Canadian Society for Ecology and Evolution Conference. Victoria, British Columbia
12. **Liczner AR***, Colla SR. 2017. Assessing at-risk bumble bee habitat in Ontario for the conservation of declining species. BeeCon. Toronto, Ontario. Poster Presentation
13. Filazzola A*, **Liczner AR**, Westphal MF, Lortie CJ. 2017. The effect of consumer pressure and abiotic stress on positive plant interactions are mediated by extreme climatic events 43rd Annual Association for Graduate Students in the Biological Sciences Symposium. Toronto, Ontario. Poster Presentation.
14. **Liczner AR***, Colla SR. 2017. Assessing at-risk bumble bee habitat in Ontario for the conservation of declining species. 43rd Annual Association of Graduate Students in Biology Symposium. Toronto, Ontario. Poster Presentation.
15. **Liczner AR***, Sotomayor DA, Filazzola A, Lortie CJ. 2016 Germination response of desert annuals to shrub facilitation is species specific but not ecotypic. York University Biology Day Conference. Toronto, Ontario. Poster Presentation.
16. Filazzola A*, **Liczner AR**, Westphal MF, Lortie CJ. 2016. A test of the stress-gradient hypothesis including both abiotic stress and consumer pressure during an extreme drought year. Ecological Society of America Conference. Fort Lauderdale, Florida. Oral Presentation
17. **Liczner, AR***, Filazzola, A, Lortie, CJ. 2016. The use of shrubs as a tool for re-establishing native annuals to an invaded arid shrub land. Ecological Society of America Conference. Fort Lauderdale, Florida. Oral Presentation.
18. Filazzola A*, Westphal MF, Liczner AR, Powers M, Johnson B, Lortie CJ. 2015. The realized niche of the endangered blunt-nosed leopard lizard is determined by an interplay between native shrub cover and invasive grass abundance. Ecological Society of America Conference. Baltimore, Maryland. Oral Presentation.
19. Filazzola A*, **Liczner AR**, Westphal MF, Lortie CJ. 2015. The habitat of the endangered Blunt-nosed leopard lizard is determined by an interplay between native shrub cover and invasive grass abundance. Conservation Conference California Natural Plant Society. San Jose, California. Oral Presentation

20. **Liczner AR***. 2014. Cushion plant effects on seed germination in an alpine environment. Northern Studies Training Program Symposium. Toronto, Ontario. Oral Presentation.

*presenting author

INVITED PRESENTATIONS

Liczner AR*, Colla SR. 2019. On a quest for bee nests. High Park Nature Centre Wild Bee Series. Oral Presentation.

*presenting author

AWARDS

Susan Mann Dissertation Scholarship York University <i>One of nine scholarships awarded at York University</i> Awarded \$22,500	2020
Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship (NSERC-PGS D) York University <i>One of ten NSERC scholarships awarded at York University,</i> Awarded \$42,000	2018-2020
Ontario Graduate Scholarship York University <i>Declined to accept NSERC-PGS D</i>	2018-2019
Vanier Canada Graduate Scholarship—Nominated York University <i>Nominated by York University for the Vanier Scholarship</i>	2018
Ontario Graduate Scholarship York University <i>One of five award winners in the Dept. of Biology,</i> Awarded \$15,000	2017-2018
Research/Fieldwork Cost Fund York University <i>Internal award determined by the Faculty of Graduate Studies</i> Awarded \$2,380	2017-2019
Graduate Development Fund York University <i>Internal award determined by the Faculty of Graduate Studies</i> Awarded \$600	2016-2017
The Carswell Scholarship York University <i>One of six award winners in the Faculty of Science</i> Awarded \$10,000	2016-2017

Ontario Graduate Scholarship York University <i>One of nine award winners in the Dept. of Biology</i> Awarded \$15,000	2016-2017
Graduate Development Fund York University June 2016 <i>Internal award determined by the Faculty of Graduate Studies,</i> Awarded \$750	2016
Research Cost Fund York University <i>Internal award determined by the Faculty of Graduate Studies</i> Awarded \$960	2015-2017
York Graduate Scholarship York University <i>Entrance scholarship awarded by the Dept. of Biology,</i> Awarded \$6,000	2014-2015

RESEARCH GRANTS

Ontario Species at Risk Stewardship Program Ontario Ministry of Environment, Conservation and Parks Awarded \$25,717	2019-2020
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VOLUNTEER EXPERIENCE AND COMMUNITY INVOLVEMENT

A. Departmental/Faculty

Committee on Teaching and Learning Graduate Student representative Faculty of Science, York University, Toronto, Ontario <i>One of two graduate student representatives giving input on TA training initiatives and adjudicating teaching awards</i>	2018-2020
AGSBS Communications Officer Association of the Graduate Students in the Biological Sciences (AGSBS), York University, Toronto, Ontario <i>Responsible for maintaining the AGSBS social media accounts, and website</i>	2019-2020
AGSBS Department of Biology Student Representative Association of the Graduate Students in the Biological Sciences (AGSBS), York University, Toronto, Ontario <i>Responsible for representing graduate student interests to the Dept. of biology</i>	2018-2019
AGSBS Symposium Committee Chair Association of the Graduate Students in the Biological Sciences (AGSBS), York University, Toronto, Ontario. <i>Lead the planning of the annual biology graduate student symposium including organizing meetings, securing funding, and promoting the event attended by 110 participants</i>	2017-2018

AGSBS Symposium Committee Member 2016-2017
Association of the Graduate Students in the Biological Sciences (AGSBS), York University, Toronto, Ontario
Organized the annual biology graduate student symposium for 100 attendees

Canadian Society for Ecology and Evolution (CSEE) Student Representative 2016-2020
York University, Toronto, Ontario
York University graduate student representative for CSEE, encouraging York student involvement and distributing information about the society.

