ARCTIC LTER PUBLICATIONS – 1975 to December 2010

Journal Articles, Books, Book Chapters and Student Theses

1. Adams, H.E., Crump, B.C., Kling, G.W. (2010) Temperature controls on aquatic bacterial production and community dynamics in arctic lakes and streams. *Environmental Microbiology*, **12**:5, 1319–1333.

2. Alexander, V., Whalen, S.C., Klingensmith, K.M. (1988) Nitrogen cycling in arctic lakes and ponds. *Hydrobiologia*, **172**, 165-172.

3. Allan, J.D., Flecker, A.S., Segnini, S., Taphorn, D.C., Sokol, E., Kling, G.W. (2006) Limnology of Andean piedmont rivers of Venezuela. *Journal of the North American Benthological Society*, **25**:1, 66-81.

4. Arft, A.M., Walker, M.D., Gurevitch, J., Alatalo, J.M., Bret-Harte, M.S., Dale, M., Diemer, M., Gugerli, F., Henry, G.H.R., Jones, M.H., Hollister, R.D., Jonsdottir, I.S., Laine, K., Levesque, E., Marion, G.M., Molau, U., Molgaard, P., Nordenhall, U., Raszhivin, V., Robinson, C.H., Starr, G., Stenstrom, A., Stenstrom, M., Totland, O., Turner, P.L., Walker, L.J., Webber, P.J., Welker, J.M., Wookey, P.A. (1999) Responses of tundra plants to experimental warming:Meta-analysis of the international tundra experiment. *Ecological Monographs*, **69**:4, 491-511.

5. Arscott, D.B., Bowden, W.B., Finlay, J.C. (1998) Comparison of epilithic algal and bryophyte metabolism in an arctic tundra stream, Alaska. *Journal of the North American Benthological Society*, **17**:2, 210-227.

6. Arscott, D.B., Bowden, W.B., Finlay, J.C. (2000) Effects of desiccation and temperature/irradiance on the metabolism of two arctic stream bryophyte taxa. *Journal of the North American Benthological Society*, **19**:2, 263-273.

7. Bahr, M., Hobbie, J.E., Sogin, M.L. (1996) Bacterial diversity in an arctic lake: a freshwater SAR11 cluster. *Aquatic Microbial Ecology*, **11**:3, 271-277.

8. Benstead, J.P., Deegan, L.A., Peterson, B.J., Huryn, A.D., Bowden, W.B., Suberkropp, K., Buzby, K.M., Green, A.D., Vacca, J.A. (2005) Responses of beaded Arctic stream to short-term N and P fertilization. *Freshwater Biology*, **50**, 277-290.

9. Benstead, J.P., Green, A.C., Deegan, L.A., Peterson, B.J., Slavik, K., Bowden, W.B., Hershey, A.E. (2007) Recovery of three Arctic stream reaches from experimental nutrient enrichment. *Freshwater Biology*, **52**, 1077-1089.

10. Bettez, N., Rublee, P., O'Brien, W.J., Miller, M.C. (2002) Changes in abundance, composition and controls within the plankton of a fertilized arctic lake. *Freshwater Biology*, **47**, 303-311.

11. Biesinger, Z., Rastetter, E., Kwiatkowski, B. (2007) Hourly and daily models of active layer evolution in Arctic soils. *Ecological Modelling*, **206**, 131-146.

12. Boelman, N.T., Stieglitz, M., Rueth, H., Sommerkorn, M., Griffin, K.L., Shaver, G.R., Gamon, J.A. (2003) Response of NDVI, Biomass, and Ecosystem Gas Exchange to Long-Term Warming and Fertilization in Wet Sedge Tundra. *Oecologia*, **135**, 414-421.

13. Boelman, N.T., Stieglitz, M., Griffin, K.L., Shaver, G.R. (2005) Inter-annual variability of NDVI in response to long-term warming and fertilization in wet sedge and tussock tundra. *Oecologia*, **143**:4, 588-597.

14. Booth, M.S., Stark, J.M., Rastetter, E. (2005) Controls on nitrogen cycling in terrestrial ecosystems: a synthetic analysis of literature data. *Ecological Monographs*, **75**:2, 139-157.

15. Bowden, W.B., Peterson, B.J., Finlay, J.C., Tucker, J. (1992) Epilithic chlorophyll a, photosynthesis and respiration in control of a tundra stream. *Hydrobiologia*, **240**, 121-132.

16. Bowden, W.B., Finlay, J.C., Maloney, P.E. (1994) Long-term effects of PO4 fertilization on the distribution of bryophytes in an arctic river. *Freshwater Biology*, **32**, 445-454.

17. Bowden, W.B., Grp, S.B. (1999) Roles of bryophytes in stream ecosystems. *Journal of the North American Benthological Society*, **18**:2, 151-184.

18. Bowden, W.B., Gooseff, M.N., Balser, A., Green, A., Peterson, B.J., Bradford, J. (2008) Sediment and nutrient delivery from thermokarst features in the foothills of the North Slope, Alaska: Potential impacts on headwater stream ecosystems. *Journal of Geophysical Research*, **113**:G02026, 12 pp.

19. Bradford, J.H., McNamara, J.P., Bowden, W.B., Gooseff, M.N. (2005) Measuring thaw depth beneath arctic streams using ground-penetrating radar. *Hydrological Processes*, **19**:14, 2689-2699.

20. Bradford, J.H., Johnson, C.R., Brosten, T., McNamara, J.P., Gooseff, M.N. (2007) Imaging thermal stratigraphy in freshewater lakes using georadar. *Geophysical Research Letters*, **34**:24, L24405.

21. Bret-Harte, M.S., Shaver, G.R., Zoerner, J.P., Johnstone, J.F., Wagner, J.L., Chavez, A.S., Gunkelman, R.F.I., Lippert, S.C., Laundre, J.A. (2001) Developmental plasticity allows Betula Nana to dominate tundra subjected to an altered environment. *Ecology*, **82**:1, 18-32.

22. Bret-Harte, M.S., Shaver, G.R., Chapin, F.S. (2002) Primary and secondary stem growth in Arctic shrubs: Implications for community response to environmental change. *Journal of Ecology*, **90**, 251-267.

23. Bret-Harte, M.S., Garcia, E.A., Sacré, V.M., Whorley, J.R., Wagner, J.L., Lippert, S.C., Chapin, F.S.I. (2004) Plant and soil responses to neighbour removal and fertilization in Alaskan tussock tundra. *Journal of Ecology*, **92**, 635-647.

24. Bret-Harte, M.S., Mack, M.C., Goldsmith, G.R., Sloan, D.B., DeMarco, J., Shaver , G., Ray, P.M., Biesinger, Z., Chapin III, F.S. (2008) Plant functional types do not predict biomass responses to removal and fertilization in Alaskan tussock tundra. *Journal of Ecology*, **96**:4, 713-726.

25. Brosten, T., Bradford, J.H., McNamara, J.P., Zarnetske, J.P., Gooseff, M.N., Bowden, W.B. (2006) Temporal thaw depth beneath two arctic stream types using ground-penetrating radar. *Permafrost and Periglacial Processes*, **17**:4, 341-355.

26. Brosten, T., Bradford, J.H., McNamara, J.P., Gooseff, M.N., Zarnetske, J.P., Bowden, W.B., Johnston, M.E. (2009) Multi-offset GPR methods for hyporheic zone investigations. *Near Surface Geophysics*, **7**:4, 247-257.

27. Brosten, T.R., Bradford, J.H., McNamara, J.P., Gooseff, M.N., Zarnetske, J.P., Bowden, W.B., Johnston, M.E. (2009) Estimating 3D variation in active-layer thickness beneath arctic streams using ground-penetrating radar. *Journal of Hydrology*, **373**:3–4, 479-486.

28. Brown, J., Hinkel, K.M., Nelson, F.E. (2000) The Circumpolar Active Layer Monitoring (CALM) program: Research designs and initial results. *Polar Geography*, **24**:2, 165-258.

29. Butler, M.G. (1982) A seven-year cycle for two Chironomus species in arctic Alaskan tundra ponds (Diptera:Chironomidae). *Canadian Journal of Zoology*, **60**, 58-70.

30. Buzby, K., Deegan, L. (1999) Retention of anchor and passive integrated transponder tags by Arctic grayling. *North American Journal of Fisheries Management*, **19**, 1147-1150.

31. Buzby, K., Deegan, L.A. (2000) Inter-annual fidelity to summer feeding sites in arctic grayling. *Environmental Biology of Fishes*, **59**, 319-327.

32. Buzby, K., Deegan, L.A. (2004) Long-term survival of adult Arctic grayling in the Kuparuk River, Alaska. *Canadian Journal of Fisheries and Aquatic Sciences*, **61**:10, 1954-1964.

33. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Johansson, M., Jolly, D., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R. (2004) Rationale, concepts and approach to the assessment. *Ambio*, **33**:7, 393-397.

34. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Elster, J., Henttonen, H., Laine, K., Taulavuori, K., Taulavuori, E., Zöckler, C. (2004) Biodiversity, distributions and adaptations of Arctic species in the context of environmental change. *Ambio*, **33**:7, 404-417.

35. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Elster, J., Jonsdottir, I.S., Laine, K., Taulavuori, K., Taulavuori, E., Zöckler, C. (2004) Responses to projected changes in climate and UV-B at the species level. *Ambio*, **33**:7, 418-435.

36. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Henttonen., H. (2004) Effects on the structure of Arctic ecosystems in the short- and long-term. *Ambio*, **33**:7, 436-447.

37. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Schaphoff, S., Sitch, S. (2004) Effects on landscape and regional processes and feedbacks to the climate system. *Ambio*, **33**:7, 459-468.

38. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Schaphoff, S., Sitch, S., Zöckler., C. (2004) Synthesis of effects in four Arctic subregions. *Ambio*, **33**:7, 469-473.

39. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R., Schaphoff, S., Sitch, S., Zöckler., C. (2004) Key findings and extended summaries. *Ambio*, **33**:7, 386-392.

40. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R. (2004) Past changes in Arctic terrestrial ecosystems, climate and UV radiation. *Ambio*, **33**:7, 398-403.

41. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R. (2004) Effects on the function of Arctic ecosystems in the short- and long-term perspectives. *Ambio*, **33**:7, 448-458.

42. Callaghan, T.V., Björn, L.O., Chernov, Y., Chapin, F.S., Christensen, T.R., Huntley, B., Ims, R.A., Jolly, D., Johansson, M., Jonasson, S., Matveyeva, N., Panikov, N., Oechel, W.C., Shaver, G.R. (2004) Uncertainties and recommendations. *Ambio*, **33**:7, 474-479.

43. Campioli, M., Street, L.E., Michelsen, A., Shaver, G.R., Maere, T., Samson, R., Lemeur, R. (2009) Determination of Leaf Area Index, Total Foliar N, and Normalized Difference Vegetation Index for Arctic Ecosystems Dominated by Cassiope tetragona. *Arctic, Antarctic, and Alpine Research*, **41**:4, 426-433.

44. Castillo, M., Allan, J.D., Sinsabaugh, R.L., Kling, G. (2004) Seasonal and interannual variation of bacterial production in lowland rivers of the Orinoco basin. *Freshwater Biology*, **49**, 1400-1414.

45. Chapin, F.S., III, Shaver, G.R. (1981) Changes in Soil Properties and Vegetation Following Disturbance of Alaskan Arctic Tundra. *Journal of Applied Ecology*, **18**:2, 605-617.

46. Chapin, F.S., III, Shaver, G.R. (1985) Individualistic growth response of tundra plant species to environmental manipulations in the field. *Ecology*, **66**:2, 564-576.

47. Chapin, F.S., III, Shaver, G.R., Kedrowski, R.A. (1986) Environmental controls over carbon, nitrogen and phosphorus fractions in Eriophorum vaginatum in Alaskan tussock tundra. *Journal of Ecology*, **74**:1, 167-195.

48. Chapin, F.S., III, Fetcher, N., Kielland, K., Everett, K.R., Linkins, A.E. (1988) Productivity and nutrient cycling of Alaskan tundra: enhancement by flowing soil water. *Ecology*, **69**, 693-702.

49. Chapin, F.S., III, Shaver, G.R. (1988) Differences in carbon and nutrient fractions among arctic growth forms. *Oecologia*, **77**:4, 506-514.

50. Chapin, F.S., III, Shaver, G.R. (1989) Lack of latitudinal variations in graminoid storage reserves. *Ecology*, **70**, 269-272.

51. Chapin, F.S., III, Shaver, G.R. (1989) Differences in growth and nutrient use among arctic plant growth forms. *Functional Ecology*, **3**:1, 73-80.

52. Chapin, F.S., III, McGraw, J.B., Shaver, G.R. (1989) Competition causes regular spacing of alder in Alaskan shrub tundra. *Oecologia*, **79**:3, 412-416.

53. Chapin, F.S., Moilanen, L., Kielland, K. (1993) Preferential use of organic nitrogen for growth by a non-mycorrhial arctic sedge. *Nature*, **361**, 150-153.

54. Chapin, F.S., III, Shaver, G.R., Giblin, A.E., Nadelhoffer, K.J., Laundre, J.A. (1995) Responses of Arctic tundra to experimental and observed changes in climate. *Ecology*, **76**:3, 694-711.

55. Chapin, F.S., III, Zimov, S.A., Shaver, G.R., Hobbie, S.E. (1996) CO2 fluctuation at high latitudes. *Nature*, **383**, 585-586.

56. Chapin, F.S., III, Shaver, G.R. (1996) Physiological and growth responses of arctic plants to a field experiment simulating climatic change. *Ecology*, **77**:3, 822-840.

57. Chapin, F.S., III, , McGuire, A.D., Randerson, J., Pielke, R., Baldocchi, D., Hobbie, S.E., Roulet, N., Eugster, W., Kasischke, E., Rastetter, E.B., Zimov, S.A., Running, S.W. (2000) Arctic and boreal ecosystems of western North America as components of the climate system. *Global Change Biology*, **6**, 211-223.

58. Chapin, F.S., III, Woodwell, G.M., Randerson, J.T., Rastetter, E.B., Lovett, G.M., Baldocchi, D.D., Clark, D.A., Harmon, M.E., Schimel, D.S., Valentini, R., Wirth, C., Aber, J.D., Cole, J.J., Goulden, M.L., Harden, J.W., Heimann, M., Howarth, R.W., Matson, P.A., McGuire, A.D., Melillo, J.M., Mooney, H.A., Neff, J.C., Houghton, R.A., Pace, M.L., Ryan, M.G., Running, S.W., Sala, O.E., Schlesinger, W.H., Schulze, E.D. (2006) Reconciling Carbon-cycle Concepts, Terminology, and Methods. *Ecosystems*, **9**:7, 1041-1050.

59. Cherry, J.E., Tremblay, L.B., Déry, S.J., Stieglitz, M. (2005) Reconstructing Solid Precipitation Snow Depth Measurements and a Land Surface Model. *Water Resources Research*, **41**:9, W09401.

60. Chester, A.L., Shaver, G.R. (1982) Reproductive effort in cotton grass tussock tundra. *Holarctic Ecology*, **5**:2, 200-206.

61. Chester, A.L., Shaver, G.R. (1982) Seedling dynamics of some cotton grass tussock tundra species during the natural revegetation of small disturbed areas. *Holarctic Ecology*, **5**:2, 207-211.

62. Clark, C.M., Cleland, E.E., Collins, S.L., Fargione, J.E., Gough, L., Gross, K.L., Pennings, S.C., Suding, K.N., Grace, J.B. (2007) Environmental and plant community determinants of species loss following nitrogen enrichment. *Ecology Letters*, **10**, 596-607.

63. Clein, J.S., Schimel, J.P. (1995) Microbial activity of tundra and taiga soils at sub-zero temperatures. *Soil Biology and Biochemistry*, **27**:9, 1231-1234.

64. Clein, J.S., Kwiatkowski, B.L., McGuire, A.D., Hobbie, J.E., Rastetter, E.B., Melillo, J.M., Kicklighter, D.W. (2000) Modeling carbon responses of tundra ecosystems to historical and project climate: A comparison of a plot- and a global-scale ecosystem model to identify process-based uncertainties. *Global Change Biology*, **6**:s1, 127-140.

65. Cleland, E.E., Clark, C.M., Collins, S.L., Fargione, J.E., Gough, L., Gross, K.L., Milchunas, D.L., Pennings, S.V., Bowman, W.D., Burke, I.C., Lauenroth, W.K., Robertson, G.P., Simpson, J.C., Tilman, G.D., Suding, K.N. (2008) Species responses to nitrogen fertilization in herbaceous plant communities, and associated species traits Ecological Archives E089-070. *Ecology*, **89**:4, 1175.

66. Clemmensen, K.E., Michelsen, A., Jonasson, S., Shaver, G.R. (2006) Increased ectomycorrhizal fungal abundance after long-term fertilization and warming of two arctic tundra ecosystems. *New Phytologist*, **171**:2, 391-404.

67. Cole, J.J., Caraco, N., Kling, G.W., Kratz, T. (1994) Carbon dioxide supersaturation in the surface waters of lakes. *Science*, **265**:5178, 1568-1570.

68. Cooper, L.W., Benner, R., McClelland, J.W., Peterson, B.J., Holmes, R.M., Raymond, P.A., Hansell, D.A., Grebmeier, J.M., Codispoti, L.A. (2005) Linkages among runoff, dissolved organic carbon, and the stable oxygen isotope composition of seawater and other water mass indicators in the Arctic Ocean. *Journal of Geophysical Research: Biogeosciences*, **110**:G2, G02013.

69. Cornelissen, J.H.C., Callaghan, T.V., Alatalo, J.M., Michelsen, A., Graglia, E., Hartley, A.E., Hik, D.S., Hobbie, S.E., Press, M.C., Robinson, C.H., Henry, G.H.R., Shaver, G.R., Phoenix, G.K., Gwynn Jones, D., Jonasson, S., Chapin III, F.S., Molau, U., Neill, C., Lee, J.A., Melillo, J.M., Sveinbjörnsson, B., Aerts, R. (2001.) Global change and arctic ecosystems: is lichen decline a function of increases in vascular plant biomass? *Journal of Ecology*, **89**, 984-994.

70. Cornelissen, J.H.C., van Bodegom, P.M., Aerts, R., Callaghan, T.V., van Logtestijn, R.S.P., Alatalo, J., Chapin, F.S., Gerdol, R., Gudmundsson, J., Gwynn-Jones, D., Hartley, A.E., Hik, D.S., Hofgaard, A., Jónsdóttir, I.S., Karlsson, S., Klein, J.A., Laundre, J., Magnusson, B., Michelsen, A., Molau, U., Onipchenko, V.G., Quested, H.M., Sandvik, S.M., Schmidt, I.K., Shaver, G.R., Solheim, B., Soudzilovskaia, N.A., Stenström, A., Tolvanen, A., Totland, Ø., Wada, N., Welker, J.M., Zhao, X., Team, M.O.L. (2007) Global negative vegetation feedback to climate warming responses of leaf litter decomposition rates in cold biomes. *Ecology Letters*, **10**, 619-627.

71. Cornwell, J. (1985) Sediment Accumulation rates in an Alaskan arctic lake using a modified 210Pb technique. *Canadian Journal of Fisheries and Aquatic Sciences*, **42**, 809-814.

72. Cornwell, J.C. (1986) Diagenetic trace metal profiles in arctic lake sediments. *Environmental Science & Technology*, **20**, 299-302.

73. Cornwell, J.C. (1987) Phosphorus cycling in arctic lake sediments: adsorption and authigenic minerals. *Archives of Hydrobiology*, **109**, 161-179.

