

# ANNA HARGREAVES

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Associate Professor & Canada Research Chair in Evolutionary Ecology & Biogeography  
Department of Biology, McGill University, Montreal QC  
phone: (514) 398 7401 email: [anna.hargreaves@mcgill.ca](mailto:anna.hargreaves@mcgill.ca) website: [annahargreaves.wix.com](http://annahargreaves.wix.com)

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## EMPLOYMENT

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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 * <i>includes 6 month maternity leave</i>
2007 – 2009	Research Scientist, Centre for Conservation Research, Calgary Zoo
2004	Field Camp Manager: Can. Wildlife Service (Arctic), Pomona College (Costa Rica)

## EDUCATION

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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)

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2025	Canadian Research Chair II in Evolutionary Ecology & Biogeography
2019	Early Career Award, Canadian Society for Ecology & Evolution
2017	JLH Young Investigator Award, American Society of Naturalists
2015	Biodiversity Post-doctoral fellowship, University of British Columbia
2015	Canada Governor General's Academic Gold Medal
2014	Best talk Award, Canadian Society for Ecology & Evolution
2014	New Phytologist Award, CSEE
2011	New Phytologist Award, CSEE
2005	Alberta Society of Professional Biologists Graduate Award
2005	Dean's Research Excellence Award, U Calgary

## PUBLICATIONS

### PEER-REVIEWED PUBLICATIONS

(GOOGLE SCHOLAR: >4000 CITATIONS, H-INDEX 31, AS OF SEPT 2025)

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

46. Long-term monitoring of Arctic coastal ecology at the East Bay Mainland Research Station, in Qaqsauqtuuq Migratory Bird Sanctuary, Nunavut  
MacNearney, D, J Rausch, S Bellefontaine, N Clyde, L Docken, D Edwards, W English, **AL Hargreaves**, C MacDonald, D Perkins, I Stenhouse, E Davis, E Nol, HG Gilchrist, J Nakoolak, K Abraham, K Allard, S Flemming, H Mariash, P Smith.  
*Arctic Science*. In press. Manuscript ID: as-2025-0013
45. Shifting, expanding, or contracting? Range movement consequences for biodiversity.  
Brodie, J, BG Freeman, PD Mannion, **AL Hargreaves**. 2025.  
*Trends in Ecology & Evolution*. published online March 7.

