**Jennie R. McLaren**

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**Professional Experience**

Assistant Professor, 2014- , Department of Biological Sciences, University of Texas at El Paso

Post-doctoral Scientist, 2012-2013, University of British Columbia (Supervisor: Dr. Roy Turkington)

Post-doctoral Scientist, 2010-2012, University of Texas at Arlington (Supervisor: Dr. Laura Gough)

**Education**

Ph. D. Botany, 2010, University of British Columbia (Supervisor: Dr. Roy Turkington)

Thesis: *The influence of plant functional groups on ecosystem function in a grassland in northern Canada*

M.Sc. Botany, 2003, University of Toronto (Supervisor: Dr. Robert Jefferies)

Thesis: *Vegetation mosaics, patch dynamics and alternate stable states in an Arctic intertidal marsh*

B.Sc. Biology (High Honours) 2000, University of Regina (Supervisor: Dr. Scott Wilson)

Thesis: *Plant-driven temporal variability of soil moisture*

**Publications**

**\*** Denotes Undergraduate Student ‡Denotes Graduate Student

24. B Kumordzi, I Aubin, F Cardou, B Shipley, C Violle, J Johnstone, M Anand, A Arseneault, W Bell, Y Bergeron, I Boulangeat, M Brosseau, L de Grandpré, S Delagrange, NJ Fenton, D Gravel, ES MacDonalt, B Hamel, M Higelin, F Hébert, N Isabel, A Malik, A McIntosh, JR McLaren, C Messier, D Morris, N Thiffault, JP Tremblay and AD Munson. Geographic scale and disturbance influence intraspecific trait variability in leaves and roots of North American understory plants. *Functional Ecology* In Press (Accepted May 2019).

23. JR McLaren and KM Buckeridge (2019) The importance of phosphorus versus nitrogen in Alaskan tundra: above- and belowground response to multi-decadal nutrient amendments in two ecosystems. *Ecosphere* In Press (Accepted April 2019)

22. M Melendez Gonzalez\*, AL Crofts\* and JR McLaren. (2019) Plant biomass, rather than species composition, determines ecosystem properties: Results from a long-term graminoid removal experiment in a northern Canadian grassland. *Journal of Ecology* In Press DOI:10.1111/1365-2745.13169 (Accepted March 2019)

21. G Craine‡, JR McLaren, B Brunner and A Darrouzet-Nardi (2018) Biologically available phosphorus in biocrust-dominated soils of the Chihuahuan desert. *Soil Systems* 2:56 DOI:10.3390/soilsystems2040056

20. AL Crofts\*, DO Drury\* and JR McLaren. (2018) Changes in the understory plant community and ecosystem properties along a shrub density gradient. *Arctic Science* doi:10.1139/AS-2017-0026

19. JR McLaren, A Darrouzet-Nardi, MN Weintraub and L Gough. (2018) Seasonal patterns of nitrogen availability in moist acidic tundra. *Arctic Science* 4:98-109DOI: 10.1139/AS-2017-0014

18. A Asmus‡, A Koltz‡, JR McLaren, G Shaver and L Gough (2018) Long-term nutrient addition alters arthropod community structure and seasonality in arctic tundra. *Oikos* 127:460-471doi:10.1111/oik.04398

17. KR Wilcox, AT Tredennick, SE Koerner, E Grman, LM Hallett, ML Avolio, KJ La Pierre, GR Houseman, F Isbell, DS Johnson, JM Alatalo, AH Baldwin, E Bork, EH Boughton, WD Bowman, A Britton, JF Cahill Jr., SL Collins, G Du, A Eskelinen, L Gough, A Jentsch, C Kern, K Klanderud, AK Knapp, J Kreyling, Y Luo, JR McLaren, P Megonigal, V Onipchenko, J Prevey, J Price, CH Robinson, O Sala, M Smith, NA Soudzilovskaia, L Souza, D Tilman, SR White, Z Xu, L Yahdjian, Q Yu, Y Zhang (2017) Asynchrony among local communities stabilizes ecosystem function of metacommunities. *Ecology Letters* 20: 1534–1545 doi:10.1111/ele.12861.

16. ARE Sinclair, R Pech, JM Fryxell, K McCann, A Byrom, CJ Savory, J Brashares, AD Arthur, PC Catling, MD Triska, MD Criag, TJE Sinclair, JR McLaren, R Turkington, WL Harrower (2017) Predicting and assessing progress in the restoration of ecosystems. *Conservation Letters* doi:10.1111/conl.12390

15. JR McLaren, KM Buckeridge, MJ van de Weg, GR Shaver, JP Schimel and L Gough (2017) Shrub encroachment in Arctic tundra: *Betula nana* effects on above- and below-ground litter decomposition. *Ecology* 98:1361-1376

14. JR McLaren, A Novoplansky, R Turkington. (2016) Few effects of plant functional group identity on ecosystem properties in an annual desert community. *Plant Ecology* DOI 10.1007/s11258-016-0660-3

13. Gough L, H Bass\* and JR McLaren (2015)Effects of increased soil nutrients on seed rain: a role for seed dispersal in the greening of the Arctic? *Arctic, Antarctic and Alpine Research* 47:27-34.