74. Cornwell, J.C. (1992) Cation export from Alaskan arctic watershed. *Hydrobiologia*, **240**, 15-22.

75. Cornwell, J.C., Banahan, S. (1992) A silicon budget for an Alaskan arctic lake. *Hydrobiologia*, **240**:1-3, 37-44.

76. Cornwell, J.C., Kipphut, G.W. (1992) Biogeochemistry of manganese- and iron-rich sediments in Toolik Lake, Alaska. *Hydrobiologia*, **240**, 45-59.

77. Crump, B.C., Kling, G.W., Bahr, M., Hobbie, J.E. (2003) Bacterioplankton community shifts in an Arctic lake correlate with seasonal changes in organic matter source. *Applied and Environmental Microbiology*, **69**:4, 2253-2268.

78. Crump, B.C., Hobbie, J.E. (2005) Synchrony and seasonality in bacterioplankton communities of two temperate rivers. *Limnology and Oceanography*, **50**:6, 1718-1729.

79. Crump, B.C., Adams, H.E., Hobbie, J.E., Kling, G.W. (2007) Biogeography of bacterioplankton in lakes and streams of an Arctic tundra catchment. *Ecology*, **88**, 1365-1378.

80. Crump, B.C., Peterson, B.J., Raymond, P.A., Amon, R.M., Rinehart, A., McClelland, J.W., Holmes, R.M. (2009) Circumpolar synchrony in big river bacterioplankton. *Proceedings of the National Academy of Sciences*, **106**:50, 21208-21212.

81. Cuker, B.E., Mozley, S.C. (1981) Summer population fluctuations, feeding, and growth of hydra in an arctic lake. *Limnology and Oceanography*, **26**, 697-708.

82. Cuker, B.E. (1983) Grazing and nutrient interactions in controlling the activity and composition of the epilithic algal community of an arctic lake. *Limnology and Oceanography*, **28**, 133-141.

83. Cuker, B.E. (1983) Competition and coexistence between the grazing snail Lymnaea, Chironomidae, and Microcrustacea in an arctic epilithic lacustrine community. *Ecology*, **64**, 10-15.

84. Cuker, B.E., McDonald, M.E., Mozley, S.C. (1992) Influences of slimy sculpin (Cottus cognatus) predation on the rocky littoral invertebrate community of an arctic lake. *Hydrobiologia*, **240**, 83-90.

85. De Ruiter, P.C., Wolters, V., Moore, J.C., Winemiller, K.O. (2005) Food Web Ecology: Playing Jenga and Beyond. *Science*, **309**:5731, 68-71.

86. Deegan, L.A., Peterson, B.J. (1992) Whole river fertilization stimulates fish production in an arctic tundra river. *Canadian Journal of Fisheries and Aquatic Sciences*, **49**, 1890-1901.

87. Deegan, L.A., Peterson, B.J., Golden, H., MacIvor, C., Miller, M. (1997) The effects of fish density and river fertilization on algal standing stock, invertebrate communities and fish production in an Arctic river. *Canadian Journal of Fisheries and Aquatic Sciences*, **54**:2, 269-283.

88. Deegan, L.A., Golden, H.E., Harvey, C.J., Peterson, B.J. (1999) Influence of environmental variability on the growth of age-0 and adult Arctic grayling. *Transactions of the American Fisheries Society*, **128**:6, 1163-1175.

89. Deegan, L.A., Golden, H., Harrison, J., Kracko, K. (2005) Swimming ability and metabolism of 0+ Arctic grayling (*Thymallus arcticus*). *Journal of Fish Biology*, **67**:4, 910-918.

90. Déry, S.J., Stieglitz, M. (2002) A note on surface humidity measurements in the cold Canadian environment. *Boundary Layer Meteorology*, **102**, 491-497.

91. Déry, S.J., Crow, W.T., Stieglitz, M., Wood, E.F. (2004) Modeling snowcover hyeterogeneity over complex terrain for regional and global climate models. *Journal of Hydrometeorology*, **5**, 33-48.

92. Déry, S.J., Stieglitz, M., Rennermalm, A.K., Wood, E.F. (2005) The Water Budget of the Kuparuk Basin, Alaska. *Journal of Hydrometeorology*, **6**:5, 633-655.

93. Déry, S.J., Stieglitz, M., McKenna, E.C., Wood, E.F. (2005) Characteristics and Trends of River Discharge, into Hudson, James, and Ungava Bays, 1964 - 1994. *Journal of Climate*, **18**:14, 2540-2557.

94. Déry, S.J., Salomonson, V.S., Stieglitz, M., Hall, D.K., Apple, I. (2005) An Approach to Using Snow Areal Depletion Curves Inferred from MODIS and its Application for Land Surface Modelling in Alaska. *Hydrological Processes*, **19**:14, 1755-2774.

95. Dodds, W.K., Lopez, A.J., Bowden, W.B., Gregory, S., Grimm, N.B., Hamilton, S.K., Hershey, A.E., Marti, E., McDowell, W.H., Meyer, J.L., Morrall, D.D., Mulholland, P.J., Peterson, B.J., Tank, J.L., Valett, H.M., Webster, J.R., Wollheim, W.M. (2002) N uptake as a function of concentration in streams. *Journal of North American Benthological Society*, **21**, 206-220.

96. Dodds, W.K., Marti, E., Tank, J.L., J. Pontius, J., Hamilton, S.K., Grimm, N.B., Bowden, W.B., McDowell, W.H., Peterson, B.J., Valett, H.M., Webster, J.R., Gregory, S. (2004) Carbon and nitrogen stoichiometry and nitrogen cycling rates in streams. *Oecologia*, **140**, 458-467.

97. Douhovnikoff, V., Goldsmith, G., Tape, K., Huang, C., Sur, N., Bret-Harte, M. (2010) Clonal Diversity in an Expanding Community of Arctic Salix spp. and a Model for Recruitment Modes of Arctic Plants. *Arctic, Antarctic, and Alpine Research*, **42**:4, 406-411.

98. Douma, J.C., Van Wijk, M., Shaver, G. (2007) The contribution of mosses to the carbon and water exchange of arctic ecosystems: Quantification and relationship with system properties. *Plant, Cell and Environment*, **30**, 1205-1215.

99. Downs, M., Michener, R., Fry, B., Nadelhoffer, K. (1999) Routine measurement of dissolved inorganic 15N in streamwater. *Environmental Monitoring and Assessment*, **55**, 211-220.

100. Ducharne, A., Koster, R.D., Suarez, M.J., Stieglitz, M., Kumar, P. (2000) A catchment-based approach to modeling land surface processes in a GCM - Part II: Parameter estimation and model demonstration. *Journal of Geophysical Research*, **105**:24823-24838.

101. Dzialowski, A.R., O'Brien, W.J. (2004) Arctic zooplankton community structure: Is competition important? *Freshwater Biology*, **49**, 1103-1111.

102. Edwardson, K.J., Bowden, W.B., Dahm, C., Morrice, J. (2003) The hydraulic characteristics and geochemistry of hyporrheic and parafluvial zones in Arctic tundra streams, North Slope, Alaska. *Advances in Water Resources*, **26**, 907-923.

103. Elser, J.J., O'Brien, W.J., Dobberfuhl, D.R., Dowling, T.E. (2000) The evolution of ecosystem processes: Growth rate and elemental stoichiometry of a key herbivore in temperate and arctic habitats. *Journal of Evolutionary Biology*, **13**, 845-853.

104. Engel, V.C., Stieglitz, M., Williams, M., Griffin, K.G. (2002) The effect of canopy hydraulic properties on ecosystem water use: Observatrions and modeling. *Ecological Modelling*, **154**, 263-288.

105. Eugster, W., Kling, G.W., Jonas, T., McFadden, J., Weust, A., MacIntyre, S., Chapin, F.S. (2003) CO2 exchange between air and water in an arctic Alaskan and mid-latitude Swiss lake: the importance of convective mixing. *Journal of Geophysical Research*, **108**:D12, 4362.

106. Evans, B.I., O'Brien, W.J. (1987) A re-evaluation of the search cycle of plankivorous Arctic grayling, *Thymallus arcticus*. *Canadian Journal of Fisheries and Aquatic Sciences*, **45**, 187-192.

107. Evans, M.A., MacIntyre, S., Kling, G.W. (2008) Internal wave effects on primary productivity: experiments, theory and modeling. *Limnology and Oceanography*, **53**, 339-353.

108. Federle, T.W., Vestal, J.R. (1980) Lignocellulose mineralization by arctic lake sediments in response to nutrient manipulation. *Applied and Environmental Microbiology*, **40**:1, 32-39.

109. Federle, T.W., Vestal, J.R. (1980) Microbial colonization and decomposition of (Carex) litter in an arctic lake. *Applied and Environmental Microbiology*, **39**, 8888-8893.

110. Federle, T.W., Vestal, J.R. (1982) Evidence of microbial succession on decaying leaf litter in an arctic lake. *Canadian Journal of Microbiology*, **28**, 686-695.

111. Federle, T.W., McKinley, V.L., Vestal, J.R. (1982) Effects of nutrient enrichment on the colonization and decomposition of plant detritus by the microbiota of an arctic lake. *Microbiology*, **28**, 1199-1205.

112. Federle, T.W., McKinley, V.L., Vestal, J.R. (1982) Physical determinants of microbial colonization and decomposition of plant litter in an arctic lake. *Microbial Ecology*, **8**:2, 127-138.

113. Fetcher, N., Shaver, G.R. (1982) Growth and tillering patterns within tussocks of Eriophorum vaginatum. *Holarctic Ecology*, **5**:2, 180-186.

114. Fetcher, N., Shaver, G.R. (1983) Life histories of tillers of Eriophorum vaginatum in relation to tundra disturbance. *Journal of Ecology*, **71**:1, 131-147.

115. Fetcher, N. (1985) Effects of removal of neighboring species on growth, nutrients, and microclimate of *Eriophorum vaginatum*. *Arctic and Alpine research*, **17**:1, 7-17.

116. Fetcher, N., Shaver, G.R. (1990) Environmental sensitivity of ecotypes as a potential influence on primary productivity. *American Naturalist*, **136**:1, 126-131.

117. Finlay, J.C., Bowden, W.B. (1994) Controls on production of bryophytes in arctic tundra stream. *Freshwater Biology*, **32**, 455-466.

118. Fitzgerald, W.F., Engstrom, D.R., Lamborg, C.H., Tseng, C.M., Balcolm, P.H., Hammerschmidt, C.R. (2005) Modern and Historic Atmospheric Mercury Fluxes in Northern Alaska: Global Sources and Arctic Depletion. *Environmental Science & Technology*, **39**, 557-568.

119. Ford, T.E., Lock, M.A. (1988) A microcalorimetric investigation of the effect of high molecular weight organics on epilithic microbial metabolism. *Archiv fur Hydrobiologie Beiheft*, **31**, 195-201.

120. Ford, T.E., Walch, M., Mitchell, R., Kaufman, M.J., Lock, M.A. (1989) Influence of nutrient enrichment of an arctic river on biofilm formation on metal surfaces. *Biofouling*, **1**, 301-311.

121. Fry, B. (1991) Stable isotope diagrams of freshwater food webs. *Ecology*, **72(6)**, 2293-2297.

122. Gartner, B.L., Chapin, F.S., III, Shaver, G.R. (1983) Demographic patterns of seedling establishment and growth of native graminoids in an Alaskan tundra disturbance. *Journal of Applied Ecology*, **20**:3, 965-980.

123. Gartner, B.L., Chapin, F.S., III, Shaver, G.R. (1986) Reproduction of Eriophorum vaginatum by seed in Alaskan tussock tundra. *Journal of Ecology*, **74**:1, 1-18.

124. Gettel, G.M., Deegan, L.A., Harvey, C.J. (1997) A comparison of whole and thin-sectioned otolith aging techniques and validation of annuli for Arctic grayling. *Northwest Science*, **71**:3, 224-232.

125. Gettel, G.M., Giblin, A.E., Howarth, R.W. (2007) The effects of grazing by the snail *Lymnaea elodes* on benthic N2 fixation and primary production in oligotrophic, arctic lakes. *Limnology and Oceanography*, **52**:6, 2398–2409.

126. Gibeau, G.G., Miller, M.C. (1989) A micro-bioassay for epilithon using nutrient diffusing artificial substrata. *Journal of Freshwater Ecology*, **5**, 171-176.

127. Giblin, A.E., Nadelhoffer, K.J., Shaver, G.R., Laundre, J.A., McKerrow, A.J. (1991) Biogeochemical diversity along a riverside toposequence in Arctic Alaska. *Ecological Monographs*, **61**:4, 415-435.

128. Giblin, A.E., Laundre, J., Nadelhoffer, K., Shaver, G. (1994) Measuring nutrient availability in arctic soils using ion-exchange resins: a field test. *Soil Science Society of America Journal*, **58**:4, 1154-1162.

129. Golden, H., Deegan, L.A. (1998) The trophic interactions of your Arctic grayling (*Thymalus arcticus*) in an arctic tundra stream. *Freshwater Biology*, **39**:4, 637-648.

130. Gooseff, M.N., Payn, R.A., Zarnetske, J.P., Bowden, W.B., McNamara, J.P., Bradford, J.H. (2008) Comparison of in-channel mobile-immobile zone exchange during instantaneous and constant-rate stream tracer additions: Implications for design and interpretation of non-conservative tracer experiments. *Journal of Hydrology*, **357**:1, 112-1124.

131. Gooseff, M.N., Balser, A., Bowden, W.B., Jones, J.B. (2009) Effects of Hillslope Thermokarst in Northern Alaska. *Eos, Transactions American Geophysical Union*, **90**:4, 29-30.

132. Gough, L., Shaver, G.R., Carroll, J., Royer, D.L., Laundre, J.A. (2000) Vascular plant species richness in Alaskan arctic tundra: the importance of soil pH. *Journal of Ecology*, **88**:1, 54-66.

133. Gough, L., Osenberg, C.W., Gross, K.L., Collins, S.L. (2000) Fertilization effects on species density and primary productivity in herbaceous plant communities. *Oikos*, **89**, 428-439.

134. Gough, L., Wookey, P.A., Shaver, G.R. (2002) Dry heath arctic tundra responses to long-term nutrient and light manipulation. *Arctic, Antarctic and Alpine Research*, **34**, 211-218.

135. Gough, L., Hobbie, S.E. (2003) Responses of moist non-acidic arctic tundra to altered environment: Productivity, biomass and species richness. *Oikos*, **103**, 204-216.

136. Gough, L. (2006) Neighbor effects on germination, survival and growth in two Arctic tundra plant communities. *Ecography*, **29**, 44-56.

137. Gough, L., Ramsey, E.A., Johnson, D.R. (2007) Plant-herbivore interactions in Alaskan arctic tundra change with soil nutrient availability. *Oikos*, **116**, 407-418.

138. Gough, L., Shrestha, K., Johnson, D.R., Moon, B. (2008) Long-term mammalian herbivory and nutrient addition alter lichen community structure in Alaskan dry heath tundra. *Arctic, Antarctic, and Alpine Research*, **40**:1, 65-73.

139. Goyke, A.P., Hershey, A.E. (1992) Effects of fish predation on larval chironomid (Diptera, Chironomidae) communities in an arctic ecosystem. *Hydrobiologia*, **240**, 203-212.

140. Graglia, E., Julkunen-Tiitto, R., Shaver, G., Schmidt, I.K., Jonasson, S., Michelsen, A. (2001) Changes in birch phenolic compounds in long term manipulations of temperature, nutrients and light in Alaska and N. Sweden. *New Phytologist*, **151**, 227-236.

141. Greenwald, M.J., Bowden, W.B., Gooseff, M.N., Zarnetske, J.P., McNamara, J.P., Bradford, J.H., Brosten, T.R. (2008) Hyporheic exchange and water chemistry of two arctic tundra streams of contrasting geomorphology. *Journal of Geophysical Research: Biogeosciences*, **113**:G02029, 14pp.

142. Gross, K.L., Willig, M.R., Gough, L., Inouye, R., Cox., S. (2000) Patterns of species diversity and productivity at different spatial scales in herbaceous plant communities. *Oikos*, **89**, 417-427.

143. Hall, R., Peterson, B.J., Meyer, J.L. (1998) Testing a nitrogen-cycling model of a forest stream by using a nitrogen 15N tracer addition. *Ecosystems*, **1**, 283-298.

144. Hammerschmidt, C.R., Fitzgerald, W.F., Lamborg, C.H., Balcom, P.H., Tseng, C.M. (2006) Biogeochemical Cycling of Methylmercury in Lakes and Tundra Watersheds of Arctic Alaska. *Environmental Science & Technology*, **40**:4, 1204-1211.

145. Hammerschmidt, C.R., Fitzgerald, W.F. (2006) Photodecomposition of Methylmercury in an Arctic Alaskan Lake. *Environmental Science & Technology*, **40**:4, 1212-1216.

146. Hanson, K.L., Hershey, A.E., McDonald, M.E. (1992) A comparison of slimy sculpin (Cottus cognatus) populations in arctic lakes with and without piscivorous predators. *Hydrobiologia*, **240**, 189-202.

147. Harvey, C.J., Peterson, B.J., Bowden, W.B., Deegan, L.A., Finlay, J.C., Hershey, A.E., Miller, M.C. (1997) Organic matter dynamics in the Kuparuk River, a tundra river in Alaska, USA. *Journal of the North American Benthological Society*, **16**:1, 18-22.

148. Harvey, C.J., Peterson, B.J., Bowden, W.B., Hershey, A.E., Miller, M.C., Deegan, L.A., Finlay, J.C. (1998) Biological responses to fertilization of Oksrukuyik Creek, a tundra stream. *Journal of the North American Benthological Society*, **17**:2, 190-209.

149. Hasegawa, Y., Hobbie, J.E. (2010) Application of Molecular Knowledge of Microbes to Studies of Ecological Processes: Why the Integration Is So Challenging. *Bulletin of the Ecological Society of America*, **91**:1, 68-79.

150. Heatherly, T., Whiles, M.R., Gibson, D.J., Collins, S.L., Huryn, A.D., Jackson, J.K., Palmer, M.A. (2007) Stream insect occupancy-frequency patterns and metapopulation structure. *Oecologia*, **151**:2, 313-321.

151. Herbert, D.A., Rastetter, E.B., Shaver, G.R., Ågren, G. (1999) Effects of plant growth characteristics on biogeochemistry and community composition in a changing climate. *Ecosystems*, **2**, 367-382.

152. Herbert, D.A., Rastetter, E.B., Gough, L., Shaver, G.R. (2004) Species diversity along nutrient gradients: An analysis of resource competition in model ecosystems. *Ecosystems*, **7**:3, 296-310.

153. Hershey, A.E. (1985) Effects of predatory sculpin on the chironomid communities in an arctic lake. *Ecology*, **66**, 1131-1138.

154. Hershey, A.E. (1985) Littoral chironomid communities in an arctic Alaskan lake. *Holarctic Ecology*, **8**, 39-48.

155. Hershey, A.E., McDonald, M.E. (1985) Diet and digestion rates of slimy sculpin, *Cottus cognatus*, in an Alaskan arctic lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **42**:3, 483-487.

156. Hershey, A.E. (1986) Selective predation by *Procladius* in an arctic Alaskan lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **43**:12, 2523-2528.

157. Hershey, A.E., Hiltner, A.L. (1988) Effects of caddisfly activity on black fly density: Interspecific interactions outweigh food limitation. *Journal of the North American Benthological Society*, **7**:3, 188-196.

