

## ARCTIC LTER PUBLICATIONS – December 2010 to June 2013

*Journal Articles, Books, Book Chapters and Student Theses*

### Journal Articles

1. Barrett, K., Rocha, A.V., van de Weg, M.J., Shaver, G.R. (2012) Vegetation shifts observed in arctic tundra 17 years after fire. *Remote Sensing Letters*, **3**:8, 729-736.
2. Bennington, C.C., Fetcher, N., Vavrek, M.C., Shaver, G.R., Cummings, K.J., McGraw, J.B. (2012) Home site advantage in two long-lived arctic plant species: results from two 30-year reciprocal transplant studies. *Journal of Ecology*, **100**:4, 841-851.
3. Boelman, N.T., Rocha, A.V., Shaver, G.R. (2011) Understanding burn severity sensing in Arctic tundra: exploring vegetation indices, suboptimal assessment timing and the impact of increasing pixel size. *International Journal of Remote Sensing*, **32**:2, 7033-7056.
4. Boelman, N.T., Gough, L., McLaren, J.R., Greaves, H. (2011) Does NDVI reflect variation in the structural attributes associated with increasing shrub dominance in arctic tundra? *Environmental Research Letters*, **6**:035501.
5. Bret-Harte, M.S., Mack, M.C., Shaver, G.R., Huebner, D.C., Johnston, M., Mojica, C.A., Pizano, M.C., Reiskind, J.A. (In Press) The response of arctic vegetation and soils following the Anaktuvuk River fire of 2007. *Proceedings of the Royal Society B: Biological Sciences*.
6. Brzostek, E.R., Blair, J.M., Dukes, J.S., Frey, S.D., Hobbie, S.E., Melillo, J.M., Mitchell, R.J., Pendall, E., Reich, P.B., Shaver, G.R., Stefanski, A., Tjoelker, M.G., Finzi, A.C. (2012) The effect of experimental warming and precipitation change on proteolytic enzyme activity: positive feedbacks to nitrogen availability are not universal. *Global Change Biology*, **18**:8, 2617-2625.
7. Budy, P., Luecke, C. (In Press) Understanding the drivers of fish population dynamics in unique, Arctic lakes with special consideration of the role of climate and climate change. *Oecologia*.
8. Cahoon, S.M.P., Sullivan, P.F., Shaver, G.R., Welker, J.M., Post, E. (2012) Interactions among shrub cover and the soil microclimate may determine future Arctic carbon budgets. *Ecology Letters*, **15**:12, 1415-1422.
9. Callaghan, T.V., Tweedie, C.E., J., A., Andrews, C., Bergstedt, J., Butler, M.G., Christensen, T.R., Cooley, D., Dahlberg, U., Danby, R.K., Daniëls, F.J., de Molenaar, J.G., Dick, J., Mortensen, C.E., Ebert-May, D., Emanuelsson, U., Eriksson, H., Hedenäs, H., Henry, H.R.G., Hik, D.S., Hobbie, J.E., Jantze, E.J., Jaspers, C., Johansson, C., Johansson, M., Johnson, D.R., Johnstone, J.F., Jonasson, C., Kennedy, C., Kenney, A.J., Keuper, F., Koh, S., Krebs, C.J., Lantuit, H., Lara, M.J., Lin, D.H., Loughheed, V.L., Madsen, J., Matveyeva, N., Mcewen, D.C., Myers-Smith, I.H., Narozhnyi, Y.L., Olsson, H., Pohjola, V.A., Pric, L.W., Rigét, F., Rundqvist, S., Sandström, A., Tamstorf, M.P., Van Bogaert, R., Villarreal, S., Webber, P.J., Zemtsov, V.A. (2011) Multi-decadal changes in tundra environments and ecosystems: synthesis of the International Polar Year-Back to the Future project (IPY-BTF) *Ambio*, **40**:6, 705-716.
10. Conant, R., Ryan, M., Ågren, G., Birge, H., Davidson, E., Eliasson, P., Evans, S., Frey, S., Giardina, C., Hopkins, F., Hyvönen, R., Kirschbaum, M., Lavalley, J., Leifeld, J., Parton, W., Steinweg, J.M., Wallenstein, M., Wetterstedt, J.A., Bradford, M. (2011) Temperature and soil carbon decomposition – synthesis of current knowledge and a way forward. *Global Change Biology*, **17**:11, 3392-3404.
11. Cory, R.M., Crump, B.C., Dobkowski, J.A., Kling, G.W. (2013) Surface exposure to sunlight stimulates CO<sub>2</sub> release from permafrost soil carbon in the Arctic. *Proceedings of the National Academy of Sciences*, **110**:9, 3429-3434.
12. Crump, B.C., Amaral-Zettler, L.A., Kling, G.W. (2012) Microbial diversity in arctic freshwaters is structured by inoculation of microbes from soils. *ISME J*, **6**:9, 1629-1639.
13. De Schrijver, A., De Frenne, P., Ampoorter, E., Van Nevel, L., Demey, A., Wuyts, K., Verheyen, K. (2011) Cumulative nitrogen input drives species loss in terrestrial ecosystems. *Global Ecology and Biogeography*, **20**:6, 803-816.
14. DeMarco, J., Mack, M., Bret-Harte, M.S. (2011) The Effects of Snow, Soil Microenvironment, and Soil Organic Matter Quality on N Availability in Three Alaskan Arctic Plant Communities. *Ecosystems*, **14**:5, 804-817.
15. DeSlippe, J.R., Hartmann, M., Mohn, W.W., Simard, S.W. (2011) Long-term experimental manipulation of climate alters the ectomycorrhizal community of *Betula nana* in Arctic tundra. *Global Change Biology*, **17**, 1625-1636.

