
Curriculum Vitae

Robert D. Hollister

Biology Department
Grand Valley State University
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Education

Ph.D. Plant Biology / Ecology, Evolutionary Biology & Behavior, Michigan State University, 2003.

M.S. Botany and Plant Pathology, Michigan State University, 1998.

B.S. Lyman Briggs Zoology with Honor, Michigan State University, 1994.

Work Experience

<i>Full Professor</i>	Department of Biology, Grand Valley State University, 8/17 – present.
<i>Associate Professor</i>	Department of Biology, Grand Valley State University, 8/10 – 7/17.
<i>Assistant Professor</i>	Department of Biology, Grand Valley State University, 1/06 – 8/10.
<i>Visiting Assistant Professor</i>	Department of Biology, Grand Valley State University, 8/04 – 12/05.
<i>Visiting Assistant Professor</i>	Department of Plant Biology, Michigan State University, 5/04 – 8/04.
<i>Visiting Research Associate</i>	Arctic Ecology Laboratory, Michigan State University, 9/03 – 5/04.
<i>Lecturer</i>	Department of Plant Biology, Michigan State University, 5/03 – 8/03.
<i>Teaching/Research Assistant</i>	Department of Plant Biology, Michigan State University, 8/94 – 5/03.
<i>Field Assistant</i>	Saginaw Bay Wetland Restoration, Michigan State University, 5/94 – 8/94.
<i>Geology / Biology Tutor</i>	Office of Supportive Services, Michigan State University, 12/92 – 5/96.
<i>Greenhouse Assistant</i>	Department of Floriculture, Michigan State University, 9/92 – 5/95.
<i>Water Surveyor</i>	State of Indiana, Indianapolis, IN. 6/91 – 9/91, 6/92 – 9/92.
<i>Home Repair & Landscaping</i>	Self-employed, Lansing, MI. 06/88-08/92.

Publications

 (excluding published abstracts) [mentored GVSU students are noted in *bold italics*]

Journal Articles

- ⁴² Collins, C.G., S.C. Elmendorf, **R.D. Hollister**, (34 authors). 2021. Experimental warming differentially affects vegetative and reproductive phenology of tundra plants. *Nature Communications* 12(1): 1-12.
- ⁴¹ **Betway, K.R., R.D. Hollister**, J.L. May, **J.A. Harris**, S.F. Oberbauer. 2021. Species--specific trends and variability in plant functional traits across a latitudinal gradient in northern Alaska. *Journal of Vegetation Science* 32(3): 1-15.
- ⁴⁰ May, J.L., **R.D. Hollister**, **K.R. Betway**, **J.A. Harris**, C.E. Tweedie, J.M. Welker, W.A. Gould, S.F. Oberbauer. 2020. NDVI changes show warming increases the length of the green season at tundra communities in Northern Alaska: A fine-scale analysis. *Frontiers in Plant Science* 11(1174): 1-12.
- ³⁹ Myers-Smith, I.H., J.T. Kerby, G.K. Phoenix, J.W. Bjerke, H.E. Epstein, J.J. Assmann, C. John, L. Andreu-Hayles, S. Angers-Blodin, P.S.A. Beck, L.T. Berner, U.S. Bhatt, A.D. Bjorkman, D. Blok, A. Bryn, C.T. Christiansen, J.H.C. Cornelissen, A.M. Cunliffe, S.C. Elmendorf, B.C. Forbes, S.J. Goetz, **R.D. Hollister**, R. de Jong, M.M. Loranty, M. Macias-Fauria, K. Maseyk, S. Normand, J. Olofsson, T.C. Parker, F.-J.W. Parmentier, E. Post, G. Schaepman-Strub, F. Stordal, P.F. Sullivan, H.J.D. Thomas, H. Tømmervik,

