

ANNA HARGREAVES

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EMPLOYMENT

2022 – now Associate Professor, Department of Biology, McGill University
2017 – 2022 Assistant Professor, Department of Biology, McGill University
2015 – 2016 Biodiversity Postdoctoral Fellow, University of British Columbia
* *includes 6 month maternity leave*
2007 – 2009 Research Scientist, Centre for Conservation Research, Calgary Zoo
2004 Field Camp Manager: Can. Wildlife Service (Arctic), Pomona College (Costa Rica)

EDUCATION

2010 – 2014 PhD, Queen's University
2005 – 2007 MSc, University of Calgary
1999 – 2003 BSc, Trent University (including thesis at U KwaZulu-Natal, South Africa)

AWARDS & HONOURS (excluding scholarships & undergraduate awards)

2019 Early Career Award, Canadian Society for Ecology & Evolution (national; \$1500)
2017 JLH Young Investigator Award, American Society of Naturalists (international; \$700)
2015 Biodiversity Post-doctoral fellowship, University of British Columbia (international; \$95K)
2015 Governor General's Academic Gold Medal (national)
2014 Best talk Award, Canadian Society for Ecology & Evolution (CSEE) (national)
2014 New Phytologist Award, CSEE (national; \$500)
2011 New Phytologist Award, CSEE (national; \$500)
2005 Alberta Society of Professional Biologists Graduate Award (province-wide; \$2000)
2005 Dean's Research Excellence Award, U Calgary (university-wide; \$3000)

PUBLICATIONS

PEER-REVIEWED JOURNALS

(GOOGLE SCHOLAR: >2900 CITATIONS, H-INDEX 23)

† *indicates student trainee publishing work from their time in my lab*

40. Rodriguez-Campbell A†, O Rahn†, M Chuiffo, **AL Hargreaves**.
Clay larvae do not accurately measure biogeographic patterns in predation.
J Biogeography. Accepted with minor revision (Oct 3 2023), Manuscript ID: JBI-23-0286
39. Moore, NA, I Morales-Castilla, **AL Hargreaves**, MA Olalla Tárrega, F Villalobos, P Calosi, S Clusella-Trullas, JG Rubalcaba, AC Algar, B Martínez, L Rodríguez, S Gravel, JM Bennett, GC Vega, C Rahbek, MB Araújo, JR Bernhardt, J Sunday. (authors except last listed in order of contribution).
Global patterns of thermal niche filling in ectotherms.
Nature Ecology Evolution. Accepted (Sept 29 2023)

38. Usui, T, D Lerner, IM Eckert, A Angert*, CJ Garroway*, **AL Hargreaves***, L Lancaster*, JP Lessard*, F Riva*, C Schmidt*, K van der Burg*, KE Marshall. *order alphabetical*. 2023. The evolution of plasticity across species ranges. *Trends in Ecology & Evolution*. 38(9) 831-842.
37. **Hardouin, M†**, **AL Hargreaves**. 2023. Mapping nationally and globally at-risk species to identify hotspots for (and gaps in) conservation. *Proceedings of the Royal Society B*. 290(1995): 1-11.
36. **Martin, E†**, **AL Hargreaves**. 2023. Gradients in the time seeds take to germinate could alter global patterns in predation strength. *Journal of Biogeography*. 50: 884-896.
35. Iseli, E, C Chisholm, S Haider, T Seipel, Agustina Barrios, **AL Hargreaves**, P Kardol, J Lembrechts, K McDougall, I Rashid, 22 authors listed alphabetically, JM Alexander. 2023. Rapid upwards spread of nonnative plants in mountains globally. *Nature Ecology Evolution*. 7: 405-413.
**Altmetric 'Attention Score' >150: in 98% percentile of publications of similar age*
34. Alexander, J, D Atwater, R Colautti, **AL Hargreaves**. 2022. How do biotic interactions affect the evolution of species range limits? *Phil Trans Royal Soc*. 377(1848): 20210020
33. **Dawson-Glass, E†**, **AL Hargreaves**. 2022. Does pollen limitation limit plant ranges? Evidence and implications. *Phil Trans Royal Soc*. 377(1846): 20210014
32. RS O'Connor, A Le Pogam, KG Young, OP Love, CJ Cox, G Roy, F Robitaille, KH Elliott, **AL Hargreaves**, ES Choy, HG Gilchrist, D Bertreux, F Vézina. 2022. Warming in the land of the midnight sun: breeding birds may suffer greater heat stress at high-versus low-Arctic sites. *Proceedings of the Royal Society B*. 289(1981): 20220300
31. Haider, S, J Lembrechts, K McDougall, A Pauchard, 51 authors listed alphabetically including **AL Hargreaves**, T Seipel. 2022. Think globally, measure locally: the MIREN standardized protocol for monitoring species distributions along elevational gradients. *Ecology & Evolution*. 12(2): e8590.
30. **Paquette, A†**, **AL Hargreaves**. 2021. Biotic interactions are more important at species warm vs. cool range-edges. *Ecology Letters*. 24(11): 2427-2438
**Altmetric 'Attention Score' >120: in 98% percentile of publications of similar age*
29. Bontrager, M, T Usui, J Lee-Yaw, D Anstett, H Branch, **AL Hargreaves**, C Muir, AL Angert. 2021. Adaptation across geographic ranges is consistent with strong selection in marginal climates and legacies of range expansion. *Evolution*. 75(6): 1316-1333.

