

Geoffrey Legault

Postdoctoral Fellow, [Wolkovich Group](#)

Forest and Conservation Science, University of British Columbia

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Professional Experience

- 2019-present Postdoctoral Fellow, *University of British Columbia*
2017-2019 Postdoctoral Research Associate, *University of North Carolina at Chapel Hill*

Education

- 2014-2017 Ph.D., Ecology and Evolutionary Biology, *University of Colorado at Boulder*
Advisor: Dr. Brett Melbourne
2011-2013 Graduate Program in Biology, *University of Calgary* (transferred to Boulder)
2009-2011 M.Sc., Environmental Science, *University of Toronto*
2006-2009 B.Sc., *University of Toronto*

Publications (†denotes undergraduate student)

8. **Legault, G.**, Kingsolver, J. (2020) A stochastic model for predicting age and mass at maturity of insects. *The American Naturalist* Accepted.
7. †Bullock, M., **Legault, G.**, Melbourne, B. A. (2020) Interspecific chemical competition between *Tribolium castaneum* and *Tribolium confusum* reduces fecundity and hastens development time. *Annals of the Entomological Society of America* (**Corresponding author**) [link](#)
6. **Legault, G.**, Fox, J., Melbourne, B. A. (2019) Demographic stochasticity alters expected outcomes in experimental and simulated non-neutral communities. *Oikos* 128(12): 1704-1715 [link](#)
5. **Legault, G.**, Melbourne, B. A. (2019) Accounting for environmental change in continuous-time stochastic population models. *Theoretical Ecology* 12(1): 31-48 [link](#)
 - Recommended ("Very Good") by Faculty of 1000 Prime 
4. Contributing author (2018) "Direct and indirect drivers of land degradation and restoration" in *Assessment Report on Land Degradation and Restoration*. Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) [link](#)
3. **Legault, G.**, †Cusa, M. (2015) Temperature and delayed snowmelt jointly affect the vegetative and reproductive phenologies of four sub-Arctic plants. *Polar Biology* 38: 1701-1711 [link](#)
2. Fox, J., **Legault, G.**, Vasseur, D., Einarson, J. (2013) Nonlinear effect of dispersal rate on spatial synchrony of predator-prey cycles. *PLoS ONE* 8(11): e379527 [link](#)
1. **Legault, G.**, Weis, A. (2013) The impact of snow accumulation on a heath spider community in a sub-Arctic landscape. *Polar Biology* 36: 885-894 [link](#)

Submitted

- **Legault, G.**, Bitters, M. E., Hastings, A., Melbourne, B. A. Interspecific competition slows range expansion and shapes range boundaries. (*Preprint available on request*)

In preparation

- Dallas, T., **Legault, G.**, Melbourne, B. A., Hastings, A. Context-dependent dispersal in two species communities.
- **Legault, G.**, †Riley, M. J., Melbourne, B. A. Intrinsic dispersal ability and environment affect trait evolution during range expansion. (*Preprint available on request*)

Awards / Grants

2017	Dissertation Completion Fellowship, <i>University of Colorado at Boulder</i>
2015	Volterra prize for best poster, <i>ESA Theory Section</i>
2015	EBIO Department Research Grant, <i>University of Colorado at Boulder</i> (\$2,300)
2011	1st prize for student poster, <i>Canadian Society for Ecology & Evolution</i>
2010	NSERC Northern Research Internship (\$9,250)
2010	Northern Scientific Training Program (\$2,900)
2010	Northern Research Fund, <i>Churchill Northern Studies Centre</i> (\$1750)

Teaching Experience

Instructor

2019	Current Issues in Ecology, <i>University of North Carolina at Chapel Hill</i>
2018	Current Issues in Ecology, <i>University of North Carolina at Chapel Hill</i>

Guest Lecturer

- "Fitting models to data using maximum likelihood estimation" for *Biology 669: Simulating ecology*, Graduate course (2019-03-04, UNC)

Teaching Assistant

2015	Principles of Ecology, <i>University of Colorado at Boulder</i> General Biology II, <i>University of Colorado at Boulder</i>
2014	General Biology I, <i>University of Colorado at Boulder</i>
2013	Conservation Biology, <i>University of Calgary</i>
2012	Conservation Biology, <i>University of Calgary</i> Quantitative Biology II, <i>University of Calgary</i>
2011	Introduction to Ecology, <i>University of Toronto</i>
2010	Adaptation and Biodiversity, <i>University of Toronto</i>

Presentations

- **Legault, G.**, Kingsolver J. G. (2019). A stochastic model for predicting age and size at maturity of insects. *The Society of Population Ecology Conference*, Kyoto Japan (Poster)
- **Legault, G.**, Bitters, M. E., Dallas, T. A., Hastings, A. Melbourne, B. A. (2018). Interspecific competition determines spatial dynamics and range boundaries in experimental invasions. *Ecological Society of America Meeting*, New Orleans USA (Oral)
- **Legault, G.**, Melbourne, B. A. (2016) Accounting for environmental change in stochastic population models. *Evolution Meeting*, Austin USA (Oral)
- **Legault, G.**, Tucker, C. M., Melbourne, B. A. (2015) The distribution of birth and death in *Daphnia magna*: Implications for simulating stochasticity. *Ecological Society of America Meeting*, Baltimore USA (Poster)
- **Legault, G.**, Fox, J., Melbourne, B. A. (2014) Population size affects competition outcomes in a model protist system via stochastic drift. *Ecological Society of America Meeting*, Sacramento USA (Oral)
- **Legault, G.**, Fox, J. (2012) Spatial synchrony in a model system: A minimum dispersal threshold and the importance of demographic stochasticity. *Ecological Society of America Meeting*, Portland USA (Oral)
- **Legault, G.**, Fox, J. (2012) The threshold for dispersal-induced synchrony in a model system. *Canadian Society for Ecology & Evolution Meeting*, Ottawa Canada (Oral)
- **Legault, G.**, Weis, A. (2011) Simulated shrub encroachment affects function of Arctic spider assemblages. *Canadian Society for Ecology & Evolution Meeting*, Banff Canada (Poster)

Professional Activities

Reviewer

American Naturalist, Ecology, Ecology Letters, Evolutionary Applications, Functional Ecology, National Geographic Society, Nature Plants, Oecologia, Oikos, Polar Biology, Proceedings of the Royal Society B: Biological Sciences

Service

- 2016-2017 Graduate student member-at-large (nominated)
Undergraduate Research Opportunities Program Advisory Board, *UCB*
- 2016-2017 Graduate student representative (nominated)
Fungal Biologist Faculty Search Committee, *UCB*
- 2016-2017 Graduate student representative
Inclusive Excellence Committee, *UCB*

Outreach

- 2019 Classroom demonstration of complete metamorphosis in insects
Creedmoor Elementary School of the Arts, Creedmoor NC
- 2019 Classroom demonstration of complete metamorphosis in insects
C. G. Credle Elementary, Oxford NC

Last modified: 2020-03-15