158. Hershey, A.E., Hiltner, A.L., Hullar, M.A.J., Miller, M.C., Vestal, R.J., Lock, M.A., Rundle, S., Peterson, B.J. (1988) Nutrient influence on a stream grazer: Orthocladius microcommunities respond to nutrient input. *Ecology*, **69**:5, 1383-1392.

159. Hershey, A.E. (1990) Snail populations in arctic lakes: competition mediated by predation. *Oecologia*, **82**, 26-32.

160. Hershey, A.E. (1992) Effects of experimental fertilization on the benthic macroinvertebrate community of an arctic lake. *Journal of the North American Benthological Society*, **11**, 204-217.

161. Hershey, A.E., Pastor, J., Peterson, B.J., Kling, G.W. (1993) Stable isotopes resolve the drift paradox for Baetis mayflies in an arctic river. *Ecology*, **74**, 2315-2325.

162. Hershey, A.E., Gettel, G., McDonald, M.E., Miller, M.C., Mooers, H., O'Brien, W.J., Pastor, J., Richards, C., Hamilton, S.K., Schuldt, J. (1999) A geomorphic-trophic model for landscape control of Arctic lake food webs. *Bioscience*, **49**:11, 887-897.

163. Hershey, A.E., Gettel, G., McDonald, M.E., Miller, M.C., Mooers, H., O'Brien, W.J., Pastor, J., Richards, C., Schuldt, J. (2000) The geomorphic-trophic hypothesis for arctic lake food webs. *Vereinigung Verhandlungen International Limnologie*, **27**, 3269-3274.

164. Hershey, A.E., S. Beaty, S., Fortino, K., Kelly, S., Keyse, M., Luecke, C., O'Brien, W.J. (2005) d13 C signatures of chironomids in arctic lakes: Role and direction of benthic-pelagic coupling. *Vereinigung Verhandlungen International Limnologie*, **29**, 92-96.

165. Hershey, A.E., Beaty, S., Fortino, K., Keyse, M., Mou, P.P., O'Brien, W.J., Ulseth, A.J., Gettel, G.A., Lienesch, P.W., Luecke, C., McDonald, M.E., Mayer, C.H., Miller, M.C., Richards, C., Schuldt, J.A., Whalen, S.C. (2005) Effect of landscape factors on fish distributions in arctic Alaskan lakes. *Freshwater Biology*, **51**, 39-55.

166. Hershey, A.E., Beaty, S., Fotino, K., Kelly, S., Keyse, M., Luecke, C., O'Brien, W.J., Whalen, S.C. (2006) Stable isotope signatures of benthic invertebrates in arctic lakes indicate limited coupling to pelagic production. *Limnology and Oceanography*, **51**, 177-188

167. Hiltner, A.L., Hershey, A.E. (1992) Blackfly (Diptera:Simuliidae) responses to phosphorus enrichment of an arctic tundra stream. *Hydrobiologia*, **240**, 259-266.

168. Hinterleitner-Anderson, D.L., Hershey, A.E., Schuldt, J.A. (1992) The effects of river fertilization of Mayfly (Baetis sp.) drift patterns and population density in an arctic river. *Hydrobiologia*, **240**, 247-258.

169. Hinzman, L.D., Bettez, N.D., Bolton, W.R., Chapin, F.S., Dyurgerov, M.B., Fastie, C.L., Griffith, B., Hollister, R.D., Hope, A., Huntington, H.P., Jensen, A.M., Jia, G.J., Jorgenson, T., Kane, D.L., Klein, D.R., Kofinas, G., Lynch, A.H., Lloyd, A.H., McGuire, A.D., Nelson, F.E., Oechel, W.C., Osterkamp, T.E., Racine, C.H., Romanovsky, V.E., Stone, R.S., Stow, D.A., Sturm, M., Tweedie, C.E., Vourlitis, G.L., Walker, M.D., Walker, D.A., Webber, P.J., Welker, J.M., Winker, K., Yoshikawa, K. (2005) Evidence and implications of recent climate change in northern Alaska and other arctic regions. *Climate Change*, **72**:3, 251-298.

170. Hobara, S., McCalley, C., Koba, K., Giblin, A., Weiss, M., Gettel, G., Shaver, G. (2006) Nitrogen fixation in surface soils and vegetation in an Arctic tundra watershed: A key source of atmospheric nitrogen. *Arctic, Antarctic, and Alpine Research*, **38**, 363-372.

171. Hobbie, J.E., Corliss, T.L., Peterson, B.J. (1983) Seasonal patterns of bacterial abundance in an arctic lake. *Arctic and Alpine research*, **15**, 253-259.

172. Hobbie, J.E., Helfrich, J.V.K., III (1988) The effect of grazing by microprotozoans on production of bacteria. *Archives of Hydrobiology*, **31**, 281-288.

173. Hobbie, J.E. (1991) Microbial control of dissolved organic carbon in lakes: research for the future. *Hydrobiologia*, **229**, 169-180.

174. Hobbie, J.E., Kwiatkowski, B.L., Rastetter, E.B., Walker, D.A., McKane, R.B. (1998) Carbon cycling in the Kuparuk Basin: Plant production, carbon storage, and sensitivity to future changes. *Journal of Geophysical Research*, **103**:D22, 29065-29073.

175. Hobbie, S.E., Chapin, F.S.I. (1998) An experimental test of limits to tree establishment in arctic tundra. *Journal of Ecology*, **86**, 449-461.

176. Hobbie, S.E., Chapin, F.S.I. (1998) The response of tundra plant biomass, aboveground production, nitrogen, and CO2 flux to experimental warming. *Ecology*, **79**, 1526-1544.

177. Hobbie, J.E., Peterson, B.J., Bettez, N., Deegan, L.A., O'Brien, W.J., Kling, G.W., Kipphut, G.W., Bowden, W.B., Hershey, A.E. (1999) Impact of global change on biogeochemistry and ecology of an arctic freshwater system. *Polar Research*, **18**:2, 207-214.

178. Hobbie, J.E., Bahr, M., Rublee, P.A. (1999) Controls on microbial food webs in oligotrophic arctic lakes. *Archiv fur Hydrobiologie Beiheft*, **54**, 61-76.

179. Hobbie, S.E., Shevtsova, A., Chapin, F.S.I. (1999) Plant responses to species removal and experimental warming in Alaskan tussock tundra. *Oikos*, **84**, 417-434.

180. Hobbie, S.E., Gough, L. (2002) Foliar and soil nutrients in tundra on glacial landscapes of contrasting ages in Northern Alaska. *Oecologia*, **131**:3, 453-462.

181. Hobbie, S.E., Miley, T.A., Weiss, M. (2002) Carbon and nitrogen cycling in soils from different glacial surfaces in northern Alaska. *Ecosystems*, **5**, 761-774.

182. Hobbie, S.E., Nadelhoffer, K.J., Högberg, P. (2002) A synthesis: The role of nutrients as constraints on carbon balances in boreal and arctic regions. *Plant and Soil*, **242**, 163-170.

183. Hobbie, J.E., Carpenter, S.R., Grimm, N.B., Gosz, J.R., Seastedt, T.R. (2003) The U.S. Long Term Ecological Research (LTER) Program. *Bioscience*, **53**:1, 21-32.

184. Hobbie, J.E. (2003) Scientific Accomplishments of the Long Term Ecological Research Program: An Introduction. *Bioscience*, **53**:1, 17-20.

185. Hobbie, S.E., Gough, L. (2004) Litter decomposition in moist acidic and non-acidic tundra with different glacial histories. *Oecologia*, **140**, 113-124.

186. Hobbie, S.E., Gough, L., Shaver, G. (2005) Species compositional differences on different-aged glacial landscapes drive contrasting responses of tundra to nutrient addition. *Ecology*, **93**, 770-782.

187. Hobbie, J.E., Hobbie, E.A. (2006) N-15 in symbiotic fungi and plants estimates nitrogen and carbon flux rates in Arctic tundra. *Ecology*, **87**:4, 816-822.

188. Hobbie, E.A., Hobbie, J.E. (2008) Natural abundance of 15N in nitrogen-limited forests and trundra can estimate nitrogen cycling through mycoorrhizal fungi: A review. *Ecosystems*, **11**:5, 815-830.

189. Hobbie, J.E., Hobbie, E.A., Weber, J.C., Shamhar, J., Drossman, H., Conte, M.H. (2009) Mycorrhizal fungi supply nitrogen to host plants in arctic tundra and boreal forests: 15N is the key signal. *Canadian Journal of Microbiology*, **55**, 84-94.

190. Hoeksema, J.D., Chaudhary, V.B., Gehring, C.A., Johnson, N.C., Karst, J., Koide, R.T., Pringle, A., Zabinski, C., Bever, J.D., Moore, J.C., Wilson, G.W.T., Klironomos, J.N., Umbanhowar, J. (2010) A meta-analysis of context-dependency in plant response to inoculation with mycorrhizal fungi. *Ecology Letters*, **13**:3, 394-407.

191. Holmes, R.M., McClelland, J.W., Sigman, D.M., Fry, B., Peterson, B.J. (1998) Measuring 15N-NH4+ in marine, estuarine and fresh waters: an adaptation of the ammonia diffusion method for samples with low ammonium concentrations. *Marine Chemistry*, **60**:3-4, 235-243.

192. Hullar, M.A.J., Kaufman, M.J., Vestal, J.R. (1986) The effects of nutrient enrichment on the distribution of microbial heterotrophic activity in arctic lakes. *ISME*, **Proc. IV**, 207-212.

193. Hullar, M.A., Vestal, J.R. (1989) The effects of nutrient limitation and stream discharge on the epilithic microbial community in an arctic stream. *Hydrobiologia*, **172**, 19-26.

194. Huryn, A.D., Slavik, K.A., Lowe, R.L., Parker, S.M., Anderson, D.S., Peterson, B.J. (2005) Landscape heterogeneity and the biodiversity of Arctic stream communities: a habitat template analysis. *Canadian Journal of Fish and Aquatic Sciences*, **62**:8, 1905–1919

195. Jefferies, R.L., Klein, D.R., Shaver, G.R. (1994) Vertebrate herbivores and northern plant communities: Reciprocal influences and responses. *Oikos*, **71**:2, 193-206.

196. Johnson, L.C., Shaver, G.R., Giblin, A.E., Nadelhoffer, K.J., Rastetter, E.R., Laundre, J.A., Murray, G.L. (1996) Effects of drainage and temperature on carbon balance of tussock tundra microcosms. *Oecologia*, **108**:4, 737-748.

197. Johnson, L.C., Shaver, G.R., Cades, D.H., Rastetter, E., Nadelhoffer, K., Giblin, A., Laundre, J., Stanley, A. (2000) Plant carbon-nutrient interactions control CO2 exchange in Alaskan wet sedge tundra ecosystems. *Ecology*, **81**:2, 453-469.

198. Johnson, N.C., Hoeksema, J.D., Bever, J.D., Chaudhary, V.B., Gehring, C., Klironomos, J., Koide, R., Miller, R.M., Moore, J., Moutoglis, P., Schwartz, M., Simard, S., Swenson, W., Umbanhowar, J., Wilson, G., Zabinski, C. (2006) From Lilliput to Brobdingnag: Extending Models of Mycorrhizal Function across Scales. *Bioscience*, **56**:11, 889-900.

199. Johnson, C.R., O'Brien, W.J., Macintyre, S. (2007) Vertical and temporal distribution of two copepod species, *Cyclops scutifer* and *Diaptomus pribilofensis*, in 24 h arctic daylight. *Journal of Plankton Research*, **29**:3, 275-289.

200. Johnson, C.R., Luecke, C., Whalen, S.C., Evans, M.A. (2010) Direct and indirect effects of fish on pelagic nitrogen and phosphorus availability in oligotrophic Arctic Alaskan lakes. *Canadian Journal of Fisheries and Aquatic Sciences*, **67**:10, 1635-1648.

201. Johnston, C.J., Kipphut, G.W. (1988) Microbially mediated Mn(II) oxidation in an oligotrophic arctic lake. *Applied and Environmental Microbiology*, **54**, 1440-1445.

202. Jonasson, S., Shaver, G.R. (1999) Within-stand nutrient cycling in arctic and boreal wetlands. *Ecology*, **80**:7, 2139-2150.

203. Jordan, M.J., Hobbie, J.E., Peterson, B.J. (1978) Effect of petroleum hydrocarbons on microbial populations in an arctic lake. *Arctic*, **31**, 170-179.

204. Judd, K.E., Kling, G.W. (2002) Production and export of dissolved C in arctic tundra mesocosms: The roles of vegetation and water flow. *Biogeochemistry*, **60**, 213-234.

205. Judd, K.E., Adams, H.E., Bosch, N.S., Kostrzewski, J.M., Scott, C.E., Schultz, B.M., Wang, D.H., Kling, G.W. (2005) A Case History: Effects of Mixing Regime on Nutrient Dynamics and Community Structure in Third Sister Lake, Michigan During Late Winter and Early Spring 2003. *Lake and Reservoir Management*, **21**:3, 316-329.

206. Judd, K.E., Crump, B.C., Kling, G.W. (2006) Environmental drivers control ecosystem function in bacteria through changes in community composition. *Ecology*, **87**, 2068-2079.

207. Judd, K.E., Crump, B.C., Kling, G.W. (2007) Bacterial responses in activity and community composition to photo-oxidation of dissolved organic matter from soil and surface waters. *Aquatic Sciences*, **69**, 96-107.

208. Keller, K., Blum, J., Kling, G.W. (2007) Geochemistry of soils and streams on surfaces of varying ages in arctic Alaska. *Arctic, Antarctic, and Alpine Research*, **39**, 84-98.

209. Keller, K., Blum, J.D., Kling, G.W. (2010) Stream geochemistry as an indicator of increasing permafrost thaw depth in an arctic watershed. *Chemical Geology*, **273**:1–2, 76-81.

210. Kettle, D., O'Brien, W.J. (1978) Vulnerability of arctic zooplankton to lake trout predation. *Journal of the Fisheries Research Board of Canada*, **35**, 1495-1500.

211. Kettle, D., O'Brien, W.J. (1978) Vulnerability of arctic zooplankton species to predation by small lake trout (*Salvelinus namaycush*). *Journal of the Fisheries Research Board of Canada*, **35**, 1495-1500.

212. Keyes, M.D., Fortino, K., Hershey, A.E., O'Brien, W.J., Lienesch, P.W., Luecke, C., McDonald, M. (2007) Effects of large lake trout (*Salvelinus namaycush*) on the dietary habits of small lake trout: a comparison of stable isotopes (delta N-15 and delta C-13) and stomach content analyses. *Hydrobiologia*, **579**:1, 175-185.

213. Kielland, K., Barnett, B., Schell, D. (1998) Intraseasonal variation in the D15 N signature of taiga trees and shrubs. *Canadian Journal of Forest Research*, **28**:(3), 485-488.

214. King, J.Y., Reeburgh, W.S., Thieler, K.K., Kling, G.W., Loya, W.M., Johnson, L.C., Nadelhoffer, K.J. (2002) Pulse-labeling studies of carbon cycling in Arctic tundra ecosystems: The contribution of photosynthates to methane emission. *Global Biogeochemical Cycles*, **16**:4, 1062.

215. Kipphut, G.W., Whalen, S.C. (1992) Access pipes for sampling through thick ice. *Hydrobiologia*, **240**, 267-269.

216. Kling, G.W., Kipphut, G.W., Miller, M.C. (1991) Arctic lakes and streams as gas conduits to the atmosphere: implications for tundra carbon budgets. *Science*, **251**, 298-301.

217. Kling, G.W., Fry, B., O'Brien, W.J. (1992) Stable isotopes and planktonic trophic structure in arctic lakes. *Ecology*, **73**, 561-566.

218. Kling, G.W., Kipphut, G.W., Miller, M.C. (1992) The flux of CO2 and CH4 from lakes and rivers in arctic Alaska. *Hydrobiologia*, **240**, 23-36.

219. Kling, G.W., O'Brien, W.J., Miller, M.C., Hershey, A.E. (1992) The biogeochemistry and zoogeography of lakes and rivers in arctic Alaska. *Hydrobiologia*, **240**, 1-14.

220. Kling, G., Kipphut, G., Miller, M.C., O'Brien, W.J. (1999) The influence of spatial position, landscape morphology, and downslope processing on the coherence of limnological characteristics in a chain of lakes and streams. *Freshwater Biology*, **41**, 1-21.

221. Kling, G.W., Kipphut, G.W., Miller, M.C., O'Brien, W.J. (2000) Integration of lakes and streams in a landscape perspective: the importance of material processing on spatial patterns and temporal coherence. *Freshwater Biology*, **43**, 477-497.

222. Kling, G.W. (2000) A lake's life is not its own. *Nature*, **408**, 149-150.

223. Klingensmith, K.M., Alexander, V. (1983) Sediment nitrification, denitrification and nitrous oxide production in a deep arctic lake. *Applied and Environmental Microbiology*, **46**, 1084-1092.

224. Knapp, A.K., Smith, M.D. (2001) Variation among biomes in temporal dynamics of aboveground primary production. *Science*, **291**, 481-484.

225. Knapp, A.K., Briggs, J.M., Collins, S.L., Archer, S.R., Bret-Harte, M.S., Ewers, B.E., Peters, D.P., Young, D.R., Shaver, G.R., Pendall, E., Cleary, M.B. (2008) Shrub encroachment in North American grasslands: shift in growth form dominance rapidly alters control of ecosystem C inputs. *Global Change Biology*, **14**:3, 615-623.

226. Koster, R.D., Suarez, M.J., Ducharne, A., Stieglitz, M., Kumar, P. (2000) A catchment-based approach to modeling land surface processes in a GCM - Part I: Model structure. *Journal of Geophysical Research*, **105**, 24809-24822.

227. Kratz, T.K., Deegan, L.A., Harmon, M.E., Lauenroth, W.K. (2003) Ecological variability in space and time: Insights gained from US LTER Program. *Bioscience*, **53**:1, 57-67.

228. Kriet, K., Peterson, B.J., Corliss, T.L. (1992) Water and sediment export of the Upper Kuparuk River drainage of the North Slope of Alaska. *Hydrobiologia*, **240**, 71-81.

229. Lambers, H., Raven, J.A., Shaver, G., Smith, S.E. (2008) Specialised nutrient-acquisition strategies reflect plant adaptations to changing N and P status as soils change over geological time scales. *Trends in Ecology and Evolution*, **23**:2, 95-103.

230. Laurion, I., Vincent, W.F., MacIntyre, S., Retamal, L., Dupont, C., Francus, P., Pienitz, R. (2010) Variability in greenhouse gas emissions from permafrost thaw ponds. *Limnology and Oceanography*, **55**:1, 115-133.

231. Le Dizès, S., Kwiatkowski, B.L., Rastetter, E.B., Hope, A., Hobbie, J.E., Stow, D., Daeschner, S. (2003) Modeling biogeochemical responses of tundra ecosystems to temporal and spatial variations in climate in the Kuparuk River Basin (Alaska). *Journal of Geophysical Research-Atmospheres*, **108**:D2, 8165.

232. Lechowicz, M.J., Shaver, G.R. (1982) A multivariate approach to the analysis of factorial fertilization experiments in Alaskan arctic tundra. *Ecology*, **63**:4, 1029-1038.

233. Lee, J.O., Hershey, A.E. (2000) The effects of aquatic bryophytes and long-term fertilization on arctic streams. *Journal of the North American Benthological Society*, **19**:4, 697-708.