28. Choy, ES, RS O'Connor, HG Gilchrist, **AL Hargreaves**, OP Love, F Vézina, KH Elliott. 2021. Limited heat tolerance in a cold-adapted seabird: implications of a warming Arctic. *Journal of Experimental Biology*. 224(13): jeb242168
27. O'Connor, R, A LePogam, K Young, F Robitaille, E Choy, O Love, K Elliott, **AL Hargreaves**, D Berteaux, A Tam, F Vézina. 2021. Limited heat tolerance in an Arctic passerine: thermoregulatory implications for cold specialized birds in a rapidly warming world. *Ecology & Evolution*. 11(4): 1609-1619.
26. Leung, B, **AL Hargreaves**, D Greenberg, B McGill, M Dornelas, R Freeman. 2020. Clustered vs. catastrophic global vertebrate declines. (*author order by contribution*) *Nature*. 588: 267-271.
**Altmetric 'Attention Score' >700: in 99% percentile for internet attention compared to publications of similar age, 88th percentile of similar-age publications from Nature*

Leung, B, **AL Hargreaves**, D Greenberg, B McGill, M Dornelas. 2022. Peer-reviewed replies to matters arising regarding our paper (*author order by contribution*) *All four published in Nature* issue 601(7894), Jan 26 2022
Reply to Loreau et al. Do not downplay biodiversity loss
Reply to Mehrabi et al. Shifting baselines & biodiversity success stories
Reply to Murali et al. Emphasizing declining populations in the Living Planet Report
Reply to Puurtinen et al. Living Planet Index does not measure abundance
25. Caissy, P†*, S Klemet-N'Guessan†*, R Jackewi, CG Eckert, **AL Hargreaves**. 2020. High conservation priority of range-edge plant populations not matched by habitat protection or research effort. **co first-authors* *Biological Conservation*. 249: 108732.
24. Cameron, V†, **AL Hargreaves**. 2020. Spatial distribution and conservation hotspots of mammals in Canada. *FACETS*. 5(1): 692-703.
23. Larsen, C† & **AL Hargreaves**. 2020. Miniaturizing landscapes to understand species distributions. *Ecography*. 43(11): 1625-1638.
**Excellence in Ecology & Evolution Award special issue*
22. **Hargreaves, AL**, R Germain, M Bontrager, J Persi†, AL Angert. 2020. Local adaptation to biotic interactions: a meta-analysis across latitudes. *American Naturalist*. 195(3): 395-411.
**Altmetric attention score =107: top 5% of all research, 97% for age, #30 of 3100 from source*
21. **Hargreaves, AL**. 2019. Lasting signature of forest fragmentation. *Science*. 366: 1196-97 (*invited Perspectives piece*)
**Interview with New York Times ([nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html](https://www.nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html))*
20. **Hargreaves, AL**, E Suarez, K Mehltreter, I Myers-Smith, S Vanderplank, H Slinn, *et al* (17 authors in total in descending order of contribution). 2019.

Seed predation increases from the Arctic to the Equator and from high to low elevations.
Science Advances. 5(2): eaau4403.

**Altmetric attention score = 162: top 5% of all research, 98% percentile for age*

19. **Hargreaves, AL**, CG Eckert. 2019.
Local adaptation primes cold-edge populations for range expansion but not warming-induced range shifts.
Ecology Letters. 22(1): 78-88
 18. Sunday, J, J Bennett, P Calosi, S Clusella-Trullas, S Gravel, **AL Hargreaves**, F Leiva, W Verberk, MA Olalla-Tarraga, I Morales-Castilla. 2019.
Thermal tolerance patterns across latitude and elevation.
Philosophical Transactions of the Royal Society B. 374(1778): 20190036
 17. **Hargreaves, AL**, GT Langston, SD Johnson. 2019.
Narrow entrance of short-tubed *Aloe* flower facilitates pollen transfer on long sunbird bills.
South African Journal of Botany. 124: 23-28
 16. Freeman, B, J Lee-Yaw, J Sunday, **AL Hargreaves**. 2018.
Expanding, shifting, and shrinking: the impact of global warming on species' elevational distributions.
Global Ecology & Biogeography. 27(11): 1268-1276
**Altmetric attention score = 155: top 5% of all research, 98% percentile for age*
**Top 10% most downloaded papers from journal*
 15. Gilbert K, N Sharp, A Angert*, G Conte*, J Draghi*, F Guillaume*, **AL Hargreaves***, R Matthey-Doret*, MC Whitlock. 2017.
Local maladaptation reduces expansion load during range expansion.
American Naturalist. 189(4): 368-380 **order alphabetical*
 14. Cheptou, PO, **AL Hargreaves**, D Bonte, H Jacquemyn. 2017.
Adaptation to fragmentation: evolutionary dynamics driven by human influences.
Philosophical Transactions of the Royal Society. 372(1712): 20160037
- Maternity leave in 2016. Started at McGill Jan 2017.*
13. **Hargreaves, AL**, SF Bailey, RA Laird. 2015.
Local adaptation and poor-quality edge habitat affect dispersal evolution during range shifts induced by climate change.
Journal of Evolutionary Biology. 28(8): 1489-1501
 12. **Hargreaves, AL**, JL Weiner, CG Eckert. 2015.
High-elevation range limit of an annual herb is neither caused nor reinforced by declining pollinator service. *Journal of Ecology*. 103(3): 572-584
 11. **Hargreaves, AL**, KE Samis, CG Eckert. 2014.
Are species' range limits simply niche limits writ large? A review of transplant experiments beyond the range.
American Naturalist. 183(2): 157-173
**Web of Science 'Highly cited paper' (top 1% in Ecology/Environment)*