- R. Treharne, C.E. Tweedie, D.A. Walker, M. Wilmking, S. Wipf. 2020. Complexity revealed in the greening of the Arctic. *Nature Climate Change* 10(2): 106-117.
- ³⁸ Thomas, H.J.D., A.D. Bjorkman, I.H. Myers-Smith, S.C. Elmendorf, J. Kattge, S. Diaz, M. Vellend, D. Blok, J.H.C. Cornelissen, B.C. Forbes, G.H.R. Henry, **R.D. Hollister**, (93 authors). 2020. Global plant trait relationships extend to the climatic extremes of the tundra biome. *Nature Communications* 11(1): 1351 1-12.
- ³⁷ Assmann, J.J., I.H. Myers-Smith, A.B. Phillimore, A.D. Bjorkman, R.E. Ennos, J.S. Prevéy, G.H.R. Henry, N.M. Schmidt, and **R.D. Hollister**. 2019. Local snow melt and temperature—but not regional sea ice—explain variation in spring phenology in coastal Arctic tundra. *Global Change Biology* 25(7): 2258-2274.
- ³⁶ Prevéy, J.S., C. Rixen, N. Rüger, T.T. Høye, A.D. Bjorkman, I.H. Myers-Smith, S.C. Elmendorf, I.W. Ashton, N. Cannone, C.L. Chisholm, K. Clark, E.J. Cooper, B. Elberling, A.M. Fosaa, G.H.R. Henry, **R.D. Hollister**, I.S. Jónsdóttir, K. Klanderud, C.W. Kopp, E. Lévesque, M. Mauritz, U. Molau, S.M. Natali, S.F. Oberbauer, Z.A. Panchen, E. Post, S.B. Rumpf, N.M. Schmidt, E. Schuur, P.R. Semenchuk, J.G. Smith, K.N. Suding, Ø. Totland, T. Troxler, S. Venn, C.-H. Wahren, J.M. Welker, and S. Wipf. 2019. Warming shortens flowering seasons of tundra plant communities. *Nature Ecology and Evolution* 3(1): 45-52.
- ³⁵ Thomas, H.J.D., I.H. Myers-Smith, A.D. Bjorkman, S.C. Elmendorf, D. Blok, J.H.C. Cornelissen, B.C. Forbes, **R.D. Hollister**, (68 authors). 2019. Traditional plant functional groups explain variation in economic but not size-related traits across the tundra biome. *Global Ecology and Biogeography* 28(2): 78-95.
- ³⁴ Bjorkman, A.D., I.H. Myers-Smith, S.C. Elmendorf, (40 authors), **R.D. Hollister**, (60 authors). 2018. Tundra Trait Team: A database of plant traits spanning the tundra biome. *Global Ecology and Biogeography* 27(12): 1402-1411.
- ³³ Bjorkman, A.D., I.H. Myers-Smith, S.C. Elmendorf, S. Normand, N. Rüger, P.S. Beck, A. Blach-Overgaard, D. Blok, J. H.C. Cornelissen, B.C. Forbes, D. Georges, S.J. Goetz, K.C. Guay, G.H.R. Henry, J. HilleRisLambers, **R.D. Hollister**, (113 authors). 2018. Plant functional trait change across a warming tundra biome. *Nature* 562(7725): 57-62+.
- ³² Dornelas M., L.H. Antão, F. Moyes, (88 authors), **R.D. Hollister**, (197 authors). 2018. BioTIME: A database of biodiversity time series for the Anthropocene. *Global Ecology and Biogeography* 27(7): 760-786.
- ³¹ May, J.L., N.C. Healey, H.E. Ahrends, **R.D. Hollister**, C.E. Tweedie, J.M. Welker, W.A. Gould, S.F. Oberbauer. 2017. Short-term impacts of the air temperature on greening and senescence in Alaskan Arctic plant tundra habitats. *Remote Sensing* 2017, 9(12): 1338 1-19.
- ³⁰ Prevéy, J., M. Vellend, N. Rüger, **R.D. Hollister**, A.D. Bjorkman, I.H. Meyers-Smith, S.C. Elmendorf, K. Clark, E.J. Cooper, B. Elberling, A.M. Fosaa, G.H.R. Henry, T.T. Høye, I.S. Jónsdóttir, K. Klanderud, E. Lévesque, M. Mauritz, U. Molau, S.N. Natali, S.F. Oberbauer, Z.A. Panchen, E. Post, S.B. Rumpf, N.M. Schmidt, E.A.G. Schuur, P.R. Semenchuk, T. Troxler, J.M. Welker, C. Rixen. 2017. Greater temperature sensitivity of plant phenology at colder sites: implications for convergence across northern latitude. *Global Change Biology* 23(7): 2660-2671.
- ²⁹ Lara, M.J., D.R. Johnson, C. Andresen, **R.D. Hollister**, C.E. Tweedie. 2017. Peak season carbon exchange shifts from a sink to a source following 50+ years of herbivore exclusion in an Arctic tundra ecosystem. *Journal of Ecology* 105(1): 122-131.
- ²⁸ Walker, D.A., A.L. Breen, L.A. Druckenmiller, L.W. Wirth, W. Fisher, M.K. Raynolds, J. Šibík, M.D. Walker, S. Hennekens, K. Boggs, T. Boucher, M. Buchhorn, H. Bültmann, D.J. Cooper, F.J.A. Daniëls, S.J. Davidson, J.J. Ebersole, S.C. Elmendorf, H.E. Epstein, W.A. Gould, **R.D. Hollister**, M.T. Jorgenson, A. Kade, M.T. Lee, W.H. MacKenzie, R.K. Peet, J.L. Peirce, U. Schickhoff, V.L. Sloan, S.S. Talbot, C.E. Tweedie, S. Villarreal, P.J. Webber, D. Zona. 2016. The Alaska Arctic Vegetation Archive (AK-AVA). *Phytocoenologia* 46(2): 221-229.
- ²⁷ **Barrett, R.T.S.**, and **R.D. Hollister**. 2016. Arctic plants are capable of sustained responses to long-term warming. *Polar Research* 35(25405): 1-9.
- ²⁶ Healey, N.C., S.F. Oberbauer, and **R.D. Hollister**. 2016. Examination of surface temperature modification by Open-Top Chambers along moisture and latitudinal gradients in arctic Alaska using thermal infrared photography. *Remote Sensing* 8(1): rs8010054 1-19.
- ²⁵ **Barrett, R.T.S.**, **R.D. Hollister**, S.F. Oberbauer, and C.E. Tweedie. 2015. Arctic plant responses to changing abiotic factors in northern Alaska. *American Journal of Botany* 102(12): 2020-2031.