16. Deslippe, J., SW, S. (2011) Below-ground carbon transfer among *Betula nana* may increase with warming in Arctic tundra. *New Phytologist*, **192**:3, 689-698.
17. Deslippe, J., Hartmann, M., Simard, S.W., Mohn, W.W. (2012) Long-term warming alters the composition of Arctic soil microbial communities *FEMS Microbiol Ecol*, **82**, 303-315.
18. Díaz, S., Quétier, F., Cáceres, D.M., Trainor, S.F., Pérez-Harguindeguy, N., Bret-Harte, M.S., Finegan, B., Peña-Claros, M., Poorter, L. (2011) Linking functional diversity and social actor strategies in a framework for interdisciplinary analysis of nature's benefits to society. *Proceedings of the National Academy of Sciences*, **108**:3, 895-902.
19. Elmendorf, S.C., Henry, G.H.R., Hollister, R.D., Björk, R.G., Bjorkman, A.D., Callaghan, T.V., Collier, L.S., Cooper, E.J., Cornelissen, J.H.C., Day, T.A., Fosaa, A.M., Gould, W.A., Grétarsdóttir, J., Harte, J., Hermanutz, L., Hik, D.S., Hofgaard, A., Jarrad, F., Jónsdóttir, I.S., Keuper, F., Klanderud, K., Klein, J.A., Koh, S., Kudo, G., Lang, S.I., Loewen, V., May, J.L., Mercado, J., Michelsen, A., Molau, U., Myers-Smith, I.H., Oberbauer, S.F., Pieper, S., Post, E., Rixen, C., Robinson, C.H., Schmidt, N.M., Shaver, G.R., Stenström, A., Tolvanen, A., Totland, Ø., Troxler, T., Wahren, C.-H., Webber, P.J., Welker, J.M., Wookey, P.A. (2012) Global assessment of experimental climate warming on tundra vegetation: heterogeneity over space and time. *Ecology Letters*, **15**:2, 164-175.
20. Elmendorf, S.C., Henry, G.H.R., Hollister, R.D., Bjork, R.G., Boulanger-Lapointe, N., Cooper, E.J., Cornelissen, J.H.C., Day, T.A., Dorrepaal, E., Elumeeva, T.G., Gill, M., Gould, W.A., Harte, J., Hik, D.S., Hofgaard, A., Johnson, D.R., Johnstone, J.F., Jonsdottir, I.S., Jorgenson, J.C., Klanderud, K., Klein, J.A., Koh, S., Kudo, G., Lara, M., Levesque, E., Magnusson, B., May, J.L., Mercado-Diaz, J.A., Michelsen, A., Molau, U., Myers-Smith, I.H., Oberbauer, S.F., Onipchenko, V.G., Rixen, C., Martin Schmidt, N., Shaver, G.R., Spasojevic, M.J., orhallsdottir, o.E., Tolvanen, A., Troxler, T., Tweedie, C.E., Villareal, S., Wahren, C.-H., Walker, X., Webber, P.J., Welker, J.M., Wipf, S. (2012) Plot-scale evidence of tundra vegetation change and links to recent summer warming. *Nature Climate Change*, **2**:6, 453-457.
21. Eugster, W., Kling, G.W. (2012) Performance of a low-cost methane sensor for ambient concentration measurements in preliminary studies. *Atmospheric Measurement Techniques Discussions*, **5**, 2567-2590.