10. **Hargreaves, AL**, CG Eckert. 2014.
Evolution of dispersal and mating systems along geographic gradients: implications for shifting ranges. *Functional Ecology*. 28(1): 5-21
*Cover article; Nominated for the Haldane young investigator prize
9. **Hargreaves, AL**, LD Harder, SD Johnson. 2012.
Floral traits mediate the vulnerability of aloes to pollen theft and inefficient pollination by bees. *Annals of Botany*. 109(4): 761-772
8. **Hargreaves, AL**, DP Whiteside, HG Gilchrist. 2011.
Concentrations of 17 elements, including mercury, in the tissues, food and abiotic environment of Arctic shorebirds. *Science of the Total Environment*. 409(19): 3757-3770
7. **Hargreaves, AL**, LD Harder, SD Johnson. 2010.
Native pollen thieves reduce the reproductive success of a hermaphroditic plant *Aloe maculata*. *Ecology*. 91(6): 1693-1703
6. **Hargreaves, AL**, DP Whiteside, HG Gilchrist. 2010.
Concentrations of 17 elements, including mercury, and their relationship to fitness measures in arctic shorebirds and their eggs. *Science of the Total Environment*. 408(16): 3153-3161
5. **Hargreaves, AL**, LD Harder, SD Johnson. 2009.
Consumptive emasculation: the ecological and evolutionary consequences of pollen theft. *Biological Reviews*. 84(2): 259-276
4. **Hargreaves, AL**, LD Harder, SD Johnson. 2008.
Aloe inconspicua: the first record of an exclusively insect-pollinated aloe. *South African Journal of Botany*. 74(4): 606-612
3. Bailey, SF, **AL Hargreaves**, S Hechtenthal, RA Laird, *et al.* (8 authors). 2007.
Empty flowers as a pollination-enhancement strategy. *Evolutionary Ecology Research*. 9(8): 1245-1262
2. Johnson, SD, **AL Hargreaves**, M Brown. 2006.
Dark, bitter-tasting nectar functions as a filter of flower visitors in a bird-pollinated plant. *Ecology*. 87(11): 2709-2716 *Cover article
1. **Hargreaves, AL**, SD Johnson, E Nol. 2004.
Do floral syndromes predict specialization in plant pollination systems? An experimental test in an "ornithophilous" African *Protea*. *Oecologia*. 140(2): 295-301

OTHER PUBLICATIONS (SELECTED)

Hargreaves AL, M Lechowicz. 2022. Biodiversity of North America. Encyclopedia of Biodiversity, 3rd Edition. Elsevier.

Greenberg, D, **AL Hargreaves**, A Mooers, B Leung. 2021. Conservation hope: Many wildlife species can recover if given a chance. *The Conversation*. March 7.
theconversation.com/conservation-hope-many-wildlife-species-can-recover-if-given-a-chance-150423

Hargreaves AL. 2020. Beyond species: How will global change affect species interactions? Invited Knowledge highlight for Alpine Club of Canada's *State of the Mountains Report*.

<https://www.stateofthemountains.ca/>

Hargreaves AL, JD Thomson. 2013. Monitoring pollen limitation with pollen supplementation experiments. Report from 2013 NSERC CANPOLIN workshop, Kluane, YK.

Hargreaves AL. 2008. Conserving Ghanaian amphibians: Status, needs, and potential for captive breeding-reintroduction. Calgary Zoo & Nature Conservation Research Centre, Ghana.

Hargreaves AL. 2007. Differential nest box use by mountain bluebirds and tree swallows: Final report on a seven-year study. Calgary Zoo Centre for Conservation Research.

Dearlove, T, **Hargreaves AL**. 2007. Northern leopard frog 2017 research summary & recommendations. Written for Calgary Zoo & Cypress Hills Inter-Provincial Park.

INVITED TALKS

INVITED PLENARIES

- 2019 Early Career Award, *Canadian Society for Ecology & Evolution meeting, Fredericton NB*
- 2017 Plenary speaker, *Canadian Botany Association meeting, Waterloo ON*
- 2017 Young Investigators Awards, *Evolution meeting, Portland, USA*
- 2017 Student-invited keynote, *Conservation, Ecology & Evolution retreat, Mont St Hilaire QC*