- ²⁴ **Hollister, R.D., J.L. May, K.S. Kremers**, C.E. Tweedie, S.F. Oberbauer, **J.A. Liebig, T.F. Botting, R.T. Barrett**, and **J.L. Gregory**. 2015. Warming experiments elucidate the drivers of observed directional changes in tundra vegetation. *Ecology and Evolution* 5(9): 1881-1895.
- ²³ **Kremers, K.S., R.D. Hollister**, and S.F. Oberbauer. 2015. Diminished response of arctic plants to warming over time. *Plos One* 10(3): e0116586 1-13.
- ²² Elmendorf, S.C., G.H.R. Henry, **R.D. Hollister**, A.M. Fosaa, W.A. Gould, L. Hermanutz, A. Hofgaard, I.I. Jónsdóttir, J.C. Jorgenson, E. Lévesque, B. Magnusson, U. Molau, I.H. Myers-Smith, S.F. Oberbauer, C. Rixen, C.E. Tweedie, and M. Walker. 2015. Experiment, monitoring, and gradient methods used to infer climate change effects on plant communities yield consistent patterns. *Proceedings of the National Academy of Science of the United States of America (PNAS)* 112(2): 448-452.
- ²¹ Healey, N.C., S.F. Oberbauer, H.E. Ahrends, D. Dierick, J.M. Welker, A.J. Leffler, **R.D. Hollister**, S.A. Vargas, and C.E. Tweedie. 2014. A mobile instrumented sensor platform for long-term terrestrial ecosystem analysis: An example application in an arctic tundra ecosystem. *Journal of Environmental Informatics* 24(1): 1-10.
- ²⁰ Oberbauer, S.F., S.C. Elmendorf, T.G. Troxler, **R.D. Hollister**, A.V. Rocha, M.S. Bret-Harte, M.A. Dawes, A.M. Fosaa, G.H.R. Henry, T.T. Høye, F.C. Jarrad, I.S. Jónsdóttir, K. Klanderud, J.A. Klein, U. Molau, C. Rixen, N.M. Schmidt, G.R. Shaver, **R.T. Slider**, Ø. Totland, C.-H. Wahren, and J.M. Welker. 2013. Phenological response of tundra plants to background climate variation tested using the International Tundra Experiment. *Philosophical Transactions of the Royal Society B* 368(1624): 20120481 1-13.
- ¹⁹ Bokhorst, S., A. Huiskes, R. Aerts, P. Convey, E.J. Cooper, L. Dalen, B. Erschbamer, J. Gudmundsson, A. Hofgaard, **R.D. Hollister**, J. Johnstone, I.S. Jónsdóttir, M. Lebouvier, B. Van De Vijver, C.-H. Wahren, And E. Dorrepaal. 2013. Variable temperature effects of Open Top Chambers at polar and alpine sites explained by irradiance and snowdepth. *Global Change Biology* 19(1): 64-74.
- ¹⁸ **May, J.L.** and **R.D. Hollister**. 2012. Validation of a simplified point frame method to detect change in tundra vegetation. *Polar Biology* 35(12): 1815-1823.
- ¹⁷ Elmendorf, S.C., G.H.R. Henry, **R.D. Hollister**, R.G. Björk, N. Boulanger-Lapointe, E.J. Cooper, J.H.C. Cornelissen, T.A. Day, E. Dorrepaal, T.G. Elumeeva, M. Gill, W.A. Gould, J. Harte, D.S. Hik, A. Hofgaard, D.R. Johnson, J.F. Johnstone, I.S. Jónsdóttir, J.C. Jorgenson, K. Klanderud, J.A. Klein, S. Koh, G. Kudo, M. Lara, E. Lévesque, B. Magnússon, **J.L. May**, J.A. Mercado-Díaz, A. Michelsen, U. Molau, I.H. Myers-Smith, S.F. Oberbauer, V.G. Onipchenko, C. Rixen, N.M. Schmidt, G.R. Shaver, M.J. Spasojevic, Þ.E. Þórhallsdóttir, A. Tolvanen, T. Troxler, C.E. Tweedie, S. Villareal, C.H. Wahren, X. Walker, P.J. Webber, J.M. Welker, and S. Wipf. 2012. Plot-scale evidence of tundra vegetation change and links to recent summer warming. *Nature Climate Change* 2(6): 453-457.
- ¹⁶ Elmendorf, S.C., G.H.R. Henry, **R.D. Hollister**, R.G. Bjork, A.D. Bjorkman, T.V. Callaghan, L.S. Collier, E.J. Cooper, J.H.C. Cornelissen, T.A. Day, A.M. Fosaa, W.A. Gould, J. Grétarsdóttir, J. Harte, L. Hermanutz, D.S. Hik, A. Hofgaard, F. Jarrad, I.S. Jónsdóttir, F. Keuper, K. Klanderud, J.A. Klein, S. Koh, G. Kudo, S.I. Lang, V. Loewen, **J.L. May**, J. Mercado, A. Michelsen, U. Molau, I.H. Myers-Smith, S.F. Oberbauer, S. Pieper, E. Post, C. Rixen, C.H. Robinson, N.M. Schmidt, G.R. Shaver, A. Stenström, A. Tolvanen, Ø. Totland, T. Troxler, C.H. Wahren, P.J. Webber, J.M. Welker, and P.A. Wookey. 2012. Global assessment of experimental climate warming on tundra vegetation: Heterogeneity over space and time. *Ecology Letters* 15(2): 164-175.
- ¹⁵ Villarreal, S., **R.D. Hollister**, D.R. Johnson, M.J. Lara, P.J. Webber, and C.E. Tweedie. 2012. Tundra vegetation change near Barrow, Alaska (1972-2010). *Environmental Research Letters* 7(015508): 1-10.
- ¹⁴ Lara, M.J., S. Villarreal, D.R. Johnson, **R.D. Hollister**, P.J. Webber, and C.E. Tweedie. 2012. Estimated change in tundra ecosystem function near Barrow, Alaska between 1972 and 2010. *Environmental Research Letters* 7(015507): 1-10.
- ¹³ Liljedahl, A.K., L.D. Hinzman, Y. Harazono, D. Zona, C.E. Tweedie, **R.D. Hollister**, R. Engstrom, and W.C. Oechel. 2011. Nonlinear controls on evapotranspiration in arctic coastal wetlands. *Biogeosciences* 8(11): 3375–3389.
- ¹² Shiklomanov, N.I., D.A. Streletskiy, F.E. Nelson, **R.D. Hollister**, V.E. Romanovsky, E. Vladimir, C.E. Tweedie, J.G. Bockheim, and J. Brown. 2010. Decadal variations of active-layer thickness in moisture-controlled landscapes, Barrow, Alaska. *Journal of Geophysical Research-Biogeosciences* 115(G00I04): 1-14.
- ¹¹ **Hollister, R.D.** and K.J. Flaherty. 2010. Above and belowground plant biomass response to experimental warming in Northern Alaska. *Applied Vegetation Science* 13(3): 378-387.