22. Euskirchen, E.S., Bret-Harte, M.S., Scott, G.J., Edgar, C., Shaver, G.R. (2012) Seasonal patterns of carbon dioxide and water fluxes in three representative tundra ecosystems in northern Alaska. *Ecosphere*, **3**:1, art 4.
23. Genet, H., Oberbauer, S.F., Colby, S.J., Staudhammer, C.L., Starr, G. (2013) Growth responses of Sphagnum hollows to a growing season lengthening manipulation in Alaskan Arctic tundra. *Polar Biology*, **36**:1, 41-50.
24. Gough, L., Moore, J.C., Shaver, G.R., Simpson, R.T., Johnson, D.R. (2012) Above- and belowground responses of arctic tundra ecosystems to altered soil nutrients and mammalian herbivory. *Ecology*, **93**:7, 1683-1694.
25. Gough, L., Gross, K.L., Cleland, E.E., Clark, C.M., Collins, S.L., Fargione, J.E., Pennings, S.C., Suding, K.N. (2012) Incorporating clonal growth form clarifies the role of plant height in response to nitrogen addition. *Oecologia*, **169**:4, 1053-1062.
26. Graham, D.E., Wallenstein, M.D., Vishnivetskaya, T.A., Waldrop, M.P., Phelps, T.J., Piffner, S.M., Onstott, T.C., Whyte, L.G., Rivkina, E.M., Gilichinsky, D.A., Elias, D.A., Mackelprang, R., VerBerkmoes, N.C., Hettich, R.L., Wagner, D., Wulfschleger, S.D., Jansson, J.K. (2012) Microbes in thawing permafrost: the unknown variable in the climate change equation. *ISME J*, **6**:4, 709-712.
27. Griffin, K., Epstein, D., Boelman, N. (2013) Hill Slope Variations in Chlorophyll Fluorescence Indices and Leaf Traits in a Small Arctic Watershed. *Arctic, Antarctic, and Alpine Research*, **45**:1, 39-49.
28. Griffin, K.L., Epstein, D.J., Boelman, N.T. (2013) Hill Slope Variations in Chlorophyll Fluorescence Indices and Leaf Traits in a Small Arctic Watershed. *Arctic, Antarctic, and Alpine Research*, **45**:1, 39-49.
29. Hagen, E.M., McCluney, K.E., Wyant, K.A., Soykan, C.U., Keller, A.C., Luttermoser, K.C., Holmes, E.J., Moore, J.C., Sabo, J.L. (2012) A meta-analysis of the effects of detritus on primary producers and consumers in marine, freshwater, and terrestrial ecosystems. *Oikos*, **121**:10, 1507-1515.
30. Heffernan, J.B., Soranno, P.A., Angilletta, M.J., Buckley, L.B., Gruner, D.S., Keitt, T.H., Kellner, J.R., Kominoski, J.S., Rocha, A.V., Xiao, J., Harms, T.K., Goring, S.J., Koenig, L.E., McDowell, W.H., Powell, H., Richardson, A.D., Stow, C.A., Vargas, R., Weathers, K.C. (In review) Macrosystems Ecology: understanding ecological pattern and processes at continental scales. *Frontiers in Ecology and the Environment*.
31. Heskell, M.A., Anderson, O.R., Atkin, O.K., Turnbull, M.H., Griffin, K.L. (2012) Leaf- and cell-level carbon cycling responses to a nitrogen and phosphorus gradient in two Arctic tundra species. *American Journal of Botany*, **99**:10, 1702-1714.

