

Note: this is UBC's standard CV template; publications are at the end

THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

Date: Jan. 05, 2024

Initials: RMG

1. SURNAME: Germain FIRST NAME: Rachel
MIDDLE NAME(S): Marie
2. DEPARTMENT/SCHOOL: Zoology
3. FACULTY: Science
4. PRESENT RANK: Assistant Professor SINCE: Jan. 2019
5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
University of Toronto	PhD	Ecology & Evolutionary Biology	2016
University of Guelph	BSc	Ecology Honors	2011

PhD thesis title: "Historical contingencies in the ecology and evolution of species diversity", advisor: Benjamin Gilbert

BSc thesis topics: adaptive maternal effects¹ and niche/neutral dynamics², advisors: ¹Christina Caruso, ¹Hafiz Maherali, and ²Andrew MacDougall

Special Professional Qualifications

6. **EMPLOYMENT RECORD**

(a) Prior to coming to UBC

University, Company or Organization	Rank or Title	Dates
N/A		

(b) At UBC

Rank or Title	Dates
Assistant Professor	01/19 - current
Biodiversity PDF (Zoology)	09/16 - 12/18
Killam PDF (Botany)	09/16 - 08/18

(c) Date of granting of tenure at UBC: N/A

7. **LEAVES OF ABSENCE**

University, Company or Organization at which Leave was taken	Type of Leave	Dates
N/A		

8. **TEACHING**(b) *Courses Taught at UBC*

Session	Course Number	Scheduled Hours	Class Size	Hours Taught			
				Lectures	Tutorials	Labs	Other (approx.)
T2 23/24	BIOL230 Fundamentals of Ecology	Lecturer	377	39 h – i.e., 2 sections for half the semester	NA	NA	In progress
T1 23/24	BIOL548O Dealing with Data	Lecturer	15	12 h	NA	NA	Lecture prep = 5 h Grading = 2 h
T2 22/23	BIOL404 Ecological Methodology	Lecturer	40	26 h	NA	Oversaw 66 h led by TAs + led 6 h myself	Lecture prep = 10 h Grading = 15 h total Admin = 10 h Office hour = 12 h TA meetings = 12 h
T1 22/23	BIOL548W Scientific Collaboration	Guest lecturer (not for credit)	~60: 10 seats at UBC, 50 from other institutions	3 h	NA	NA	Lecture prep = 5 h
T1 22/23	BIOL548U Scientific Data Management	Co-lecturer (not for credit)	~60: 10 seats at UBC, 50 from other institutions	12 h	NA	NA	Lecture prep = 5 h TA meetings = 3 h
T1 22/23	BIOL548O Dealing with Data	Lecturer	7	12 h	NA	NA	Lecture prep = 5 h Grading = 2 h
T2 21/22	BIOL230 Fundamentals of Ecology	Co-teaching with Jill Jankowski	200	24 h	NA	NA	Lecture prep = 18 h Admin = 10 h Exams = 5 h Grading = 10 h Office hours = 6 h TA meetings = 3 h
T2 21/22	BIOL404 Ecological Methodology	Lecturer	400	26 h	NA	Oversaw 66 h led by TAs + led 6 h myself	Lecture prep = 20 h Grading = 15 h Admin = 20 h
T1 21/22	BIOL548O Dealing with Data	Lecturer	12	12 h	NA	NA	Lecture prep = 5 h Grading = 2 h

T2 20/21	BIOL230 Fundamentals of Ecology	Lecturer	200	45 h	NA	NA	Lecture prep = 60 h Exams = 10 h Grading = 20 h Office hours = 12 h TA meetings = 3 h Admin = 20 h
T1 20/21	BIOL404 Ecological Methodology	Lecturer	40	26 h	NA	Oversaw 66 h led by TAs + led 6 h myself	Lecture prep = 20 h Grading = 15 h Admin = 20 h TA meetings = 12 h Rejig labs for remote delivery = 30 h
T2 19/20	BIOL548O Dealing with Data	Lecturer	24	12 h	NA	NA	Lecture prep = 30 h (made 8 new lectures) Grading = 2 h
T2 19/20	BIOL230 Fundamentals of Ecology	Co- teaching for full credit in paired teaching program with Laura Parfrey	180	39 h – I delivered 19.5 h and attended the remaining 19.5 h for paired teaching program	NA	NA	Lecture prep = 60 h Exams = 10 h Grading = 20 h Office hours = 12 h TA meetings = 3 h Admin = 20 h Paired teaching meetings = 12 h
T2 18/19	BIOL230 Fundamentals of Ecology	Co- teaching with Rachel Wilson	180	19 h	NA	NA	Lecture prep = 60 h Exams = 10 h Grading = 20 h Office hours = 12 h TA meetings = 3 h Admin = 20 h

In addition, I have advised student research for 9 courses (see section (g))

- two ENV449 thesis students (two terms each)
- one BIOL449 thesis student (two terms)
- two BIOL448 directed studies students (one term each)
- four BIOL448 directed studies students (two terms each)

Teaching buyouts as of end of T2 23/24:

- Buyouts earned (4.33 total): 2 as part of my start-up package, 1.33 from teaching BIOL5480 four times, 1 for serving on Living Data Project (note: LDP involved two training modules).
- Buyouts used, by year (4 total): 18/19 (half a buyout by co-teaching), 19/20 (1 buyout), 21/22 (half a buyout by co-teaching), 22/23 (1 buyout), 23/24 (1 buyout)