12. McLaren JR (2014) Diversity in the afterlife. (News & Views) *Nature* 509: 173-174 doi:10.1038/nature13329

11. Turkington R, JR McLaren and M Dale (2014) Determinants of herbaceous community structure and function in the Kluane region. *Arctic* <http://dx.doi.org/10.14430/arctic4351>

10. Boelman NT, L Gough, JR McLaren and H Greaves (2011) Does NDVI reflect variation in the structural attributes associated with increasing shrub dominance in arctic tundra? *Environmental Research Letters* 6:035501

9. McLaren JR and R Turkington (2011) Plant identity influences decomposition through more than one mechanism. *PLOS One* 6(8): e23702. doi:10.1371/journal.pone.0023702

8. Fremlin KM\*, JR McLaren, L DeSandoli and R Turkington (2011) The effects of fertilization and herbivory on the phenology of the understory vegetation of the boreal forest in north-western Canada. *Arctic, Antarctic and Alpine Research* 43: 389-396.

7. McLaren JR and R Turkington (2011) Biomass compensation and plant responses to 7-years of plant functional group removals. *Journal of Vegetation Science* 22: 503-515.

6. Marshall CB‡, JR McLaren and R Turkington (2011) Soil microbial communities resistant to changes in plant community composition. *Soil Biology and Biochemistry* 43:78-85

5.McLaren JR and R Turkington (2010) Plant functional group identity differentially affects leaf and root decomposition. *Global Change Biology* 16(11):3075-3084

4. McLaren JR and R Turkington (2010) Ecosystem properties determined by plant functional group identity. *Journal of Ecology* 98(2): 459-469

3. McLaren JR (2004) Effects of plant functional groups on vegetation dynamics and ecosystem properties. *Arctic* 59:449-452 (Invited)

2. McLaren JR and RL Jefferies (2004) Initiation and maintenance of vegetation mosaics in an Arctic salt marsh. *Journal of Ecology* 92(4): 648-660.

1. McLaren JR, SD Wilson and DA Peltzer (2004) Plant feedbacks increase the temporal heterogeneity of soil moisture. *Oikos* 107(1): 199-205.

### Peer-Reviewed Book Chapters

4. McLaren JR and R Turkington (2013) Boreal forest ecosystems. *In* S. Levin, ed. Encyclopedia of Biodiversity 2nd Edition. Elsevier Press, Oxford.

3. Duffy JE, DS Srivastava, JR McLaren, M Sankaran, M Solan, J Griffin, M Emmerson, KE Jones (2009) Forecasting decline in ecosystem services under realistic scenarios of extinction. *In* Naeem S, DE Bunker, A Hector, M Loreau and C Perrings, editors. Biodiversity, Ecosystem Functioning, and Human Wellbeing: An Ecological and Economic Perspective. Oxford University Press, Oxford.

2. Hector A, T Bell, J Connolly, J Finn, J Fox, L Kirwan, M Loreau, JR McLaren, B Schmid, A Weigelt (2009) The analysis of biodiversity experiments: From pattern toward mechanism. *In* Naeem S, DE Bunker, A Hector, M Loreau and C Perrings, editors. Biodiversity, Ecosystem Functioning, and Human Wellbeing: An Ecological and Economic Perspective. Oxford University Press, Oxford.

1. Bell T, MO Gessner, RI Griffiths, JR McLaren, PJ Morin, M van der Heijden, W van der Putten (2009) Microbial biodiversity and ecosystem functioning under controlled conditions and in the wild. *In* Naeem S, DE Bunker, A Hector, M Loreau and C Perrings, editors. Biodiversity, Ecosystem Functioning, and Human Wellbeing: An Ecological and Economic Perspective. Oxford University Press, Oxford.

**Published Data Sets**

1. McLaren JR, M Melendez, and AL Crofts. 2019. Soil properties and plant functional group biomass, Emerald Lake, Kluane Lake Region, Yukon Territory, Canada, 2015. Arctic Data Center. [doi:10.18739/A2XG9F982](https://doi.org/10.18739/A2XG9F982)

2. McLaren JR, K Buckeridge. 2018. Multiple biogeochemical variables were measured for organic and mineral soils on Arctic LTER experimental plots in moist acidic and non-acidic tundra, Arctic LTER Toolik Field Station, Alaska, 2013. Arctic Data Center. doi:10.6073/pasta/12e96295aa4a2dc8fa377480bab6aa06

3. McLaren JR, K Buckeridge. 2018. Relative percent cover was measured for plant species on Arctic LTER experimental plots in moist acidic and non-acidic tundra, Arctic LTER Toolik Field Station, Alaska, 2013. Arctic Data Center. doi:10.6073/pasta/8a2999c9ed297a184aaca7057e1ae177

**Submitted Manuscripts**

**\*** Denotes Undergraduate Student ‡Denotes Graduate Student

1. C Hicks Pries, JR McLaren, L Smith, C Treat, C Voigt. The Changing Biogeochemical Cycles of Tundra Soils *in* Y.Yang, M. Keiluweit, N. Senesi and B. Xing (Eds) Multi-Scale Biogeochemical Processes in Soil Ecosystems: Critical Reactions and Resilience to Climate Changes. John Wiley & Sons, New Jersey, USA. Submitted to publisher for peer-review (Sept 2018)