44. Geographic gradients in species interactions: from latitudinal patterns to ecological mechanisms.  
**Hargreaves, AL.** 2024.  
*Annual Review of Ecology, Evolution, and Systematics*. 55: 369-393.
43. Latitudinal gradients in predation persist in urban environments.  
**Hargreaves AL**, J Ensing, **O Rahn†**, F Oliveira, J Burkiewicz, J Lafond, S Haeussler, B Best, **K Lazda†**, H Slinn, **E Martin†**, M Carlson, T Sformo, **E Dawson-Glass†**, M Chuiffo, Y Vargas-Rodriguez, C García-Jiménez, I Gomes, **S Klemet-N'Guessan†**, L Paolucci, S Joly, K Mehlreter, J Muñoz, C Buono, J Brodie, **A Rodriguez-Campbell†**, T Veen, B Freeman, J Lee-Yaw, J Camilo Muñoz, **A Paquette†**, J Butler, E Suaréz. 2024.  
*Nature Ecology & Evolution*. 8: 1897-1906.
42. Predation on live and artificial insect prey shows different global latitudinal patterns.  
Zvereva, EL, B Adroit, T Andersson, CRA Barnett, S Branco, B Castegneyrol, GM Chiarenza, W Dáttilo, E del-Val, J Filip, **J Griffith†**, **AL Hargreaves**, JA Hernández-Agüero, ILH Silva, Y Hong, G Kietzka, P Klimeš, M Koistinen, O Kruglova, S Kumpula, P Lopezosa, M March-Salas, A Nakamura, C Olson, E Pagani-Núñez, A Popova, **O Rahn†**, A Reshchikov, **A Rodriguez-Campbell†** S Rytönen, K Sam, A Sounapoglou, R Tropek, C Wenda, G Xu, Y Zeng, M Zolotarev, N Zubrii, V Zverev, MV Kozlov. 2024.  
*Global Ecology & Biogeography*. e13899
41. An arctic breeding songbird overheats during intense activity even at low air temperatures.  
O'Connor, RS, OP Love, L Regimbald, A Gerson, KH Elliott, **AL Hargreaves**, F Vézina. 2024.  
*Scientific Reports*. 14(1): 15193.
40. Clay larvae do not accurately measure biogeographic patterns in predation.  
**Rodriguez-Campbell A†**, **O Rahn†**, M Chuiffo, **AL Hargreaves**. 2024.  
*J Biogeography*. 51: 1004-1013.
39. Temperate species underfill their tropical thermal potentials on land.  
Moore, NA, I Morales-Castilla, **AL Hargreaves**, MA Olalla Tárrega, F Villalobos, P Calosi, S Clusella-Trullas, J Rubalcaba, A Algar, B Martínez, L Rodríguez, S Gravel, J Bennett, G Vega, C Rahbek, MB Araújo, JR Bernhardt, JM Sunday. *middle authors in order of contribution*. 2023.  
*Nature Ecology Evolution*. 7: 1993-2003.
38. The evolution of plasticity across species ranges.  
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.  
*Trends in Ecology & Evolution*. 38(9) 831-842.
37. Mapping nationally and globally at-risk species to identify hotspots for (and gaps in) conservation.  
**Hardouin, M†**, **AL Hargreaves**. 2023.  
*Proceedings of the Royal Society B*. 290(1995): 1-11.  
*\*Prompted request to advise Auditor General of Canada on conservation of species at risk*

36. Gradients in the time seeds take to germinate could alter global patterns in predation strength.  
[Martin, E†](#), **AL Hargreaves**. 2023.  
*Journal of Biogeography*. 50: 884-896.
35. Rapid upwards spread of nonnative plants in mountains globally.  
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.  
*Nature Ecology Evolution*. 7: 405-413.  
*\*Altmetric 'Attention Score' >150: in 98% percentile of publications of similar age*
34. Effects of species interactions on the potential for evolution at species' range limits  
Alexander, J, D Atwater, R Colautti, **AL Hargreaves**. 2022.  
*Philosophical Transactions of the Royal Society B*. 377(1848): 20210020
33. Does pollen limitation limit plant ranges? Evidence and implications  
[Dawson-Glass, E†](#), **AL Hargreaves**. 2022.  
*Philosophical Transactions of the Royal Society B*. 377(1846): 20210014
32. Warming in the land of the midnight sun: breeding birds may suffer greater heat stress at high- versus low-Arctic sites.  
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.  
*Proceedings of the Royal Society B*. 289(1981): 20220300
31. Think globally, measure locally: the MIREN standardized protocol for monitoring species distributions along elevational gradients.  
Haider, S, J Lembrechts, K McDougall, A Pauchard, 51 authors listed alphabetically including **AL Hargreaves**, T Seipel. 2022.  
*Ecology & Evolution*. 12(2): e8590.
30. Biotic interactions are more important at species warm vs. cool range-edges.  
[Paquette, A†](#), **AL Hargreaves**. 2021.  
*Ecology Letters*. 24(11): 2427-2438  
*\*Altmetric 'Attention Score' >200: in 98% percentile of publications of similar age*
29. Adaptation across geographic ranges is consistent with strong selection in marginal climates and legacies of range expansion  
Bontrager, M, T Usui, J Lee-Yaw, D Anstett, H Branch, **AL Hargreaves**, C Muir, AL Angert. 2021.  
*Evolution*. 75(6): 1316-1333.
28. Limited heat tolerance in a cold-adapted seabird: implications of a warming Arctic  
Choy, ES, RS O'Connor, HG Gilchrist, **AL Hargreaves**, OP Love, F Vézina, KH Elliott. 2021.  
*Journal of Experimental Biology*. 224(13): jeb242168
27. Limited heat tolerance in an Arctic passerine: thermoregulatory implications for cold specialized birds in a rapidly warming world.  
O'Connor, R, A LePogam, K Young, F Robitaille, E Choy, O Love, K Elliott, **AL Hargreaves**, D Bertreux, A Tam, F Vézina. 2021.  
*Ecology & Evolution*. 11(4): 1609-1619.