32. Heskell, M., Greaves, H., Kornfeld, A., Gough, L., Atkin, O.K., Turnbull, M.H., Shaver, G., Griffin, K.L. (2013) Differential physiological responses to environmental change promote woody shrub expansion. *Ecology and Evolution*, **3**:5, 1149-1162.
33. Hobara, S., Koba, K., Ae, N., Giblin, A.E., Kushida, K., Shaver, G.R. (2013) Geochemical Influences on Solubility of Soil Organic Carbon in Arctic Tundra Ecosystems. *Soil Science Society of America Journal*, **77**:2, 473-481.
34. Hobbie, J.E., Hobbie, E.A. (2012) Amino acid cycling in plankton and soil microbes studied with radioisotopes: measured amino acids in soil do not reflect bioavailability. *Biogeochemistry*, **107**:1-3, 339-360.
35. Johnson, D.R., Lara, M.J., Shaver, G.R., Batzli, G.O., Shaw, J.D., Tweedie, C.E. (2011) Exclusion of brown lemmings reduces vascular plant cover and biomass in Arctic coastal tundra: resampling of a 50+ year herbivore enclosure experiment near Barrow, Alaska. *Environmental Research Letters*, **6**:4, 8pp.
36. Johnson, D.R., Gough, L. (2012) Two arctic tundra graminoids differ in tolerance to herbivory when grown with added soil nutrients. *Botany*, **91**:2, 82-90.
37. Johnson, C.R., Luecke, C. (2012) Copepod dominance contributes to phytoplankton nitrogen deficiency in lakes during periods of low precipitation. *Journal of Plankton Research*, **34**:5, 345-355.
38. Jones, B., Breen, A., Gaglioti, B., Mann, D., Rocha, A.V., Grosse, G., Arp, C.D., Kunz, M., Walker, D.A. (In review) Discovery of two large tundra fire events on the North Slope of Alaska. *JGR-Biogeosciences*.
39. Knapp, A.K., Smith, M.D., Hobbie, S.E., Collins, S.L., Fahey, T.J., Hansen, G.J.A., Landis, D.A., La Pierre, K.J., Melillo, J.M., Seastedt, T.R. (2012) Past, present, and future roles of long-term experiments in the LTER network. *Bioscience*, **62**:4, 377-389.
40. Kornfeld, A., Heskell, M., Atkin, O.K., Gough, L., Griffin, K.L., Horton, T.W., Turnbull, M.H. (2013) Respiratory flexibility and efficiency are affected by simulated global change in Arctic plants. *New Phytologist*, **197**:4, 1161-1172.
41. Lang, S.I., Cornelissen, J.H.C., Shaver, G.R., Ahrens, M., Callaghan, T.V., Molau, U., Ter Braak, C.J.F., Hölzer, A., Aerts, R. (2012) Arctic warming on two continents has consistent negative effects on lichen diversity and mixed effects on bryophyte diversity. *Global Change Biology*, **18**:3, 1096-1107.
42. Larouche, J.R., Bowden, W.B., Giordano, R., Flinn, M.B., Crump, B.C. (2012) Microbial biogeography of arctic streams: exploring influences of lithology and habitat. *Frontiers in Microbiology*, **3**.
43. Loranty, M.M., Goetz, S.J., Rastetter, E.B., Rocha, A.V., Shaver, G.R., Humphreys, E.R., Lafleur, P.M. (2011) Scaling an instantaneous model of tundra NEE to the Arctic landscape. *Ecosystems*, **14**, 76-93.
44. Loughheed, V.L., Butler, M.G., McEwen, D.C., Hobbie, J.E. (2011) Changes in tundra pond limnology: Re-sampling Alaskan ponds after 40 years. *Ambio*, **40**:6, 589-599.
45. MacIntyre, S., Jonsson, A., Jansson, M., Aberg, J., Turney, D.E., Miller, S.D. (2010) Buoyancy flux, turbulence, and the gas transfer coefficient in a stratified lake. *Geophysical Research Letters*, **37**:24, L24604.
46. Mack, M.C., Bret-Harte, M.S., Hollingsworth, T.N., Jandt, R.R., Schuur, E.A., Shaver, G.R., Verbyla, D.L. (2011) Carbon loss from an unprecedented Arctic tundra wildfire. *Nature*, **475**:7357, 489-492.
47. McGuire, A.D., Hinzman, L.D., Walsh, J.E., Hobbie, J.E., Sturm, M. (In Press) Trajectory of the Arctic as an integrated system. *Ecological Applications*.
48. McMahon, S.K., Wallenstein, M.D., Schimel, J.P. (2011) A cross-seasonal comparison of active and total bacterial community composition in Arctic tundra soil using bromodeoxyuridine labeling. *Soil Biology and Biochemistry*, **43**:2, 287-295.
49. McMillan, H.K., Clark, M.P., Bowden, W.B., Duncan, M., Woods, R.A. (2011) Hydrological field data from a modeller's perspective: Part 1. Diagnostic tests for model structure. *Hydrological Processes*, **25**:4, 511-522.
50. Melack, J.M., Finzi, A.C., Siegel, D., MacIntyre, S., Nelson, C.E., Aufdenkampe, A.K., Pace, M.L. (2011) Improving biogeochemical knowledge through technological innovation. *Frontiers in Ecology and the Environment*, **9**:1, 37-43.