2. KJ La Pierre, ML Avolio, NP Lemoine, F Isbell, E Grman, GR Houseman, SE Koerner, DS Johnson, KR Wilcox, JM Alatalo, JP Anderson, R Aerts, SG Baer, AH Baldwin, J Bates, C Beierkuhnlein, RT Belote, J Blair, JMG Bloor, PJ Bohlen, EW Bork, EH Boughton, WD Bowman, AJ Britton, JF Cahill, E Chaneton, N Chiariello, J Cheng, SL Collins, JHC Cornelissen, G Du, A Eskelinen, J Firn, B Foster, L Gough, K Gross, L Hallett, X Han, H Harmens, MJ Hovenden, A Jentsch, C Kern, K Klanderud, AK Knapp, J Kreyling, W Li, Y Luo, RL McCulley, JR McLaren, JP Megonigal, U Molau, J Morgan, V Onipchenko, SC Pennings, JS Prevéy, J Price, P Reich, CH Robinson, FL Russell, OE Sala, E Seabloom, MD Smith, NA Soudzilovskaia, L Souza, K Suding, KB Suttle, T Svejca, D Tilman, P Tognetti, R Turkington, SR White, Z Xu, L Yahdjian, Q Yu, P Zhang, Y Zhang. Global change manipulations systematically shift plant communities without driving local species loss. Revision submitted to *Proceedings of the National Academy of Science* (May 2019)

3. BD Duval, \*HD Curtsinger, \*A Hands, J Martin, JR McLaren and DD Cadol. Greenhouse gas emissions and exo-enzyme activity during decomposition of native versus invasive riparian litter. Submitted to *Plant Ecology* (May 2019)

4. ML Avolio, KR Wilcox, KJ La Pierre, B Bowman, SL Collins, A Knapp, SE Koerner, N Lemoine, MD Smith, S Baer, J Blair, EH Boughton, K Gross, F Isbell, JR McLaren, P Reich, K Suding, KB Suttle, D Tilman, Z Xu, Q Yu. Global change drivers diminish differences in variability of aboveground net primary production across herbaceous-dominated ecosystems. To be submitted to *Global Change Biology* (May 2019)

**Research Grants and Awards**

**Research Grants**

2019 "Plant community recovery after cessation of long-term fertilization treatments in the boreal forest of northern Canada", $6500, PI: JR McLaren, 6/2019 – 6/2020

2018 “Ecosystem effects of increasing shrub abundance in alpine tundra ecosystems”, *UTEP University Research Incentive Program*, $5000, PI: JR McLaren, 2/2018 - 8/2018

2017 “Critical Loads of N deposition in grasslands at Carlsbad Caverns National Park”, *National Park Service – Air Resources Division*, $89,953, PI: JR McLaren 8/2017 – 7/2020

2016 "Collaborative Research: Adding animals to the equation: linking observational, experimental and modeling approaches to assess herbivore impacts on carbon cycling in northern Alaska", *National Science Foundation*, Polar Programs, Arctic System Science, $621,488, PI: JR McLaren ($2.7 Million Collaborative grant to N Boelman, K Griffin (Columbia University), L Gough (Towson University), E Rastetter (Marine Biological Laboratory), R Rowe (University of New Hampshire)), 10/2016 - 9/2021

2014 "Herbivore-mediated effects on nutrient cycling in arctic tundra ecosystems", UTEP *University Research Incentive Program*, $5000, PI: JR McLaren, 9/2014 - 8/2015

2014 "Revitalizing the UTEP Green Roof and Research Platform", *UTEP Green Fund*, $53,500, PI: V Lougheed, Co-PIs: JR McLaren, C Tweedie, 9/2015 - 8/2016

2012 "Long-term effects of plant functional group identity on ecosystem properties in a northern Canadian grassland", British Ecological Society Small-Projects-Grant, $2500 5/2012 - 4/2013

2012 "Long-term effects of plant functional group identity on ecosystem properties in a northern Canadian grassland, Arctic Institute of America Grant-in-Aid, $1000, 5/2012 - 4/2013

2007 "Effects of plant functional groups on vegetation dynamics and ecosystem properties", Arctic Institute of America Grant-in-Aid, $1000, 5/2007 - 4/2008

2006 "Effects of plant functional groups on vegetation dynamics and ecosystem properties", Yukon College Northern Exploration fund, $1500, 5/2006 - 4/2007

2005 "Plant functional group effects on ecosystems", Sigma Xi Grant-in-Aid, $1200, 5/2005 - 4/2006

2004 "Effects of plant functional groups on ecosystem properties", Mountain Equipment Co-op Environment Fund, $9,650, 5/2004 - 4/2005

2001-5 Northern Scientific Training Program (5 awards totalling $14,300)

**Awards**

**University of Texas at Arlington**

2012 International Arctic Research Center Travel Grant, $1000

2011 University Sustainability Committee Travel Grant, $500

**University of British Columbia**

2004 Izaak Walton Killam Memorial Doctoral Fellowship, $50,000 (2004-2006)

2003 NSERC Post-Graduate Scholarship B, $42,000 (2003-2004)

2003 4 additional awards totalling $21,900 (2003-2007)