26. Leung, B, **AL Hargreaves**, D Greenberg, B McGill, M Dornelas. 2022.  
Peer-reviewed replies to matters arising regarding our paper (*author order by contribution*)  
*Nature* issue 601(7894), Jan 26 2022 (all four published in same issue)  
26a. Reply to Loreau et al. Do not downplay biodiversity loss  
26b. Reply to Mehrabi et al. Shifting baselines & biodiversity success stories  
26c. Reply to Murali et al. Emphasizing declining populations in the Living Planet Report  
26d. Reply to Puurtinen et al. Living Planet Index does not measure abundance
25. Clustered vs. catastrophic global vertebrate declines. (*author order by contribution*)  
Leung, B, **AL Hargreaves**, D Greenberg, B McGill, M Dornelas, R Freeman. 2020.  
*Nature*. 588: 267-271.
24. High conservation priority of range-edge plant populations not matched by habitat protection or research effort.  
[Caissy, P†\\*](#), [S Klemet-N'Guessan†\\*](#), R Jackewi, CG Eckert, **AL Hargreaves**. *\*co first-authors* 2020.  
*Biological Conservation*. 249: 108732.
23. Spatial distribution and conservation hotspots of mammals in Canada  
[Cameron, V†](#), **AL Hargreaves**. 2020.  
*FACETS*. 5(1): 692-703.
22. Miniaturizing landscapes to understand species distributions  
[Larsen, C†](#) & **AL Hargreaves**. 2020.  
*Ecography*. 43(11): 1625-1638.  
*\*Excellence in Ecology & Evolution Award special issue*
21. Local adaptation to biotic interactions: a meta-analysis across latitudes  
**Hargreaves, AL**, R Germain, M Bontrager, [J Persi†](#), AL Angert. 2020.  
*American Naturalist*. 195(3): 395-411.
20. Seed predation increases from the Arctic to the Equator and from high to low elevations  
**Hargreaves, AL**, E Suarez, K Mehlreter, I Myers-Smith, S Vanderplank, H Slinn, *et al* (17 authors in total, listed in descending order of contribution). 2019.  
*Science Advances*. 5(2): eaau4403.
19. Local adaptation primes cold-edge populations for range expansion but not warming-induced range shifts  
**Hargreaves, AL**, CG Eckert. 2019.  
*Ecology Letters*. 22(1): 78-88
18. Thermal tolerance patterns across latitude and elevation  
Sunday, J, J Bennett, P Calosi, S Clusella-Trullas, S Gravel, **AL Hargreaves**, F Leiva, W Verberk, MA Olalla-Tarraga, I Morales-Castilla. 2019.  
*Philosophical Transactions of the Royal Society B*. 374(1778): 20190036  
*\*cited > 300x*
17. Narrow entrance of short-tubed *Aloe* flower facilitates pollen transfer on long sunbird bills  
**Hargreaves, AL**, GT Langston, SD Johnson. 2019.  
*South African Journal of Botany*. 124: 23-28