234. Levine, M.A., Whalen, S.C. (2001) Nutrient limitation of phytoplankton production in Alaskan Arctic foothill lakes. *Hydrobiologia*, **455**, 189-201.

235. Lienesch, P.W., M. E. McDonald, M.E., Hershey, A.E., O'Brien, W.J., Bettez, N.D. (2005) Effects of whole-lake experimental fertilization on lake trout in a small oligotrophic arctic lake. *Hydrobiologia*, **548**, 51-66.

236. Lock, M.A., Ford, T.E. (1986) Colloidal and dissolved organic carbon dynamics in undisturbed boreal forest catchments: A seasonal study of apparent molecular weight spectra. *Freshwater Biology*, **16**, 187-195.

237. Lock, M.A., Ford, T.E. (1988) Metabolism of dissolved organic matter by attached microorganisms in rivers. *ISME*, **1V**, 367-374.

238. Lock, M.A., Ford, T.E., Fiebig, D.M., Miller, M.C., Hullar, M., Kaufman, M., Peterson, B.J., Hobbie, J. (1989) A biogeochemical survey of rivers and streams in the mountains and foothills province of arctic Alaska. *Hydrobiologia*, **115**, 499-521.

239. Lock, M.A., Ford, T.E., Hullar, M., Kaufman, M., Vestal, J.R., Volk, G.S., Ventullo, R.M. (1990) Phosphorus limitation in an arctic river biofilm- a whole ecosystem experiment. *Water Research*, **24**:12, 1545-1549.

240. Loya, W.M., Johnson, L.C., Kling, G.W., King, J.Y., Reeburgh, W.S., Nadelhoffer, K.J. (2002) Pulse-labeling studies of carbon cycling in arctic tundra ecosystems: Contribution of photosynthates to soil organic matter. *Global Biogeochemical Cycles*, **16**:4, 10-11.

241. Loya, W.M., Johnson, L., Nadelhoffer, K. (2004) Seasonal dynamics of leaf and root derived carbon in Arctic tundra mesocosms. *Soil Biology and Biochemistry*, **36**:4, 655-666.

242. Luecke, C., O'Brien, W.J. (1981) Phototoxicity of arctic zooplankton: selective factors in color morphs in Heterocope. *Limnology and Oceanography*, **26**, 454-460.

243. Luecke, C., O'Brien, W.J. (1983) Photoprotective pigments in a pond morph of *Daphnia middendorffiana*. *Arctic*, **36**:4, 365-368.

244. Luecke, C., O'Brien, W.J. (1983) The effect of Heterocope predation on zooplankton communities in arctic ponds. *Limnology and Oceanography*, **28**, 367-377.

245. Luecke, C., MacKinnon, P. (2008) Landscape effects on growth of age-0 Arctic grayling in tundra streams. *Transactions of the American Fisheries Society*, **137**:1, 236-243.

246. MacIntyre, S., Sickman, J.O., Goldthwait, S.A., Kling, G.W. (2006) Physical pathways of nutrient supply in a small, ultra-oligotrophic lake during summer stratification. *Limnology and Oceanography*, **51**:2, 1107-1124.

247. MacIntyre, S. (2008) Describing fluxes within lakes using temperature arrays and surface meteorology. *Vereinigung Verhandlungen International Limnologie*, **30**, 339-344.

248. MacIntyre, S., Fram, J.P., Bettez, N.D., O'Brien, W.J., Hobbie, J.E., Kling, G.W. (2009) Climate related variations in mixing dynamics of an Alaskan arctic lake. *Limnology and Oceanography*, **54**, 2401-2417.

249. Mack, M.C., Schuur, E.A.G., Bret-Harte, M.S., Shaver, G.R., Chapin, F.S.I. (2004) Ecosystem carbon storage in arctic tundra reduced by long-term nutrient fertilization. *Nature*, **431**, 440-443.

250. MacKay, M.D., Neale, P.J., Arp, C.D., De Senerpont Domis, L.N., Fang, X., Gal, G., Jöhnk, K., Kirillin, G., Lenters, J.D., Litchman, E., MacIntyre, S., Marsh, P., Melack, J.M., Mooij, W.M., Peeters, F., Quesada, A., Schladow, S.G., Schmid, M., Spence, C., Stefan, H.G., Stokes, S.L. (2009) Modeling lakes and reservoirs in the climate system. *Limnology and Oceanography*, **54**:6-2, 2315-2329.

251. Manizza, M., Follows, M.J., Dutkiewicz, S., McClelland, J.W., Menemenlis, D., Hill, C.N., Townsend-Small, A., Peterson, B.J. (2009) Modeling transport and fate of riverine dissolved organic carbon in the Arctic Ocean. *Global Biogeochemical Cycles*, **23**:4, GB4006.

252. Mark, A.F., Fetcher, N., Shaver, G.R., Chapin, F.S., III (1985) Estimated ages of mature tussocks of Eriophorum vaginatum along a latitudinal gradient in central Alaska, U.S.A. *Arctic and Alpine research*, **17**:1, 1-5.

253. McClelland, J.W., Holmes, R.M., Peterson, B.J., Stieglitz, M. (2004.) Increasing river discharge in the Eurasian Arctic: Consideration of dams, permafrost thaw, and fires as potential agents of change. *Journal of Geophysical Research D: Atmospheres*, **109**:D18, no. 18102.

254. McClelland, J.W., Déry, S.J., Peterson, B.J., Holmes, R.M., Wood, E.F. (2006) A pan-arctic evaluation of changes in river discharge during the latter half of the 20th century. *Geophysical Research Letters*, **33**:6, L06715.

255. McClelland, J.W., Stieglitz, M., Pan, F., Holmes, R.M., Peterson, B.J. (2007) Recent changes in nitrate and dissolved organic carbon export from the Upper Kuparuk River, North Slope, Alaska. *Journal of Geophysical Research*, **112**:G4, G04S60.

256. McDonald, M.E., Cuker, B.E., Mozley, S.C. (1982) Distribution, production and age structure of slimy sculpin (*Cottus cognatus*) in an arctic lake. *Environmental Biology of Fish*, **7**:2, 171-176.

257. McDonald, M.E., Hershey, A.E. (1989) Size structure of a lake trout (*Salvelinus namaycush*) population in an Arctic lake: influence of angling and implications for fish community structure. *Canadian Journal of Fisheries and Aquatic Sciences*, **46**, 2153-2156.

258. McDonald, M.E., Hershey, A.E. (1992) Shifts in abundance and growth of slimy sculpin in response to changes in the predator population in an arctic Alaskan lake. *Hydrobiologia*, **240**, 219-224.

259. McDonald, M.E., Hershey, A.E., O'Brien, W.J. (1992) Cost of predation avoidance in young-of-year lake trout (*Salvelinus namaycush*): growth differential in sub-optimal habitats. *Hydrobiologia*, **240**, 213-218.

260. McDonald, M.E., Hershey, A.E., Miller, M.C. (1996) Global warming impacts on lake trout in arctic lakes. *Limnology and Oceanography*, **41**:5, 1102-1108.

261. McDonald, M.E., Tikkanen, C.A., Axler, R.P., Larsen, C.P., Host, G. (1996) Fish simulation model (FIS-C): A bioenergetics based model for aquacultural wasteload applications. *Aquacultural Engineering*, **15**:4, 243-259.

262. McGraw, J.B., Shaver, G.R. (1982) Seedling density and seedling survival in Alaskan cotton grass tussock tundra. *Holarctic Ecology*, **5**:2, 212-217.

263. McGuire, A.D., Clein, J.S., Melillo, J.M., Kicklighter, D.W., Meier, R.A., Vorosmarty, C.J., Serreze, M.C. (2000) Modelling carbon responses of tundra ecosystems to historical and projected climate: sensitivity of pan-Arctic carbon storage to temporal and spatial variation in climate. *Global Change Biology*, **6**, 141-159.

264. McGuire, A.D., Melillo, J.M., Randerson, J.T., Parton, W.J., Heimann, M., Meier, R.A., Clein, J.S., Kicklighter, D.W., Sauf, S. (2000) Modeling the effects of snowpack on heterotrophic respiration across northern temperate and high latitude regions: comparison with measurements of atmospheric carbon dioxide in high latitudes. *Biogeochemistry*, **48**, 94-114.

265. McKane, R.B., Rastetter, E.B., Shaver, G.R., Nadelhoffer, K.J., Giblin, A.E., Laundre, J.A., Chapin, F.S., III (1997) Reconstruction and analysis of historical changes in carbon storage in arctic tundra. *Ecology*, **78**:4, 1188-1198.

266. McKane, R.B., Rastetter, E.B., Shaver, G.R., Nadelhoffer, K.J., Giblin, A.E., Laundre, J.A., Chapin, F.S., III (1997) Climatic effects on tundra carbon storage inferred from experimental data and a model. *Ecology*, **78**:4, 1170-1187.

267. McKane, R.B., Johnson, L.C., Shaver, G.R., Nadelhoffer, K.J., Rastetter, E.B., Fry, B., Giblin, A.E., Kielland, K., Kwiatkowski, B.L., Laundre, J.A., Murray, G. (2002) Resource-based niche provide a basis for plant species diversity and dominance in arctic tundra. *Nature*, **415**, 68-71.

268. McKinley, V.L., Vestal, J.R. (1982) The effects of acid on plant litter decomposition in an arctic lake. *Applied and Environmental Microbiology*, **43**, 1188-1195.

269. McKinley, V.L., Federle, T.W., Vestal, J.R. (1982) Effects of Petroleum hydrocarbons on plant litter microbiota in an arctic lake. *Applied and Environmental Microbiology*, **43**, 129-135.

270. McKinley, V.L., Federle, T.W., Vestal, J.R. (1983) Improvements in and environmental applications of double vial radiorespirometry for the study of microbial mineralization. *Applied and Environmental Microbiology*, **45**, 255-259.

271. McKinley, V.L., Vestal, J.R. (1991) Mineralization of glucose and lignocellulose by four arctic sediments in response to nutrient enrichment. *Applied and Environmental Microbiology*, **58**, 1554-1563.

272. McNamara, J., Kane, D., Hobbie, J., Kling, G. (2008) Hydrologic and biogeochemical controls on the spatial and temporal patterns of nitrogen and phosphorus in the Kuparuk River, arctic Alaska. *Hydrological Processes*, **22**:17, 3294–3309.

273. Meili, M., Fry, B., Kling, G.W. (1993) Fractionation of stable isotopes(13C,15N) in the food web of a humic lake. *Vereinigung Verhandlungen International Limnologie*, **25**, 501-505.

274. Meininger, C.A., Spatt, P. (1987) Variation in moss and tardigrade species assemblages in a dust-impacted arctic tundra. *Arctic and Alpine research*, **20**:1, 24-30.

275. Merrick, G.W., Hershey, A.E., McDonald, M.E. (1991) Lake trout (Salvelinus namaycush) control of snail density and size distribution in an arctic lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **48**, 498-502.

276. Merrick, G.W., Hershey, A.E., McDonald, M.E. (1992) Salmonid diet and the size, distribution, and density of benthic invertebrates in an arctic lake. *Hydrobiologia*, **240**, 225-234.

277. Meyer, J.L., McDowell, W.H., Bott, T.L., Elwood, J.W., Ishizaki, C., Melack, J.M., Peckarsky, B.L., Peterson, B.J., Rublee, P.A. (1988) Elemental dynamics in streams. *Journal of the North American Benthological Society*, **7**:4, 410-432.

278. Michaelson, G.L., Ping, C.L., Kling, G.W., Hobbie, J.E. (1998) The character and bioactivity of dissolved organic matter at thaw and in the spring runoff waters of the arctic tundra north slope, Alaska. *Journal of Geophysical Research*, **103**:D22, 28939-28946.

279. Miller, M.C., Reed, J.P. (1975) Benthic metabolism of arctic coastal ponds, Barrow, Alaska. *Vereinigung Verhandlungen International Limnologie*, **19**, 459-465.

280. Miller, M.C., Hobbie, J.E. (1976) R.A.T.E.-The Toolik Lake Program. *Arctic Bulletin*, **2**, 161-164.

281. Miller, M.C., Alexander, V., Barsdate, R.J. (1978) The effects of oil spills on phytoplankton in an arctic lake and ponds. *Arctic*, **3**, 192-218.

282. Miller, P.C., Miller, P.M., Blake-Jacobson, M., Chapin, F.S., III, Everett, K.R., Hilbert, D.W., Kummerow, J., Linkins, A.E., Marion, G.M., Oechel, W.C., Roberts, S.W., Stuart, L. (1984) Plant-soil processes in (Eriophorum vaginatum) tussock tundra in Alaska: a systems modeling approach. *Ecological Monographs*, **54**, 361-405.

283. Miller, M.C., Stout, J.R., Alexander, V. (1986) Effects of a controlled under-ice oil spill on invertebrates of an arctic and a subarctic stream. *Environmental Pollution*, **42**, 99-132.

284. Miller, M.C., Hater, G.R., Spatt, P., Westlake, P., Yeakel, D.P.p. (1986) Primary production and its control in Toolik Lake, Alaska. *Archives of Hydrobiology*, **74**:1, 97-131.

285. Miller, M.C., Stout, J.R. (1989) Variability of macroinvertebrate community composition in an arctic and subarctic stream. *Hydrobiologia*, **172**, 111-127.

286. Miller, M.C., DeOliveira, P., Gibeau, G.G. (1992) Epilithic diatom community response to years of PO4 fertilization: Kuparuk River, Alaska (68 N Lat.). *Hydrobiologia*, **240**, 103-120.

287. Molau, U., Christensen, T.R., Forbes, B., Holten, J.I., Kling, G.W., Vourlitis, G.L. (1999) Climate change effects on northern terrestrial and freshwater ecosystems: Current status assessment. *Global Change Science*, **1**, 493-495.

288. Moore, J.C., McCann, K., Setälä, H., de Ruiter, P.C. (2003) Top-down is bottom-up: Does predation in the rhizosphere regulate aboveground production? *Ecology*, **84**, 84-857.

289. Moore, J.C., McCann, K.S., de Ruiter, P.C. (2005) Modeling trophic pathways, nutrient cycling, and dynamic stability in soils. *Pedobiologia*, **49**, 499-510.

290. Moorhead, D.L., Currie, W.S., Rastetter, E.B., Parton, W.J., Harmon, M.E. (1999) Climate and litter quality controls on decomposition: An analysis of modeling approaches. *Global Biogeochemical Cycles*, **13**:2, 575-589.

291. Moosavi, S.C., Crill, P.M. (1998) CH4 oxidation by tundra wetlands as measured by a selective inhibitor technique. *Journal of Geophysical Research-Atmospheres*, **103**:D22, 29093-29106.

292. Morse, N., Bowden, W.B., Hackman, A., Pruden, C., Steiner, E., Berger, E. (2007) Using weighted average sound pressure to estimate reaeration in stream reaches. *Journal of the North American Benthological Society*, **26**:1, 28-37.

293. Mozley, S.C. (1979) Neglected characters in larval morphology as tools in taxonomy and phylogeny of Chironomidae. *Entomologica Scandiinavica Supplementum*, **10**, 27-36.

294. Mulholland, P.J., Fellows, C.S., Tank, J.L., Grimm, N.B., Webster, J.R., Hamilton, S.K., Marti, E., Ashkenas, L., Bowden, W.B., Dodds, W.K., McDowell, W.H., Paul, M.J., Peterson, B.J. (2001) Inter-biome comparison of factors controlling stream metabolism. *Freshwater Biology*, **46**, 1503-1517.

295. Nadelhoffer, K.J., Giblin, A.E., Shaver, G.R., Laundre, J.A. (1991) Effects of temperature and substrate quality on element mineralization in six Arctic soils. *Ecology*, **72**:1, 242-253.

296. Nadelhoffer, K., Shaver, G., Fry, B., Giblin, A., Johnson, L., McKane, R. (1996) 15N natural abundances and N use by tundra plants. *Oecologia*, **107**:3, 386-394.

297. Nadelhoffer, K.J., Johnson, L., Laundre, J., Giblin, A.E., Shaver, G.R. (2002) Fine root production and nutrient use in wet and moist arctic tundras as influenced by chronic fertilization. *Plant and Soil*, **242**, 107-113.

298. Nordin, A., Schmidt, I.K., Shaver, G.R. (2004) Nitrogen uptake by arctic soil microbes and plant in relation to soil nitrogen supply. *Ecology*, **85**, 955-962.

299. Nowinski, N., Trumbore, S.E., Schuur, E., Mack, M., Shaver, G. (2008) Nutrient addition prompts rapid destabilization of organic matter in an Arctic tundra ecosystem. *Ecosystems*, **11**, 16-25.

300. O'Brien, W.J., Schmidt, D. (1979) Arctic Bosmina morphology and copepod predation. *Limnology and Oceanography*, **24**, 564-568.

301. O'Brien, W.J., Buchanan, C., Haney, J. (1979) Arctic zooplankton community structure: exceptions to some general rules. *Arctic*, **32**, 237-247.

302. O'Brien, W.J., Kettle, D., Riessen, H. (1979) Helmets and invisible armor: structures reducing predation from tactile and visual planktivores. *Ecology*, **60**, 287-294.

303. O'Brien, W.J. (1979) The predator-prey interaction of planktivorous fish and zooplankton. *American Scientist*, **67**:5, 572-581.

304. O'Brien, W.J., Kettle, D. (1981) A zooplankton bioassay chamber for lab and field use. *Plankton Research*, **3**, 561-566.

305. O'Brien, W.J. (1988) The effect of container size on the feeding rate of *Heterocope septentrionalis*: a freshwater predaceous copepod. *Plankton Research*, **10**:2, 313-317.

306. O'Brien, W.J., Leucke, C. (1988) The coexistence of a predaceous copepod and a daphnid: weeding and gardening in the arctic. *Vereinigung Verhandlungen International Limnologie*, **23**, 2069-2074.

307. O'Brien, W.J., Browman, H.I., Evans, B.I. (1990) Search strategies for foraging animals. *American Scientist*, **78**, 152-160.

308. O'Brien, W.J., Evans, B.I. (1991) Saltatory search behavior in five species of planktivorous fish. *Vereinigung Verhandlungen International Limnologie*, **24**, 2371-2376.

309. O'Brien, W.J., Evans, B.I. (1992) Simulation model of the planktivorous feeding of arctic grayling: laboratory and field verification. *Hydrobiologia*, **240**, 235-246.

310. O'Brien, W.J., Hershey, A., Hobbie, J., Hullar, M.A., Kipphut, G.W., Miller, M.C., Moller, B., Vestal, J.R. (1992) Control Mechanisms of arctic lake ecosystems: a limnocorral experiment. *Hydrobiologia*, **240**, 143-188.

311. O'Brien, W.J., Showalter, J.J. (1993) Effects of current velocity and suspended debris on the drift feeding of arctic grayling. *Transactions of the American Fisheries Society*, **122**, 609-615.

312. O'Brien, W.J. (2000) Long-term impact of an invertebrate predator *Heterocope septentrionalis* on an arctic pond zooplankton community. *Freshwater Biology*, **46**:1, 39-45.

313. O'Brien, W.J. (2001) Heterocope, an important predator structuring arctic pond zooplankton communities: A mesocosm study. *Vereinigung Verhandlungen International Limnologie*, **27**, 3686-3689.

314. O'Brien, W.J., Barfield, M., Sigler, K. (2001) The functional response of drift-feeding Arctic grayling: The effects of prey density, water velocity, and location efficiency. *Canadian Journal of Fish and Aquatic Sciences*, **58**:10, 1957-1963.