**University of Toronto**

2000 NSERC Post-Graduate Scholarship A, $34,600 (2000-2002)

**University of Regina**

2000 NSERC Undergraduate Research Award, $5800

1999 NSERC Undergraduate Research Award, $5800

1996 7 additional awards totalling $19,700 (1996-2000)

**Presentations**

### Invited Seminars

18. The Greening of the Arctic, New Mexico Institute of Mining and Technology, Socorro NM (2018)

17. Shrubs, Climate Change and the Arctic Carbon Balance, Connecticut Agricultural Experiment Station, New Haven CT (2017)

16. Broadening perspectives on the controls over carbon and nutrient cycling, Toolik All Scientists Meeting, Portland OR (2017)

15. The Greening of the Arctic, University of California at Irvine, Department of Earth System Science (2016)

14. How shrubs are changing the arctic tundra, Pennsylvania State University, Polar Center (2015)

13. The Greening of the Arctic, University of Texas at Arlington, Department of Biology (2015)

12. The influence of plant identity in a changing Arctic, University of Texas at El Paso, EEB Seminar Series (2014)

11. Effects of increasing shrub abundance in the arctic tundra, New Mexico State University, Department of Biology (2014)

10. The greening of the arctic: how shrubs are changing the tundra, University of British Columbia, Biodiversity Research Centre (2013)

9. The influence of plant identity on ecosystem properties in a changing Arctic, Mississippi State University, Department of Biological Sciences (2013)

8. The influence of plant identity on ecosystem properties in a changing Arctic, University of Texas at El Paso, Department of Biological Sciences (2013)

7. Plant communities and ecosystem function in a changing Arctic, University of California Santa Barbara, Department of Ecology Evolution and Marine Biology (2012)

6. Effects of changing plant communities on arctic and sub-arctic ecosystems, University of Alaska Fairbanks, Institute for Arctic Biology (2012)

5. Plant communities and ecosystem function in arctic and sub-arctic ecosystems, North Dakota State University, Department of Biology (2012)

4. The effects of plant identity on ecosystem function in a northern Canadian grassland. University of Texas at Arlington, Department of Biology (2011)

3. Different plants do different things: The effects of plant identity on ecosystem functioning. University of British Columbia, Department of Botany (2008)

2. Collapse of a Canadian Arctic salt marsh: Effects and implications of lesser snow goose population increases. Ben Gurion University of the Negev, Israel (2004)

1. Vegetation collapse in an Arctic salt marsh: Effects of lesser snow goose population increases in the Hudson Bay lowlands. University of British Columbia, Department of Forestry (2003)

**Contributed Presentations and Posters**

**\*** Denotes Undergraduate Student ‡Denotes Graduate Student

66. I Siles Asaff\*, A Darrouzet-Nardi, M. Mauritz, C Tweedie, JR McLaren (2019) Seasonal nutrient cycling trends in a Chihuahuan Desert ecosystem. Soil Ecology Society Biennial Meeting, Toledo OH.

65. C Noriega\*, K Schaeffer‡, JR McLaren (2019) The effects of shrub removal on soil carbon under different vegetation cover types in a New Mexico desert ecosystem. COURI Spring Symposium, El Paso Tx (Poster).

64. CR Moreno\*, D Aguirre‡, JR McLaren (2019) Effects on tundra shrub encroachment on soil nitrogen mineralization rate. COURI Spring Symposium, El Paso Tx (Poster).

63. LR Raulston\*, K Schaeffer‡, JR McLaren (2019) Soil carbon in New Mexico after shrub removal. COURI Spring Symposium, El Paso Tx (Poster).

62. A Roy‡ and JR McLaren (2019) Soil CNP pool and flux responses to long-term reduced herbivore activity. Arctic LTER Annual Meeting, Woods Hole MA.

61. J Holguin**\***, S Collins, JR McLaren (2018). Soil microbial responses to altered precipitation in two semi-arid grasslands. Long Term Ecological Research (LTER) All Scientists Meeting, Pacific Grove, CA (Student Poster Award, 3rd Place).

60. R Dunkleberger\*, A Benhumea ‡, J Holguin‡, JR McLaren (2018) Are Chihuahuan Desert grassland soil microbes nutrient limited. COURI Summer Symposium, El Paso Tx (Poster).

59. J Holguin**\***, S Collins, JR McLaren (2018). Soil nutrient and microbial responses to altered seasonal precipitation regimes in two semi-arid grasslands. Ecological Society of America 103rd Annual Meeting, New Orleans, LA

58. GM Craine‡, A Darrouzet-Nardi, JR McLaren (2018) Biologically accessible phosphorus in a cyanobacteria dominated dryland ecosystem. Ecological Society of America 103rd Annual Meeting, New Orleans, LA

57. L Gough and JR McLaren (2018) Long term nutrient addition in arctic tundra alters decomposition rates through multiple mechanisms. Ecological Society of America 103rd Annual Meeting, New Orleans, LA.

56. V Mendoza Martinez, J Holguin, S Collins and JR McLaren (2018) Effects of changes in precipitation patterns on soil nutrient availability in an arid grassland. COURI Spring Symposium, El Paso Tx (Poster).

55. I Torres**\***, K Schaeffer‡ and JR McLaren (2018) Effects on vegetation in the Chihuahuan desert due to herbicide treatments. COURI Spring Symposium, El Paso Tx (Poster).