(c) Graduate Research Supervision

Student Name	Program Type	Year		Supervisory Role (supervisor, co-supervisor, committee member)
		Start	Finish	
Jawad Sakarchi	PhD Zoology	May 2019	current	Supervisor
Mia Waters	PhD Zoology	Sept. 2019	current	Supervisor
Jessica Kowalski	PhD Zoology	Sept. 2020	current	Supervisor
William Ou	PhD Zoology	Jan. 2021	current	Supervisor
Tess Grainger	Banting postdoc	Jan. 2021	Aug 2023; currently a prof at U Guelph	Co-supervisor (unofficial for Banting purposes)
Chelsea Little	Killam postdoc	Sep. 2019	Dec. 2020; currently a prof at SFU	Supervisor
Megan Szojka	MSc Zoology	Sept. 2018	Aug. 2020; currently a PhD student at U Wyoming	Supervisor
supervision of my HQP above, committee member work below				
Nicholas Wright (Gaynor lab)	PhD Zoology	Sept. 2023	current	Committee member
Dominik Vinopal (King lab)	PhD Zoology	Sept. 2023	current	Committee member
Finola Fogarty (Irwin lab)	MSc Zoology	Sept. 2023	current	Committee member
Avery Kruger (Davies lab)	PhD Zoology	Sept. 2021	current	Committee member
Emma Menchions (Angert lab)	MSc Botany	Sept 2022	current	Committee member
Keila Stark (O'Connor lab)	PhD Zoology	Sept. 2020	current	Committee member
Rebecca Hansen (Harley lab)	PhD Zoology	Sept. 2020	current	Committee member

Carla Urquhart (Williams lab)	PhD Geography	Sept. 2020	current	Committee member
Gracy Buckholtz (Whitton lab)	PhD Botany	Sept. 2020	current	Committee member
Jenna Loesberg (Williams lab)	PhD Geography	Sept. 2019	current	Committee member
Katie Goodwin (Angert lab)	PhD Botany	Jan. 2021	current	Committee member
Jarrett Blair (Marshall lab)	PhD Zoology	Sept. 2019	current	Committee member
Deirdre Loughnan (Wolkovich lab)	PhD Forestry	Sept. 2018	current	Committee member
Takuji Usui (Angert lab)	PhD Botany	Sept. 2018	Aug. 2023	Committee member
Natasha Bush (Whitton lab)	MSc Botany	Sept. 2018	Sept. 2022	Committee member
Stephanie Blain (Schluter lab)	PhD Zoology	Sept. 2018	June 2022	Committee member
Amelia Hesketh (Harley lab)	PhD Zoology	Sept. 2016	July 2022	Committee member
Darwin Sodhi (Wolkovich lab)	PhD Forestry	Sept. 2019	Dec. 2021	Committee member

(g) Other

Undergraduate advising

Student Name	Dates	Supervisory Role	Course	Progress
Students doing research through coursework				
Joshua Dyer	May 2023 - current	Supervisor	ENVR449	Worked as a co-op student with us this summer before starting an honour's thesis testing how duckweed species co-evolve
Andrea Jackman	Sept 2022-April 2023	Supervisor	BIOL448	Completed a directed studies testing assumptions of Tilman's resource-ratio theory
Tahlia Read, 2 nd project	Sept 2022-April 2023	Supervisor	BIOL449	Completed a thesis testing if <i>Tribolium</i> make informed decisions about where and when to disperse
Tahlia Read, 1 st project	Sept 2021 - Dec 2021	Supervisor	BIOL448	Completed a directed studies. Her paper will be submitted to a journal soon
Graydon Gilles	Sept 2021-May 2022	Supervisor	ENVR449	Completed a thesis; paper will be submitted once a supplementary experiment is completed. Current position: MSc at Queens.
Aishwarya Subramanian	Jan 2021 - April 2021	Supervisor	BIOL448	Completed directed studies; manuscript accepted in <i>PLOS ONE</i> . Current position: MSc at York.
Kately Nikiforuk	May 2019 - Dec 2019	Supervisor	BIOL448	Hired through UBC's SURE program and stayed for directed studies – manuscript published in <i>Landscape Ecology</i>

Kelley Slimon	Sept 2018 - April 2019	Supervisor	BIOL448	Manuscript submitted to Ecology (Slimon, Szojka, & Germain). Current position: PhD at Cornell
Danielle Main	Jan 2019 - April 2019	Supervisor	BIOL448	Manuscript published in <i>Global Ecology and Biogeography</i> . Completed an MSc at UBC Forestry
Students doing research through paid employment (I do not take unpaid volunteers for equity reasons)				
Saran Khella	Oct 2023- Dec 2023	Supervisor	N/A	First research experience through the BUDR program
Safia Thiam	Sept 2022 - current	Support for grad student supervisor	N/A	First research experience through the BUDR program, stayed on as a work-learn student
Zhoujie Wou	Sept 2022 - Aug 2023	Support for grad student supervisor	N/A	First research experience through the BUDR program, stayed on for a summer directed studies testing how flour beetle life stages are affected by growing environment
Savanna Skinner	May 2020 - Aug 2021	Supervisor	N/A	A UBC SURE student, helping out with lab projects but also undertaking independent project testing the ecology of ant-aphid mutualisms)
Jenny MacKay	May 2019 - Dec 2019	Supervisor	N/A	Hired through UBC's SURE program – project completed, manuscript published in <i>Landscape Ecology</i>

Guest lectures at UBC

2019 – BIOL411 Insect Ecology
 2019 – BIOL404 Ecological Methodology
 2019 – BIOL347 Princ. and Methodology in Biol. Research

Teaching activities while at University of Toronto

2016 – Lab tutorials, four terms, *Community Ecology*

2015 – Course development, *Community Ecology*. Designed computer simulations of species coexistence for laboratory exercises that are still in use

2015 – Guest lecturer, *Community Ecology*; lecture on species coexistence and phylogenetic community assembly. Professors: Megan Frederickson/Benjamin Gilbert

2014 – Guest lecturer, *Community Ecology*; lecture on community phylogenetics. Professors: Martin Krkosek/Karen Alofs

2013 – Lab tutorials, one term, *Population Ecology*

Nominated by students for Outstanding Teaching Assistant Award

2012 – Lab tutorials, one term, *From Genomes to Ecosystems in a Changing World*

2011 – Lab tutorials, two terms, *Adaptation and Biodiversity*

9. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(b) *Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))*