51. Merck, M.F., Neilson, B.T. (2012) Modelling in-pool temperature variability in a beaded arctic stream. *Hydrological Processes*, **26**:25, 3921-3933.
52. Merck, M.F., Neilson, B.T., Cory, R.M., Kling, G.W. (2012) Variability of in-stream and riparian storage in a beaded arctic stream. *Hydrological Processes*, **26**:19, 2938-2950.
53. Moulton, C.A., Gough, L. (2011) Effects of Soil Nutrient Availability on the Role of Sexual Reproduction in an Alaskan Tundra Plant Community. *Arctic, Antarctic and Alpine Research*, **43**:4, 612-620.
54. O'Brien, W.J., Luecke, C. (2011) Zooplankton community structure in arctic ponds: shifts related to pond size. *Arctic*, **64**:4, 483-487.
55. Oberbauer, S.F., Elmendorf, S.C., Troxler, T., Hollister, R.D., Rocha, A.V., Bret-Harte, S., Fosaa, M., Hoyer, T.T., Henry, G.H.R., Jarrad, F., Jonsdottir, I.S., Klanderud, K., Klein, J.A., Molau, U., Rixen, C., Schmidt, N.M., Shaver, G.R., Slider, R., Totland, O., Wahren, C.H., Welker, J.M. (In Press) Phenological responses of tundra plants to background climate warming tested using the International Tundra Experiment. *Philosophical Transactions of Royal Society: Biology*.
56. Peters, D.P.C., Lugo, A.E., Chapin, F.S.I., Pickett, S.T.A., Duniway, M., Rocha, A.V., Swanson, F.J., Laney, C., Jones, J. (2011) Cross-system comparisons elucidate disturbance complexities and generalities. *Ecosphere*, **2**:7, 3-26.
57. Peterson, C.A., Fetcher, N., McGraw, J.B., Bennington, C.C. (2012) Clinal variation in stomatal characteristics of an Arctic sedge, *Eriophorum vaginatum* (Cyperaceae). *American Journal of Botany*, **99**:9, 1562-1571.
58. Ramirez, K.S., Craine, J.M., Fierer, N. (2012) Consistent effects of nitrogen amendments on soil microbial communities and processes across biomes. *Global Change Biology*, **18**:6, 1918-1927.
59. Rastetter, E.B. (2011) Modeling coupled biogeochemical cycles. *Frontiers in Ecology and the Environment*, **9**:1, 68-73.
60. Rich, M.E., Gough, L., Boelman, N.T. (2013) Arctic arthropod assemblages in habitats of differing shrub dominance. *Ecography*, **36**, xx-xx.
61. Robertson, G.P., Collins, S.L., Foster, D.R., Brokaw, N., Ducklow, H.W., Gragson, T.L., Gries, C., Hamilton, S.K., McGuire, A.D., Moore, J.C. (2012) Long-term ecological research in a human-dominated world. *Bioscience*, **62**:4, 342-353.
62. Robertson, G.P., Brokaw, N., Collins, S., Ducklow, H., Foster, D.R., Gragson, T.L., Gries, C., Hamilton, S.K., McGuire, A.D., Moore, J.C., Stanley, E., Waide, R.B., Williams, M.W. (In press) Strategic role of the Long-Term Ecological Research Network in ecological and environmental science and education. *Bioscience*.
63. Rocha, A.V., Shaver, G.R. (2011) Burn severity influences postfire CO<sub>2</sub> exchange in arctic tundra. *Ecological Applications*, **21**:2, 477-489.
64. Rocha, A.V., Shaver, G.R. (2011) Postfire energy exchange in arctic tundra: the importance and climatic implications of burn severity. *Global Change Biology*, **17**:9, 2831-2841.
65. Rocha, A.V., Lorant, M.M., Higuera, P.E., Mack, M., C., Hu, F.S., Jones, B.M., Breen, A.L., Rastetter, E.B., Goetz, S.J., Shaver, G.R. (2012) The footprint of Alaskan tundra fires during the past half-century: implications for surface properties and radiative forcing. *Environmental Research Letters*, **7**:4, 044039.
66. Rocha, A.V. (2013) Tracking carbon within the trees. *New Phytologist*, **197**:3, 685-686.
67. Shaver, G.R., Rastetter, E.B., Salmon, V., Street, L.E., Van de Weg, M.J., Rocha, A.V., van Wijk, M.T., Williams, M. (In press) Panarctic modeling of net ecosystem exchange of CO<sub>2</sub>. *Philosophical Transactions of Royal Society: Biology*.
68. Sikes, D.S., Draney, M.L., Fleshman, B. (2013) Unexpectedly high among-habitat spider (Araneae) faunal diversity from the Arctic Long-Term Experimental Research (LTER) field station at Toolik Lake, Alaska, United States of America. *The Canadian Entomologist*, **145**:Special Issue 02, 219-226.
69. Simard, S.W., Beiler, K.J., Bingham, M.A., Deslippe, J.R., Philip, L.J., Teste, F.R. (2012) Mycorrhizal networks: Mechanisms, ecology and modelling. *Fungal Biology Reviews*, **26**:1, 39-60.
70. Sistla, S.A., Rastetter, E.B., Schimel, J.P. (In Press) Responses of a tundra system to warming using SCAMPS: a stoichiometrically coupled, acclimating microbe-plant-soil model. *Ecological Monographs*, Accepted.