16. Expanding, shifting, and shrinking: the impact of global warming on species' elevational distributions  
Freeman, B, J Lee-Yaw, J Sunday, **AL Hargreaves**. 2018.  
*Global Ecology & Biogeography*. 27(11): 1268-1276  
IF = 7.6, top 5% of 195 ecology journals  
\*cited > 300x  
\*Top 10% most downloaded papers from journal
  15. Local maladaptation reduces expansion load during range expansion  
Gilbert K, N Sharp, A Angert\*, G Conte\*, J Draghi\*, F Guillaume\*, **AL Hargreaves\***, R Matthey-Doret\*, MC Whitlock. 2017.  
*American Naturalist*. 189(4): 368-380 \*order alphabetical
  14. Adaptation to fragmentation: evolutionary dynamics driven by human influences  
Cheptou, PO, **AL Hargreaves**, D Bonte, H Jacquemyn. 2017.  
*Philosophical Transactions of the Royal Society*. 372(1712): 20160037
- Maternity leave in 2016. Started at McGill Jan 2017.*
13. Local adaptation and poor-quality edge habitat affect dispersal evolution during range shifts induced by climate change  
**Hargreaves, AL**, SF Bailey, RA Laird. 2015.  
*Journal of Evolutionary Biology*. 28(8): 1489-1501
  12. High-elevation range limit of an annual herb is neither caused nor reinforced by declining pollinator service.  
**Hargreaves, AL**, JL Weiner, CG Eckert. 2015.  
*Journal of Ecology*. 103(3): 572-584
  11. Are species' range limits simply niche limits writ large? A review of transplant experiments beyond the range  
**Hargreaves, AL**, KE Samis, CG Eckert. 2014.  
*American Naturalist*. 183(2): 157-173  
\*cited > 400x  
\*Web of Science 'Highly cited paper' (top 1% in Ecology/Environment)
  10. Evolution of dispersal and mating systems along geographic gradients: implications for shifting ranges  
**Hargreaves, AL**, CG Eckert. 2014.  
*Functional Ecology*. 28(1): 5-21  
\*Cover article; Nominated for the Haldane young investigator prize
  9. Floral traits mediate the vulnerability of aloes to pollen theft and inefficient pollination by bees  
**Hargreaves, AL**, LD Harder, SD Johnson. 2012.  
*Annals of Botany*. 109(4): 761-772
  8. Concentrations of 17 elements, including mercury, in the tissues, food and abiotic environment of Arctic shorebirds  
**Hargreaves, AL**, DP Whiteside, HG Gilchrist. 2011.  
*Science of the Total Environment*. 409(19): 3757-3770

7. Native pollen thieves reduce the reproductive success of a hermaphroditic plant *Aloe maculata*  
**Hargreaves, AL**, LD Harder, SD Johnson. 2010.  
*Ecology*. 91(6): 1693-1703  
*\*cited > 250x*
6. Concentrations of 17 elements, including mercury, and their relationship to fitness measures in arctic shorebirds and their eggs  
**Hargreaves, AL**, DP Whitesie, HG Gilchrist. 2010.  
*Science of the Total Environment*. 408(16): 3153-3161
5. Consumptive emasculation: the ecological and evolutionary consequences of pollen theft  
**Hargreaves, AL**, LD Harder, SD Johnson. 2009.  
*Biological Reviews*. 84(2): 259-276  
*\*cited > 250x*
4. *Aloe inconspicua*: the first record of an exclusively insect-pollinated aloe  
**Hargreaves, AL**, LD Harder, SD Johnson. 2008.  
*South African Journal of Botany*. 74(4): 606-612
3. Empty flowers as a pollination-enhancement strategy  
Bailey, SF, **AL Hargreaves**, S Hechtenthal, RA Laird, *et al.* (8 authors). 2007.  
*Evolutionary Ecology Research*. 9(8): 1245-1262
2. Dark, bitter-tasting nectar functions as a filter of flower visitors in a bird-pollinated plant  
Johnson, SD, **AL Hargreaves**, M Brown. 2006.  
*Ecology*. 87(11): 2709-2716 *\*Cover article*
1. Do floral syndromes predict specialization in plant pollination systems? An experimental test in an "ornithophilous" African *Protea*  
**Hargreaves, AL**, SD Johnson, E Nol. 2004.  
*Oecologia*. 140(2): 295-301

## MANUSCRIPTS SUBMITTED OR IN REVIEW

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

**Griffith, J**, J Sunday, **AL Hargreaves**.

Urbanization weakens the latitudinal diversity gradient in birds.