Granting Agency	Subject	COMP	\$ Per Year	Year	Principal Investigator	Co-Investigator(s)
Australian Research Council Discovery Grants	Rapid evolution, and the dynamics and stability of ecological communities	C	15k x 3 years	2022	Simon Hart, Masato Yamamichi	Rachel Germain, Adam Siepielski, Serguei Saavedra
BCKDF	Solving the extinction crisis	C	125k total	2020	Rachel Germain	NA
UBC VPRI	Everything is moving: ecosystem function in a changing world	C	3.8k total	2020	Rachel Germain	Chelsea Little (postdoc in my lab)
UBC Cluster	An empiricist's guide to ecological theory	C	18k total	2020	Rachel Germain	Tess Grainger (postdoc at Princeton)
CFI	Solving the extinction crisis	C	125k total	2020	Rachel Germain	NA
NSERC Discovery Grant	The ecology and evolution of biodiversity in natural metacommunities	C	38k x 6 years + 12.5k one time	2019	Rachel Germain	NA
UBC Cluster	Evolution of species coexistence	C	30k total	2019	Rachel Germain	NA
UBC Cluster	Trophic metacommunities	C	25k total	2018	Rachel Germain, Mary O'Connor	Diane Srivastava

(d) *Invited Presentations (Identify whether International/National/Local)*

2024 – Cornell University, International (New York State, USA)
 2024 – Discussion leader, opening a session at the Gordon Research Conference, International (New Hampshire, USA)
 2024 – University of Michigan, International (Michigan, USA)
 2024 – Rice University, International (Texas, USA)
 2023 – University of Arkansas, International (Arkansas, USA)
 2023 – Discussion leader, opening a session at the Gordon Research Conference, International (Tuscany, Italy)
 2022 – University of Pittsburgh, International (Pittsburgh, USA)
 2022 – Invited speaker at symposium at the World Biodiversity Forum, International (Davos, Switzerland)
 2022 – University of Guelph, National (Guelph, ON)
 2022 – Invited speaker at symposium at the Annual Meeting of the Ecological Society of Japan, International (Japan)
 2021 – International Initiative for Theoretical Ecology, International (hosted online, organized in Europe)
 2021 – University of Wyoming, International (Wyoming, USA)

2021 – Duke University, International (North Carolina, USA)
 2021 – Florida State University, International (Florida, USA); two talks, special seminar for Darwin Day
 2021 – University of Florida, International (Florida, USA)
 2021 – Ecology and Evolution Seminars of Montpellier, International (Montpellier, France)
 2021 – Invited speaker at symposium at the Ecological Society of America, International
 2021 – Case Western university, International (Ohio, USA)
 2020 – Humboldt Symposium (online due to covid)
 2020 – Michigan State University, International (Michigan, USA)
 2020 – UC Davis Center for Population Biology, International (California, USA)
 2019 – Stanford University, International (California, USA)
 2018 – University of Minnesota, International (Minnesota, USA)
 2018 – Joint Evolution/ESEB/ASN meeting– Young Investigator Award Symposium, International (Montpellier, France)
 2018 – University of Calgary (nominated by postdoc community), National (Calgary, AB)
 2018 – University of Victoria, National (Victoria, BC)
 2017 – McGill University, National (Montreal, QC)
 2017 – University of British Columbia, Local – three invited talks for different groups
 2016 – Canadian Society for Ecology and Evolution, National (St. John's, NL); award talk
 2016 – University of Michigan, [Early Career Scientist Symposium](#), International (Ann Arbor, Michigan); award talk

(e) *Other Presentations*

Germain RM (2020) Evolution in multi-species communities. Meeting of the American Society of Naturalists, Asilomar, CA

Germain RM (2019) The evolutionary ecology of species coexistence. 104th Meeting of the Ecological Society of America, Louisville, KY

Germain RM (2018) The evolutionary ecology of species coexistence. Joint Evolution/ESEB/ASN meeting in Montpellier, France – Young Investigator Award Symposium

Germain RM (2018) Characteristic scales of biodiversity and their ecological underpinnings. 150th meeting of the American Society of Naturalists, Asilomar, CA

Germain RM (2017) Moving character displacement beyond characters using contemporary coexistence theory. 102th Meeting of the Ecological Society of America, Portland, OR (poster)

Germain RM (2017) Cascading effects of spatial structure across trophic levels. Meeting of the Canadian Society for Ecology and Evolution, Victoria, BC

Germain RM (2016) Historical contingencies in the ecology and evolution of species diversity. Ecology & Evolutionary Biology exit seminar at the University of Toronto

Germain RM, SY Strauss, B Gilbert (2015) Limits to plant diversity: an experimental decoupling of local and regional control. 100th Meeting of the Ecological Society of America, Baltimore, MD

Germain RM (2014) The evolution of coexistence mechanisms. Ecology & Evolutionary Biology departmental seminar at the University of Toronto

Germain RM, B Gilbert (2014) The evolution of species invasion potential. Terrestrial Invasive Plant Symposium, Mississauga, CA

Germain RM, B Gilbert (2014) Ghost of environments past: maternal effects reveal species niche dimensions. Botany 2014 New Frontiers, Boise, ID

→ Won two awards from the Botanical Society of America: travel grant and best ecological presentation

Germain RM, B Gilbert (2014) Ghost of environments past: maternal effects reveal species niche dimensions. Genomes to/aux Biomes: Joint meeting of CSEE, SCZ, SCL, Montreal, CA

Germain RM, B Gilbert (2013) Phylogeny-coexistence relationships: disentangling the role of species differences, environment, and biogeography. 98th Meeting of the Ecological Society of America, Minneapolis, MN

Germain RM, B Gilbert (2012) Evolution of coexistence mechanisms in Mediterranean annual plant communities. 97th Meeting of the Ecological Society of America, Portland, OR

Germain RM, B Gilbert (2012) Evolution of species interactions: finding meaning in community-level phylogenetic patterns. Evolution: 1st Joint Congress on Evolutionary Biology, Ottawa, ON