54. OJ Barrera**\***, A Roy‡ and JR McLaren (2018) Understanding the impacts of wood bison on soil processes in arctic grasslands. COURI Spring Symposium, El Paso Tx (Poster).

53. JR McLaren and KM Buckeridge (2017) The importance of nitrogen versus phosphorus in Alaskan tundra: Above- and belowground response to multi-decadal nutrient amendments in two ecosystems. Ecological Society of America 102nd Annual Meeting, Portland, OR. (Invited)

52. A Darrouzet-Nardi, D Aguirre\*, J Martinez‡, JR McLaren, C Tweedie. (2017) Association of exoenzyme activities with larger solid components of tundra soil. Ecological Society of America 102nd Annual Meeting, Portland, OR.

51. A Asmus‡, A Koltz, JR McLaren, G Shaver, L Gough (2017) Bottom-up effects of experimental nutrient addition on arthropod assemblages in arctic tundra mediated by plant traits. Ecological Society of America 102nd Annual Meeting, Portland OR. (Invited)

50. M Zaret\*, K Schaeffer‡ and JR McLaren (2017) Effects of shrub removal on soil carbon during grassland restoration in New Mexico. COURI Summer Symposium, El Paso Tx (Poster).

49. I Aubin, BB Kumordzi, F Cardou, B Shipley, C Violle, J Johnstone, M Ananad, A Arseneault, W Bell, Y Bergeron, M Brousseau, L de Grandpré, S Delagrange, N Fenton, D Gravel, ES MacDonald, B Hamel, M Higelin, F Hébert, N Isabel, A Mallik, A McIntosh, JR McLaren, C Messier, D Morris, N Thiffault, J Tremblay, I Boulangeatand AD Munson (2017) Collaborative science to investigate above- and belowground intraspecific trait variability at continental scale. New Phytologist Symposium, Exeter England.

48. Darrouzet-Nardi A, JR McLaren, K Roman\*, E Keats\* and C Tweedie (2017) Stable microbial biomass and soil hydrolytic enzyme potential despite dynamic carbon exchange during summer in a Chihuahuan desert shrubland. Arlington meeting for Critical Zone Science, Arlington VA.

47. Pena, S\*, A Benhumea‡ and JR McLaren (2017) Effects on increasing deciduous shrub litter on soil biogeochemistry. COURI Spring Symposium, El Paso Tx (Poster).

46. Asmus A‡, A Koltz, JR McLaren, G Shaver and L Gough (2016) Disparate responses of plant and arthropod communities to long-term nutrient addition in arctic tundra. Aarhus Network for Arthropods of the Tundra Meeting, Aarhus Denmark.

45. Soto X\*, S Cooks\*, A Darrouzet-Nardi and JR McLaren (2016) Soil analysis on desert ecosystems of New Mexico. COURI Summer Symposium, El Paso, Tx (Poster)

44. Cooks S\*, X Soto\*, JR McLaren and A Darrouzet Nardi (2016) What soil properties drive grassland recovery in dryland areas after shrub removal. COURI Summer Symposium, El Paso, Tx (Poster)

43. Morrow D\* and JR McLaren (2016) Do voles affect carbon and nutrient cycling in arctic tundra? COURI Spring Symposium, El Paso, Tx (Poster)

42. Aguirre D\* and JR McLaren (2016) Seasonality of phosphorus availability in arctic tundra soils. COURI Spring Symposium, El Paso, Tx (Poster)

41. Alfaro J\* and JR McLaren (2016) Vole effects on soil nutrient availability in Alaskan tundra. COURI Spring Symposium, El Paso, Tx (Poster)

40. Del Val L\* and JR McLaren (2016) Vole presence and microbial exoenzyme activity in the Toolik Region of Alaska. COURI Symposium, El Paso, Tx. (Best Poster Award, Environmental Science)

39. Asmus A‡, A Koltz‡, J McLaren, G Shaver and L Gough (2015) Underlying seasonal shifts determine the effect of long-term nutrient addition on arctic tundra arthropod communities. LTER All Scientists Meeting, Estes Park, CO.

38. McLaren JR, P deKoning‡ and R Turkington (2015) Long-term effects of fertilization and herbivory on the boreal forest understory: Results of a 20-year experiment. Ecological Society of America 100th Annual Meeting, Baltimore, MD. (Invited)

37. Boleman N, L Gough, JR McLaren, R Rowe, K Griffin and E Rastetter (2015) Adding animals to the equation: trophic interactions mediate carbon cycling in arctic tundra. Ecological Society of America 100th Annual Meeting, Baltimore, MD.

36. Keats\* E, K Roman\*, JR McLaren, A Darrouzet-Nardi (2015) Effects of shrub species on soil nutrient availability in the Jornada Experimental Range. COURI Summer Symposium, El Paso, TX (Poster)

35. Roman K\*, E Keats\*, A Darrouzet-Nardi, JR McLaren (2015) Influence of dominant shrub species on exoenzyme activity in a desert shrubland. COURI Summer Symposium, El Paso, TX (Poster)

34. van de Weg M, JR McLaren, K Buckeridge, L Gough, J Schimel and G Shaver (2015) Shrub encroachment in Arctic tundra peatlands: Betula nana effects on above- and below-ground litter decomposition. European Geosciences Union, Vienna, Austria.