- ¹⁰ Huemmrich, K.F., J.A. Gamon, C.E. Tweedie, S.F. Oberbauer, G. Kinoshita, S. Houston, A. Kuchy, **R.D. Hollister**, H. Kwon, M. Mano, Y. Harazono, P.J. Webber, and W.C. Oechel. 2010. Remote sensing of tundra gross ecosystem productivity and light use efficiency under varying temperature and moisture conditions. *Remote Sensing of Environment* 114(3): 481-489.
- ⁹ Oberbauer, S.F., C.E. Tweedie, J.M. Welker, J.T. Fahnestock, G.H.R. Henry, P.J. Webber, **R.D. Hollister**, M.D. Walker, A. Kuchy, and G. Starr. 2007. Carbon dioxide exchange responses of arctic tundra ecosystems to experimental warming along moisture and latitudinal gradients. *Ecological Monographs* 77(2): 221-238.
- ⁸ **Hollister, R.D.**, P.J. Webber, F.E. Nelson, and C.E. Tweedie. 2006. Soil thaw and temperature response to air warming varies by plant community: Results from an open-top chamber experiment in northern Alaska. *Arctic Antarctic and Alpine Research* 38(2): 206-215.
- ⁷ Walker, M.D., C.H. Wahren, **R.D. Hollister**, G.H.R. Henry, L.E. Ahlquist, J.M. Alatalo, M.S. Bret-Harte, M.P. Calef, T.V. Callaghan, A.B. Carroll, H.E. Epstein, I.S. Jónsdóttir, J.A. Klein, B. Magnússon, U. Molau, S.F. Oberbauer, S.P. Rewa, C.H. Robinson, G.R. Shaver, K.N. Suding, C.C. Thompson, A. Tolvanen, Ø. Totland, P.L. Turner, C.E. Tweedie, P.J. Webber, and P.A. Wookey. 2006. Plant community responses to experimental warming across the tundra biome. *Proceedings of the National Academy of Science of the United States of America (PNAS)* 103(5): 1342-1346.
- ⁶ **Hollister, R.D.**, P.J. Webber, and C. Bay. 2005. Plant response to temperature in northern Alaska: Implications for predicting vegetation change. *Ecology* 86(6): 1562-1570.
- ⁵ Hinzman, L.D., N. Bettez, F. S. Chapin III, M.B. Dyurgerov, C.L. Fastie, B. Griffith, **R.D. Hollister**, A.S. Hope, H.P. Huntington, A. Jensen, D.L. Kane, A.H. Lynch, A. Lloyd, A. D. McGuire, F.E. Nelson, W.C. Oechel, T.E. Osterkamp, C.H. Racine, V.E. Romanovsky, D. Stow, M. Sturm, C.E. Tweedie, G.L. Vourlitis, M.D. Walker, P.J. Webber, J.M. Welker, K. Winker, and K. Yoshikawa. 2005. Evidence and implications of recent climate change in terrestrial regions of the Arctic. *Climatic Change* 72(3): 251-298.
- ⁴ **Hollister, R.D.**, P.J. Webber, and C.E. Tweedie. 2005. The response of Alaskan arctic tundra to experimental warming: Differences between short- and long-term responses. *Global Change Biology* 11(4): 525-536.
- ³ Rustad, L.E., J. Campbell, G.M. Marion, R.J. Norby, M.J. Mitchell, A.E. Hartley, J. H.C. Cornelissen, J. Gurevitch, and **GCTE-NEWS** [R. Alward, C. Beier, S. Bridgham, J. Canadell, T. Christensen, S. Duke, J. Fahnestock, I. Fernandez, J. Harte, G. Henry, **R. Hollister**, J. Hom, M. Johnson, S. Jonasson, S. Linder, A. Lukewille, G. Masters, J. Melillo, C. Neill, D. Olszyk, K. Pregitzer, P. Rygielwicz, O. Sala, G. Shaver, K. Thompson, A. Thichelsan, D. Tingey, P. Verburg, D. Wall, J. Welker, R. Wright]. 2001. A meta-analysis of the response of soil respiration, net mineralization, and aboveground plant growth to experimental ecosystem warming. *Oecologia* 126(4): 543-562.
- ² **Hollister, R.D.** and P.J. Webber. 2000. Biotic validation of small open-top chambers in a tundra ecosystem. *Global Change Biology* 6(7): 835-842.
- ¹ Arft, A.M., M.D. Walker, J. Gurevitch, J.M. Alatalo, M.S. Bret-Harte, M. Dale, M. Diemer, F. Gugerli, G.H.R. Henry, M.H. Jones, **R.D. Hollister**, I.S. Jónsdóttir, K. Laine, E. Lévesque, G.M. Marion, U. Molau, P. Mølgaard, U. Nordenhäll, V. Raszhivin, C.H. Robinson, G. Starr, A. Stenström, M. Stenström, Ø. Totland, P.L. Turner, L.J. Walker, P.J. Webber, J.M. Welker, and P.A. Wookey. 1999. Response patterns of tundra plant species to experimental warming: a meta-analysis of the International Tundra Experiment. *Ecological Monographs* 69(4): 491-511.