(preprint: <https://www.biorxiv.org/content/10.1101/2020.11.01.364349v1.abstract>)

Submitted.

Bontrager, M, CD Muir, C Mahony, DE Gamble, RM Germain, **AL Hargreaves**, EL

Kleinhaeus, KA Thompson, AL Angert.

Climate warming weakens local adaptation.

(preprint: <https://www.biorxiv.org/content/10.1101/2020.11.01.364349v1.abstract>)

In Revision. Manuscript ID 2024-02825

## OTHER PUBLICATIONS (SELECTED)

**Hargreaves AL**, JM Alexander. 2024. A hard fruit to swallow: Foraging niches become more specialized toward bird range limits.

*Science* (invited Perspectives article). 385(6706): 260-261.



**Hargreaves AL, M Lechowicz.** 2023. Biodiversity of North America. *Encyclopedia of Biodiversity*, 3<sup>rd</sup> Edition. Elsevier. Published online Nov 2022, print publishing Sept 2023  
<https://doi.org/10.1016/B978-0-12-384719-5.00100-3>

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](https://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*. Editors L Parrott, A Robinson, D Hik. vol 3: 25–27. <https://www.stateofthemountains.ca/>

**Hargreaves, AL.** 2019. Lasting signature of forest fragmentation. *Science* (invited Perspectives article). 366: 1196-97  
*\*Interview with New York Times* ([nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html](https://nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html))

**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

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### INVITED PLENARIES & KEYNOTES

- 2024 Macroecology of Foodwebs plenary, 'Unifying Ecology Across Scales' Gordon Research Conference, New Hampshire, USA
- 2019 Early Career Award, *Canadian Society for Ecology & Evolution meeting*, Fredericton NB
- 2017 Keynote 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

- 2025 Special Topic Network on Dispersal and Mating Systems seminar series, *European Society for Evolutionary Biology*
- 2025 Department of Biology, *Mount Allison University*, New Brunswick
- 2024 Department of Biology, *University of Ottawa*, ON
- 2024 Southern Swedish Forest Research Centre, *Swedish University of Agricultural Sciences*
- 2024 Consultation re habitat protection for species-at-risk, *Office of the Auditor General of Canada*, Ottawa, ON
- 2023 Department of Biology, *Carleton University*, ON
- 2022 Department of Biological Sciences, *University of Lethbridge*, AB

- 2022 Long-Term Ecological Research division, *HJ Andrews Experimental Forest, USA*
- 2021 Department of Integrative Biology, *University of Guelph, ON*
- 2021 Department of Botany, *University of Wyoming USA*
- 2021 Department of Ecology and Evolutionary Biology, *Cornell, Ithaca USA*
- 2021 Department of Biology, *Trent University*
- 2020 Department of Biology, *University of New Brunswick*
- 2020 Biogeography group (T Price & D Jablonsky labs), *University of Chicago USA*
- 2020 Research Seminar, *University of Lethbridge*
- 2019 Institute of Integrative Biology, *ETH Zurich, Switzerland*
- 2019 Department of Environmental Sciences, *University of Basel, Switzerland*
- 2019 Department of Ecology and Evolution, *Université de Lausanne, Switzerland*
- 2019 Department of Biology, *University of Vermont, Burlington USA*
- 2018 Department of Evolutionary Biology, *University of Virginia, Charlottesville USA*
- 2018 Department of Biological Sciences, *Botanical Garden/Université de Montreal*
- 2018 Global Change seminar series, *University of Toronto*
- 2018 Natural Resource Sciences, *McGill University (NRS, MacDonald campus)*
- 2018 Biology Department (elected by graduate student association), *University of Concordia*
- 2018 Environmental Sciences, *Dawson College CEGEP, Montreal QC*
- 2017 Department of Biology, *University of Ottawa*
- 2017 Departmental seminar, *University of Colorado, Boulder USA*
- 2017 Department of Biology, *Université de Sherbrooke*
- 2016 Ecology seminar, *Simon Fraser University*
- 2015 Departmental seminar, *University of Calgary*
- 2015 Department of Biology, *McGill University*
- 2015 Biodiversity Research Centre, *University of British Columbia*
- 2014 Department of Biology, *Queen's University*
- 2013 Departmental seminar, *University of Alberta*
- 2013 Department of Biology, *Trent University*
- 2010 Ecology, Evolution & Behaviour seminar, *Queen's University*