OE3C Symposium Committee Organizer 2014-2015
Ontario Ecology, Ethology, and Evolution Colloquium, York University, Toronto, Ontario
Organized the annual provincial symposium Ontario Ecology, Ethology, and Evolution Colloquium with ~140 attendees.

B. Non-departmental

Canadian Society of Ecology and Evolution (CSEE) volunteer organizer March – August 2021
University of British Columbia Okanagan, Kelowna, British Columbia.
Volunteer member of the social media and communications, and program development committees for the 2021 virtual CSEE conference.

PEEC 2021 Virtual Presentation Judge February 2021
University of British Columbia Okanagan, Kelowna, British Columbia
Student presentation judge for a virtual conference for universities in Western Canada and the United States of America.

NACCB 2020 contributed symposium organizer July 2020
North American Congress for Conservation Biology virtual conference
Lead organizer for a contributed symposium titled “Prioritization in Conservation: Tools and Considerations.”

C. Non-academic

BioBlitz Planning Committee Organizer – Chair 2017
Organized York University’s first BioBlitz event. Educated members of the York University community (120 participants) on species identification, biodiversity and conservation.

Bumble Bee Conservation Outreach Volunteer 2017
City Cider Festival, Toronto, Ontario
Educated children and adults (1200 event participants) about bumble bee conservation and encouraged involvement in bumble bee monitoring citizen science projects

Bumble Bee Conservation Outreach Volunteer 2017
General Mercer Junior Public School, Toronto, Ontario
Educated children (50) and adults (30) about bumble bee conservation and encouraged involvement in bumble bee monitoring citizen science projects.

D. Reviewer service

Plant Ecology (3), Insect Conservation and Diversity (2), Annals of the Entomological Society of America (1), Ecology (1), Oikos (1), Insects Sociaux (1) Restoration Ecology (1) Scientific Reports (1)

TEACHING EXPERIENCE

A. Guest Lectures

BIOL1001 Biology II—Evolution, Ecology, Biodiversity and Conservation Biology 2019
York University, 500 students
Life history traits and bumble bee ecology

DATT4010 Physical Computing III: Environmental Sensing and Art, 2017
York University, 50 students
Importance of Environmental Monitoring for Restoration Science.

B. Teaching Assistantships

Laboratory Coordinator—BIOL 1000 3.0 Biology I—Cells, Molecular Biology and Genetics
York University, Fall 2019, 2400 students

Laboratory Demonstrator—BIOL 2010 3.0 Plant Biology
York University, Winter 2019, 20 students

Laboratory Coordinator—BIOL 1000 3.0 Biology I—Cells, Molecular Biology and Genetics
York University, Fall 2018, 2400 students

Laboratory Coordinator – BIOL 1001 3.0 Biology II— Evolution, Ecology, Biodiversity and Conservation Biology
York University, Winter 2018, 2000 students

Laboratory Coordinator – BIOL 2050 3.0 Ecology
York University, Fall 2017, 180 students

Laboratory Coordinator – BIOL 1001 3.0 Biology II- Evolution, Ecology, Biodiversity and Conservation Biology
York University, Winter 2017, 2100 students

Laboratory Demonstrator – BIOL 2050 3.0 Ecology
York University Fall 2016, 24 students

Marker – BIOL 2050 3.0 Ecology
York University, Fall 2016, 200 students

Laboratory Coordinator – BIOL 1001 3.0 Biology II—Evolution, Ecology, Biodiversity and Conservation Biology
York University, Summer 2016, 500 students

Laboratory Demonstrator – BIOL 2050 3.0 Ecology
York University Fall 2015, 44 students

Laboratory Demonstrator – BIOL 1001 3.0 Biology II -Evolution, Ecology, Biodiversity and Conservation Biology

York University, Summer 2015, 40 students

Laboratory Demonstrator – BIOL 2050 3.0 Ecology

York University, Fall 2014, 40 students

MEDIA COVERAGE AND OTHER PUBLICATIONS

Liczner, AR. 2018. Buzzing down the house: An Update. Nature Conservancy of Canada Blog

Liczner AR. 2017. Buzzing down the house: Determining the habitat for declining bumble bee species. Nature Conservancy of Canada Blog

Kate Allen 2017. Climate change and the great global species shakeup. Toronto Star. December 9, 2017 <http://projects.thestar.com/climate-change-global-species-shakeup/>

Collaborators

A. Current projects

Dr. Jason Pither	Associate Professor	University of British Columbia Okanagan
Dr. Adam Ford	Assistant Professor	University of British Columbia Okanagan
Dr. Lael Parrot	Professor	University of British Columbia
Dr. Josie Hughes	Research Scientist	Environment and Climate Change Canada
Dr. Richard Pither	Physical Scientist	Environment and Climate Change Canada
Dr. Sheila Colla	Assistant Professor	York University
Dr. Leif Richardson	Postdoctoral Research Associate	University of Vermont
Dr. Richard Schuster	Postdoctoral Fellow	Carleton University
Dr. Deborah Woollett	Co-Founder and Director	Working Dogs for Conservation
Dr. Ngaio Richards	Forensics and Field Specialist	Working Dogs for Conservation
Victoria MacPhail	PhD Student	York University

B. Past projects

Shelby Gibson	PhD Student	York University
Alessandro Filazzola	Postdoctoral Fellow	University of Alberta
Diego Sotomayor	Principal Professor	Universidad Nacional Agraria La Molina
Michael Powers	Biologist	Bureau of Land Management Salinas Field Office
Dr. Michael Westphal	Biologist	Bureau of Land Management Salinas Field Office
Brent Johnson	Park Biologist	U.S.A. National Park Service Pinnacles National Park
Dr. Christopher Lortie	Professor	York University