INVITED SEMINARS

- 2024 Departmental seminar, *Université de Sherbrooke, ON (forthcoming)*
- 2023 Departmental seminar, *Carleton University, ON (forthcoming; Feb 2023)*
- 2022 Departmental seminar, *University of Lethbridge, AB*
- 2022 Research seminar, *HJ Andrews Experimental Forest Long-Term Ecol. Res. program USA*
- 2021 Departmental seminar, *University of Guelph, ON*
- 2021 Departmental seminar, *University of Wyoming USA*
- 2021 Departmental seminar, *Cornell, Ithaca USA*
- 2021 Departmental seminar, *Trent University*
- 2020 Departmental seminar, *University of New Brunswick*
- 2020 Seminar for Biogeography group (*T Price & D Jablonsky labs*) *University of Chicago USA*
- 2020 Departmental seminar, *Cornell, Ithaca USA (postponed due to COVID)*
- 2020 Research Seminar, *University of Lethbridge*
- 2019 Departmental seminar, *ETH Zurich, Switzerland*
- 2019 Departmental seminar, *University of Basel, Switzerland*
- 2019 Departmental seminar, *Université de Lausanne, Switzerland*
- 2019 Departmental seminar, *University of Vermont, Burlington USA*
- 2018 Departmental seminar, *University of Virginia, Charlottesville USA*
- 2018 Research seminar, *Botanical Garden/Université de Montreal*
- 2018 Global Change seminar series, *University of Toronto*
- 2018 Departmental seminar, *McGill University (NRS, MacDonald campus)*
- 2018 Departmental seminar (elected by graduate student association), *University of Concordia*
- 2018 Research seminar, *Dawson College CEGEP, Montreal QC*
- 2017 Departmental seminar, *University of Ottawa*
- 2017 Departmental seminar, *University of Colorado, Boulder USA*
- 2017 Departmental seminar, *Université de Sherbrooke*

- 2016 Ecology seminar, *Simon Fraser University*
 2015 Departmental seminar, *University of Calgary*
 2015 Organismal Biology seminar, *McGill University*
 2015 Biodiversity Research Centre internal seminar, *University of British Columbia*
 2014 Departmental seminar, *Queen's University*
 2013 Departmental seminar, *University of Alberta*
 2013 Departmental seminar, *Trent University*
 2010 Ecology, Evolution & Behaviour seminar, *Queen's University*

INVITED SYMPOSIUM PRESENTATIONS

- 2024 Consumer-resource Theory and Emergent Macro Patterns. *Unifying Ecology Across Scales Gordon Research Conference, New Hampshire USA (forthcoming)*
 2022 Species interactions at range margins in changing climate, *Ecol. Soc America, Montreal*
 2022 President's Symposium, *American Society of Naturalists & Evolution, Cleveland, USA*
 2021 Landscape Ecology Experiments Across Scales, *Int Assoc Landscape Ecology, Reno*
 2021 Evolution of Species Ranges, *Linnaeus Centre for Marine Evolutionary Biology, University of Gothenburg, Sweden*
 2017 Species Interactions in a Warming World, *Can Soc Ecol Evol, Victoria*
 2016 Ecology & Evolution in Spatially-structured Landscapes, *Can Soc Ecol Evol, Newfoundland*

CONTRIBUTED TALKS (contributed posters not listed)

(* = presenter, † = student in my lab)

- 2023 Paquette†, Hargreaves*. *Species on the Move (international), Florida USA*
 2023 Rahn†*, Hargreaves. *Species on the Move (international), Florida USA*
 2023 Hardouin†, Hargreaves*. *Canadian Society for Ecology & Evolution (national), Winnipeg*
 2023 Eckert*, Cross, Gillies, Hargreaves. *Can Soc Ecol Evol, Winnipeg*
 2023 Griffith†*, Sunday, Hargreaves. *Can Soc Ecol Evol, Winnipeg*
 2023 Meadley-Dunphy†*, Hargreaves. *Can Soc Ecol Evol, Winnipeg*
 2023 Blondeau†*, Hargreaves. *Can Soc Ecol Evol, Winnipeg*
 2022 Rodriguez-Campbell†*, Hargreaves. *Ecological Society of America (international) Montreal*
 2022 Dawson-Glass†*, Hargreaves. *Ecological Society of America (poster)*
 2022 Griffith†*, Hargreaves, Sunday. *Ecological Society of America (poster)*
 2021 Paquette†, Hargreaves*. *Can Soc Ecol Evol, (national)*
 2021 Meadley-Dunphy†*, Hargreaves. *Can Soc Ecol Evol*
 2021 Martin†*, Hargreaves. *Can Soc Ecol Evol*
 2021 Rodriguez-Campbell†*, Hargreaves. *Can Soc Ecol Evol*
 2021 Colautti*, Hargreaves, Alexander, Atwater. *Evolution (international), virtual*
 2021 Hargreaves. *American Society of Naturalists (international), virtual*
 2020 Hargreaves. *Quebec Centre for Biodiversity Studies (QCBS; provincial), virtual*
 2020 Rodriguez-Campbell†*, Hargreaves. *QCBS, virtual*
 2020 Dawson-Glass†*, Hargreaves. *QCBS, virtual*
 2020 Meadley-Dunphy†*, Hargreaves. *QCBS, virtual*
 2020 Martin†*, Hendry, Hargreaves. *QCBS, virtual*
 2020 Hargreaves. *CSF conference, Monte Verità, Switzerland (cancelled due to COVID19)*
 2019 Hargreaves, Germain, Bontrager, Persi†*, Angert. *QCBS, Montreal*
 *Winner Best Student Talk