Germain RM, B Gilbert (2012) Evolution of species interactions: finding meaning in community-level phylogenetic patterns. Atwood Memorial Colloquium, University of Toronto, Toronto, ON

Germain RM, L Johnson, AS MacDougall, K Cottenie, E Gillis (2011) Spatial variability in granivory determines the strength of stochasticity during community assembly. 96th Meeting of the Ecological Society of America, Austin, TX

Germain RM, L Johnson, AS MacDougall, K Cottenie, E Gillis (2011) Spatial variability in granivory determines the strength of stochasticity during community assembly. Ontario Ecology, Ethology, & Evolution Colloquium, University of Toronto at Scarborough, Toronto, ON

Germain RM, L Johnson (2011) Little mouse on a prairie: small mammal impacts on native plant diversity. *rare* Charitable Research Reserve, Blair, ON

Germain RM, CM Caruso, H Maherali (2011) Functional traits underlie adaptive parental effects in the annual grass *Avena barbata*. Ontario Biology Day, Wilfred Laurier University, Waterloo, ON

→ Won best poster award from the Canadian Botanical Association

(f) *Other*

2022 – Invited interview with *Scientific American* magazine – [link](#)

(g) *Conference Participation (Organizer, Keynote Speaker, etc.)*

- 2016 – Organizer, symposium at meeting of the Canadian Society for Ecology and Evolution, “Metacommunity theory for real-world communities: theoretical and empirical advances for trophic metacommunities” – Victoria, BC
- 2016 – Organizer, symposium at the meeting of the Canadian Society for Ecology and Evolution, “The interplay between ecology and evolution in spatially-structured landscapes” – St. John’s, Newfoundland

(h) *Other – Conference presentations by Germain lab members*

- Sakarchi (2023) Coexistence mechanisms evolve prior to speciation in duckweed (5-min “blitz” talk) – Eco-Evo retreat in Squamish, BC (local conference) – won award for best blitz
- Jackman A (2023) Challenging assumptions of Tilman’s resource-ratio theory – Eco-Evo retreat in Squamish, BC (local conference) – poster
- Waters M (2023) Evolutionary trajectories within competitive communities – Eco-Evo retreat in Squamish, BC (local conference) – poster
- Sakarchi (2023) The genesis and evolution of coexistence mechanisms – Debbie & Justin Wragg Schmidt Symposium (local conference) – talk
- Kowalski K (2023) Historical dispersal and the maintenance of biodiversity in fluctuating environments – Canadian Society for Ecology & Evolution, Winnipeg, MB – talk
- Waters M (2023) Ecological and evolutionary influences on persistence in a patchy environment. Evolution meeting, Albuquerque, NM – talk
- Ou W (2023) How to use ecological theory to inform biological control. ESA/ESC/ESBC Joint Annual Meeting, Vancouver, BC – invited talk
- Sakarchi J (2023) On the origin of coexisting species: an empirical test – Gordon Research Conference on Speciation, Lucca, Italy – lightning talk
- Sakarchi J (2023) On the origin of coexisting species: an empirical test – Gordon Research Conference on Speciation, Lucca, Italy – poster
- Ou W (2022) A guided tour to computational ecology: computing biology or biology computing? – Biodiversity Internal Seminar Series, UBC – talk
- Sakarchi J (2022) How populations evolve to persist and persist to evolve – Ecological Society of America meeting, Montreal, Canada – talk

Kowalski J (2022) Historical dispersal and the maintenance of biodiversity in a fluctuating climate – Ecological Society of America meeting, Montreal, Canada – talk

Ou W (2022) Active aggregation stabilises priority effects and promotes regional coexistence – Ecological Society of America meeting, Montreal, Canada – talk

Waters W (2022) Eggs for breakfast: the demographic consequences of cannibalism and harsh environments – Ecological Society of America meeting, Montreal, Canada – talk

Szozka M (2022) Species persistence and species occurrence are decoupled across an environmental stress-gradient – Ecological Society of America meeting, Montreal, Canada – talk

Gillies G (2022) The biological underpinnings of demographic stochasticity. Earth & Ocean Sciences research symposium, UBC – 10 minute oral poster presentation

Waters M (2021) History's influence on population divergence via ecological persistence – Evolution – virtual talk

Sakarchi J (2021) Evolution in the presence of interspecific competitors– Evolution – virtual talk

Subramanian A (2021) Animal movement in a landscape is rewired by wildfire. Meeting of the Canadian Society for Ecology and Evolution – virtual talk

Kowalski J (2021) Connecting regional and local diversity patterns through dispersal – Zoology/Botany Symposium in 2021 – virtual talk (runner up for best blitz)

Waters M (2021) History's role in the persistence of species in a geographic mosaic. Meeting of the American Society of Naturalists - virtual talk

Szozka M (2021) Persistence across habitat boundaries. Meeting of the American Society of Naturalists - virtual talk

Sakarchi J (2020) The evolution of competitive ability. Meeting of the American Society of Naturalists, Asilomar, CA - talk

Nikiforuk K (2020) A hitchhiker's ride via endozoochory. Pacific Ecology & Evolution Conference, Bamfield, BC - poster

Slimon K (2020) Environmental variability and the evolution of bet hedging. Multidisciplinary Undergraduate Research Conference, UBC - virtual poster

Little C (2019) Animals link ecosystems through resource movement. Postdoc Research Symposium, UBC - won best blitz prize

Sakarchi J (2020) The evolution of competitive ability. Eco-Evo Retreat in Squamish, BC - talk

Szozjka M (2019) Persistence across habitat boundaries. Meeting of the Canadian Society for Ecology and Evolution, New Brunswick, CA - poster

Waters M (2019) Ecological memory and population persistence in a geographic mosaic. Eco-Evo Retreat in Squamish, BC - won best poster prize

Little C (2019) Animals link ecosystems through resource movement. Eco-Evo Retreat in Squamish, BC - poster