Theses, Book Chapters & Other

- ⁶ Villarreal, S., P.J. Webber, D.R. Johnson, **R.D. Hollister**, M.J. Lara, D.H. Lin, and C.E. Tweedie. 2014. Vegetation datasets from Northern Alaska, Baffin Island, Canada, and Beringia. In *Alaska Arctic Vegetation Archive (AVA) Workshop, Boulder, Colorado, USA, October 14-16, 2013. CAFF Proceedings Report 11. ISBN: 978-9935-431-29-5*. Conservation of Arctic Flora and Fauna (CAFF), Iceland. 73-82 pp.
- ⁵ **Hollister, R.D.**, P.J. Webber, **R.T. Slider**, F.E. Nelson, C.E. Tweedie. 2008. Soil temperature and thaw response to manipulated air temperature and plant cover at Barrow and Atkasuk, Alaska. In *Ninth International Conference on Permafrost*. Institute of Northern Engineering, University of Alaska Fairbanks. 729-734 pp.
- ⁴ **Hollister, R.D.** 2003. *Response of Tundra Vegetation to Temperature: Implications for Forecasting Vegetation Change*. Doctor of Philosophy Thesis. Michigan State University. East Lansing, MI. 385+XXIV pp. [Major Professor Patrick J. Webber, 6 resulting publications]
- ³ Webber, P.J. and **R.D. Hollister**. 2001. Vegetation research and global Change at Barrow. In *Fifty More Years Below Zero*. Arctic Institute of North America. 303-312 pp.

- ² **Hollister, R.D.** (editor). 1999. *Plant Response to Climate Change: Integration of ITEX Discoveries. Proceedings from the 9th ITEX Meeting January 5-9,1999.* Arctic Ecology Laboratory Report 1, Michigan State University. East Lansing, MI. 117 pp.
- ¹ **Hollister, R. D.** 1998. *Response of Wet Meadow Tundra to Interannual and Manipulated Temperature Variation: Implications for Climate Change Research.* Master of Science Thesis. Michigan State University. East Lansing, MI. 128 pp. [Major Professor Patrick J. Webber; 2 resulting publications]

External Funding

Primary Investigator (PI)

- NSF Arctic Sciences Division 2019-2024. NNA: Collaborative Research: Using the ITEX-AON network to document and understand terrestrial ecosystem change in the New Arctic. **Lead PI:** Robert D. Hollister: Awarded \$992,961 over 5 years. [collaborative with S. Oberbauer at FIU, C. Tweedie UTEP, J. Welker UAA, for \$4,043,822 plus logistics]
- NSF Arctic Sciences Division 2016-2020. Arctic Observing Networks: Collaborative Research: ITEX AON - understanding the relationships between vegetation change, plant phenology, and ecosystem function in a warming Arctic. **PI:** Robert D. Hollister: Awarded \$304,439 over 4 years. [collaborative with S. Oberbauer at FIU, C. Tweedie UTEP, J. Welker UAA, for \$1,332,678 plus logistics]
- NSF Arctic Sciences Division 2014-2016. Collaborative Research: Sustaining and amplifying the ITEX AON through automation and increased interdisciplinarity of observations. **PI:** Robert D. Hollister: Awarded \$111,995 over 2 years. [collaborative with S. Oberbauer at FIU, C. Tweedie UTEP, J. Welker UAA, for \$828,529]
- NSF Arctic Sciences Division 2009-2014. Collaborative Research: Sustaining and amplifying the ITEX AON through automation and increased interdisciplinarity of observations. **PI:** Robert D. Hollister: Awarded \$502,600 over 5 years. [collaborative with S. Oberbauer at FIU, C. Tweedie UTEP, J. Welker UAA, for \$3,513,162]
- NSF REU (Research Experiences for Undergraduates) Supplement 2008. Supplement to: Study of arctic ecosystem changes in the IPY using the International Tundra Experiment. **PI:** Robert D. Hollister: Awarded \$7,000 over 1 year.
- NSF REU (Research Experiences for Undergraduates) Supplement 2007. Supplement to: Study of arctic ecosystem changes in the IPY using the International Tundra Experiment. **PI:** Robert D. Hollister: Awarded \$7,000 over 1 year.
- NSF Arctic Research Support & Logistics 2007-2010. International Polar Year: Collaborative Research: Study of Arctic ecosystem changes in the IPY using the International Tundra Experiment (ITEX). **PI:** Robert D. Hollister: Awarded \$158,000 over 3 years. [collaborative with S. Oberbauer at FIU, J. Welker UAA, J. Klein CSU for \$1,132,426 plus logistics]
- NASA Earth Systems Fellowship 1999-2000. An Integrated Assessment of Cumulative Impacts from Large-scale Arctic Developments. **PI:** Robert D. Hollister; Awarded \$22,000 over 1 year.

Made a Significant Contribution in Proposal Preparation & Project Execution

- NSF Arctic Systems Science Program 1997-2003. Response of Arctic Tundra to Variation of Temperature. PI: P.J. Webber, **Co-Investigator:** Robert D. Hollister; Awarded \$966,198 over 6 years.
- NSF Office of Polar Programs 2002-2003. Biocomplexity Associated with Controls of Sensitivity and Stability in Tundra Systems Over Decadal Time Scales. PI: P.J. Webber / C.E. Tweedie; Awarded \$98,878 over 1 year.
- NSF Arctic Systems Science Program 1999-2003. Forecasting Arctic Vegetation: The Interaction Between Surface Disturbance and Climate Change. PI: P.J. Webber; Awarded \$341,119 over 3 years.