315. O'Brien, W.J., Barfield, M., Bettez, N.D., Gettel, G.M., Hershey, A.E., McDonald, M.E., Miller, M.C., Mooers, H., Pastor, J., Richards, C., Schuldt, J. (2004) Physical, chemical and biotic impacts on arctic zooplankton communities and diversity. *Special Volume of Limnology and Oceanography*, **49**, 1250-1261.

316. O'Brien, W.J., Barfield, M., Bettez, N., Hershey, A.E., Hobbie, J.E., Kipphut, G., Kling, G., Miller, M.C. (2005) Long-term response and recovery to nutrient addition of a partitioned arctic lake. *Freshwater Biology*, **50**:5, 731-741.

317. O'Brien, W.J., Luecke, C., C., J., Holland, V. (2005) Variable impact of arctic grayling predation of arctic lake foodwebs. *Vereinigung Verhandlungen International Limnologie*, **29**, 685-690.

318. Oswald, W.W., Brubaker, L.B., Hu, F.S., Kling, G.W. (2003) Holocene records from the central acrtic foothills of northern Alaska: Testing the role of substrate in the response of tundra to climate changes. *Journal of Ecology*, **91**, 1034-1048.

319. Parker, S.M., Huryn, A.D. (2006) Food web structure and function in two Arctic streams with contrasting disturbance regimes. *Freshwater Biology*, **51**:7, 1249-1263.

320. Payn, R.A., Gooseff, M.N., Benson, D.A., Cirpka, O.A., Zarnetske, J.P., Bowden, W.B., McNamara, J.P., Bradford, J.H. (2008) Comparison of instantaneous and constant-rate stream tracer experiments through non-parametric analysis of residence time distributions. *Water Resources Research*, **44**:6, W06404.

321. Pennings, S.C., Clark, C.M., Cleland, E.E., Collins, S.L., Gough, L., Gross, K.L., Milchunas, D.A., Suding, K.N. (2005) Do individual plant species show predictable responses to nitrogen addition across multiple experiments? *Oikos*, **110**, 547-555.

322. Peterson, B.J., Hobbie, J.E., Haney, J.F. (1978) Daphnia grazing on natural bacteria. *Limnology and Oceanography*, **23**, 1039-1044.

323. Peterson, B.J., Hobbie, J.E., Corliss, T.L., Kriet, K. (1983) A continuous-flow periphyton bioassay: tests of nutrient limitation in a tundra stream. *Limnology and Oceanography*, **28**, 583-591.

324. Peterson, B.J., Hobbie, J.E., Hershey, A.E., Lock, M.A., Ford, T.E., Vestal, J.R., McKinley, V.L., Hullar, M.A.J., Miller, M.C., Ventullo, R.M., Volk, a.G.S. (1985) Transformation of a tundra river from heterotrophy to autotrophy by addition of phosphorus. *Science*, **229**:4720, 1383-1386.

325. Peterson, B.J., Hobbie, J.E., Corliss, T.L. (1986) Carbon flow in a tundra stream ecosystem. *Canadian Journal of Fisheries and Aquatic Sciences*, **43**:6, 1259-1270.

326. Peterson, B.J., Corliss, T.L., Kriet, K., Hobbie, J.E. (1992) Nitrogen and phosphorus concentration and export for the Upper Kuparuk River on the North Slope of Alaska in 1980. *Hydrobiologia*, **240**, 61-69.

327. Peterson, B.J., Fry, B., Deegan, L., Hershey, A.E. (1993) The trophic significance of epilithic algal production in a fertilized tundra river ecosystem. *Limnology and Oceanography*, **38**:4, 872-878.

328. Peterson, B.J., Deegan, L., Helfrich, J., Hobbie, J.E., Hullar, M., Moller, B., Ford, T.E., Hershey, A., Hiltner, A., Kipphut, G., Lock, M.A., Feibig, D.M., McKinley, V., Miller, M.C., Vestal, J.R., Venutllo, R., Volk, G. (1993) Biological response of a tundra river to fertilization. *Ecology*, **74**:3, 653-672.

329. Peterson, B.J., Bahr, M., Kling, G.W. (1997) A tracer investigation of nitrogen cycling in a pristine tundra river. *Canadian Journal of Fisheries and Aquatic Sciences*, **54**:10, 2361-2367.

330. Peterson, B.J., Wollheim, W.M., Mulholland, P.J., Webster, J.R., Meyer, J.L., Tank, J.L., Marti, E., Bowden, W.B., Valett, H.M., Hershey, A.E., McDowell, W.H., Dodds, W.K., Hamilton, S.K., Gregory, S., Morrall, D.D. (2001) Control of nitrogen export from watersheds by headwater streams. *Science*, **292**:5514, 86-90.

331. Peterson, B.J., McClelland, J., Curry, R., Holmes, R.M., Walsh, J.E., Aagaard, K. (2006) Trajectory Shifts in the Arctic and Subarctic Freshwater Cycle. *Science*, **313**:5790, 1061-1066.

332. Post, E., Forchhammer, M.C., Bret-Harte, M.S., Callaghan, T.V., Christensen, T.R., Elberling, B., Fox, A.D., Gilg, O., Hik, D.S., Hoye, T.T., Ims, R.A., Jeppesen, E., Klein, D.R., Madsen, J., McGuire, A.D., Rysgaard, S., Schindler, D.E., Stirling, I., Tamstorf, M.P., Tyler, N.J.C., van der Wal, R., Welker, J., Wookey, P.A., Schmidt, N.M., Aastrup, P. (2009) Ecological Dynamics Across the Arctic Associated with Recent Climate Change. *Science*, **325**:5946, 1355-1358.

333. Prowse, T.D., Wrona, F.J., Reist, J.D., Gibson, J.J., Hobbie, J.E., Lévesque, L.M.J., Vincent, W.F. (2006) Climate Change Effects on Hydroecology of Arctic Freshwater Ecosystems. *Ambio*, **35**:7, 347-358.

334. Prowse, T.D., Wrona, F.J., Reist, J.D., Hobbie, J.E., Lévesque, L.M.J., Vincent, W.F. (2006) General Features of the Arctic Relevant to Climate Change in Freshwater Ecosystems. *Ambio*, **35**:7, 330-338.

335. Prowse, T.D., Wrona, F.J., Reist, J.D., Gibson, J.J., Hobbie, J.E., Lévesque, L.M.J., Vincent, W.F. (2006) Historical Changes in Arctic Freshwater Ecosystems. *Ambio*, **35**:7, 339-346.

336. Rahm, J., Martel-Reny, M.-P., Moore, J.C. (2005) The Role of Afterschool and Community Science Programs in the Lives of Urban Youth. *School Science and Mathematics*, **105**:6, 283-291.

337. Rastetter, E.B., Ryan, M.G., Shaver, G.R., Melillo, J.M., Nadelhoffer, K.J., Hobbie, J.E., Aber, J.D. (1991) A general biogeochemical model describing the responses of the C and N cycles in terrestrial ecosystems to changes in CO2, climate, and N deposition. *Tree Physiology*, **9**:1-2, 101-126.

338. Rastetter, E.B., McKane, R.B., Shaver, G.R., Melillo, J.M. (1992) Changes in C storage by terrestrial ecosystems: How C-N interactions restrict responses to CO2 and temperature. *Water, Air, and Soil Pollution*, **64**:1-2, 327-344.

339. Rastetter, E.B., Shaver, G.R. (1992) A model of multiple-element limitation for acclimating vegetation. *Ecology*, **73**:4, 1157-1174.

340. Rastetter, E.B., King, A.W., Cosby, B.J., Hornberger, G.M., O'Neill, R.V., Hobbie, J.E. (1992) Aggregating Fine-Scale Ecological Knowledge to Model Coarser-Scale Attributes of Ecosystems. *Ecological Applications*, **2**:1, 55-70.

341. Rastetter, E.B. (1996) Validating models of ecosystem response to global change. *Bioscience*, **46**:3, 190-198.

342. Rastetter, E.B., Aagren, G.I., Shaver, G.R. (1997) Responses of N-limited ecosystems to increased CO2: A balanced-nutrition, coupled-element-cycles model. *Ecological Applications*, **7**:2, 444-460.

343. Rastetter, E.B., Gough, L., Hartley, A.E., Herbert, D.A., Nadelhoffer, K.J., Williams, M. (1999) A Revised Assessment of Species Redundancy and Ecosystem Reliability. *Conservation Biology*, **13**:2, 440-443.

344. Rastetter, E.B., Aber, J.D., Peters, D.P.C., Ojima, D.S., Burke, I.C. (2003) Using Mechanistic Models to Scale ecological processes across space and time. *Bioscience*, **53**:1, 68-76.

345. Rastetter, E.B., Kwiatkowski, B.L., Le Dizes, S., Hobbie, J.E. (2004) The role of down-slope water and nutrient fluxes in the response of arctic hill slopes to climate change. *Biogeochemistry*, **69**:1, 37-62.

346. Rastetter, E.B., Perakis, S.S., Shaver, G.R., Ågren, G.I. (2005) Terrestrial C sequestration at elevated-CO2 and temperature: The role of dissolved organic N loss. *Ecological Applications*, **15**:1, 71-86.

347. Rastetter, E.B., Williams, M., Griffin, K.L., Kwiatkowski, B.L., Tomasky, G., Potosnak, M.J., Stoy, P.C., Shaver, G.R., Stieglitz, M., Hobbie, J.E., Kling, G.W. (2010) Processing arctic eddy-flux data using a simple carbon-exchange model embedded in the ensemble Kalman filter. *Ecological Applications*, **20**:5, 1285-1301.

348. Raymond, P.A., McClelland, J.W., Holmes, R.M., Zhulidov, A.V., Mull, K., Peterson, B.J., Striegl, R.G., Aiken, G.R., Gurtovaya, T.Y. (2007) Flux and age of dissolved organic carbon exported to the Arctic Ocean: A carbon isotopic study of the five largest arctic rivers. *Global Biogeochemical Cycles*, **21**:4, GB4011.

349. Riessen, H., O'Brien, W.J. (1980) Re-Evaluation of the Taxonomy of *Daphnia longiremis* Sars, 1862 (Cladocera): Description of a New Morph from Alaska. *Crustaceana*, **38**:1, 1-11.

350. Rocha, A.V., Shaver, G.R. (2009) Advantages of a two band EVI calculated from solar and photosynthetically active radiation fluxe. *Agricultural and Forest Meteorology*, **149**:9, 1560-1563.

351. Rocha, A.V., Goulden, M.L. (2010) Drought legacies influence the long-term carbon balance of a freshwater marsh. *Journal of Geophysical Research D: Atmospheres*, **115**:G3, 9 pp.

352. Rooney, N., McCann, K., Gellner, G., Moore, J.C. (2006) Structural asymmetry and the stability of diverse food webs. *Nature*, **442**, 265-269.

353. Rouse, W.R., Douglas, M., Hecky, R.E., Hershey, A., Kling, G.W., Lesack, L., Marsh, P., McDonald, M., Nicholson, B., Roulet, N., Smol, J. (1997) Effects of climate change on the fresh waters of arctic and subarctic North America. *Hydrological Processes*, **11**, 873-902.

354. Rublee, P.A. (1992) Community structure and bottom-up regulation of heterotrophic microplankton in arctic LTER lakes. *Hydrobiologia*, **240**, 133-142.

355. Rublee, P.A., Bettez, N. (1995) Change of microplankton community structure in response to fertilization of an arctic lake. *Hydrobiologia*, **312**:3, 183-190.

356. Rueda, F.R., MacIntyre, S. (2009) Modeling the fate and transport of storm-river-water in small lakes of complex morphometry. *Environmental Modeling and Software*, **25**:1, 146-157.

357. Rueda, F.R., MacIntyre, S. (2009) Flowpaths and spatial heterogeneity of storm-river-water in small multi-basin lakes. *Limnology and Oceanography*, **54**:6, 2041-2057.

358. san Gil, I., Baker, K., Campbell, J., Denny, E.G., Vanderbilt, K., Riordan, B., Koskela, R., Downing, J., Grabner, S., Melendez, E., Walsh, J., Kortz, M., Conners, J., Yarmey, L., Kaplan, N., Boose, E., Powell, L., Gries, C., Schroeder, R., Ackerman, T., Ramsey, K., Benson, B., Chipman, J., Laundre, J., Garritt, R., Henshaw, D., Collins, B., Gardner, C., Bohm, S., O'Brien, M., Gao, J., Sheldon, W., Lyon, S., Bahauddin, D., Servilla, M., Costa, D., Brunt, J. (2009) The Long-Term Ecological Research community metadata standardisation project: A progress report. *International Journal of Metadata, Semantics and Ontologies*, **4**:3, 141-153.

359. Schiesari, L., Werner, E.E., Kling, G.W. (2009) Carnivory and resource-based niche differentiation in anuran larvae: implications for food web and experimental ecology. *Freshwater Biology*, **54**:3, 572-586.

360. Schmidt, D., O'Brien, W.J. (1982) Planktivorous feeding ecology of arctic grayling (*Thymallus arcticus*). *Canadian Journal of Fisheries and Aquatic Sciences*, **39**:3, 475-482.

361. Schmidt, I.K., Jonasson, S., Shaver, G., Michelsen, A., Nordin, A. (2002) Mineralization and distribution of nutrients by plants and microbes in four arctic ecosystems: responses to warming. *Plant and Soil*, **242**:1, 93-106.

362. Shaman, J., Stieglitz, M., Engel, V.C., Koster, R.D., Stark, C.P. (2002) Representation of Stormflow and a More Responsive Water Table in a TOPMODEL-Based Hydrology Model. *Water Resources Research*, **38**:8, 1156.

363. Shaver, G.R., Billings, W.D. (1975) Root Production and Root Turnover in a Wet Tundra Ecosystem, Barrow, Alaska. *Ecology*, **56**:2, 401-409.

364. Shaver, G.R., Chapin, F.S. (1980) Response to Fertilization by Various Plant Growth Forms in an Alaskan Tundra: Nutrient Accumulation and Growth. *Ecology*, **61**:3, 662-675.

365. Shaver, G.R. (1981) Mineral nutrition and leaf longevity in an evergreen shrub, *Ledum palustre* ssp. *decumbens*. *Oecologia*, **49**:3, 362-365.

366. Shaver, G.R. (1983) Mineral nutrition and leaf longevity in Ledum palustre : The role of individual nutrients and the timing of leaf mortality. *Oecologia*, **56**:2-3, 160-165.

367. Shaver, G.R., Chapin, F.S., III (1984) Limiting factors for plant growth in northern ecosystems: Future Directions for Research in Nouveau-Quebec. *McGill Subarctic Research*, **Paper No. 39**, 49-60.

368. Shaver, G.R., Lechowicz, M.J. (1985) A multivariate approach to plant mineral nutrition: Dose-response relationships and nutrient dominance in factorial experiments. *Canadian Journal of Botany*, **63**:12, 2138-2143.

369. Shaver, G.R., Fetcher, N., Chapin, F.S., III (1986) Growth and flowering in Eriophorum vaginatum: Annual and latitudinal variation. *Ecology*, **67**:6, 1524-1525.

370. Shaver, G.R., Chapin, F.S., III, Gartner, B.L. (1986) Factors limiting seasonal growth and peak biomass accumulation in Eriophorum vaginatum in Alaskan tussock tundra. *Journal of Ecology*, **74**:1, 257-278.

371. Shaver, G.R., Chapin, F.S., III (1986) Effect of fertilizer on production and biomass of tussock tundra, Alaska, U.S.A. *Arctic and Alpine research*, **18**:3, 261-268.

372. Shaver, G.R. (1986) Woody stem production in Alaskan tundra shrubs. *Ecology*, **67**:3, 660-669.

373. Shaver, G.R., Chapin, F.S., III (1991) Production: Biomass relationships and element cycling in contrasting arctic vegetation types. *Ecological Monographs*, **61**:1, 1-31.

374. Shaver, G.R., Billings, W.D., Chapin, F.S., III, Giblin, A.E., Nadelhoffer, K.J., Oechel, W.C., Rastetter, E.B. (1992) Global change and the carbon balance of arctic ecosystems. *Bioscience*, **42**:6, 433-441.

375. Shaver, G.R., Stuart Chapin, F., III (1995) Long-term responses to factorial, NPK fertilizer treatment by Alaskan wet and moist tundra sedge species. *Ecography*, **18**:3, 259-275.

376. Shaver, G.R., Laundre, J.A., Giblin, A.E., Nadelhoffer, K.J. (1996) Changes in live plant biomass, primary production, and species composition along a riverside toposequence in Arctic Alaska, U.S.A. *Arctic and Alpine research*, **28**:3, 363-379.

377. Shaver, G.R., Laundre, J. (1997) Exsertion, elongation, and senescence of leaves of *Eriophorum vaginatum* and *Carex bigelowii* in Northern Alaska. *Global Change Biology*, **3**:S1, 146-157.

378. Shaver, G.R., Johnson, L.C., Cades, D.H., Murray, G., Laundre, J.A., Rastetter, E.B., Nadelhoffer, K.J., Giblin, A.E. (1998) Biomass accumulation and CO2 flux in three Alaskan wet sedge tundras: Responses to nutrients, temperature, and light. *Ecological Monographs*, **68**:1, 75-97.

379. Shaver, G.R., Jonasson, S. (1999) Response of arctic ecosystems to climate change: Results of long-term field experiments in Sweden and Alaska. *Polar Research*, **18**:2, 245-252.

380. Shaver, G.R., Canadell, J., Chapin, F.S., Gurevitch, J., Harte, J., Henry, G., Ineson, P., Jonasson, S., Melillo, J., Pitelka, L., Rustad, L. (2000) Global warming and terrestrial ecosystems: A conceptual framework for analysis. *Bioscience*, **50**:10, 871-882.

381. Shaver, G.R., Canadell, J., Chapin, F.S., Gurevitch, J., Harte, J., Henry, G., Ineson, P., Jonasson, S., Melillo, J., Pitelka, L., Rustad, L. (2000) Global Warming and Terrestrial Ecosystems: A Conceptual Framework for Analysis. *Bioscience*, **50**:10, 871-882.

382. Shaver, G.R., Bret-Harte, M.S., Jones, M.H., Johnstone, J., Gough, L., Laundre, J., III., C.F.S. (2001) Species composition interacts with fertilizer to control long-term change in tundra productivity. *Ecology*, **82**:11, 3163-3181.

383. Shaver, G.R., Giblin, A.E., Nadelhoffer, K.J., Thieler, K.K., Downs, M.R., Laundre, J.A., Rastetter, E.B. (2006) Carbon turnover in Alaskan tundra soils: effects of organic matter quality, temperature, moisture and fertilizer. *Journal of Ecology*, **94**:4, 740-753.

384. Shaver, G.R., Street, L.E., Rastetter, E.B., van Wijk, M.T., Williams, M. (2007) Functional convergence in regulation of net CO2 flux in heterogeneous tundra landscapes in Alaska and Sweden. *Journal of Ecology*, **95**:4, 802-817.

385. Sierszen, M.E., McDonald, M.E., Jensen, D.A. (2003) Benthos as the basis for arctic lake food webs. *Aquatic Ecology*, **37**:4, 437-445.

386. Sigman, D.M., Altabet, M.A., Michener, R., McCorkle, D.C., Fry, B., Holmes, R.M. (1997) Natural abundance-level measurement of the nitrogen isotopic composition of oceanic nitrate: an adaptation of the ammonia diffusion method. *Marine Chemistry*, **57**:3, 227-242.