- 2019 Cameron†*, Hargreaves. *QCBS (provincial), Montreal (poster)*
- 2019 Hargreaves. *Montreal Eco-Evo Symposium*
- 2019 Larsen†* & Hargreaves. *Montreal Eco-Evo Symposium*
- 2019 Dawson-Glass†* & Hargreaves. *Montreal Eco-Evo Symposium*
- 2019 Hargreaves, Germain, Bontrager, Persi†*, Angert. *Can Soc Ecol Evol, Fredericton*
- 2019 Klemet-N'Guessan†*, Jackewi, Eckert, Hargreaves. *Can Soc Ecol Evol, Fredericton*
- 2018 Hargreaves*. *Montreal Eco-evo symposium*
- 2018 Persi† & Hargreaves*. *Montreal Eco-evo symposium*
- 2017 Sora, Eckert, Ensing, Hargreaves. *Evolution, Portland USA*
- 2017 Angert, + 9 coauthors including Hargreaves. *Evolution, Portland USA*
- 2015 Hargreaves, Bailey, Laird*. *Can Soc Ecol Evol, Saskatoon*
- 2014 Hargreaves*, Eckert. *Can Soc Ecol Evol, Montreal*
 *Winner Best Student Talk
 *Winner New Phytologist Award for Outstanding Student Presentation
- 2014 Hargreaves, Falk, Weiner, Eckert*. *Can Soc Ecol Evol, Montreal*
- 2013 Hargreaves, Samis, Eckert*. *International Biogeography Society meeting, USA*
- 2013 Hargreaves, Eckert*. *Can Soc Ecol Evol, Kelowna*
- 2013 Falk*, Hargreaves, Eckert. *Ontario Ecology, Ethology & Evolution Colloquium (OE3C)*
- 2012 Hargreaves, Samis, Eckert*. *OE3C*
- 2012 Weiner*, Hargreaves, Eckert. *OE3C*
- 2011 Hargreaves*, Harder, Johnson. *OE3C*
- 2011 Hargreaves*, Harder, Johnson. *Can Soc Ecol Evol, Banff*
 *Winner New Phytologist Award for Outstanding Student Presentation
- 2011 Hargreaves*, Eckert. (poster). *OE3C*
- 2011 Hargreaves*, Eckert. (poster). *Can Soc Ecol Evol, Banff*
- 2011 Eckert*, Hargreaves, Samis. *Can Soc Ecol Evol, Banff*
- 2006 Hargreaves*, Johnson, Brown. *North American Ornithological Conference (Mexico)*
- 2006 Hargreaves*, Johnson, Brown. *Ecological Society of America, Nashville USA*

WORKSHOPS & WORKING GROUPS

- 2021 'Fight or flight: Predicting range expansion amid climate change'. *Quebec Centre for Biodiversity Studies* working group (invited participant). QC.
- 2019 'Distributed ecological observatories and long-term monitoring of mountain biodiversity'. *Mountain Invasion Research Network* working group (invited participant). Switzerland
- 2019 'Incorporating phenotypic variation of thermal tolerance to improve projections of climate responses'. *Canadian Institute Ecology Evolution*. working group (invited participant). QC
- 2018 'Using species' thermal physiological limits to predict future biodiversity changes'. *Quebec Centre for Biodiversity Studies* working group (invited participant). QC
- 2018 'Species range shifts & local adaptation' *ANDINA workshop* (one of 6 fully-funded early career participants), Mt Tronador, Argentina
- 2016 'Globetherm' sDIV writing retreat (invited to participate in funded writing retreat in Germany; joined working group but declined the retreat), Germany
- 2015 'Does biodiversity explain underfilling of species' thermal range limits?' *UBC Biodiversity Research Centre workshop* (co-organizer). British Columbia
- 2013 'Pollination, climate change, and invasive species' *NSERC-CANPOLIN workshop* (invited participant). Yukon

RESEARCH GRANTS & FUNDING

(TOTAL OF >\$1.5 MILLION, >\$1.1 MILLION AS PI)

- Hargreaves AL**, Y Vargas-Rodriguez, S Vanderplank, S Haeussler, K Mehltreter, E Suarez, J Jankowski, N Emery, I Myers-Smith. 2022. New Frontiers in Research Fund (NFRF) Rapid response call. ‘Distributed experiments to overcome pandemic lockdowns while promoting equity, diversity and global knowledge’. (\$240K)
- Hargreaves AL**, M Vellend, J McCune. 2022. NOVA (NSERC & FRQNT). ‘Using range-edge ecology to inform conservation of Canada’s rare plants’. (\$225K over 3 yr)
- Vézina, F, **AL Hargreaves**, K Elliott, O Love. 2021. FRQNT Team Research Grant. ‘ArcticWATTS: Arctic Wildlife Are Threatened by Thermal Stress’. (\$240K over 3 yr)
- Hargreaves, AL**. 2019. Canadian Foundation for Innovation (CFI) John R Evans Leaders’ Fund. ‘Evolutionary ecology of species distributions’. (\$350K)
- Hargreaves, AL**. 2019. Liber Ero McGill Conservation Biology Allocation. ‘Pollen limitation in the tropics’. (\$12K)
- Hargreaves, AL**. 2018. NSERC Discovery Grant. ‘Evolutionary ecology of species distributions’. (\$177K over 5 yr)
- Hargreaves, AL**. 2018. FRQNT New Researcher Start-up Grant. ‘Non-temperature determinants of species range limits’. (\$40K over 2 yr + \$50K for equipment)
- Vézina, F, K Elliott, **AL Hargreaves**. 2018. FRQNT Team Research Project Grant. ‘ArcticSCOPE: A thermal modelling approach for predicting Arctic vertebrate performance under climate change’. (\$204K over 3 yr + \$17K for equipment)
- Hargreaves, AL**. 2018. Liber Ero McGill Conservation Biology Allocation. ‘Canadian species conservation meet range limit theory: are our species-at-risk ‘just’ edge populations?’ (\$6K)
- Hargreaves, AL**. 2015-2016. Biodiversity Post-doctoral Fellow Research funds. (\$14K)
- Hargreaves, AL**, JM Sunday. 2015. Biodiversity Research Centre workshop grant. ‘Does biodiversity explain underfilling of species’ thermal range limits?’. (\$1.2K)
- Hargreaves, AL**. 2012. Alberta Conservation Association Biodiversity grant. ‘Ecology and evolution of altitudinal range limits in a montane herb’. (\$9K)
- Eckert, CG, **AL Hargreaves**. 2011. NSERC-Canadian Pollination Initiative Strategic Network. ‘Pollinations role in local adaptation and species range limits from prairie to alpine’. (\$15K)
- 2008 Arctic research funding. 2008 Logistical support from Canadian North Airlines (return flight and shipping to Iqaluit, \$3K) and Nunavut Wildlife Trust.