Courses Taught

Grand Valley State University

Aquatic & Wetland Plants (BIO 323)
 Plant Identification & Natural History (BIO 243)
 General Ecology (BIO 215)
 Plants in the World (BIO 109)
 General Biology I (BIO 120)
 Environmental Science (BIO 105)
 Plants of the Great Lakes Region (BIO 578)
 Independent Study (BIO/HNR/NRM 399/499/699)

Michigan State University

Plant Biology
 Study Abroad: Antarctic System Science
 Study Abroad: Arctic Studies
 Introduction to Earth System Science
 Undergraduate Research
 Environmental Biology Laboratory
 Ecology (Assisted)
 Wetland Plants & Algae (Assisted)

Undergraduate Students Employed / Mentored

Jenna Boelkins (2022-present)*,	Peyton Frank* (2018),	Kelsey Kremers (2013-2010),
Scott Branham (2022-present)*,	Kailey Keenan-Whittemore (2017),	Tim Botting (2012-2011),
Emma Miller (2022-present)*,	Caleb Krueger (2016),	Julien Nadeau (2011),
Taylor Doorn (2021-present),	Ellen Audia (2016),	Jenny Liebig (2009-2008),
Nina Gropp (2020-2021),	Jacob Rumschlag (2016-2015),	Robert Slider (2009-2007),
Ashley Wigton (2020)*,	Ashley Brecken (2016-2014),	Jean Galang (2008),
Rebecca Daigle (2020-2019),	Kelsey Mannard (2015),	Jeremy May (2008-2007),
Hannah Clarida (2020-2019),	Shelia Wald (2015),	Amanda Snyder (2008-2007),
Mackenzie Lift (2020-2019),	Amanda Hennells (2014),	Michael Lothschutz (2008-2007),
Nicole Foy (2019-2018),	Michaela Clingaman (2014-2013),	Martha Steele* (2007-2006),
Hana Christoffersen (2018-2017),	Andrew Smith (2014-2013),	Casey Bartman* (2005).
Katlyn Betway (2018-2016),	Chase Baldwin (2013-2012),	

All of the above spent at least one field season in Arctic Alaska except for those noted with an *.

At Michigan State University: Leslie Ovitt (2004-2002), Shawn Serbin (2003-2002), Dustin Bronson (2003-2001), Andrew Johnson (2002), Devan Berry (2001), Josh Picotte (2000), Christin Kolarchick (2000), Meghan Yurenka (2000), Christine Jimenez (2000), Frank Lepera (2000-1999), Steve Rewa (2000-1997), Karri Tompkins (2000), Kelli Tompkins (2000), Brandon Baker (1999), Kathryn Wilkinson (1999-1998), Mary Grace Villanueva (1998), Christie Klimas (1998), Theresa Thomas (1998), Natasha Nesbitt (1998), Sharon Osborn (1998), Seth Houston (1998), Anna Noson (1997), David Conlin (1997), Bennett Weinstein (1997), Matt Guisbert (1997), Stephanie Grimes (1997-1995), Laura Stack (1996), Mark Peterson (1996), Lisa Koch (1996).

Graduate Students

Sarah K. Ansbro (M.S. 2020-present), Mackenzie M. Lift (M.S. 2020-present), Hana L. Christoffersen (M.S. 2019-present), Katlyn R. Betway (M.S. 2018-2020), Jacob A. Harris (M.S. 2016-2020), Robert T. Slider/Barrett (M.S. 2009-2016), Timothy F. Botting (M.S. 2012-2015), Jessica L. Gregory (M.S. 2012-2014), Jennifer A. Liebig (M.S. 2010-2013 not completed), Jeremy L. May (M.S. 2008-2011)

Theses

- ⁶ Harris, J.A. 2020. *Drivers of Decadal Vegetation Change in Northern Alaska*. Master's Thesis. Grand Valley State University. Allendale, MI. 100 pp.
- ⁵ Betway, K.R. 2020. *Variation in Tundra Plant Traits Across a Latitudinal Gradient*. Master's Thesis. Grand Valley State University. Allendale, MI. 128 pp.
- ⁴ Barrett, R.T.S. 2016. *Detection and Attribution of Long-Term Vegetation Changes in Northern Alaska*. Master's Thesis. Grand Valley State University. Allendale, MI. 81 pp.
- ³ Botting, T.F. 2015. *Documenting Annual Differences in Vegetation Cover, Height and Diversity near Barrow, Alaska*. Master's Thesis. Grand Valley State University. Allendale, MI. 66 pp.
- ² Gregory, J.L. 2014. *Structural Comparison of Arctic Plant Communities Across the Landscape and with Experimental Warming in Northern Alaska*. Master's Thesis. Grand Valley State University. Allendale, MI. 87 pp.
- ¹ May, J.L. 2011. *Documenting Tundra Plant Community Change in Northern Alaska*. Master's Thesis. Grand Valley State University. Allendale, MI. 85+IX pp.

Awards

Center for Scholarly and Creative Excellence: Distinguished Graduate Mentoring Award. December, 2019.

Graduate Student Association: Faculty Mentor Award. April, 2011.

GVSU Sustainable Community Development Initiative: Sustainability Champion. October 23, 2009.

University Service

Chair of University Faculty Salary and Budget Committee (FSBC), GVSU 2012-Current.

Member of University Faculty Salary and Budget Committee (FSBC), GVSU 2006-Current.

Biology Department Curriculum Committee, GVSU 2006-Current.

Chair of Program Review Working Data Group, GVSU 2021-2022.

Member of Program Review Committee, GVSU 2021.