387. Slavik, K., Peterson, B.J., Deegan, L.A., Bowden, W.B., Hershey, A.E., Hobbie, J.E. (2004) Long-term response of the Kuparuk River ecosystem to phosphorus fertilization. *Ecology*, **85**:4, 939-954.

388. Smerdon, J.E., Stieglitz, M. (2006) Simulating heat transport of harmonic temperature signals in the Earth's shallow subsurface: Lower-boundary sensitivities. *Geophysical Research Letters*, **33**:14, L14402.

389. Soranno, P.A., Webster, K.E., Riera, J.L., Kratz, T.K., Baron, J.S., Bukaveckas, P.A., Kling, G.W., White, D.S., Caine, N., Lathrop, R.C., Leavitt, P.R. (1999) Spatial variation among lakes within landscapes: ecological organization along lake chains. *Ecosystems*, **2**:5, 395-410.

390. Spatt, P.D., Miller, M.C. (1981) Growth conditions and vitality of Sphagnum tundra community along the Alaska Pipeline Haul Road. *Arctic*, **34**:1, 48-54.

391. Steiglitz, M., Hobbie, J., Giblin, A., Kling, G. (2000) Effects of climate change and climate variability on carbon dynamics in Arctic tundra. *Global Biogeochemical Cycles*, **14**:4, 1123-1136.

392. Stevens, M.B., Smerdon, J.E., González-Rouco, J.F., Stieglitz, M., Beltrami, H. (2007) Effects of bottom boundary placement on subsurface heat storage: Implications for climate model simulations. *Geophysical Research Letters*, **34**:2, L02702.

393. Stieglitz, M., Rind, D., Famiglietti, J., Rosenzweig, C. (1997) An efficient approach to modeling the topographic control of surface hydrology for regional and global climate modeling. *Journal of Climate*, **10**, 118-137.

394. Stieglitz, M., Hobbie, J., Giblin, A., Kling, G. (1999) Hydrologic modeling of an arctic watershed: Towards Pan-Arctic predictions. *Journal of Geophysical Research*, **104**:D22, 27507-27518.

395. Stieglitz, M., Ducharne, A., Koster, R.D., Suarez, M.J. (2001) The impact of detailed snow physics on the simulation of snowcover and subsurface thermodynamics at continental scales. *Journal of Hydrometeorology*, **2**:3, 228-242.

396. Stieglitz, M., Shaman, J., McNamara, J., Kling, G.W., Engel, V., Shanley, J. (2003) An Approach to Understanding Hydrologic Connectivity on the Hillslope and the Implications for Nutrient Transport. *Global Biogeochemical Cycles*, **17**:4, 1105.

397. Stieglitz, M., Déry, S.J., Romanovsky, V.E., Osterkamp, T.E. (2003) The Role of Snow Cover in the Warming of Arctic Permafrost. *Geophysical Research Letters*, **30**:13, 1721.

398. Stieglitz, M., McKane, R.B., Klausmeier, C.A. (2006) A simple model for analyzing climatic effects on terrestrial carbon and nitrogen dynamics: An Arctic case study. *Global Biogeochemical Cycles*, **20**:3, GB3016.

399. Stieglitz, M., Smerdon, J. (2007) Characterizing land-atmosphere coupling and the implications for subsurface thermodynamics. *Journal of Climate*, **20**:1, 21-37.

400. Street, L., Shaver, G., Williams, M., Van Wijk, M. (2007) What is the relationship between changes in leaf area and changes in photosynthetic CO2 flux in Arctic ecosystems? *Journal of Ecology*, **95**:1, 139-150.

401. Suding, K.N., Collins, S.L., Gough, L., Clark, C., M,, Cleland, E.E., Gross, K.L., Milchunas, D.A., Pennings, S.C. (2005) Functional and abundance based mechanisms explain diversity loss due to soil fertilization. *Proceedings of the National Academy of Sciences*, **102**:12, 4387-4392.

402. Sugai, S.F., Kipphut, G.W. (1992) The influence of light and nutrient addition upon the sediment chemistry of iron in an arctic lake. *Hydrobiologia*, **240**:1-3, 91-101.

403. Sullivan, P.F., Sommerkorn, M., Rueth, H.M., Nadelhoffer, K.J., Shaver, G.R., Welker, J.M. (2007) Climate and species affect fine root production with long-term fertilization in acidic tussock tundra near Toolik Lake, Alaska. *Oecologia*, **153**:3, 643-652.

404. Tseng, C.M., Lamborg, C.H., Fitzgerald, W.F., Engstrom, D.R. (2004) Cycling of dissolved elemental mercury in Arctic Alaskan lakes. *Geochemica et Cosmochemica Acta*, **68**, 1173-1184.

405. van der Welle, M.E.W., Vermeulen, P.J., Shaver, G.R., Berendse, F. (2003) Factors determining plants species richness in Alaskan arctic tundra. *Journal of Vegetation Science*, **14**:5, 711-720.

406. Van Wijk, M.T., Williams, M., Laundre, J.A., Shaver, G.R. (2003) Inter-annual variability of plant phenology in tussock tundra: modelling interactions of plant productivity, snowmelt, and soil thaw. *Global Change Biology*, **9**:5, 743-758.

407. Van Wijk, M.T., Williams, M., Gough, L., Hobbie, S.E., Shaver, G.R. (2003) Luxury consumption: A possible competitive strategy in above-belowground carbon allocation for slow-growing vegetation? *Journal of Ecology*, **91**:4, 664-676.

408. van Wijk, M.T., K. Clemmensen, K., Shaver, G.R., Williams, M., Callaghan, T.V., Chapin III, F.S., Cornelissen, J.H.C., Gough, L., Hobbie, S.E., Jonasson, S., Lee, J.A., Michelsen, A., Press, M.C., Richardson, S.J., Rueth, H. (2004) Long-term ecosystem level experiments in Toolik Lake, Alaska, and Abisko, Northern Sweden: generalizations and differences in ecosystem and plant type responses to global change. *Global Change Biology*, **10**:1, 105-123.

409. Van Wijk, M., Williams, M. (2005) Optical Instruments For Measuring Leaf Area Index In Low Vegetation: Application In Arctic Ecosystems. *Ecological Applications*, **15**, 1462-1470.

410. Van Wijk, M., Williams, M., Shaver, G. (2005) Tight coupling between leaf area index and foliage N content in arctic plant communities. *Oecologia*, **142**, 421-427.

411. Vavrek, M.C., Fetcher, N., McGraw, J.B., Shaver, G.R., Chapin, F.S., III, Bovard, B. (1999) Recovery of productivity and species diversity in Tussock tundra following disturbance. *Arctic, Antarctic and Alpine Research*, **31**:3, 254-258.

412. Wahren, C.-H.A., Walker, M.D., Bret-Harte, M.S. (2005) Vegetation responses in Alaskan arctic tundra after 8 years of a summer warming and winter snow manipulation experiment. *Global Change Biology*, **11**:4, 537-552.

413. Waide, R., Willig, M., Steiner, C., Mittelbach, G., Gough, L., Dodson, S., Juday, G., Parmenter, R. (1999) The relationship between productivity and species richness. *Annual Review of Ecology and Systematics*, **30**, 257-300.

414. Walker, D.A. (2000) Hierarchical subdivision of Arctic tundra based on vegetation response to climate, parent material and topography. *Global Change Biology*, **6**:S1, 19-34.

415. Walker, M.D., Wahren, C.H., Hollister, R.D., Henry, G.H.R., Ahlquist, L.E., Alatalo, J.M., Bret-Harte, M.S., Calef, M.P., Callaghan, T.V., Carroll, A.B., Epstein, H.E., Jonsdottir, I.S., Klein, J.A., Magnusson, B., Molau, U., Oberbauer, S.F., Rewa, S.P., Robinson, C.H., Shaver, G.R., Suding, K.N., Thompson, C.C., Tolvanen, A., Totland, Ø., Turner, P.L., Tweedie, C.E., Webber, P.J., Wookey, P.A. (2006) Plant community responses to experimental warming across the tundra biome. *Proceedings of the National Academy of Sciences*, **103**:5, 1342-1346.

416. Wan, Z., Vallino, J. (2005) An Inverse Ecosystem Model of Year-to-year Variations with First Order Approximation to the Annual Mean Fluxes. *Ecological Modeling*, **187**:4, 369-388.

417. Wan, Z., Vallino, J.J., Peterson, B.J. (2008) Study of the inter-annual food web dynamics in the Kuparuk River with a first order approximation inverse model. *Ecological Modelling*, **211**:1-2, 97-112.

418. Webster, J.R., Mulholland, P.J., Tank, J.L., Valett, H.M., Dodds, W.K., Peterson, B.J., Bowden, W.B., Dahm, C.N., Findlay, S., Gregory, S.V., Grimm, N.B., Hamilton, S.K., Johnson, S.L., Martí, E., McDowell, W.H., Meyer, J.L., Morrall, D.D., Thomas, S.A., Wollheim, W.M. (2003) Factors affecting ammonium uptake in streams – an inter-biome perspective. *Freshwater Biology*, **48**:8, 1329-1352.

419. Weiss, M., Hobbie, S.E., Gettel, G. (2005) Contrasting responses of nitrogen fixation in Arctic lichens to experimental and ambient nitrogen and phosphororus availability. *Arctic, Antarctic, and Alpine Research*, **37**:3, 396-401.

420. Whalen, S.C., Alexander, V. (1984) Diel variations in inorganic carbon and nitrogen uptake by phytoplankton in an arctic lake. *Journal of Plankton Research*, **6**:4, 571-590.

421. Whalen, S.C., Alexander, V. (1984) Influence of temperature and light on rates of inorganic nitrogen transport by algae in an arctic lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **41**:9, 1310-1318.

422. Whalen, S.C., Cornwell, J.C. (1985) Nitrogen, phosphorus and organic carbon cycling in an arctic lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **42**, 797-808.

423. Whalen, S.C., Alexander, V. (1986) Chemical influences on 14C and 15C primary production in an arctic lake. *Polar Biology*, **5**, 211-219.

424. Whalen, S.C., Alexander, V. (1986) Seasonal inorganic carbon and nitrogen transport by phytoplankton in an arctic lake. *Canadian Journal of Fisheries and Aquatic Sciences*, **43**, 1177-1186.

425. White, D., Hinzman, L., Alessa, L., Cassano, J., Chambers, M., Falkner, K., Francis, J., Gutowski, B., Holland, M., Holmes, M., Huntington, H., Kane, D., Kliskey, A., Lee, C., McClelland, J., Peterson, B., Staneo, F., Steele, M., Woodgate, R., Yang, D., Yoshikawa, K., Zhang, T. (2007) The Arctic Freshwater System: Changes and Impacts. *Journal of Geophysical Research D: Atmospheres*, **112**:G4, G04S54.

426. Williams, M., Rastetter, E.B., Fernandes, D.W., Goulden, M.L., Wofsy, S.C., Shaver, G.R., Melillo, J.M., Munger, J.W., Fan, S.-M., Nadelhoffer, K.J. (1996) Modelling the soil-plant-atmosphere continuum in a Quercus-Acer stand at Harvard Forest: The regulation of stomatal conductance by light, nitrogen, and soil/plant hydraulic properties. *Plant, Cell, and Environment*, **19**:8, 911-927.

427. Williams, M., Rastetter, E.B., Fernandes, D.N., Goulden, M.L., Shaver, G.R., Johnson, L.C. (1997) Predicting gross primary productivity in terrestrial ecosystems. *Ecological Applications*, **7**:3, 882-894.

428. Williams, M., Rastetter, E.B. (1999) Vegetation characteristics and primary productivity along an arctic transect: implications for scaling-up. *Journal of Ecology*, **87**:5, 885-898.

429. Williams, M., Eugster, W., Rastetter, E.B., McFadden, J.P., Chapin, F.S., III (2000) The controls on net ecosystem productivity along an Arctic transect: a model comparison with flux measurements. *Global Change Biology*, **6**:S1, 116-126.

430. Williams, M., Rastetter, E.B., Carpino, E., Hobbie, J.E., Shaver, G.R., Kwiatkowski, B.L. (2001) Primary production of an arctic watershed: An uncertainty analysis. *Ecological Applications*, **11**:6, 1800-1816.

431. Williams, M., Street, L.E., van Wijk, M.T., Shaver, G.R. (2006) Identifying differences in carbon exchange among arctic ecosystem types. *Ecosystems*, **9**:2, 288-304.

432. Wollheim, W.M., Peterson, B.J., Deegan, L.A., Bahr, M., Hobbie, J.E., Jones, D., Bowden, W.B., Hershey, A.E., Kling, G.W., Miller, M.C. (1999) A coupled field and modeling approach for the analysis of nitrogen cycling in streams. *Journal of the North American Benthological Society*, **18**, 199-221.

433. Wollheim, W.M., Peterson, B.J., Deegan, L.A., Hobbie, J.E., Hooker, B., Bowden, W.B., Edwardson, K.J., Arscott, D.B., Hershsey, A.E., Finlay, J. (2001) Influence of stream size on ammonium and suspended particulate nitrogen processing. *Limnology and Oceanography*, **46**:1, 1-13.

434. Wollheim, W.M., Vörösmarty, C.J., Peterson, B.J., Seitzinger, S.P., Hopkinson, C.S. (2006) Relationship between river size and nutrient removal. *Geophysical Research Letters*, **33**:6, L06410.

435. Wookey, P.A., Aerts, R., Bardgett, R.D., Baptist, F., Bråthen, K.A., Cornelissen, J.H.C., Gough, L., Hartley, I.P., Hopkins, D.W., Lavorel, S., Shaver, G.R. (2009) Ecosystem Feedbacks and cascade processes: understanding their role in the responses of arctic and alpine ecosystems to environmental change. *Global Change Biology*, **15**:5, 1153-1172.

436. Wright, D., O'Brien, W.J. (1984) The development and field test of a tactical model of the planktivorous feeding of white crappie (*Pomoxis annularis*). *Ecological Monographs*, **54**:1, 65-98.

437. Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Levesque, L.M.J., Vincent, W.F. (2006) Climate Impacts on Arctic Freshwater Ecosystems and Fisheries: Background, Rationale and Impact Assessment (ACIA). *Ambio*, **35**:7, 326-329.

438. Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Levesque, L.M.J., Vincent, W.F. (2006) Climate Change Effects on Aquatic Biota, Ecosystem Structure and Function. *Ambio*, **35**:7, 359-369.

439. Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Levesque, L.M.J., Macdonald, R.W., Vincent, W.F. (2006) Effects of Ultraviolet Radiation and Contaminant-related Stressors on Arctic Freshwater Ecosystems. *Ambio*, **35**:7, 388-401.

440. Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Levesque, L.M.J., Vincent, W.F. (2006) Key Findings, Science Gaps and Policy Recommendations. *Ambio*, **35**:7, 411-415.

441. Yano, Y., Shaver, G.R., Giblin, A.E., Rastetter, E.B., Nadelhoffer, K.J. (2010) Nitrogen dynamics in a small arctic watershed: Retention and downhill movement of 15N. *Ecological Monographs*, **80**:2, 331-351.

442. Yano, Y., Shaver, G.R., Giblin, A.E., Rastetter, E.B. (2010) Depleted 15N in hydrolysable-N of arctic soils and its implication for mycorrhizal fungi–plant interaction. *Biogeochemistry*, **97**:2-3, 183-194.

443. Yurista, P.M., O'Brien, W.J. (2001) Growth, survivorship and reproduction of Daphnia middendorffiana in several Arctic lakes and ponds. *Journal of Plankton Research*, **23**, 733-744.

444. Zak, D.R., Kling, G.W. (2006) Microbial Community Composition and Function across an Arctic Tundra Landscape. *Ecology*, **87**, 1659-1670.

445. Zarnetske, J.P., Gooseff, M.N., Brosten, T.R., Bradford, J.H., McNamara, J.P., Bowden, W.B. (2007) Transient storage as a function of geomorphology, discharge, and permafrost active layer conditions in Arctic tundra streams. *Water Resources Research*, **43**:7, WR004816.

446. Zarnetske, J.P., Gooseff, M.N., Bowden, W.B., Greenwald, M.J., Brosten, T., Bradford, J.H., McNamara, J.P. (2008) Influence of morphology and permafrost dynamics on hyporheic exchange in Arctic headwater streams under warming climate conditions. *Geophysical Research Letters*, **35**:2, L02501.

447. Zwart, G., Crump, B.C., Kamst-van Agterveld, M.P., Hagen, F., Han, S.K. (2002) Typical freshwater bacteria: an analysis of available 16S rRNA gene sequences from plankton of freshwater lakes and rivers. *Aquatic Microbial Ecology*, **28**, 141-155.

Books and Book Chapters

1. Chapin, F.S., III, Jefferies, R., Reynolds, R., Shaver, G.R., Svoboda, J. (1992) Arctic ecosystems in a changing climate: an ecophysiological perspective. Academic Press, New York, NY.

2. De Ruiter, P.C., Wolters, V., Moore, J.C. (2005) Dynamic food webs: multispecies assemblages, ecosystem development and environmental change. Academic Press, San Diego, CA.

3. Hobbie, J.E. (1980) Limnology of Tundra Ponds: Barrow, Alaska. Dowden, Hutchinson and Ross, Stroudsburg, PA.

4. Hobbie, J.E. (1984) The Ecology of Tundra Ponds of the Arctic Coastal Plain: a community profile. Fish and Wildlife Service FWS/OBS-83/25.

5. Agren, G., Shaver, G.R., Rastetter, E.B., (1999) Nutrients: Dynamics and Limitations, *In:* Luo, Y., Mooney, H.A. (Eds.), *Carbon Dioxide and Environmental Stress*. Academic Press, New York, NY, pp. 333-345.

6. Brown, J., Kling, G.W., Hinkel, K.M., Hinzman, L.D., Nelson, F.E., Romanovsky, V.E., Shiklomonov, N.I., (2002) Arctic Alaska and Seward Peninsula, *In:* J. Brown, J., Hinkel, K.M., Nelson, F.E. (Eds.), *The circumpolar active layer monitoring (CALM) program: Research designs and initial results*. Polar Geography, pp. 165-258.

7. Buchanan, C., Haney, J.F., (1980) Vertical migrations of zooplankton in the arctic: a test of the environmental controls, *In:* Kerfoot, W.C. (Ed.), *Evolution and Ecology of Zooplankton Communities*. The University Press of New England, Hanover, NH, pp. 69-79.

8. Budy, P., Thiede, G.P., Luecke, C., Schneidervin, R., (2009) Warmwater and coldwater fish in two-story standing waters, *In:* Bonar, S.A., Hubert, W.A., Willis, D.W. (Eds.), *Standard methods for sampling North American fishes* American Fisheries Society., Bethesda, MD.

9. Buzby, K., Hobbie, J., Deegan, L., McDonald, M., Peterson, B., (1999) Effects of fertilization on fish in Alaskan arctic tundra streams and lakes, *In:* Stockner, J.G., Milbrink, G. (Eds.), *Restoration of Fisheries by Enrichment of Aquatic Ecosystems*. Uppsala University, Uppsala, Sweden, pp. 99-112.

10. Callaghan, T.V., Björn, L.O., Chapin, F.S., Chernov, Y., Christensen, T.R., Huntley, B., Ims, R.A., Johansson, M., Riedlinger, D.J., Jonasson, S., Matveyeva, N., Oechel, W.C., Panikov, N., Shaver, G., (2005) Arctic Tundra and Polar Desert Ecosystems, Chapter 7, *ACIA 2005: Arctic Climate Impact Assessment*. Cambridge University Press, pp. 243-352.