### INVITED SYMPOSIUM PRESENTATIONS

- 2025 Evolution of Species Range Margins Symposium, *European Society for Evolutionary Biology, Barcelona, Spain*
- 2025 Plant ecology at the edges: ecotones and range limits. *Canadian Botanical Association, Newfoundland* (presented by PhD student O Rahn)
- 2022 Species interactions at range margins in a changing climate Symposium, *Ecological Society of America, Montreal*
- 2022 President's Symposium: Species distributions and coexistence', *American Society of Naturalists & Evolution, Cleveland, USA*
- 2021 Landscape Ecology Experiments Across Scales Symposium, *Int Assoc Landscape Ecology, Reno*
- 2021 Evolution of Species Ranges Symposium, *Linnaeus Centre for Marine Evolutionary Biology, University of Gothenburg, Sweden*
- 2017 Species Interactions in a Warming World Symposium, *Can Soc Ecol Evol, Victoria*
- 2016 Ecology & Evolution in Spatially-structured Landscapes Symposium, *Can Soc Ecol Evol, Newfoundland*



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**RESEARCH GRANTS & FUNDING**

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(TOTAL OF >\$1.7 MILLION, >\$1.3 MILLION AS PI)

Vézina, F, **AL Hargreaves**, K Elliott, O Love. 2025. FRQNT Team Research Grant.

‘ArcticWATTS: Arctic Wildlife Are Threatened by Thermal Stress’. (\$240K over 3 yr)

**Hargreaves, AL**. 2024. NSERC Discovery Grant. ‘Biogeography of species and their interactions’. (\$47K/yr over 5 yr = \$235K)

**Hargreaves AL**, Y Vargas-Rodriguez, S Vanderplank, S Haeussler, K Mehlreter, 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’. (\$275K 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’. (\$33K/yr + \$12 early career supplement over 5 yr = \$177K)

**Hargreaves, AL**. 2018. FRQNT New Researcher Start-up Grant. ‘Non-temperature determinants of species range limits’. (\$51K 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**. 2017-2019. McGill Biology Start-up Research funds. (\$120K)

**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)

## SCHOLARSHIPS (post undergrad only)

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- 2013 Queen Elizabeth II Scholarship in Science and Technology (\$15K)  
 2012 IODE War Memorial doctoral scholarship (\$15K)  
 2011 Queen's RS McLaughlin Fellowship (\$10K)  
 2011 Queen's Graduate Dean's Travel Grant for PhD research (\$3K)  
 2010 Queen's Tri-Council Recipient Recognition Award (\$5K)  
 2010 NSERC Alexander Graham Bell Canadian Graduate Scholarship PhD (\$70K)  
 2007 Research Fellowship, Calgary Zoo Centre for Conservation Research (\$25K)  
 2007 Alberta Society of Professional Biologists Graduate Student Scholarship (\$2K)  
 2005 NSERC Alexander Graham Bell Canadian Graduate Scholarship MSc (\$35.8K)  
 2004 Commonwealth Scholarship, U Canterbury New Zealand (\$28K) declined