Szozjka M (2019) Persistence across habitat boundaries. Eco-Evo Retreat in Squamish, BC – talk

10. **SERVICE TO THE UNIVERSITY AND THE COMMUNITY**

(a) Areas of special interest and accomplishments

Note: here I have opted to list my most substantial (in terms of time + leadership) service activities at UBC

2023 – Chair, Meeting of the Canadian Society of Ecology and Evolution, to be hosted at UBC with ~700 expected attendees (a 4 day event with a scientific program, field trips, a banquet, and various social events) – I am also leading fundraising for the event. **Substantial time commitment (equiv. to ~4 search committees)**

2023 – Interim coordinator (standing in for D. Srivastava during her sabbatical), Living Data Project. Involved in all aspects of the organization, including training, internship, working group committees, and hiring new team members. **Substantial time commitment (equiv. to ~2 search committees)**

2023 – Lead organizer, Debbie & Justin Wragg Zoology symposium, Dept. Zoology (a two-day event with scientific program, formal dinner, and social events). **Substantial time commitment (equiv. to ~2 search committees, less than 2022 since we had established protocols)**

2022 – Lead organizer, Inaugural Debbie & Justin Wragg Zoology symposium, Dept. Zoology (a two-day event with scientific program, formal dinner, and social events). **Substantial time commitment (equiv. to ~3 search committees)**

(b) Areas of service undertaken to advance the inclusion of all those who have been historically excluded based on gender, race, religion, sexuality, age, disability, or economic circumstance

2023 – was awarded a Skylight grant to develop a local field course to be held on South campus, as a more equitable (i.e., cheaper, closer, more physically accessible) option for students. **Project title:** *Developing a local option for Biology 409 (Field Course in Ecology) for a more equitable field course*

2022 – Committee member, Zoology Equity Diversity and Inclusion, Dept. Zoology

2021 – Committee member, Zoology Equity Diversity and Inclusion, Dept. Zoology

2021 – Organizer and panel speaker, “Failing your way to success: a balanced perspective of life in academia”, Biodiversity Research Centre

2018 – Mental health committee, Dept. Botany, UBC

(c) *Memberships on committees, including offices held and dates*

Service at Faculty Level

2022 – Search committee, BRC Director position, Faculty of Science

2021 – Selection committee, Raja Rosenbluth award, Faculty of Science

2021 – Panel speaker about applying to academic jobs, Faculty of Graduate and Postdoctoral Studies

Service at Department/Centre Level; BRC = Biodiversity Research Centre, UBC

2022 – BRC expansion focus group, BRC

2021 – Search committee, Connectivity Science Assistant Professor position, Dept. Zoology.

2020 – BRC building expansion committee, BRC

2019 – Biology Symposium organizing committee, Dept. Zoology

2018 – Organizer, Squamish Eco-Evo retreat, BRC

2017 – Misc. committees: space committee for BRC, postdoc rep for Dept. Zoology external review

2017 – Organizer, Squamish Eco-Evo retreat, BRC

2017 – Search committee, President’s Excellence Chair faculty search, BRC

2017 – Search committee, Biodiversity Postdoctoral Fellowship, BRC

2016 – Coordinator, Biodiversity Discussion Group, BRC

2016 – Coordinator, Biodiversity Legendary Internal Seminar Series (BLISS), BRC

2016 – Organizing committee, Squamish Eco-Evo retreat, BRC

(d) *Other service, including dates*

Thesis examiner for two MSc exit exams (Forestry and Conservation Sciences (Richardson lab), and UBC-O (Ford lab)) and one BIOL449 student (Botany (Michaletz lab))

Chaired a MSc exit exam (Zoology (Srivastava lab))

11. **SERVICE TO THE COMMUNITY**

- (a) *Service undertaken to advance the inclusion of all those who have been historically excluded based on gender, race, religion, sexuality, age, disability, or economic circumstance.*

- 2021 – Published two papers aimed at making theoretical ecology more accessible (see publication list; Grainger et al. 2021 AmNat and Ou et al. 2021 BioScience), as well as organizing a special issue at AmNat for “demystifying” key ecological theories
- 2021 – Invited speaker, Broadening Representation & Equity with Science (i.e., BREWS), University of Toronto – topic = my blog post ([link](#)) on interacting equitably in a group setting
- 2021 – Invited speaker, topic: How to plan, organize, and run equitable working groups. Meeting of the Canadian Society for Ecology and Evolution, virtual
- 2020 – Panel speaker, topic = EDI in working groups, CIEE/NSERC Synthesis Science webinar
- 2020 – Panel speaker, topic: how to attend and run working groups to support Equity, Inclusion, and Diversity. Virtual workshop for graduate students organized by D. Srivastava
- 2017 – Invited speaker, “How to run a graduate mental health workshop in your department” Meeting of the Canadian Society for Ecology and Evolution, St. Johns, NL
- 2016 – Organizer and panel speaker, EEB seminar at the University of Toronto, “Failing your way to success: a balanced perspective of life in academia”; presented a “real CV” of successes and failures to remind graduate students that perceived failures are normal and part of learning
- 2015 – Workshop organizer, School of Graduate Studies. Worked with the Dean’s office to develop mental health initiatives for graduate students across the University of Toronto
Media coverage: [“Graduate students identify strategies to boost morale, mental health”](#), *U of T News*

- (d) *Memberships on scholarly committees, including offices held and dates*

- 2021 – Co-chair, Meeting of the Canadian Society of Ecology and Evolution, hosted at the University of British Columbia –served for 6 months until my teaching workload made this infeasible
- 2014 – Publications Committee member, Botanical Society of America; two-year term, tasked with modernizing the American Journal of Botany for a new generation of scientists

- (e) *Memberships on other committees, including offices held and dates*

From time in grad school; EGSA = UofT Ecology & Evolution Graduate Student Association

- 2016 – President, EGSA; responsible for running the EGSA and representing graduate student interests at faculty meetings. This was an elected position.