TEACHING

McGill course: approximate yearly enrolment, role

BIOL610 Scientific Manuscript Writing: 12 grad students, *created & taught 2019–now*

BIOL111 Organismal Biology: 500 undergrads, *co-taught 2018–now, coordinated 2022–*

BIOL331 Ecology & Behaviour Field Course: 16 undergrads, *co-taught 2017–now*

BIOL205 Functional Biol Plants & Animals: 100 undergrads, *co-taught 2018–20, coordinated '19*

Recurring guest lectures

BIOL601 Intro to Graduate Studies in Biology: *2x lectures per year, 2021–now*

BIOL205 Functional Biol Plants & Animals: *2 to 3 lectures per year, 2020–now*

BIOL465 Conservation Biology: 50 undergrads, *2x lectures per year, 2018–2019*

Other teaching

Ecology & Evolution of Galapagos Field course; Trent University, *co-created & taught 2012-2013*

Scientific writing workshop (half day); QCBS, Biodiversity Science intensive grad course *2021*

MENTORING

GRADUATE STUDENT SUPERVISION

- 2024– MSc. Simon Petley. TBD; starting January 2024 (*co-advised*)
 2023– PhD. Kristin Olson. Ecology & conservation of rare, range-edge plants (*co-advised*)
 2021– MSc. Jory Griffith. Urbanization and the latitudinal diversity gradient in birds (*co-advis.*)
 2021– PhD. Olivia Rahn. Patterns in habitat abundance & quality toward range edges
 2021– PhD. Cameron So. Conservation genetics of threatened range-edge plants (*co-advised*)
 2018– PhD. Shannon Meadley-Dunphy. Host-to-competitor shifts across hemiparasite ranges
 2022–23 MSc. Maggie Blondeau. Reproductive ecology of rare lupine toward its range edge
 2020–22 MSc. Antonio Rodriguez-Campbell. Testing drivers of geographic patterns in predation.
 2020–22 MSc. Ella Martin. Testing biogeographic theories with syntheses of plant traits (*co-advised*)
 2018–20 MSc. Cole Larsen. Dispersal evolution across temporally variable landscapes.
 2018–20 MSc. Josh Persi. Elevational patterns in seed fates: experimental tests in the Rocky Mts.

UNDERGRADUATE THESIS SUPERVISION

- 2024 N Bartram-Forbes—Community ecology of white trilliums' northern range limit
 2021 M Hardouin—Identifying hotspots of species-at-risk in Canada.
 2021 V Javidi—Creating standardized trait variation for seed evolution experiments.
 2020 K Lazda—Are mistletoe distributions limited by their hosts?
 2019 R Ludwick—Selection on seed defense traits by ants.
 2019 A Paquette—Review: What causes species' high elevation and latitude range limits?
 2019 E Dawson-Glass—Meta-analysis: pollen limitation toward species' range limits.
 2018 V Cameron—Biodiversity hotspots for at-risk vs. secure Canadian mammals.
 2018 P Caissy—Distribution of Canadian at-risk plants vs. protected areas.
 2018 M Salmon-Beitel—Elevational gradients in seed predation by mammals.
 2018 N Sheppard—Latitudinal and elevational gradients in ant seed predators.
 2017 S Klemet-N'Guessan—Dispersal evolution during bacteria range expansion.
 2014 R Wilson—Dispersal toward the upper range limit of prairie smoke (*co-supervised*).
 2014 L Murphy—Dispersal characteristics of *Rhinanthus minor* (*co-supervised*).
 2013 L Falk—Range-wide effects of herbivory on *R. minor* fitness (*co-supervised*).
 2012 J Weiner—Pollination's role in limiting *R. minor*'s altitudinal range (*co-supervised*).