71. Sistla, S.A., Moore, J.C., Simpson, R., Gough, L., Shaver, G.R., Schimel, J.P. (In Press) Long-term warming restructures arctic tundra without changing net soil carbon storage. *Nature*.
72. Street, L.E., Shaver, G.R., Rastetter, E.B., van Wijk, M.T., Kaye, B.A., Williams, M. (2012) Incident radiation and the allocation of nitrogen within Arctic plant canopies: implications for predicting gross primary productivity. *Global Change Biology*, **18**:9, 2838-2852.
73. Townsend-Small, A., McClelland, J.W., Max Holmes, R., Peterson, B.J. (2011) Seasonal and hydrologic drivers of dissolved organic matter and nutrients in the upper Kuparuk River, Alaskan Arctic. *Biogeochemistry*, **103**:1-3, 109-124.
74. van de Weg, M.J., Fetcher, N., Shaver, G.R. (2012) Response of dark respiration to temperature in *Eriophorum vaginatum* from a 30-year-old transplant experiment in Alaska. *Plant Ecology & Diversity*, 1-5.
75. Wyant, K.A., Draney, M.L., Moore, J.C. (2011) Epigeal Spider (Araneae) Communities in Moist Acidic and Dry Heath Tundra at Toolik Lake, Alaska. *Arctic, Antarctic, and Alpine Research*, **43**:2, 301-312.