- 2015 – Chair, Atwood Colloquium Organizing Committee, EGSA; head of committee tasked with selecting, inviting, and hosting an esteemed professor of ecology and evolutionary biology (Dr. Sally Otto) at a prestigious annual event
- 2015 – Invited panel speaker, University of Toronto's President's office on ways to improve graduate student experiences in the Faculty of Arts and Sciences
- 2014 – Committee member, Atwood Colloquium Organizing Committee, EGSA; participated in the selection of the 2013 Atwood lecturer (Dr. Dolph Schluter)
- 2014 – Social committee chair, EGSA, two terms. These were elected positions. Organized major social events (e.g., themed parties) for the department as well as fundraisers for prostate cancer and for bird conservation.

(f) *Editorships (list journal and dates)*

- current – Associate editor, the *American Naturalist*
- current – Guest editor, special issue at *Ecology*, Title = "Pandemic Pivots": Research Innovations in Times of Collective Hardship (co-organized with Katie Marshall)
- current – Guest editor, special issue at the *American Naturalist*, Title = Demystifying key theories in ecology (co-organized with Sebastian Schreiber)

(g) *Reviewer (journal, agency, etc. including dates)*

>86 total: Acta Biotheoretica, American Naturalist (x8), Axios Review, Botany, CFI evaluator, Ecography (x2), Ecology (x6), Ecology Letters (x19), Evolution, Evolutionary Applications, Evolutionary Ecology (x2), Functional Ecology (x4), Global Change Biology, Journal of Animal Ecology (x2), Journal of Ecology (x4), Journal of Vegetation Science, Methods in Ecology & Evolution (x2), Quarterly Review of Biology, Movement Ecology, National Science Foundation, Nature Communications, New Phytologist, NSERC Discovery Grant program (x3), NSERC Staacie Fellowship (x2), Nature Ecology & Evolution (x6), Oecologia, Oikos (x3), Plos ONE, Proceedings of the National Academy of Sciences USA (x2), Proceedings of the Royal Society B (x4), Science, Scientific Reports (x3), Tenure file for Loyola University, Trends in Ecology and Evolution (x2)

(j) *Other service to the community*

- 2020 – Panel speaker, Topic = how to score an academic job, Faculty of Graduate and Postdoctoral Studies
- 2015 – *Let's Talk Science National* – Presented *Dispersal Detectives: The Diversity and Adaptations of Seeds*, an interactive science exhibit on functional trait variation among seed species, to engage middle school students in scientific observation and discovery

2013 – *Planting Science, Botanical Society of America* – Scientist mentor, five terms, mentored middle school and high school students as they conducted experiments on pollination and seed germination

12. **AWARDS AND DISTINCTIONS**

(a) *Awards for Teaching (indicate name of award, awarding organizations, date)*

21-23 – letters from Dean Aronson in recognition of receiving “some of the highest student evaluations in the Faculty of Science” for all three of my primary courses

2022 – Killam Teaching Prize nomination (withdrew from competition due to year-long health issue)

2021 – Killam Teaching Prize nomination

2013 – Nominated by students for outstanding teaching assistant award in 3rd year Community Ecology class (University of Toronto)

(b) *Awards for Scholarship (indicate name of award, awarding organizations, date)*

2018 – Jasper Loftus-Hills Young Investigator Award, American Society of Naturalists: **\$1700**

2018 – George Mercer Award for outstanding ecological research paper, Ecological Society of America: **\$1700**

2016 – Biodiversity Postdoctoral Fellowship, University of British Columbia (\$69,000 accepted): **\$110,000**

2016 – Excellence in Doctoral Research, Canadian Society for Ecology & Evolution: **\$750**

2016 – Invitation to speak at prestigious Early Career Scientists Symposium in Ann Arbor, Michigan

2015 – Runner-up for Ramsay Wright award, University of Toronto, for exceptional contribution to the Dept. of Ecology and Evolutionary Biology

2014 – Grants-in-aid of Research, Sigma Xi: **\$700**

2014 – NSERC CGS-D Alexander Graham Bell, University of Toronto: **\$70,000**

2014 – Best Talk Award, Ecological Section at Botany 2014, Botanical Society of America: **\$500**

2014 – Ecological Section Student Travel Award, Botanical Society of America: **\$500**

2014 – Frederick P. Ide Graduate Award in EEB, University of Toronto: **\$1917**

2014 – Robert L. Jefferies Graduate Award, University of Toronto: **\$797**

2013 – Michael Smith Foreign Study Supplement, NSERC: **\$6000**

2013 – Jeanne F. Goulding Fellowship, University of Toronto: **\$2000**

2012 – NSERC CGS-M Alexander Graham Bell, University of Toronto: **\$17,500**

2012 – Ontario Graduate Scholarship, University of Toronto (Declined): **\$15,000**

2012 – Graduate Student Research Award, Botanical Society of America: **\$500**

2011 – E. M. Walker Graduate Award in Biodiversity, University of Toronto: **\$2800**

2011 – Monroe Landon Memorial prize for conservation research, University of Guelph: **\$550**

2011 – Young Botanist Award, Botanical Society of America: BSA membership

2011 – Best poster award at Ontario research conference, Canadian Botanical Association: **\$100**

2010 – Best Thesis Proposal award, University of Guelph: **\$300**

13. OTHER RELEVANT INFORMATION (Maximum One Page)

THE UNIVERSITY OF BRITISH COLUMBIA
Publications Record

SURNAME: Germain

FIRST NAME: Rachel

Initials: RMG

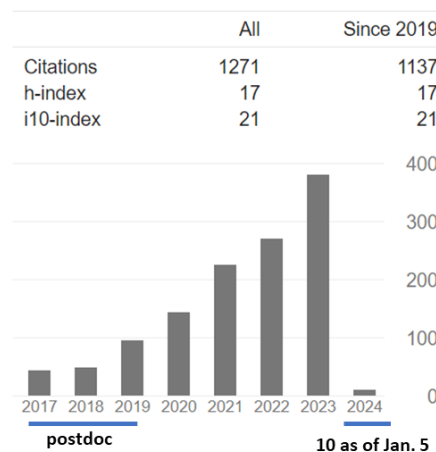
MIDDLE NAME(S): Marie

Date: Jan. 05, 2024

1. REFEREED PUBLICATIONS

Table of Journal Impact (median IF of all ecology journals = 1.8) – first publication in 2013