Chair of Taskforce to Study Summer Compensation, GVSU 2018.

Search Committee for Vice President of Finance, GVSU 2017.

College of Liberal Arts and Science, Risk Reduction Task Force, GVSU 2011-2012.

Biology Department Search Committee, GVSU: Genetics 2010; Quantitative Ecologists 2008-9; Systematics 2007-8; Botany 2005-6.

Graduate Student representative to the Chair Search Committee, Michigan State University 1999-2000.

Graduate Student Natural Science representative for Dean's Faculty Advisory Committee, Michigan State University 1998-99.

Graduate Student Botany and Plant Pathology representative for Dean's Student Advisory Committee, Michigan State University 1998-99.

Graduate Student Botany and Plant Pathology Computer Concerns Representative, Michigan State University 1996.

Professional Service

Invited Memberships / Positions

Barrow-Atkasuk Science Advisor (BASA) to UIC. 2014-2019.

Co-Chair of the International Tundra Experiment (ITEX) Network. 2012-present.

Member of the Global Change Biology Editorial Advisory Board. 2007-2014.

Arctic Research Consortium of the United States (ARCUS) Member Alternate Representative. 1998-2004.

Arctic Research Consortium of the United States (ARCUS) Board Development Committee. 2003-2004.

Arctic Research Consortium of the United States (ARCUS) Board Nominating Committee. 2002-2003.

International Tundra Experiment (ITEX) Metadata Working Group Co-chair 1999-2002.

Conference Host/Organizer. The 9th ITEX Workshop. January 5-9, 1999. Michigan State University, East Lansing, Michigan.

Workshop Organizing Committee Member for the Barrow Area Research Support Workshop, December 2-4, 1998. Marconi Conference Center, Marshall, California.

Committee to Recommend Judges for the ARCUS 2nd Annual Student Award November 20, 1997.

Peer Reviewer - Journals

Arctic Science (2:2018-2019)

Ambio (2:2011)

American Fern Journal (2:2004-2007)

American Journal of Botany (1:2004)

Applied Vegetation Science (3:2005-2011)

Aquatic Botany (4:2006-2010)

Arctic (1:2017)

Arctic, Antarctic & Alpine Research (4:2004-2014)

Australian Journal of Botany (4:2006-2009)

Botany (2:2010-2011)

Ecological Engineering (1:2009)	Global Change Biology (22:2005-2021)
Ecology (1:2007)	Global Ecology & Biogeography (1:2011)
Ecological Research (1:2017)	Methods in Ecology and Evolution (2:2017)
Ecology Letters (1:2019)	Nature Plants (2:2019)
Ecosystems (2:2011-2012)	Oecologia (4:2008-2012)
European Journal of Soil Biology (1:2009)	Permafrost & Periglacial Processes (2:2011-2014)
Fundamental & Applied Limnology (1:2010)	Plant Ecology (2:2008-2017)
Journal of Ecology (7:2009-2013)	Plant Ecology & Diversity (2:2009-2010)
J of Geophysical Research -Earth Surface (2:2012-2013)	Polar Biology (1:2017)
Journal of Hydrology (1:2013)	Polar Knowledge: Aqhalat (1:2018)
Journal of Vegetation Science (2:2012)	Polar Research (3:2009)

Peer Reviewer - Grants

Department of Energy (1:2008) – National Institute for Climatic Change Research
 Netherlands Organization for Scientific Research (1:2016)
 National Oceanic and Atmospheric Administration (1:2010) – Earth System Science
 National Science Foundation (39:2003-2020) – Antarctic Biology & Medicine; Arctic Natural Sciences (Panel Member 2009); Arctic Research Support & Logistics; Arctic System Science Program; Ecosystem Science Cluster; Ecosystem Studies; Partnerships for International Research and Education; Long-Term Research in Environmental Biology
 Natural Sciences and Engineering Research Council of Canada (1:2006)
 University of Alaska Fairbanks (1:2009) – Student Grants
 U.S. Fish & Wildlife Service (1:2010) – Great Lakes Fish and Wildlife

Peer Reviewer - Books

McGraw-Hill (3:2008-2009) – Biology; Environmental Science
 Oxford University Press (1:2018) – Environmental Science
 Pearson Benjamin Cummings (3:2008) – Ecology; Environmental Science
 Red Line (2:2014-2015) – Tundra Ecology
 Singer (2:2012) – Ecology
 W.H. Freeman & Co. (7:2008-2011) – Environmental Science

Subscribed Memberships

American Association for the Advancement of Science	since December 1999
American Geophysical Union	since January 2000
Ecological Society of America	since December 1999
Arctic Research Consortium of the United States	since January 2017

Community Service

Miscellaneous

Event- Common Wetland Plants of Michigan. Michigan Wetland Association. Virtual. July 13 & 20, 2021.
 Event- Climate Crisis Townhall. Young Democratic Socialists of America. GVSU. February 6, 2020.
 Founding Member- Climate Solution Education Collaborative Project. GVSU. 2018-present.
 Event Organizer/Leader- Tundra Tours! Experience the Arctic. West Michigan Academy of Environmental Science. May 16-20, 2019.
 Event Organizer/Leader- Tundra Ecology. Atqasuk School. April 25, 2019.
 Event- Civil Conversations on Climate Change. Table Leader –Climate Change in the Arctic. GVSU. October 25, 2018.
 Event Organizer/Leader- Tundra Tours! Experience the Arctic. West Michigan Academy of Environmental Science. May 31-June 2, 2017.
 Event Organizer/Leader- Arctic Research. Science Night at the Museum; Grand Rapids Public Museum (GRPM). April 18, 2017. ***Won Staff Award for Best Display (Hands-on for all!)***
 Event Organizer/Leader- Life with 24 Hours of Light. Super Science Saturday Open House: The Wonder of Light. January 24, 2015.