### Books and Book Chapters

1. Hobbie, J.E., Kling, G.W. (In Press) A Changing Arctic: Ecological Consequences for Tundra, Streams and Lakes. Oxford University Press.
2. Hury, A.D., Hobbie, J.E. (2012) Land of Extremes: A Natural History of the Arctic North Slope of Alaska. University of Alaska Press, Fairbanks, AK.
3. Moore, J.C., de Ruiter, P.C. (2012) Energetic food webs: An analysis of real and model ecosystems. OUP Oxford.
4. Crump, B.C., Ducklow, H., Hobbie, J.E., (2012) Chapter 10: Estuarine microbial food webs, *In: Day, J.W., Crump, B.C., Kemp, W.M., Yanez-Arancibia, A. (Eds.), Estuarine Ecology*, 2nd ed. John Wiley & Sons.
5. De Ruiter, P.C., Moore, J.C., (2012) Top-down control, *In: Hastings, A., Gross, L.J. (Eds.), Encyclopedia of Theoretical Ecology*. University of California Press, pp. 739-744.
6. Gough, L., (2012) Freshwater arctic tundra wetlands, *In: Batzer, D.P., Baldwin, A.H. (Eds.), Wetland Habitats of North America: Ecology and Conservation Concerns*. University of California Press, pp. 371-386.
7. Moore, J.C., De Ruiter, P.C., (2012) Bottom-up control, *In: Hastings, A., Gross, L.J. (Eds.), Encyclopedia of Theoretical Ecology*. University of California Press, pp. 106-112.
8. Prowse, T.D., Alfredsen, K., Beltaos, S., Bonsal, B., Duguay, C., Korhola, A., McNamara, J., Vincent, W.F., Vuglinsky, V., Weyhenmeyer, G., (2011) Changing Lake and River Ice Regimes: Trends, Effects and Implications, *Snow, Water, Ice and Permafrost in the Arctic (SWIPA): Climate change and the Cryosphere*. Arctic Monitoring and Assessment Programme, Oslo, Norway.
9. Wallenstein, M., Allison, S.D., Ernakovich, J., Steinweg, J.M., Sinsabaugh, R.L., (2011) Controls on the temperature sensitivity of soil enzymes: a key driver of *in situ* enzyme activity rates, *In: Shukla, G., Varma, A. (Eds.), Soil Enzymology*. Springer-Verlag, pp. 245-258.
10. Moore, J.C., (2013) Diversity, Taxonomic versus Functional, *In: Levin, S. (Ed.), Encyclopedia of Biodiversity*, 2 ed. Elsevier Academic Press, pp. 648-656.