Journal	Impact factor	# Pubs
American Naturalist	4.27	5 + 1 in revision
Biology Letters	3.32	1
BioScience	8.28	1
Biological Reviews	12.82	1
Cold Spring Harbor	6.8	1
Ecosphere	2.70	1
Ecology	5.18	2 + 1 in review
Ecology and Evolution	2.34	1
Ecology Letters	8.70	3 + 1 in revision
Global Ecology and Biogeography	6.91	1
International Journal of Plant Sciences	1.43	1 (this was my 1st paper)
Journal of Ecology	5.17	2
Landscape Ecology	3.39	1
Nature Ecology & Evolution	10.97	2
Oikos	3.71	2
PLOS ONE	3.75	1
Proceedings of the National Academy of Sciences	9.58	1
Proceedings of the Royal Society B	4.30	1
Trends in Ecology & Evolution	18.96	3
Quarterly Review of Biology	2.32	2
Other manuscripts in revision for new journal after review	--	2
Total = 31 papers + 2 book reviews, 5 in review/revision		



(a) Journals (my HQP are in bold & underlined; undergrads listed in red)

Authorship conventions: first author is the person who led the paper, last author (if a PI of a first-author HQP) typically is the research advisor. Given the high costs of publishing open access I post PDFs of all my papers on my website (as soon as journal embargoes lift). My lab aims to publish in top journals in ecology and evolution. HQP are in **bold and underlined**, undergrads are listed in red.

31	<u>Subramanian A</u> , RM Germain. Landscape use by animals is rewired by wildfire. In press, PLOS ONE
30	<u>Szojka M</u> , RM Germain. Dispersing across habitat boundaries: uncovering the demographic fates of populations in unsuitable habitat. In press, <i>Ecosphere</i> .

29	Germain RM , B Matthews, L Harmon. Niche theory as an underutilized resource for the study of adaptive radiations. In press, Cold Spring Harbor volume on speciation. - link
28	Straus S, C Forbes, CJ Little , RM Germain , DA Main , MI O'Connor, PL Thompson, AT Ford, D Gravel, LM Guzman. (2023) Macroecological variation in movement profiles: body size does not explain it all. In press, Global Ecology and Biogeography.
27	Zelnik Y*, M Barbier, DW Shanafelt, M Loreau, RM Germain* (2023) Linking intrinsic scales of ecological processes to characteristic scales of biodiversity and functioning patterns. In press, Oikos. * = equal contribution → PCI Recommended - link
26	Rolland J, LF Henao-Diaz, M Doebeli, RM Germain , LJ Harmon, LL Knowles, LH Liow, JE Mank, A Machac, SP Otto, M Pennell, N Salamin, D Silvestro, M Sugawara, J Uyeda, CE Wagner, D Schluter (2023) Conceptual and empirical bridges between micro- and macroevolution. Nature Ecology & Evolution 7: 1181-1193 - link
25	Sakarchi J , RM Germain (2023) The evolution of competitive ability. American Naturalist 201:1-15 - link
24	Germain RM , Urquhart-Cronish M, Jones NT, Mayfield MM, Raymundo M (2022) The strength and direction of local (mal)adaptation depends on neighbour density and the environment. Journal of Ecology 110: 514-552 - link
23	Ou W J-A* , Henriques GJB*, Senthilnathan A, Ke P-J, Grainger TN† , Germain RM† (2022) Writing accessible theory in ecology and evolution: insights from Cognitive Load Theory. BioScience 72: 300–313. * = equal contribution, † = co-senior - link → F1000 recommended
22	Grainger T* , Barbour M, Coblenz K, DeLong D, Goel N, Jones N, Ke P-J, Levine, O'Connor M, Otto S, Sakarchi J , Senthilnathan A, Szojka M , Germain RM* (2022) An empiricist's guide to using ecological theory. American Naturalist 199. *corresponding authors - link → F1000 recommended x 2 → In the top 5% of all research outputs scored by Altmetric → featured on podcast “Major Revisions”
21	Loreau M, M Barbier, E Filotas, D Gravel, F Isbell, SJ Miller, JM Montoya, S Wang, R Aussenac, RM Germain , PL Thompson, A Gonzalez, LE Dee (2021) Biodiversity as insurance: from concept to measurement and application. <i>Biological Reviews</i> 96:2333-2354.
20	Gomez-Llano M, RM Germain , D Kyogoku, M McPeck, A Siepielski (2021) When ecology fails: how reproductive interactions promote coexistence. <i>Trends in Ecology and Evolution</i> - link
19	Germain RM , Hart S, Turcotte MM, Otto SP, Sakarchi J , Rolland J, Usui T, Angert AL, Schluter D, Bassar R, Waters MT , Henao Diaz F, Siepielski AM (2021) On the origin of coexisting species. <i>Trends in Ecology and Evolution</i> 36: 284-293. - link