## WORKSHOPS & WORKING GROUPS

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- 2021 'Fight or flight: Predicting range expansion amid climate change'. *Quebec Centre for Biodiversity Studies* working group (invited participant). Quebec.  
 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). Quebec  
 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

## TEACHING

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<i>Course name</i>	<i>University</i>	<i>Level</i>	<i>Students</i>	<i>Years taught</i>
Organismal Biology*	McGill	100	500	2018 – now
Ecology & Behaviour Field course	McGill	300	15	2017 – now
Neotropical Environments Field course	McGill	500	25	2024 – now
Scientific Manuscript Writing*	McGill	600	15	2019 – now
Functional Biology Plants & Animals	McGill	200	100	2018 – 2020
Ecology Evolution Galapagos Field course*	Trent	400	14	2012 – 2013

\* course co-ordinator. All courses are co-taught except Scientific Manuscript Writing

## MENTORING

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### GRADUATE STUDENT SUPERVISION

- 2025– MSc. Julie Corbeil Walsh. Local adaptation to urban environments (*co-advised*)  
 2025– MSc. James Connolly. Seed dispersal beyond species' ranges  
 2024– MSc. Simon Petley. Role of soil in limiting the distribution of a rare plant (*co-advised*)  
 2023– PhD. Kristin Olson. Ecology & conservation of rare, range-edge plants (*co-advised*)  
 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*)  
 2021–24 MSc. Jory Griffith. Urbanization and the latitudinal diversity gradient in birds (*co-advis.*)  
 2018–24 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  
 2020–23 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 RESEARCH PROJECT SUPERVISION

Date ranges distinguish between 2-semester (honours thesis) vs one-semester projects

- 2025–26 Nora Hand-Lennon. How should we measure latitudinal gradients in specialization?  
 2024–25 Sophie Krouse. Does predation become more specialized toward the tropics?  
 2024–25 Leia Swayze. Erasing female leads: gender power dynamics in kids movies  
 2023–24 Nora Bartram-Forbes. Community ecology of white trilliums' northern range limit  
 2020–21 Marie Hardouin. Identifying hotspots of species-at-risk in Canada  
 2020–21 Vida Javidi. Creating standardized trait variation for seed evolution experiments  
 2020 Kira Lazda. Are mistletoe distributions limited by their hosts?  
 2019–20 Clara Kitt. Selection on seed defense traits by ants  
 2019–20 Alex Paquette. Synthesis: What causes species' high elevation and latitude range limits?  
 2019–20 Emma Dawson-Glass. Meta-analysis: pollen limitation toward species' range limits  
 2018–19 Victor Cameron. Biodiversity hotspots for at-risk vs. secure Canadian mammals  
 2018–19 Pascale Caissy. Distribution of Canadian at-risk plants vs. protected areas  
 2018 Mikayla Salmon-Beitel. Elevational gradients in seed predation by mammals  
 2018 Noemie Sheppard. Latitudinal and elevational gradients in ant seed predators  
 2017 Sandra Klemet-N'Guessan. Dispersal evolution during bacteria range expansion  
 2013–14 Rachel Wilson. Dispersal toward the upper range limit of prairie smoke (*co-supervised*)  
 2013–14 Liam Murphy. Dispersal characteristics of *Rhinanthus minor* (*co-supervised*)  
 2012–13 Lindsey Falk. Range-wide effects of herbivory on *R. minor* fitness (*co-supervised*)  
 2011–12 Jenn Weiner. Pollination's role in limiting *R. minor*'s altitudinal range (*co-supervised*)

### POST-DOCTORAL FELLOWS SUPERVISION

- 2023–now Raja Kanagaraj. Using thermal physiology to project range shifts of arctic birds

### OTHER TRAINEE POSITIONS SUPERVISED

Undergrad Research Assistants	31	(1 to 5 summer positions / year)
Lab manager / technician	5	(4 x part time, 1 x full time for summer)
Graduate Research Assistant	4	(part time)