11. Chapin, F.S., III, Shaver, G.R., (1985) The physiological ecology of arctic plants, *In:* Chabot, B., Mooney, H.A. (Eds.), *Physiological Ecology of North American Plant Communities*. Chapman and Hall, London, pp. 16-40.

12. Chapin, F.S., III, Shaver, G.R., (1985) Arctic, *In:* Chabot, B.F., Mooney, H.A. (Eds.), *Physical Ecology of North American Plant Communities*. Chapman and Hail, New York, NY, pp. 16-40.

13. Chapin, F.S., III, Jefferies, R., Reynolds, R., Shaver, G.R., Svoboda, J., (1992) Arctic Plant physiological ecology: A challenge for the future, *In:* Chapin, F.S., III, Jeffries, R., Reynolds, R., Shaver, G.R., Svoboda, J. (Eds.), *Arctic Ecosystems in a Changing Climate: An Ecophysiological Perspective*. Academic Press, New York, NY, pp. 441-452.

14. Chapin, F.S., III, Jefferies, R., Reynolds, R., Shaver, G.R., Svoboda, J., (1992) Arctic physiological ecology in an ecosystems context, *In:* Chapin, F.S., III, Jeffries, R., Reynolds, R., Shaver, G.R., Svoboda, J. (Eds.), *Arctic Ecosystems in a Changing Climate: An Ecophysiological Perspective*. Academic Press, New York, NY, pp. 3-10.

15. Chapin, F.S., III, Hobbie, S.E., Shaver, G.R., (1997) Impacts of global change on composition of arctic communities: implications for ecosystem functioning, *In:* Oechel, W.C., Holten, J. (Eds.), *Global Change and Arctic Terrestrial Ecosystems*. Springer-Verlag, New York, NY.

16. DeBruyn, A.M.H., McCann, K.S., Moore, J.C., Strong, D.R., (2007) An Energetic Framework for Trophic Control, *In:* Rooney, N., McCann, K.S., Noakes, D.L.G. (Eds.), *From Energetics to Ecosystems: The Dynamics and Structure of Ecological Systems*. Springer Netherlands, pp. 65-85.

17. Fry, B., Jones, D.E., Kling, G.W., McKane, R.B., Nadelhoffer, K.J., Peterson, B.J., (1995) Adding 15N tracers to ecosystem experiments, *In:* Wada, E., Yoneyama, T., Minegawa, M., Ando, T., Fry, B. (Eds.), *Stable isotopes in the biosphere*. Kyoto University Press, Kyoto, pp. 171-192.

18. Giblin, A.E., (2009) Iron and Manganese, *In:* Likens, G. (Ed.), *Encyclopedia of Inland Waters*. Elsevier Press.

19. Hershey, A.E., Lamberti, G.A., (1998) Stream macroinvertebrate communities, *In:* Bilby, R.E., Naiman, R.J. (Eds.), *Ecology and Management of Streams and Rivers in the Pacific Northwest Coastal Regions*. Springer-Verlag, New York, pp. 169-192.

20. Hershey, A.E., Merritt, R.W., Miller, M.C., (1995) Insect diversity, life history, and trophic dynamics in arctic streams, with particular emphasis on blackflies (Diptera: Simuliidae), *In:* Chapin, F.S.I., Koerner, C. (Eds.), *Arctic and Alpine Biodiversity: Patterns, Causes and Ecosystem Consequences*. Springer Berlin Heidelberg, Berlin, pp. 283-295.

21. Hershey, A.E., Fortino, K., Peterson, B.J., Ulseth, A.J., (2007) Stream Food Webs, *In:* Hauer, F.R., Lamberti, G.A. (Eds.), *Methods In Stream Ecology*, 2 ed. Academic Press, pp. 637-662.

22. Hershey, A.E., Peterson, B.J., (1996) Stream food webs, *In:* Lamberti, G.A., Hauer, F.R. (Eds.), *Methods in stream ecology*. Academic Press, San Diego, pp. Chapter 24, pgs 511-530.

23. Hershey, A.E., Bowden, W.B., Deegan, L.A., Hobbie, J.E., Peterson, B.J., Kipphut, G.W., Kling, G.W., Lock, M.A., Merritt, R.W., Miller, M.C., Vestal, J.R., Schuldt, J.A., (1997) The Kuparuk River: A long-term study of biological and chemical processes in an arctic river, *In:* Milner, A., Oswood, M.W. (Eds.), *Freshwaters of Alaska*. Springer-Verlag, NY, pp. 107-130.

24. Hobbie, J.E., (1990) Measuring heterotrophic activity in plankton, *Methods in Microbiology, Volume 22*. Academic Press, London, England, pp. 235-250.

25. Hobbie, J.E., (1993) Arctic Ecosystem Response to Change, *In: Arctic Research of the United States*, National Science Foundation, pp. 2-9.

26. Hobbie, J.E., Shaver, G.R., Laundre, J., Slavik, K., Deegan, L.A., O'Brien, J., Oberbauer, S.F., MacIntyre, S., (2003) Climate forcing at the Arctic LTER Site., *In:* D. Greenland, D.G.a.R.S. (Ed.), *Climate Variability and Ecosystem Response at Long-Term Ecological Research (LTER) Sites*. Oxford University Press., New York, pp. 74-91.

27. Hobbie, J.E., Ford, T.E., (1993) A perspective on the ecology of aquatic microbes, *In:* Ford, T.E. (Ed.), *Aquatic Microbiology: An Ecological Approach*. Blackwell Scientific Publications, Boston, MA, pp. 1-14.

28. Hobbie, J.E., Bahr, M., Reysenbach, A.L., (2007) Ecology at long-term research sites: Integrating microbes and ecosystems, *In:* Hurst, C.J. (Ed.), *Third edition of the ASM Manual of Environmental Microbiology*. ASM Press, pp. 182-189.

29. Hobbie, J.E., Peterson, B.J., Shaver, G.R., O'Brien, W.J., (1991) The Toolik Lake Project: terrestrial and freshwater research on change in the Arctic, *In:* II, V. (Ed.), *Proceedings of the University of Alaska Confrence, "International Conference on the Role of Polar Regions in Global Change", June 1990*. University of Alaska, Fairbanks, Alaska, pp. 378-383.

30. Hobbie, J.E., (1993) Introduction, *In:* Kemp, P.F., Sherr, B.F., Sherr, E.B., Cole, J.J. (Eds.), *Handbook of Methods in Aquatic Microbial Ecology*. Lewis Publishers, Boca Raton, Florida, pp. 1-5.

31. Hobbie, J.E., (1996) History of limnology in Alaska, *In:* Milner, A., Oswood, M.W. (Eds.), *Alaskan freshwaters*. Springer-Verlag, NY, pp. 45-60.

32. Hobbie, J.E., Hershey, A.E., Lienesch, P.W., McDonald, M.E., Kling, G.W., O'Brien, W.J., (2001) Studies of fresh waters on the North Slope, *In:* Norton, D. (Ed.), *Fifty More Years Below Zero: Tributes and Meditations for the Naval Arctic Research Laboratory's First Half Century at Barrow, Alaska*. University of Alaska Press, Fairbanks, AK, pp. 123-128.

33. Hobbie, J.E., Deegan, L.A., Peterson, B.J., Rastetter, E.B., Shaver, G.R., Kling, G.W., O'Brien, W.J., Chapin, F.S.T., Miller, M.C., Kipphut, G.W., Bowden, W.B., Hershey, A.E., McDonald, M.E., (1995) Long-term measurements at the Arctic LTER site, *In:* Powell, T.M., Steele, J.H. (Eds.), *Ecological Time Series*, 1st ed. Chapman and Hall, New York, pp. 391-409.

34. Hobbie, J.E., (1984) Polar Limnology, *In:* Taub, F.B. (Ed.), *Lakes and Reservoirs*. Elsevier Scientific Publishing Co., Amsterdam, Netherlands, pp. 63-105.

35. Hobbie, J.E., Laybourn-Parry, J., (2008) Heterotrophic microbial processes in polar lakes, *In:* Vincent, W.F., Laybourn-Parry, J. (Eds.), *Polar Lakes and Rivers: Limnology of Arctic and Antarctic Aquatic Ecosystems*. Oxford University Press, Oxford, pp. 197-212.

36. Jonasson, S., Callaghan, T.V., Shaver, G.R., Nielsen, L., (2000) Arctic Terrestrial Ecosystems and Ecosystem Function, *In:* Nuttall, M., Callaghan, T.V. (Eds.), *The Arctic: Environment, People, Policy*. Harwood Academic Publishers, Amsterdam, pp. 275-313.

37. Jonasson, S., Chapin, F.S.I., Shaver, G.R., (2001) Biogeochemistry in the Arctic: Patterns, processes and controls,, *In:* Schulze, E.-D., Harrison, S.P., Heimann, M., Holland, E.A., Lloyd, J.J., Prentice, I.C., Schimel, D. (Eds.), *Global Biogeochemical Cycles in the Climate System*. Academic Press, pp. 139-150.

38. Kipphut, G.W., (1988) Sediments and organic carbon in an arctic lake, *In:* Degens, T.E., Kempe, S., Naidu, A.S. (Eds.), *Transport of Carbon and Minerals in Major World Rivers, Lakes and Estuaries*. Mitt. Geol. Paleot. Inst. Univ. Hamburg, Hamburg, Germany.

39. Kling, G.W., (1994) Ecosystem-Scale Experiments: The Use of Stable Isotopes in Fresh Waters, *In:* Baker, L.A. (Ed.), *Environmental Chemistry of Lakes and Reservoirs*. American Chemical Society, Washington, DC, pp. 91-120.

40. Kling, G.W., (1995) Land-water linkages: the influence of terrestrial diversity on aquatic systems, *In:* Chapin, F.S., Korner, C. (Eds.), *The role of biodiversity in arctic and alpine tundra ecosystems*. Springer-Verlag, Berlin, pp. 297-310.

41. Kling, G.W., (2009) Lakes of the Arctic, *In:* Likens, G.E. (Ed.), *Encyclopedia of Inland Waters, volume 2*. Oxford: Elsevier, pp. 577-588.

42. Kratz, T.K., MacIntyre, S., Webster, K.E., (2005) Causes and consequences of spatial heterogeneity in lakes, *In:* Lovett, G.M., Jones, C.G., Turner, M.G., Weathers, K.C. (Eds.), *Ecosystem Function in Heterogeneous Landscapes*. Springer, NY, pp. 329-347.

43. Lorke, A., MacIntyre, S., (2009) The benthic boundary layer, *In:* Likens, G. (Ed.), *Encyclopedia of Inland Waters*. Elsevier.

44. Luecke, C., O'Brien, W.J., (1990) Photoprotective pigmentation of freshwater zooplankton: a phenomenon of extreme environments, *Adaptive Coloration in Invertebrates*. American Society of Zoologists, pp. 101-108.

45. MacIntyre, S., Eugster, W., Kling, G.W., (2002) The critical importance of buoyancy flux for gas flux across the air-water interface., *In:* Donelan, M.A., Drennan, W.M., Saltzman, E.S., Wanninkhof , R. (Eds.), *Gas Transfer at Water Surfaces*. American Geophysical Union, Geophysical Monograph 127, pp. 135-139.

46. MacIntyre, S., Melack, J.M., (2009) Lakes across climate zones, *In:* Likens, G. (Ed.), *Encyclopedia of Inland Waters*. Elsevier.

47. Maxwell, B., (1991) Arctic climate: Potential for change under global warming, *In:* Chapin, F.S., III, Jeffries, R., Reynolds, R., Shaver, G.R., Svoboda, J. (Eds.), *Arctic Ecosystems in a Changing Climate: An Ecophysiological Perspective*. Academic Press, San Diego, CA, pp. 11-34.

48. McGuire, A.D., Hobbie, J.E., (1998) Global climate change and the equilibrium responses of carbon storage in arctic and subarctic regions, *Arctic System Science Modeling Workshop Report*, Workshop Report ed. Arctic Research Consortium of the United States, Fairbanks,AK, pp. 47-48.

49. McKnight, D.M., Gooseff, M.N., Vincent, W.F., Peterson, B.J., (2008) High-latitude rivers and streams, *In:* Vincent, W.F., Laybourn-Parry, J. (Eds.), *Polar Lakes and Rivers: Limnology of Arctic and Antarctic Aquatic Ecosystems*. Oxford University Press, Oxford, pp. 83-102.

50. Miller, M.C., Hater, G.R., Vestal, J.R., (1978) Effects of Prudohe crude oil on carbon assimilation by planktonic algae in an arctic pond, *In:* Adriano, D.D., Brisbin, I.L. (Eds.), *Environmental Chemistry and Cycling Processes*. US Dept. of Energy, Washington, DC, pp. 833-850.

51. Miller, M.C., Vestal, J.R., Mozley, S., Butler, M., Hobbie, J.E., (1977) Effects of Prudhoe crude oil on coastal tundra ponds, *In:* USEPA (Ed.), *Energy/Environment II*. EPA600/977012, Washington, DC, pp. 521-529.

52. Monismith, S.G., MacIntyre, S., (2009) The surface mixed layer, *In:* Likens, G. (Ed.), *Encyclopedia of Inland Waters*. Elsevier.

53. Moore, J.C., McCann, K., de Ruiter, P.C., (2007) Soil rhizosphere food webs, their stability, and implications for soil processes and ecosystems, *In:* Cardon, Z.G., Whitbeck, J.L. (Eds.), *The Rhizosphere: An Ecological Perspective*. Elsevier Academic Press, San Diego, CA, pp. 101-126.

54. Moore, J.C., de Ruiter, P.C., (2000) Invertebrates in detrital food webs along gradients of productivity, *In:* Coleman, D.C., Hendrix, P.F. (Eds.), *Invertebrates as Webmasters in Ecosystems*. CABI Publishing, Oxford, UK.

55. Nadelhoffer, K.J., Linkins, A.E., Giblin, A.E., Shaver, G.R., (1992) Microbial processes and plant nutrient availability in arctic soils, *In:* Chapin, F.S., Jeffries, R., Reynolds, R., Shaver, G., Svoboda, J. (Eds.), *Arctic Ecosystems in a Changing Climate: An Ecophysiological Perspective*. Academic Press, New York, pp. 281-300.

56. Nadelhoffer, K.J., Shaver, G.R., Giblin, A.E., Rastetter, E.B., (1997) Potential impacts of climate change on nutrient cycling, cecomposition and productivity in arctic ecosystems, *In:* Oechel, W.C., Holten, J.I. (Eds.), *Global Change and Arctic Terrestrial Ecosystems*. Springer-Verlag, NY, pp. 349-364.

57. O'Brien, W.J., Burris, M.E., Hershey, A.E., Holland Iii, V.B., Luecke, C., (2006) Zooplankton species occurrence in Arctic lakes in landscapes of very different ages, *In:* Davies, B., Thomson, S. (Eds.), *Water and the Landscape: The Landscape Ecology of Freshwater Ecosystems*. Colin Cross Printers. Ltd, Garstang, UK pp. 218-224.

58. O'Brien, W.J., Kettle, D., Riessen, H., Schmidt, D., Wright, D., (1980) Dimorphic Daphnia longiremis: Predation and competitive interactions between the two morphs, *In:* Kerfoot, W.C. (Ed.), *Evolution and Ecology of Zooplankton Communitees*. The University Press of New England, Hanover, NH, pp. 497-505.

59. O'Brien, W.J., Bahr, M., Hershey, A.E., Hobbie, J.E., Kipphut, G.W., Kling, G.W., Kling, H., McDonald, M., Miller, M.C., Rublee, P., Vestal, J.R., (1997) The limnology of Toolik Lake, *In:* Milner, A., Oswood, M.W. (Eds.), *Freshwaters of Alaska*. Springer-Verlag, NY, pp. 61-106.

60. Peter C. de Ruiter, A.-M.N., Moore, J., (2005) The balance between productivity and food web structure in soil ecosystems, *In:* Bardgett, R., Usher, M.B., Hopkins, D.W. (Eds.), *Biological diversity and function in soils*. Cambridge University Press, pp. 139-153.

61. Peterson, B.J., (2005) Abrupt climate change: ocean salinity changes and potential impacts on ocean circulation, *In:* Harrison, P. (Ed.), *UNEP Global Environment Outlook Year Book 2004/5*. United Nations Environment Programme, Nairobi, Kenya, pp. 80-84.

62. Phillips, D.A., Fox, T.C., Ferris, H., Moore, J.C., (2006) Increases in Atmospheric [CO2] and the Soil Food Web, *In:* Nösberger, J., Long, S., Norby, R., Stitt, M., Hendrey, G., Blum, H. (Eds.), *Managed Ecosystems and CO2*. Springer Berlin Heidelberg, pp. 413-428.

63. Quesada, A., Vincent, W.F., Kaup, E., Hobbie, J.E., Laurion, I., Pienitz, R., López-Martínez, J., Durán, J.J., (2006) Landscape control of high latitude lakes in a changing climate., *In:* Bergstrom, D., Convey, P., Huiskes, A. (Eds.), *Trends in Antarctic Terrestrial and Limnetic Ecosystems*. Springer, Berlin, pp. 221-252.

64. Rastetter, E.B., Shaver, G.R., (1995) Functional redundancy and process aggregation: Linking ecosystems to species, *In:* Jones, C.G., Lawton, J.H. (Eds.), *Linking Species and Ecosystems*. Chapman and Hall, Ny, pp. 215-223.

65. Rastetter, E.B., McKane, R.B., Shaver, G.R., Nadelhoffer, K.J., Giblin, A.E., (1998) Analysis of CO2, temperature, and moisture effects on carbon storage in Alaskan arctic tundra using a general ecosystem model, *In:* Oechel, W.C., Holten, J. (Eds.), *Global Change and Terrestrial Ecosystems*. Springer-Verlag, NY, pp. 349-364.

66. Ruiter, P.C., Neutel, A.-M., Moore, J., (2005) The balance between productivity and food web structure in soil ecosystems, *In:* Bardgett, R., Usher, M., Hopkins, D. (Eds.), *Biological diversity and function in soils*. Cambridge University Press, pp. 139-153.

67. Schell, D.M., Barnett, B., (1992) Carbon dynamics in arctic Alaskan tundra, *In:* Reynolds, J., Tenhunen, J. (Eds.), *Landscape function: Implications for Ecosystem Response to Disturbance A case study in Arctic Tundra*. Springer-Verlag, New York.

68. Schell, D.M., Ziemann, P.J., (1989) Natural carbon isotope tracers in arctic aquatic food webs, *In:* Rundel, P., Ehleringer (Eds.), *Stable Isotopes in Ecological Research*. Springer-Verlag, New York.

69. Shaver, G.R., Aber, J.D., (1996) Carbon and nutrient allocation in terrestrial ecosystems, *In:* Breymeyer, A., Hall, D.O., Melillo, J.M., Agrem, G.I. (Eds.), *Global Change: Effects on Coniferous forests and Grasslands*. John Wiley and Sons, Chichester, NY, pp. 183-198.

70. Shaver, G.R., Kummerow, J., (1992) Phenology, resource allocation, and growth of arctic vascular plants, *In:* Chapin, F.S., Jeffries, R., Reynolds, R., Shaver, G., Svoboda, J. (Eds.), *Arctic Ecosystems in a Changing Climate: An Ecophysiological Perspective*. Academic Press, New York, pp. 193-212.