33. van de Weg M, JR McLaren, K Buckeridge, L Gough, J Schimel and G Shaver (2015) Litter mixing alters predicted decomposition: Betula nana effects on above- and below-ground litter decomposition in Arctic tundra. British Ecological Society Annual Meeting Edinburgh, UK.

32. McLaren JR and L Gough (2014) Effects of increasing shrub abundance on litter production and decomposition in arctic tundra. Ecological Society of America 99th Annual Meeting, Sacramento, CA.

31. A Ford\*, J Penna-Avila\*, E Stunz, M Moody and J McLaren (2014) Effect of salt cedar vigor on soil properties in Big Bend National Park. COURI Summer Symposium, El Paso, TX. (Poster)

30. J Penna-Avila\*, E Stunz\*, A Ford\*, J McLaren and M Moody (2014) Invasive Salt cedar under the effect of a biocontrol agent. COURI Summer Symposium, El Paso, TX. (Poster)

29. E Stunz\*, J Penna-Avila\*, A Ford\*, J McLaren and M Moody (2014) Correlation of genotypes to plant resistance to a biocontrol agent. COURI Summer Symposium, El Paso, TX. (Poster)

28. Turkington R and JR McLaren (2014) Herbaceous community structure and function in northern Canada; the value of long-term experimental plots. Annual Symposium of the International Association for Vegetation Science, Perth, Australia.

27. Turkington R and JR McLaren (2014) Importance of long term research in ecology. Canadian Botanical Association Annual Meeting, Montreal, QC.

26. Hobbie E, R Simpson, J McLaren, J Chen, L Gough, J Moore and G Shaver (2014) Isotopic evidence for effects of six years of fertilization on C and N cycling in moist acidic tundra. Arctic LTER annual meeting, Woods Hole, MA (Poster)

25. McLaren JR, MJ van de Weg, L Gough and GR Shaver (2013) Increasing shrub abundance and N addition in Arctic tundra affect leaf and root litter decomposition differently. American Geophysical Union Annual Meeting, San Francisco, CA.

24. McLaren JR, MJ van de Weg, L Gough and GR Shaver (2013) Increasing shrub abundance effects on leaf and root litter decomposition in arctic tundra. Ecological Society of America 98th Annual Meeting, Minneapolis, MN.

23. Buckeridge KM, JR McLaren, MJ van de Weg, L Gough, GR Shaver and JP Schimel (2013) The impact of shrub encroachment and litter mixing on microbial exoenzyme activity. Ecological Society of America 98th Annual Meeting, Minneapolis, MN.

22. McLaren JR, L Gough and M Weintraub (2012) Consequences of long-term fertilization on seasonal patterns in soil nitrogen availability. ArcticNET All Scientists Meeting, Vancouver, BC.

21. McLaren JR, L Gough and M Weintraub (2012) Seasonal variation in nitrogen availability across a fertilization chronosequence. American Geophysical Union Annual Meeting, San Francisco, CA.

20. Bass H\*, JR McLaren and L Gough (2012) Seed dispersal in Alaskan tundra and its role in the greening of the Arctic. UTA Undergraduate Research Symposium, Arlington, TX

19. McLaren JR and L Gough (2012) Seasonal variation in ecosystem properties in moist acidic tundra. Ecological Society of America 97th Annual Meeting, Portland, OR.

18. McLaren JR and L Gough (2012) Shrub abundance and seasonal variation in ecosystem properties across a fertilization chronosequence. International Polar Year, Montreal, QC (Poster)

17. McLaren JR and L Gough (2012) Shrub abundance and seasonal variation in ecosystem properties across a fertilization chronosequence. Arctic LTER annual meeting, Woods Hole, MA (Poster)

16. Hendrix C\*, L Gough, JR McLaren and M Rich (2012) Immediate effects of accelerated snowmelt on arctic arthropod communities. ACES Symposium, Arlington, TX (Poster)

15. McLaren JR, A Novoplansky and R Turkington (2011) The influence of functional group identity in the Negev desert, Israel. Ecological Society of America 96th Annual Meeting, Austin, TX.

14. McLaren JR, CB Marshall‡ and R Turkington (2009) Plant identity determines ecosystem processes in a northern grassland. INTECOL, Brisbane, Australia

13. McLaren JR (2008) Effects of plant functional group loss on soil properties in a northern grassland. Ecological Society of America 93nd Annual Meeting, Milwaukee, WI.

12. McLaren JR (2007) Ecosystem Functioning Determined by Plant Functional Group Composition. Ecological Society of America 92nd Annual Meeting, San Jose, CA.

11. McLaren JR (2006) Effects of Plant Functional Group Identity on Ecosystem Processes. Ecological Society of America 91st Annual Meeting, Memphis, TN

10. McLaren JR (2004) Effects of plant functional group identity on vegetation dynamics and ecosystem function. Botany Graduate Students Symposium, University of British Columbia

9. McLaren JR (2003) Soil degradation and plant re-establishment: Patch dynamics in an Arctic marsh. 24th Annual Pacific Ecology Conference, Bamfield, BC

8. McLaren JR (2002) Vegetation patterns and patch dynamics in an Arctic intertidal marsh. Botany Graduate Students Association seminar series, University of Toronto, ON.

