Mackenzie Urquhart-Cronish

Ph.D. Candidate
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RESEARCH INTERESTS

My PhD research focuses on understanding the demographic pathways and genetic consequences of range expansion in plants. I am interested in expanding on current evolutionary theory that predicts negative fitness consequences on the range edge (e.g., mutation accumulation, decreased genetic variation) as a result of range expansion by developing new theoretical models and conducting empirical investigations in nature along contrasting spatiotemporal scales (e.g., latitudinal and elevational gradients). Specifically, I want to identify when and where we would expect spread to impact spatial patterns in plant mating-system type and the long-term persistence of edge plant populations in nature, which has implications for population-level responses to climate change.

EDUCATION

Ph.D. Candidate *September 2018 - Present*
University of British Columbia Supervisor: Amy Angert
Department of Botany

M.Sc. *September 2014 - July 2016*
University of Toronto Supervisor: Marla Sokolowski
Department of Ecology & Evolutionary Biology

B.Sc. Hon. with distinction *September 2009 - June 2013*
University of Toronto Supervisor: Marla Sokolowski
Double major: Ecology & Evolutionary Biology and Animal Physiology

PUBLICATIONS

Peer-reviewed

4. R. Germain, **M. Urquhart-Cronish**, N. Jones, M. Mayfield, and M. Raymundo (*In press*). The strength and direction of (mal)adaptation depends on neighbour density and the environment. *Journal of Ecology.*
3. K.A. Thompson, **M. Urquhart-Cronish**, K.D. Whitney, L.H. Rieseberg, and D. Schluter (2021). Patterns, predictors, and consequences of dominance in hybrids. *The American Naturalist.* 197(3), E72-E88 (*Honorable mention: Best student paper award 2022*)
2. **M. Urquhart-Cronish**, and S. P. Otto (2019). Gender and language use in scientific grant writing. *FACETS.* 4: 442-458.
   press: *University Affairs* article
1. **M. Urquhart-Cronish** and M. B. Sokolowski (2014). Gene-environment interplay in *Drosophila melanogaster*: chronic nutritional deprivation in larval life affects adult fecal output. *Journal of Insect Physiology.* 69: 95-100.

AWARDS

Scholarships & fellowships

2022	Kit Malkin Scholarship	$775 CAD
2020–2021	NSERC CGS D	$35 000 CAD
2020	L'Oréal - France-Canada Research Fund Fellowship	$5 000 CAD
2019	Vladimir J. Krajina Prize in Plant Ecology	$1 200 CAD
2019	Samantha Hicks Memorial Prize	$1 050 CAD
2018–2020	NSERC PGS D	$42 000 CAD
2018-2022	UBC Four-Year Fellowship ($\frac{3}{4}$ declined)	$72 800 CAD
2015 & 2016	Frederick P. Ide Graduate Award	$2 020 CAD
2015–2016	NSERC CGS M	$17 500 CAD
2014	EEB Entrance Scholarship	$1 000 CAD
2012	Victoria College In-Course Regents Scholarship	$1 000 CAD

Research grants

2022	The American Society of Naturalists Student Research Award	$2 000 USD
2021	Lewis and Clark Fund for Exploration and Field Research	$5 000 USD
2020	RC Lewontin Award. Society for the Study of Evolution	$2 500 USD

Travel awards

2016	School of Graduate Studies Conference Grant	$500 CAD
2016	Harold H. Harvey Travel Award	$400 CAD
2014	Imperial College Travel Grant	£500 UK

TEACHING EXPERIENCE

Mentorship

2019–2020	Olivia Rahn	UBC 'SURE' Award, Directed Studies, & NSERC USRA (UBC)

Courses taught

2022	Teaching assistant	Integrative Science Research Development Project (UBC)
2020, 2021, 2022	Teaching assistant	Plant Ecology (UBC)
2021	Teaching assistant	Fundamentals of Biostatistics (UBC)
2020	Teaching assistant	Plants and People (UBC)
2015, 2016	Teaching assistant	From Genomes to Ecosystems (U of T)
2014	Teaching assistant	Adaptation and Biodiversity (U of T)

CONFERENCE PRESENTATIONS

‡Talk †Poster *Presentation award

2022	Botany Graduate Student Symposium‡	Vancouver, BC, Canada
2021	Ecology & Evolution Virtual Retreat‡	Online
2019	Ecology & Evolution retreat†	Brackendale, BC, Canada
2018	Ecology & Evolution Retreat†	Brackendale, BC, Canada
2016	Canadian Society for Ecology & Evolution‡	St. John's, NL, Canada
2016	Ontario Ecology, Ethology & Evolution Colloquium‡	Toronto, ON, Canada
2013	Ontario Ecology, Ethology & Evolution Colloquium†	London, ON, Canada
2013	U of T EEB Department Undergraduate Poster Fair †*	Toronto, ON, Canada

PROFESSIONAL DEVELOPMENT

Technical experience

2018	Field Crew Leader with Dr. Amy Angert	Vancouver, BC, Canada
2018	CIEE Website Developer with Dr. Diane Srivastava	Vancouver, BC, Canada
2017	Field and Greenhouse Technician with Dr. Rachel Germain	Vancouver, BC, Canada
2017	Grant Writer/Research Assistant with Dr. Sarah P. Otto	Vancouver, BC, Canada
2016-2017	Data Analyst with Dr. Jeannette Whitton	Vancouver, BC, Canada
2013-2014	Research Assistant with Dr. Marla B. Sokolowski	Toronto, ON, Canada

COMMUNITY INVOLVEMENT & SERVICE

Positions held

2021–	UBC Graduate Representative	Canadian Society for Ecology & Evolution
2018–	Webmaster	Angert Lab (UBC)
2020–2021	President	UBC Botany Graduate Students' Association
2020–2021	Ofice Space Use Committee	UBC Biodiversity Research Centre
2019	Co-director "Huts" Skit	UBC Botany & Zoology Departments
2019–2020	Wilderness First Aid Coordinator	UBC Botany & Zoology Departments
2017–2018	"Coexisting with Coyotes" Data Analyst	Stanley Park Ecology Society
2016–2017	Museum Outreach Education Volunteer	Beaty Biodiversity Museum
2016	Volunteer Tutor	U of T Saturday Program
2015–2016	Lead Plenary Coordinator	Ontario Ecology, Ethology & Evolution Colloquium

Reviewer history

Academic journals

2021 *Journal of Biogeography, Proc. Royal Soc. B.*
2020 *FACETS*