71. Shaver, G.R., (2006) Spatial heterogeneity past, present, and future, *In:* G. M. Lovett, Jones, C.G., Turner, M.G., Weathers, K.C. (Eds.), *Ecosystem Function in Heterogeneous Landscapes*. Springer-Verlag, New York, pp. 443-449

72. Shaver, G.R., (1995) Plant functional diversity and resource control of primary production in Alaskan arctic tundras, *In:* Korner, C., Chapin, F.S.I.I.I. (Eds.), *Arctic and Alpine Biodiversity: Patterns, Causes, and Ecosystem Consequences*, Springer-Verlag Ecological Studies Series ed. Springer-Verlag, NY, pp. 199-212.

73. Shaver, G.R., (2005) Spatial Heterogeneity: Past, Present, and Future, *In:* Lovett, G., Turner, M., Jones, C., Weathers, K. (Eds.), *Ecosystem Function in Heterogeneous Landscapes*. Springer New York, pp. 443-449.

74. Shaver, G.R., Jonasson, S., (2001) Productivity of Arctic Ecosystems, *In:* Mooney, H., Roy, J., Saugier, B. (Eds.), *Terrestrial Global Productivity*. Academic Press, New York, pp. 189-210.

75. Shaver , G.R., (1996) Integrated Ecosystem Research in Northern Alaska, 1947-1994, *In:* Reynolds, J.F., Tenhunen, J.D. (Eds.), *Landscape Function and Disturbance in Arctic Tundra*. Springer-Verlag.

76. Shaver , G.R., (1996) Carbon dynamics in actic Alaskan tundra, *In:* Reynolds, J.F., Tenhunen, J.D. (Eds.), *Landscape Function and Disturbance in Arctic Tundra*. Springer-Verlag.

77. Shaver, G.R., Giblin, A.E., Nadelhoffer, K.J., Rastetter, E.B., (1996) Plant functional types and ecosystem change in arctic, *In:* Smith, T., Shugart, H., Woodward, I. (Eds.), *Plant Functional Types*. Cambridge University Press, Cambridge, UK.

78. Shaver, G.R., Nadelhoffer, K.J., Giblin, A.E., (1990) Biogeochemical diversity and element transport in a heterogeneous landscape, the North Slope of Alaska., *In:* Turner, M.G., Gardner, R.H. (Eds.), *Quantitative Methods in Landscape Ecology*. Springer-Verlag, New York, pp. 105-126.

79. Vestal, J.R., Hobbie, J.E., (1988) Microbial adaptations to extreme environments, *In:* Hobbie, J.E., Lynch, J.M. (Eds.), *Microorganisms in Action*. Blackwell Scientific Publications, Oxford, England, pp. 193-206.

80. Vincent, W.F., Hobbie, J.E., (2000) Ecology of Arctic lakes and rivers, *In:* Nuttall, M., Callaghan, T.V. (Eds.), *The Arctic: Environment, People, Policies*. Harwood Academic Publishers, United Kingdom, pp. 197-232.

81. Vincent, W.F., Hobbie, J.E., Laybourn-Parry, J., (2008) Introduction to the limnology of high-latitude lake and river ecosystems, *In:* Vincent, W.F., Laybourn-Parry, J. (Eds.), *Polar Lakes and Rivers: Limnology of Arctic and Antarctic Aquatic Ecosystems*. Oxford University Press, Oxford, pp. 23-Jan.

82. Vincent, W.F., MacIntyre, S., Spigel, R.H., Laurion, I., (2008) The physical limnology of high latitude lakes, *In:* Vincent, W.F., Laybourn-Parry, J. (Eds.), *Polar Lakes and Rivers: Limnology of Arctic and Antarctic Aquatic Ecosystems*. Oxford University Press, Oxford, U.K.

Theses and Student Projects

Doctoral Theses

1. Boelman, N. (2004) Relating Spectral Vegetation Indices to Plant Physiological & Ecosystem Processes at Multiple Spatial Scales. Earth and Environmental Sciences, Columbia University, New York, NY, Ph.D. Thesis.

2. Buchanan, C. (1978) Arctic investigations of some factors that control the vertical distributions and swimming activities of zooplankton. University of New Hampshire, Durham, NH, Ph.D. Thesis.

3. Burkart, G. (2006) Energy flow in arctic lake food webs: the role of glacial history, fish predators, and benthic-pelagic linkages. Utah State University, Logan, UT, Ph.D. Thesis.

4. Butler, M.G. (1980) The population ecology of some arctic Alaskan Chironomidae. University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

5. Cherry, J. (2006) Arctic hydroclimatology. Columbia University, New York, NY, Ph.D. Thesis.

6. Cornwell, J.C. (1983) Geochemistry of Mn, Fe and P in an arctic lake. University of Alaska, Fairbanks, AK, Ph.D. Thesis.

7. Cuker, B.E. (1981) Control of epilithic community structure in an arctic lake by vertebrate predation and invertebrate grazing. North Carolina State University, Raleigh, NC, Ph.D. Thesis.

8. Dobberfuhl, D.R. (1999) Elemental Stoichiometry in Crustacean Zooplankton: Phylogenetic Patterns, Physiological Mechanisms, and Ecological Consequences. Department of Biology, Arizona State University, Tempe, AZ, Ph.D. Thesis.

9. Engman, J. (1994) Phylogeny and biogeography of the genus Heterocope sars 1863 (Copepoda:Calanoida) : a molecular genetic, morphological, and distributional analysis. Biological Sciences, University of Cincinnati, Cincinnati, OH, Ph.D. Thesis.

10. Evans, M.A. (2007) Phytoplankton ecology of Arctic lakes. University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

11. Federle, T.W. (1981) The processes and control of the microbial colonization and decomposition of plant litter in an arctic lake. Department of Biological Sciences, University of Cincinnati, Cincinnati, OH, Ph.D. Thesis.

12. Evans, B.I. (1986) Strategies and tactics of search behavior in Salmonid and Centrarchid planktivorous fish. University of Kansas, Lawrence, KS, Ph.D. Thesis.

13. Ford, T.E. (1984) A study of dissolved and collooidal organic carbon in rivers and their contribution to benthic microbial metabolism. Bangor University, Bangor, UK, Ph.D. Thesis.

14. Gettel, G. (2006) Rates, importance, and controls of nitrogen fixation in oligotrophic Arctic lakes, Toolik, Alaska. Cornell Univeristy, Ithaca, NY, Ph.D. Thesis.

15. Hershey, A.E. (1983) Benthic community structure in an arctic lake. fish predation foraging strategies, and prey refugia. North Carolina State University, Raleigh, NC, Ph.D. Thesis.

16. Hobbie, S.E. (1995) The effects of increased temperature on Tundra plant community composition and the consequences for ecosystem pocesses. Integrative Biology, University of California Berkeley, Berkeley, CA, Ph.D. Thesis.

17. Johnson, C. (2009) Consumer-driven nutrient recycling in arctic Alaskan lakes: controls, importance for primary production, and influence on nutrient limitation. Utah State University, Logan, UT, Ph.D. Thesis.

18. Johnson, D. (2008) How herbivores affect individual plant growth, community structure and decomposition in Alaskan tundra: implications for responses to climate change. University of Texas-Arlington, Arlington, TX, Ph.D. Thesis.

19. Judd, K. (2004) Dissolved organic matter dynamics in an Arctic catchment. University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

20. Keller, K.A. (2006) Geochemistry of streams, soils, and permafrost and the geochemical effects of climate change in a continuous permafrost region, arctic Alaska, USA. University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

21. Kielland, K. (1989) Processes controlling nitrogen release and turnover in arctic tundra. University of Alaska, Fairbanks, AK, Ph.D. Thesis.

22. Parker, S.M. (2008) Effects of natural disturbance on benthic communities of Arctic headwater streams, North Slope, Alaska, U.S.A. Department of Biological Sciences, University of Alabama, Tuscaloosa, AL, Ph.D. Thesis.

23. Rantala, H.M. (2009) Glacial legacy effects on tundra stream processes and macroinvertebrate communities, North Slope, Alaska. Biological Sciences, University of Alabama, Tuscaloosa, AL, Ph.D. Thesis.

24. Shaman, J. (2003) Monitoring and Forecasting Land Surface Wetness, Mosquito Abundance and Mosquito-Borne Disease Transmission. Columbia University, New York, NY, Ph.D. Thesis.

25. Valentine, D. (1991) Influence of topography on soil acidity and hydrogen ion budgets in an arctic landscape. Duke University, Durham, NC, Ph. D. Thesis.

26. Whalen, S.C. (1986) Pelagic nitrogen cycles in an arctic lake. University of Alaska, Fairbanks, AK, Ph.D. Thesis.

27. Yurista, P.M. (1997) Physiology and energy budgets of two cladocerans, Bythotrephas and Daphnia. University of Michigan, Ann Arbor, MI, Ph.D. Thesis.

Masters Theses

28. Alexander-Ozinskas, M. (2007) Controls on N accumulation and loss in Arctic tundra ecosystems. Brown University, Providence, RI, M.S. Thesis.

29. Arscott, D.B. (1997) Comparison of epilithic algal and bryophyte metabolism in an arctic tundra stream, Alaska. Water Resources Management, University of New Hampshire, Durham, NH, M.S. Thesis.

30. Barnett, B.A. (1994) Carbon and Nitrogen Isotope Ratios of Caribou Tissues, Vascular Plants, and Lichens from Northern Alaska. Marine Sciences, University of Alaska, Fairbanks, AK, M.S. Thesis.

31. Bettez, N.D. (1996) Changes in abundance, species composition and controls within the microbial loop of a fertilized arctic lake. University of North Carolina, Greensboro, NC, M.S. Thesis.

32. Bixby, R.J. (1993) The paleolimnology of two arctic lakes: Regional and local changes in climate. Biological Sciences, Uniersity of Cincinnati, Cincinnati, OH, M.S. Thesis.

33. Burris, M. (2006) The life history, morphological, and behavioral changes of two Arctic daphnids to kairomone from the invertebrate predator Heterocope septentrionalis. University of North Carolina, Greensboro, NC, M.S. Thesis.

34. Cappelletti, C. (2006) Photosynthesis and respiration in an Arctic tundra river: Modification and application of the whole-stream metabolism method and the influence of physical, biological and chemical variables. University of Vermont, Burlington, VT, M.S. Thesis.

35. Chinn, C. (2001) Estimating Microbial Biomass in Low-production Ecosystems. Department of Biological Sciences, University of Northern Colorado, Greeley, CO, M.S. Thesis.

36. Cuker, B.E. (1978) Ecology of Hydra in an arctic Alaskan lake. University of Michigan, Ann Arbor, MI, M.S. Thesis.

37. Doles, J. (2000) A Survey of Soil Biota in the Arctic Tundra and Their Role in Mediating Terrestrial Nutrient Cycling. Department of Biological Sciences, University of Northern Colorado, Greeley, CO, M.S. Thesis.

38. Dzialowski, A. (2001) Range expansion and ecology of the exotic cladoceran Daphnia lumholtzi'. University of Kansas, Lawrence, KS, M.A. Thesis.

39. Edwardson, K.J. (1997) Characterization of hyporheic influences on the hydrology and geochemistry in contrasting arctic streams. University of New Hampshire, Durham, NH, M.S. Thesis.

40. Evans, R. (1995) Chironomid fossil remains: a bioindicator for post-glacial fish migration into Toolik Lake, Alaska. Biological Sciences, University of Cincinnati, Cincinnati, OH, M.S. Thesis.

41. Fiebig, D.M. (1988) Riparian zone and streamwater chemistries and organic matter immobilization at the stream-bed interface. University of Wales, Bangor, UK, M.S. Thesis.

42. Galarowitz, T.L. (1994) Effects of slimy sculpin (Cottus cognatus) removal on sculpin and chironomid (Diptera: Chironomidae) populations in an arctic lake. University of Minnesota, Duluth, MN, M.S. Thesis.

43. Gartner, B.L. (1982) Controls over regeneration of tundra graminoids in a natural and a man-disturbed site in arctic Alaska. Univeristy of Alaska, Fairbanks, AK, M.S. Thesis.

44. Gettel, G. (1998) The effects of lake gromorphology, fish assemblages and species richness on food web structure in arctic Alaskan lakes. University of Minnesote, Duluth, MN, M.S. Thesis.

45. Gibeau, G.G. (1990) Epilithic algal response to fertilization and grazer activity in an arctic river. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

46. Golden, H.E. (1997) The trophic interactions of young-of-the-year Arctic grayling, Thymallus arcticus, in an Arctic tundra. University of Massachusetts, Amherst, MA, M.S. Thesis.

47. Goyke, A.P. (1990) Effects of fish predation on Chironomid (Diptera: Chironomidae) communities in Arctic lakes. University of Minnesota, Duluth, MN, M.S. Thesis.

48. Greenwald, M.J. (2007) Hyporheic exchange and biogeochemical processing in Arctic tundra streams. University of Vermont, Burlington, VT, M.S Thesis.

49. Hanson, K.L. (1993) A comparison of slimy sculpin (Cottus cognatus) populations in arctic lakes with implications for the role of piscivorous predators. University of Minnesota, Duluth, MN, M.S. Thesis.

50. Hershey, A.E. (1980) Chironomid community structure in an arctic lake: The role of a predatory chironomic. North Carolina State University, Raleigh, NC, M.S. Thesis.

51. Hiltner, A.L. (1985) Response of two black fly species (Diptera:Simuliidae) to phosphorum enrichment of an arctic tundra stream. University of Wisconsin-Madison, Madison, WI, M.S. Thesis.

52. Hinterleitner-Anderson, D.L. (1990) The effects of river fertilization on mayfly drift patterns and population density in an arctic ecosystem. University of Minnesota, Duluth, MN, M.S. Thesis.

53. Holland, V. (2006) Infection of slimy sculpin (Cottus congatus) by the Cestode Schistocephalus in the presence and absence of Lake Trout (Salvelinus namaycush) in Arctic Alaskan lakes. University of North Carolina, Greensboro, NC, M.S. Thesis.

54. Hullar, M.A.J. (1986) The effects of nutrient enrichment and light regimes on the epilithic microbiota of an oligotrophic arctic river. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

55. Johnson, C. (2004) Coexistence and vertical distribution of two copepods Cyclops scutifer and Diaptomus pribilofensis in an oligotrophic Arctic lake. University of North Carolina, Greensboro, NC, M.S. Thesis.

56. Johnston, C.J. (1986) Microbially mediated Mn (II) oxidation in an oligotrophic arctic lake. University of Alaska, Fairbanks, AK, M.S. Thesis.

57. Judd, K. (1998) Production and transport of dissolved carbon and nutrients in arctic tundra microcosms: The role of vegetation and water flow. University of Michigan, Ann Arbor, MI, M.S. Thesis.

58. Klingensmith, K.M. (1981) Sediment nitrification, denitrification, and nitrous oxide production in an arctic lake. University of Alaska, Fairbanks, AK, M.S. Thesis.

59. LaRouche, J. (2008) Environmental influences on the genetic diversity of bacterial communities in arctic streams. University of Vermont, Burlington, VT, M.S. Thesis.

60. Luecke, C. (1981) The effect of Heterocope predation on arctic pond zooplankton communities. Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS, M.S Thesis.

61. MacKinnon, P. (2006) Landscape effects on growth of age-0 Arctic grayling in tundra streams. Utah State University, Logan, UT, M.S. Thesis.

62. McKinley, V. (1981) Effect of hydrocarbons and pH on litter decomposition and primary production in an arctic lake. Department of Biological Sciences, University of Cincinnati, Cincinnati, OH, M.S. Thesis.

63. Merrick, G.E. (1989) Lake trout (Salvelinus namaycush) and benthic community ecology in an arctic ecosystem. University of Minnesota, Duluth, MN, M.S. Thesis.

64. Moulton, C. (2009) How soil nutrient availability affects plant sexual reproduction and seedling recruitment in Alaskan dry heath tundra: Implications for response to climate change. University of Texas, Arlington, TX, M.S. Thesis.

65. Naber, A.C. (1996) The effects of simulated herbivory on Arctic woody shrubs: a test of a resource allocation hypothesis in response to herbivory. University of Toronto, Toronto, Canada, M.S. Thesis.

66. Parker, S.M. (2004) Effects of natural disturbance on arctic stream communities. Ecology and Environmental Science, University of Maine, Orono, ME, M.S. Thesis.

67. Parsons-Field, A.B. (2008) Winter Conditions and Spring Convection in Toolik Lake, Alaska. University of California at Santa Barbara, Santa Barbara, CA, M.S. Thesis.

68. Partusch-Talley, A. (1994) Microfaunal response to fertilization of an arctic tundra river. University of North Carolina, Greensboro, NC, M.S. Thesis.

69. Perry, W.L. (1993) The response of *Pisidium casertanum* and *Sphaerium nitidum* to nutrient enrichment of divided arctic lake. Biological Sciences, University of Cincinnati, Cincinnati, OH, M.S. Thesis.

70. Repasky, R.D. (1991) The development of the epilithic community in an arctic lake: responses to antibiotics and nutrient enrichment. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

71. Ries, R. (1988) Foraging behavior of arctic grayling (Thymallus arcticus) in a tundra stream. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

72. Schmidt, D.R. (1980) The planktivorous feeding ecology of arctic grayling (Thymallus arcticus). University of Kansas, Lawrence, KS, M.S. Thesis.

73. Schneider, J.R. (1991) The effects of nutrient enrichment on the growth and morphology of mosses growing in an arctic lake. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

74. Skvorc, P. (1980) Toxic effects of Prudhoe Bay crude oil on arctic freshwater zooplankton. University of Kansas, Lawrence, KS, M.S. Thesis.

75. Sommer, M.E. (1979) Role of zooplankton grazers in determining composition and productivity of seston in arctic lakes and ponds. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

76. Spatt, P.D. (1978) Seasonal variation of growth conditions in a natural and dust impacted Sphagnum (Sphagnaceae) community in northern Alaska. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

77. Stout, J.R. (1986) Macroinvertebrate drift and community composition in an arctic and subarctic stream in Alaska. Department of Biological Sciences, University of Cincinnati, Cincinnati, OH, M.S. Thesis.

78. Weiss, M. (2003) The Contribution and Environmental Control of Nitrogen Fixation by Lichens in Upland Arctic Tundra. University of Minnesota, Minneapolis, MN, M.S. Thesis.

79. Wheeler, J.R. (1994) Factors affecting black fly abundance and distribution in an arctic stream. University of Minnesota, Duluth, MN, M.S. Thesis.

80. Yeakel, D. (1978) Primary production of epilithic periphyton in a deep arctic lake. University of Cincinnati, Cincinnati, OH, M.S. Thesis.

81. Yelen, L. (2008) Microbial communities in soils. University of Michigan, Ann Arbor, MI, M.S. Thesis.

82. Ziemann, P.J. (1986) Energetics of Arctic Alaskan Fishes: Carbon Isotope Evidence. Marine Science and Limnology, University of Alaska, Fairbanks, AK, M.S. Thesis.

Senior Undergraduate Theses

83. Carroll, J. (1998) Controls over bryophyte diversity in Alaskan Arctic tundra. Department of Ecology, Evolution and Organismal Biology, Tulane University, New Orleans, LA, Senior Honors Thesis.

84. Greaves, H. (2009) The Role of Leaf Carbon Exchange in Arctic Shrub Expansion. Department of Ecology, Evolution and Environmental Biology, Columbia University, New York, NY, Senior Thesis.

85. Harrison, J. (1995) Young-of-the-year arctic grayling (Thymallus arcticus) metabolism: Scaling with size, temperature and flow. Brown University, Providence, RI, Senior Honors Thesis.

86. Wright, A. (1996) The effect of whole-river fertilization on production of young-of-the-year arctic grayling in two arctic tundra streams. Hampshire College, Amherst, MA, Senior Thesis.