7. McLaren JR, RL Jefferies and PM Kotanen (2002) Soil degradation and plant re-establishment in coastal salt-marshes. Ecological Society of America 87th Annual Meeting, Tucson, AZ.

6. McLaren JR (2002). Soil degradation and plant re-establishment in coastal arctic salt-marshes of the Hudson Bay. Ontario Ecology and Ethology Conference, Queen’s University, ON

5. McLaren JR, SD Wilson and DA Peltzer (2001) Plant-driven temporal variability of soil moisture. Ecological Society of America 86th Annual Meeting, Madison, WI.

4. McLaren JR, SD Wilson and DA Peltzer (2001) Plant-driven temporal variability of soil moisture. Ontario Ecology and Ethology Conference, University of Guelph, ON

3. McLaren JR (2001) Soil degradation by lesser snow geese in the coastal salt-marshes of Manitoba and Nunavut. Arctic Working Group Symposium, University of Toronto, ON

2. McLaren JR, SD Wilson and DA Peltzer (2000) Plant-driven temporal variability of soil moisture. Botany Graduate Students Association seminars, University of Toronto, ON.

1. McLaren JR (2000) Growth form effects on the temporal heterogeneity of soil moisture. Prairie University Biology Symposium, University of Regina, SK

**Teaching Experience**

**Primary Lecturer**

Advances in Ecological Theory (Graduate, UTEP) 2016, 2018

Introductory Ecology (Undergraduate, UTEP) 2014-2019

Plant Ecology (Undergraduate, UTEP) 2014, 2016, 2017

**Teaching Assistant**

Community and Ecosystem Biology (University of British Columbia) 2003-2009

Population Biology (University of British Columbia) 2003-2009

Plant Ecology (University of British Columbia) 2008

Environmental Biology (University of Toronto) 2000-2002

Arctic Ecosystems Field Course (University of Toronto) 2001

Human Biology (University of Regina) 1999-2000

Introductory Biology (University of Regina) 1999

**Guest Lecturer**

Professional Development (UTEP) 2017, 2018, 2019

Ecosystem Ecology (UTEP) 2016, 2017

Soil Ecology (UTEP) 2015, 2016

Hot-Topics in Environmental Science (UTEP) 2014-2018

Professional Development (co-taught, University of Texas at Arlington) 2012

Non-majors Introductory Biology (University of Texas at Arlington) 2012

Wetland Ecology (University of Texas at Arlington) 2012

Plant Ecology (University of Texas Arlington) 2011

Plant Ecology (UBC) 2009

Field Course in Ecology (UBC) 2007

Field Biology of the Alaska Inside Passage (University of Alaska) 2004, 2005

Northern Canada Plant Identification (University of Regina) 2004

Environmental Sciences Research Methods (UBC) 2004

**Mentoring/ Supervisory Experience**

*PhD Advisor:* Austin Roy 2017-

Kathleen Schaeffer 2017-

*MSc Advisor*: Jennifer Holguin 2018 -

Daniela Aguirre 2017-

Alejandro Benhumea 2015-2018

Caroline Marshall (co-Advisor, UBC) 2007-2008

*Graduate Certificate in Biology Advisor*

Allison Nawman 2014-2017

*Undergraduate Research Advisor (UTEP)*:

2019 Allison Druckman, Anna Maxwell, Erick Rodriguez

2018 Isabelle Asaff, Ricardo Alvarez, Nikki Donegan, Esmerelda Duenez, Rebecca Dunkleburger (REU), Adam Castillo, Sonia Leonardo (REU), Violeta Mendoza Martinez, Cynthia-Rae Moreno, Crystal Noriega, Linda Raulston

2017 Hector Apodaca, OJ Berrara, Jessica Duran, Natalia Fernandez, Katia Gonzales, Vanessa

Gonzales, Jennifer Holguin, William Maravilla, Bailey Reader, Isabel Torres, Max Zaret (REU)

2016 Daniela Aguirre, Monica Amaton, Shyla Cooks (REU), Cristian Gonzales, Adam Lares, Jacqueline

Mackenize, Samantha Pena, Scott Reza, Kathleen Schaeffer, Isaac Silvestre, Xavier Soto (REU), Isaac Tilley

2015 Daniela Aguirre, Jacqueline Alfaro, Anna Crofts, Luis Del Val, Eleanor Keats (REU), Mayra Melendez, Daniel Morrow, Allison Nawman, Kathleen Roman (REU)

2014 Alejandro Benhumea, Anna Crofts, Jocelyn Crouse, Dennise Drury, Alexandra Ford (REU)

*Undergraduate Research Advisor (Other Universities)*

University of Texas at Arlington (2011-2012) - Heather Bass, Christopher Hendrix

University of British Columbia (2003-2007) - Kate Fremlin, Crystal Cerny, Iona To

Mentor and supervisor for > 30 undergraduate lab and field assistants

*Advisory Committee Member*:

MSc Grace Craine (UTEP 2018), Sara Baqla (UTEP 2017), Kevin Lerer (UTEP 2017), Naomi Luna (UTEP 2016)

PhD Hugo Alarcon (UTEP), Cat Cort (UTEP), Michelle Garcia (UTEP), Jane Martinez (UTEP), Kristina Young (UTEP)