18	Mackay J* , K Nikiforuk* , M Szojka , CJ Little , JR Fleri, RM Germain (2021) Animals connect plant species and resources in a meta-ecosystem. <i>Landscape Ecology</i> - link
17	Van Allen B, N Jones, K Carscadden, B Gilbert, RM Germain* (2021) Maternal effects and the outcome of competition. <i>Ecology and Evolution</i> . * = corresponding author - link
16	Germain RM , DS Srivastava, A Angert (2020) Evolution of an inferior competitor increases resistance to biological invasion. <i>Nature Ecology & Evolution</i> 4: 419-425.
15	Hargreaves, A, RM Germain , M Bontrager, J Persi, A Angert (2020) Local adaptation to biotic interactions: a meta-analysis across latitudes. <i>American Naturalist</i> 195: 395-411 - link
14	Blackford C , RM Germain , B Gilbert (2020) Species differences in phenology shape coexistence. <i>American Naturalist</i> 195: 168-180 - link
13	Gonzalez A, RM Germain , DS Srivastava, E Filotas, LE Dee, D Gravel, MI O'Connor, PL Thompson, J Cowles, F Isbell, S Kéfi, J Montoya, Y Zelnick, M Loreau (2020) Scaling-up biodiversity-ecosystem functioning research. <i>Ecology Letters</i> 23:757-776.
12	Germain RM , NT Jones, TN Grainger (2019) Cryptic dispersal networks shape biodiversity in an invaded landscape. <i>Ecology</i> 100: e02738.
-----started faculty appointment at UBC-----	
11	Guzman LM, RM Germain* , C Forbes, S Straus, MI O'Connor, D Gravel, DS Srivastava, PL Thompson* (2018) A multi-trophic extension to metacommunity ecology. <i>Ecology Letters</i> 22: 19-33. * = contributed equally → F1000 recommended
10	Germain RM , MM Mayfield, B Gilbert (2018) The 'filtering' metaphor revisited: competition and environment jointly structure invasibility and coexistence. <i>Biology Letters</i> 14: 20180460.
9	Germain RM , TN Grainger, NT Jones, B Gilbert (2018) Maternal provisioning is structured by species' competitive neighborhoods. <i>Oikos</i> 0: 1-9.
8	Germain RM , J Williams, D Schluter, A Angert (2018) Moving character displacement beyond characters using contemporary coexistence theory. <i>Trends in Ecology & Evolution</i> 33: 74-84.
7	Germain RM , SY Strauss, B Gilbert (2017) Experimental dispersal reveals characteristic scales of biodiversity in a natural landscape. <i>Proceedings of the National Academy of Sciences</i> 114: 4447-4452.
6	Grainger, TN, RM Germain , NT Jones, B Gilbert (2017) Predation modifies biogeographic constraints in an insect metacommunity. <i>Ecology</i> 98: 851-860.
-----started postdoc at UBC-----	

5	Germain RM , JT Weir, B Gilbert (2016) Species coexistence: macroevolutionary relationships and the contingency of historical interactions. <i>Proceedings of the Royal Society B</i> 283: 20160047.
4	Jones NT, RM Germain , TN Grainger, A Hall, L Baldwin, B Gilbert (2015) Dispersal mode mediates the effect of patch size and patch connectivity on metacommunity diversity. <i>Journal of Ecology</i> 103: 935-944.
3	Germain RM , B Gilbert (2014) Hidden responses to environmental variation: maternal effects reveal species niche dimensions. <i>Ecology Letters</i> 17: 662-669.
2	Germain RM , L Johnson, S Schneider, K Cottenie, E Gillis, AS MacDougall (2013) Spatial variability in seed predation determines the strength of stochasticity during community assembly. <i>American Naturalist</i> 182: 169-179.
1	Germain RM , CM Caruso, H Maherali (2013) Mechanisms and consequences of parental effects in an invasive annual grass. <i>The International Journal of Plant Sciences</i> 171: 960-971.

2. **NON-REFEREED PUBLICATIONS**

(a) *Journals*

2	Germain RM , J Kowalski , SJ Leonard, W Ou , J Sakarchi , M Waters . Invited review of: <i>Coexistence in Ecology: A Mechanistic Perspective</i> by Mark McPeck for The Quarterly Review of Biology 97(3):222-223 - link
1	Srivastava D, Germain RM , Guzman M, Straus S, Thompson P, Forbes C. Invited review of: <i>Metacommunity Ecology</i> by Matt Leibold and Jon Chase for The Quarterly Review of Biology 94(1):92-92 - link

7. **OTHER WORKS**

2022	Blog post invited by International Initiative for Theoretical Ecology: “Simple, in theory: an empiricist’s endeavor to becoming more theoretical” - link
2022	Blog post invited by Dynamic Ecology: “A raspberry of an idea: How to do inspired science as a group” - link – this post has an explicit EDI focus

8. **WORK SUBMITTED** (including publisher and date of submission)

5	Craig E* , M Szojka* , RM Germain† , LG Shoemaker†. Sink populations decouple species occupancy and persistence across a productivity gradient. Revisions (Nov. 16 2023) at Ecology Letters. * = equal contribution; † = co-senior
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4	<u>Sakarchi J</u>, RM Germain. MacArthur's consumer-resource model: a Rosetta Stone for competitive interactions. In revision for the American Naturalist.
3	<u>Waters M</u>, RM Germain. A test of persistence reveals ecological causes and evolutionary consequences for population differentiation. In revision after an unsuccessful review at Proceedings of the Royal Society B.
2	<u>Slimon K</u>, <u>M Szojka</u>, RM Germain. Environmental variability and the evolution of bet hedging strategies. In revision for Ecology.
1	Bontrager M, CD Muir, CR Mahony, DE Gamble , RM Germain , AL Hargreaves, EJ Kleynhans, KA Thompson, AL Angert. Climate warming weakens local adaptation. In revision after an unsuccessful review at Science.

9. **WORK IN PROGRESS** (including degree of completion)

In total we have dozens of projects/papers in progress across all HQP and across all of the collaborative projects I am involved in or am leading. Here I have only included manuscripts that I expect will be submitted by the next annual report due date (~mid April 2024) while also prioritizing manuscripts listed in "Work Submitted".

Szojka M, L Shoemaker, **RM Germain**. Biotic interactions cause non-equilibrial communities across scales – degree of completion: analysis = 100%, writing 80%.

Kowalski J, SY Strauss, B Gilbert, **RM German**. Dispersal alters community trajectories in variable environments – degree of completion: analysis 100%, writing = 90%.