GRADUATE STUDENT SUPERVISORY COMMITTEES

Thesis committee member, McGill:

PhD students x 6

MSc students x 7

Thesis committee member, external:

PhD students x 2 (Université de Montreal, Université Sherbrooke)

MSc students x 2 (Université Sherbrooke, Memorial University)

External examiner:

PhD qualifying exam x 2

PhD defense x 6

MSc defense x 3

OUTREACH

PUBLIC TALKS AND LECTURES

- 2022 Public lecture, *Lake O'Hara Yoho National Park* evening talk series, BC
- 2022 Speaker, *Soup and Science* virtual talk outreach series, Redpath Museum, Montreal QC
- 2020 Speaker, *Sun and Science* virtual talk outreach series, Redpath Museum, Montreal QC
- 2020 Speaker, *Soup and Science* lunchtime outreach series, Redpath Museum, Montreal QC
- 2020 Public lecture, *Lake O'Hara Yoho National Park*, BC (cancelled due to COVID)
- 2020 Guided botany hike, *U Calgary Biogeosciences field station* (cancelled due to COVID)
- 2019 Public lecture, *Lake O'Hara Yoho National Park* evening talk series, BC
- 2019 Public lecture, *Montreal Field Naturalists* evening talk series, Montreal QC
- 2019 Public lecture, *Redpath Museum 'Cutting Edge'* lecture series
- 2019 Public lecture, *McGill's Annual 'Mini-Science'* lecture series
- 2019 Research seminar, *Vanier College CEGEP Science week*, Montreal QC
- 2018 Public lecture, *McGill's Annual Mini-Science* lecture series:
- 2017 Speaker in *Soup and Science* lunchtime outreach series, Redpath Museum, Montreal QC
- 2015 Public lecture, *Beatty Biodiversity Museum 'Way Cool'* lecture series, Vancouver BC
- 2014 Classroom presenter, Alberta Science Network *Scientists-in-the-classroom* program
- 2012 Guided wildflower hikes, *U Calgary Biogeosciences field station* open houses, AB
- 2012 Presentations to grade 1 classes on pollination biology, Calgary & Edmonton AB
- 2009 Public lecture, *Alberta Wilderness Association* monthly seminar series, Calgary AB
- 2008 Lunch hour research talk, Calgary Zoo
- 2007 Talk for *Mountain Bluebird Trails Conservation Society* meeting, Lethbridge AB

OUTREACH IN OTHER FORMATS

- 2022 Public lecture, *Lake O'Hara Yoho National Park* evening talk series, BC
- 2022 Speaker, *Soup and Science* virtual talk outreach series, Redpath Museum, Montreal QC
- 2020 Interview for *Ecography* podcast describing our E4-award shortlisted paper, Europe
<https://soundcloud.com/user-224236556/miniaturizing-landscapes-to-understand-species-distributions>
- 2020 Panellist, *Build a Dream* Career Exploration event, Peterborough ON
- 2020 Guided a stop in Mont St Hilaire virtual Field trip, Montreal QC
- 2019 Popular Science article in *Science Trends* [sciencetrends.com/arctic-to-equator-experiment-shows-seeds-are-more-likely-to-be-eaten-in-the-tropics-and-lowlands/](https://www.sciencetrends.com/arctic-to-equator-experiment-shows-seeds-are-more-likely-to-be-eaten-in-the-tropics-and-lowlands/)
- 2018 Panelist, *Let's Talk Science* Women in Science event for grade 5/6 students, Montreal QC
- 2017 Interviewed for *Diversity in STEM* initiative, now an exhibit at McGill Redpath Museum.
- 2014 Guest blog post ecoevoevoeco.blogspot.ca/2014/11/why-stop-there-probing-species-range.html
- 2009 Popular science articles about conservation research, *Calgary Zoo newsletter* (two)
- 2008 Published article 'Conserving Alberta's amphibians' in *Wild Lands Advocate* 16: 14-15.
www.albertawilderness.ca/AWRC/WLA/2008/200802_WLA.pdf
- 2008 Popular science articles about conservation research, *Calgary Zoo newsletter* (two)

MEDIA

COVERAGE OF MY WORK

- 2023 'Cibler les zones cruciales à protéger pour les espèces en péril'. Dedicated article about Hardouin & Hargreaves (2023). *Le Devoir* (Sept 23)
<https://www.ledevoir.com/environnement/798435/especes-en-peril-cibler-zones-cruciales-protoger?>

- 2023 ‘Rapid upwards spread of nonnative plants in mountains globally’. Coverage of 2023 *Nature Ecology Evolution* paper in 15 news outlets (<https://www.nature.com/articles/s41559-022-01979-6/metrics>), including:
EOS (March 9)
MongaBay (February 10)
- 2020 ‘Vertebrate diversity: A glimmer of hope’. Coverage of 2020 *Nature* paper in >20 news outlets. Examples below, links to articles at <https://nature.altmetric.com/details/94537058/news>
The Atlantic (USA, Feb 1 – retweeted by Barack Obama)
Le Monde (France, Dec 15)
CTV News (Nov 18)
Foreign Affairs New Zealand (Dec 21)
Borneo Bulletin (Borneo; Nov 20)
Global Times (China; Nov 19)
- 2020 *McGill Tribune*: www.mcgilltribune.com/sci-tech/29th-edition-of-soup-and-science-210120/
2019 *New York Times*: www.nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html
2019 *Radio Canada*: March 6. ici.radio-canada.ca/nouvelle/1156866/interaction-especies-sous-tropiques-universite-mcgill-regions-basse-altitude
2019 *Prince George Daily News*: Feb 22. pgdailynews.ca/index.php/2019/02/22/smithers-based-unbc-researcher-involved-in-plant-animal-interaction-study-across-the-americas
2019 *McGill Tribune*: Oct 29 www.mcgilltribune.com/sci-tech/big-questions-reap-big-rewards/
2019 *Phys.org*: <https://phys.org/news/2019-02-mega-species-interact-tropics-lowlands.html>
2019 *Phys.org*: <https://phys.org/news/2018-12-importance-edge-populations-biodiversity.html>
2018 *AAA Eureka!*: www.eurekaalert.org/pub_releases/2018-12/mu-tio121818.php
2018 *Science Daily*: www.sciencedaily.com/releases/2018/12/181218115145.htm
2008 *Calgary FFWD* newspaper