*Thesis/Dissertation External Examiner*

MSc Stevie Waring (Victoria University, Wellington NZ, 2017)

PhD Laura Ladwig (UNM 2014)

**Invited Workshops and Working Groups**

Warming and Removal in Mountains – Investigator, International Network Experiment 2015-2020

Next Generation Polar Researchers Leadership Symposium 2015 (Catalina Island, CA)

Women Evolving Biological Sciences Workshop 2013 (Durham, North Carolina)

Serengeti Biodiversity Program, 2007-9 Developing sustainable human-natural systems (Vancouver BC)

BioMERGE Adaptive Synthesis Workshops,

2006 - Consequences of changing biodiversity- Solutions and scenarios (Ascona, Switzerland)

2005 - Biodiversity and ecosystem functioning- Cross biome syntheses (Kota Kinabalu, Malaysia)

2003 - Integration of functional and taxonomic diversity (St. Louis MO, USA)

#### Professional Service and Outreach

**Manuscript Reviews** (47 reviews since 2014)

*Austral Ecology,* *Arctic, Antarctic and Alpine Biology, Biogeochemistry, Biogeosciences, Biological Invasions, Climate Change Responses, Ecology*, *Ecology Letters*, *Ecosphere,* *Ecosystems, Functional Ecology, Global Change Biology*, *Israeli Journal of Ecology and Evolution,* *Journal of Applied Ecology*, *Journal of Ecology*, *Journal of Vegetation Science, Nature*, *Nature Climate Change*, *Nature Ecology and Evolution*, *New Phytologist, New Zealand Journal of Botany, Oecologia, Oikos*, *Plant and Soil*, *Plant Biology*, *Plant Ecology*, *Soil Biology and Biochemistry*

**Grant Review Panelist** (9 panels since 2014)

NSF Division of Environmental Biology (2016, 2018)

NSF Geosciences (2015)

NSF DDIG (2015, 2016)

Department of Energy - Terrestrial Ecosystem Sciences (2016, 2019)

USDA/NIFA – Renewable Energy, Natural Resources and Environment (2014, 2017)

**Ad-Hoc Grant Reviews** (16 reviews since 2014)

National Science Foundation (2014-Present), Natural Science and Engineering Research Council, Canada (2018 - present), British Ecological Society Research and Outreach Grants (2012-present), ConTex Collaborative Research Grants Competition (2019), Natural Environment Research Council, UK (2016), Israeli Science Foundation (2014)

**University Service**

Member, Faculty Senate, UTEP (2017-Present)

Member, Ecology and Evolutionary Biology Program Advisory Committee, UTEP (2016-Present)

Member, Teaching Evaluation Committee, Biological Sciences, UTEP (2016 – Present)

Member, Awards Committee, Biological Sciences, UTEP (2016 – Present)

Member, Work Load Committee, Biological Sciences, UTEP (2017 – 2018)

**Elected Positions**

Secretary, Biogeosciences Section, Ecological Society of America (2014-2016)

**Media**

Research featured on El Paso Inc (Dec 2016), El Paso Herald Post (Dec 2016), Newsday.com (Aug 2011), CBC Radio (Aug 2009), Yukon News (Aug 2009, Sept 2009), Yukon Magazine (Oct 2009)

**Membership in Professional Societies**

Ecological Society of America (2002-present), Arctic Institute of North America (2004-present)

British Ecological Society (2008 – present), Assoc. of Polar Early Career Scientists (2011 – present), American Geophysical Union (2012-present), BES Review College (2012-present), Royal Geographical Society Fellow (2018-present)

**Outreach**

Served as judge for:

Next Generation Polar Researchers Leadership Symposium Applicants (2019)

Outstanding Student Poster Award at UTEP COURI Annual Symposium (2014, 2016, 2017)

ESA Biogeosciences Section Outstanding Student Presentation Award (2013-2015)

ESA Gene E. Likens Outstanding publication award in Biogeosciences (2014-2015)

ESA Elizabeth Sulzman Outstanding publication award in Biogeosciences (2014-2015)

ESA Braun/Buell Award judge for outstanding graduate student presentation (2011 - 2013)

Outstanding Student Poster award judge American Geophysical Union Annual meeting (2012)

Public Seminar – Biological Impacts of Climate Change in the Arctic and Beyond: Revisiting the IPCC Report, Academy for Learning in Retirement, Las Cruces NM, February 2016

Public Seminar – “Impacts of Global Change in the Arctic and Beyond” UTEP Earth Science Day Celebration, October 2015

Co-Organizer and Moderator: Organized Oral Session at Ecological Society of America 100th Annual Meeting, “Dead Roots: The Dark Side of the Carbon Cycle” (2015)

Moderator and Mentor: Creating Connections Conference on Professional Development and Participation of Women in STEM (2013)

Co-hosted 10 High school Science Teachers at Toolik Research Station through Polar TREC (Teachers and Researchers Exploring and Collaborating) (2012)

Assisted with a Climate change and tundra ecosystems session at *Expanding Your Horizons,* a hands-on science workshop for 6th-8th grade girls at University of Texas at Arlington (2010)

Consultant for soil microbe art installation “Underfoot yet Overhead” (Artist Karen Kazmer) including workshops with 5th grade classrooms in Surrey, BC, Canada (2009)