## OUTREACH

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### PUBLIC TALKS AND LECTURES

- 2025 Public lecture, *Lake O'Hara Yoho National Park* evening talk series, BC
- 2024 Talks to grade 4 students (2 classes), Queen Elizabeth school, Kazabazua QC
- 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
- 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

- 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
- 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](http://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](http://www.albertawilderness.ca/AWRC/WLA/2008/200802_WLA.pdf)
- 2008 Popular science articles about conservation research, *Calgary Zoo newsletter* (two)

## MEDIA

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### COVERAGE OF MY WORK (EXAMPLES)

- 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>)

- 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)
- 2020 *McGill Tribune*: [www.mcgilltribune.com/sci-tech/29th-edition-of-soup-and-science-210120/](http://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](http://www.nytimes.com/2019/12/05/science/forests-fragmentation-wildlife.html)
- 2019 *Radio Canada*: March 6. [ici.radio-canada.ca/nouvelle/1156866/interaction-especes-sous-tropiques-universite-mcgill-regions-basse-altitude](http://ici.radio-canada.ca/nouvelle/1156866/interaction-especes-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](http://pgdailynews.ca/index.php/2019/02/22/smithers-based-unbc-researcher-involved-in-plant-animal-interaction-study-across-the-americas)

### INTERVIEWS (EXAMPLES)

- 2023 *Globe and Mail* [https://www.theglobeandmail.com/canada/article-quebec-approved-nearly-all-development-projects-on-vulnerable-plant/ \(species at risk\)](https://www.theglobeandmail.com/canada/article-quebec-approved-nearly-all-development-projects-on-vulnerable-plant/(species%20at%20risk))
- 2023 *McGill Reporter* <https://reporter.mcgill.ca/mcgill-scholars-respond-to-cop15-biodiversity-conference> (UN Convention on Biodiversity COP15 in Montreal)
- 2022 Book about insects declines, Brooke Jarvis
- 2021 *NewScientist* magazine, [www.newscientist.com/article/2287983-thieving-honeybees-offer-a-glimpse-of-flowers-evolutionary-origins/](http://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](http://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/](http://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/](http://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

- 2021–28 Committee on Status of Endangered Wildlife in Canada (COSEWIC) Vascular Plant Specialist Committee (national body for assessing potentially at-risk plants). Currently serving second 4 yr term (2021–2024, 2025–2028)
- 2019–21 American Society of Naturalists Student Research Award committee, Chair in 2021

#### AD HOC SERVICE & ORGANIZATION (EXAMPLES)

- Host since 2017 Host 16 speakers (1-2/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

**EDITORIAL WORK**

Associate Editor. Jan 2020 – Dec 2022, renewed for another 3 year term starting 2024  
*Proceedings of the Royal Society of London B* (5yr IF = 5.4; in top 10% of Biology journals).

Editorial Board Member. Oct 2020 – Dec 2023  
*Climate Change Ecology* (new journal launched in 2020).

**EXTERNAL REVIEWER**

>50 reviews including for:

Grants, Proposals, Award Nominations: NSERC, CIEE, NSF, Israel Science Foundation

Articles: American Naturalist, Annals of Botany, Antarctic Science, Australian J Botany, Biology Letters, Diversity & Distributions, Ecography, Ecology, Ecology Letters, Functional Ecology, Global Ecology & Biogeography, J Ecology, J Pollination Ecology, New Phytologist, Oecologia, PLoS Biology, TREE, Science

**PROFESSIONAL MEMBERSHIPS**

Canadian Society for Ecology & Evolution (lifetime member since 2015)  
American Society of Naturalists (lifetime member since 2018)  
Botanical Society of America (lifetime member since 2023)  
British Ecological Society (annual member 2024 – now)  
Quebec Centre for Biodiversity Studies (2017 – now)