### Theses and Student Projects

#### Doctoral Theses

1. Adams, H.E. (2010) Controls on bacterial productivity in arctic lakes and streams. Ecology and Evolutionary Biology, University of Michigan Ph. D., Ph.D. Thesis.
2. Dobkowski, J.A. (In progress) Mineral absorption effects on permafrost carbon. Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

3. Heskell, M.A. (2013) Environmental Controls of Foliar Respiration in Arctic Tundra Plants. Department of Ecology, Evolution and Environmental Biology, Columbia University, Ph. D. Thesis.
4. Simpson, R. (2010) Soil organic matter and aggregate dynamics in an arctic ecosystem. Ecology Department, Colorado State University, Ph.D. Thesis.
5. Sweet, S. (In progress) Impacts of changing arctic seasonality on the phenology of graminoid vs. woody deciduous shrub dominated tundra. Department of Earth and Environmental Sciences, Columbia University, New York, NY, Ph.D. Thesis.

#### ***Masters Theses***

6. Daniels, W. (2013) The impacts of nutrient enrichment and a thermokarst failure on epilimnetic algae in Arctic lakes of differing morphometry. Geological Sciences, Brown University, Providence, RI, M.S. Thesis.
7. Harrold, K.H. (2013) Stratification Influences on Instream Chemistry and Export within a Beaded Arctic Stream. University of North Carolina, Chapel Hill, NC, M.S. Thesis.
8. Longo, W.M. (2013) Novel tri-unsaturated alkenones in arctic lakes: Implications for paleotemperature reconstruction. Geological Sciences, Brown University, Providence, RI, M.S. Thesis.
9. Merck, M.F. (2011) Variability of Water Storage and Instream Temperature in Beaded Arctic Streams. Civil and Environmental Engineering, Utah State University, M.S. Thesis.
10. Rich, M.E. (2012) Arctic arthropod communities in habitats of differing shrub abundance. Department of Biology, University of Texas at Arlington, M.S. Thesis.

#### ***Senior Undergraduate Theses***

11. Beveridge, L. (2013) Scaling from leaf to canopy: to what extent does scale affect the photosynthetic light response curve and resulting measures of photosynthesis? School of Geosciences, University of Edinburgh, Edinburgh, UK, Senior Honors Thesis.
12. Bitterman, D. (2010) Early season respiration in *Betula nana* and *Eriophorum vaginatum*, two important tundra plant species. Department of Ecology, Evolution and Environmental Biology, Columbia University, Senior Thesis with Honors.
13. Formica, A. (2013) Quantifying the physiology of structurally complex arctic vegetation and implications for carbon cycling in a shrubbier tundra. Department of Earth and Environmental Sciences, Columbia University, Senior Thesis with Honors.
14. Gersony, J. (In progress) Changes in arctic vegetation and associated changes in resources for herbivorous arthropods. Department of Ecology, Evolutionary and Environmental Biology, Columbia University, New York, NY, Senior Thesis.
15. Gibson, R. (In progress) Analyzing spectral signatures as rapid indicators of leaf biochemistry in plants of the Arctic tundra. Department of Ecology, Evolutionary and Environmental Biology, Columbia University, New York, NY, Senior Thesis.
16. Gratton, Z. (2013) Interactions between canopy structure and leaf trait distribution in arctic shrub communities. School of Geosciences, University of Edinburgh, Edinburgh, UK, Senior Honors Thesis.
17. Harris-Coble, L. (2012) Arthropod availability for migratory songbirds in Alaskan tundra: Timing of abundance of aquatic and terrestrial sources. Department of Ecology, Evolutionary and Environmental Biology, Columbia University, Senior Thesis.
18. Pendergast, G. (2011) Temperature response of leaf respiration influenced by emerging canopy dynamics in arctic shrub species. Department of Ecology, Evolution and Environmental Biology, Columbia University, Senior Thesis.