INTERVIEWS

- 2023 *Globe and Mail* <https://www.theglobeandmail.com/canada/article-quebec-approved-nearly-all-development-projects-on-vulnerable-plant/> (species at risk)
- 2023 *McGill Reporter* <https://reporter.mcgill.ca/mcgill-scholars-respond-to-cop15-biodiversity-conference> (UN Convention on Biodiversity COP15 in Montreal)
- 2023 *McGill Reporter* <https://reporter.mcgill.ca/mcgill-scholars-respond-to-cop15-biodiversity-conference>
- 2022 Book about insects declines, Brooke Jarvis
- 2021 *NewScientist* magazine, www.newscientist.com/article/2287983-thieving-honeybees-offer-a-glimpse-of-flowers-evolutionary-origins/ (pollen theft by honey bees)
- 2020 *NPR All things considered*, USA (COVID vs research) www.npr.org/transcripts/834460160
- 2020 *El País* newspaper, Madrid, Spain (latitudinal gradients in predation)
- 2020 *McGill Tribune*: www.mcgilltribune.com/sci-tech/6477641-062720/ (COVID vs conservation)
- 2020 *McGill Tribune*: www.mcgilltribune.com/sci-tech/the-internet-bands-together-to-save-earths-forests-140120/ (tree planting to fight climate change)
- 2008 *CTV Morning show*, Calgary (frog conservation)

PROFESSIONAL SERVICE

EXTERNAL COMMITTEES

- 2021–24 Committee on Status of Endangered Wildlife in Canada (COSEWIC) Vascular Plant Specialist Committee (national body for assessing potentially at-risk plants)
- 2019–21 American Society of Naturalists Student Research Award committee, Chair in 2021

MCGILL UNIVERSITY COMMITTEES

- 2022 Gault Nature Reserve Gault Nature Research Awards Committee
2019–20 McGill Redpath Museum ‘Mini Science’ Lecture Series Organizing Committee
2017–19 McGill Liber Ero Chair Advisory Committee
2017–18 McGill BESS Program Delivery Committee (McGill downtown representative)

DEPARTMENTAL COMMITTEES (MCGILL BIOLOGY)

- 2020– Chair’s Advisory Group
2018–20 Curriculum task force
2018–19 Search committee, joint Biology-MSE Plant Ecologist hire
2017–19 Seminar committee
2017 Curriculum committee

AD HOC SERVICE & ORGANIZATION

- Host 2017–now Host 1 to 2 speakers per semester, McGill Dept Biology seminar series
Panelist 2021 EDI panel for students interested in grad school, McGill
Judge 2023 Canadian Society for Ecology & Evolution Student presentation awards
2022 Canadian Society for Ecology & Evolution Student presentation awards
2019 Canadian Society for Ecology & Evolution Student presentation awards
2018 Canadian Society for Ecology & Evolution PhD Diversity & Excellence Award
2018 Quebec Centre for Biodiversity Symposium, Student presentation awards
2017 Canadian Society for Ecology & Evolution, Student presentation awards
2017 Evolution meeting, Portland USA, student presentation awards
Reviewer 2018–now, McGill Animal Care & Use in Teaching
Prodean 2019 1 PhD thesis, McGill Dept of Sociology
Organizer 2019 International Women’s Day Wikipedia editing for STEM equity, McGill
2017 Ecology & Evolution graduate student discussion group, McGill Biology
2016 Biodiversity Internal Seminar Series, University of British Columbia
2014 Science in *Science* reading and discussion group, Queen’s University
2008 Conservation Research seminar series, Calgary Zoo
Co-organizer
2016 Inter-university Ecology & Evolution Retreat, Squamish, BC
2015 International working group. UBC Biodiversity Research Centre
2015 Inter-university Ecology & Evolution Retreat, Squamish, BC
2015 Biodiversity Discussion Group, UBC
2010 Ecology, Evolution and Behaviour seminar series, Queen’s University

EDITORIAL WORK

Associate Editor. Jan 2020 – Dec 2022, renewed for another 3 year term starting Jan 2025
Proceedings of the Royal Society of London B (5yr IF = 5.4; in top 10% of Biology journals).

PROFESSIONAL MEMBERSHIPS

- Canadian Society for Ecology & Evolution (lifetime member)
American Society of Naturalists (lifetime member)
Quebec Centre for Biodiversity Studies (2017 – now)