Land Steward for the 5 Lakes Nature Area owned by the Michigan Nature Association 2005-2013.

Event Organizer/Leader- Arctic Life and Carbon Cycling. Super Science Saturday Open House: Celebrating Chemistry Past, Present, Future. January 29, 2011.

PolarTREC teacher host. Arctic Research Consortium of the United States (ARCUS) 2010.

Science Olympiad Judge. Grand Valley State University 2005, 2006, 2007, 2008, 2009.

Event Organizer/Leader: The North Slope Safari. Super Science Saturday Open House: Polar Themes in Science & Culture. International Polar Year 2007-2008. January 26, 2008.

College Board Advanced Placement Reader for Environmental Science. Clemson University June 3-9, 2006.

Talks

Great Decisions, Competition in the Arctic. Hope Academy of Senior Professionals (HASP). Hope College. September 27, 2021.

Ecosystem Studies. UICS Outreach and Engagement Podcast. Utqiagvik, Alaska. September 15, 2021.

The Melting Arctic. Grand Forum. GVSU (virtual). May 6, 2021.

The Warming Arctic. Great Decisions Global Discussions, World Affairs Council of Western Michigan. Western Michigan (virtual). March 15, 2021.

Climate Change in the Arctic: Terrestrial Ecosystem Change. Climate Change Education Solutions Summit and Michigan Climate and Land Change Lecture Series 2020-21. GVSU (virtual), November 18, 2020.

Permafrost? Arctic Change. Sunday Assembly. Wyoming, Michigan, January 19, 2020.

What is the New Arctic? 2019 Annual Conservation Banquet Dwight Lydell Chapter - Izaak Walton League of America. Grand Rapids, Michigan, March 2, 2019.

Ongoing Research. Atqasuk Community Meeting. Atqasuk, Alaska, June 11, 2018.

Science, Climate Change & Arctic Research. AP Environmental Science. Jenison High School, Jenison, Michigan, May 3, 2018.

Ongoing Research. Atqasuk Community Meeting. Atqasuk, Alaska, June 11, 2016.

Significance of a Changing Tundra. Ilisagvik College BBC Hard talk in Barrow. Barrow, Alaska, July 18, 2013.

The Significance of a Changing Tundra. Understanding Our Climate Summer Camp, Ilasavik College, Barrow, Alaska, July 15, 2012.

Exploring Climate Change from Michigan to the Arctic. Fall Science Update, Regional Math and Science Center Grand Rapids, MI, November 17, 2010.

Climate Change & the Arctic. Audubon Society, Grand Haven, MI, November 16, 2010.

Significance of a Changing Tundra. Spring Lake Library, Spring Lake, MI, May 1, 2008.

Living in the Arctic & Recent Changes in the Arctic. Dwight Rich Elementary School, Lansing, MI, April 29, 2008.

Understanding Climate Change in the Arctic. Spring Lake Rotary Club, Spring Lake Country Club, April 4, 2008.

The Arctic and Global Climate Change. Michigan Science Teachers Association, Lansing Center, March 8, 2008.

Polar Climate Change with Focus on Arctic Tundra. Kellogg Biological Station-K12 Partnership for Science Literacy, Hickory Corners, MI, February 26, 2008.

Global Warming and the Status and Significance of the Changing Tundra. Michigan Botanical Club – White Pine Chapter, Grand Valley State University, February 16, 2008

International Polar Year: Overview of the Arctic and the Changing Tundra. Grand Forum, Grand Valley State University, February 14, 2008.

The Impact of Warming on Arctic Vegetation. Annis Water Research Institute Seminar, Grand Valley State University, January 17, 2008.

Global Linkages: The Significance of a Changing Tundra. Polar Science- Global Impact: Lecture series on topics and issues with urgent consequences, Grand Valley State University, November 8, 2007.

Wetlands. MIGHT Home Schooling, Kellogg Biological Station, MI, Summer 2005.

The Arctic and Antarctic. Catholic Elementary School, Charlotte, MI, Spring 2004.

The Arctic. MIGHT Home Schooling, Main Library, Farmington Hills, MI, Spring 2004.

Impact of Climate Change on Arctic Ecosystems. Kellogg Biological Station-K12 Partnership for Science Literacy, Hickory Corners, MI, Fall 2003.

Global Warming. Gardener Elementary School, Lansing, MI, Spring 2002.

The Arctic. Endeavor Elementary School, Kentwood, MI, Spring 2001.

A Few Words about Global Warming from the Scientific Perspective. Press Conference to announce the MSU ECO representative to The Hague, November 16, 2000.

Global Warming: What You Should Know & Why. Master Gardeners of Charlotte, Spring 2000.

Global Change Research in Arctic Alaska. Holt High School, Organized by Dr. Frank Ewers, Spring 1999.

Mass Media

Pandemic Hobbies - Lakers find comfort in newly found pastimes. GVSU University Communications. by Kendra Stanley-Mills. Thursday April 1, 2021

Carbon Doomsday Clock. WXMI-GR (FOX). FOX 17 Morning News. by Erik Kostrzewa. Thursday September 24, 2020.

GVSU expert on rampant Arctic fires: 'Fulfilling a prophecy'. GVNext, by Peg West. Monday July 20, 2020.

Young Democratic Socialists of America chapter hosts townhall discussion on climate change. Grand Valley Lanthorn. A3 by Jane Johnston. Monday February 10, 2020.

Grand Valley State Researcher Gets \$1M Grant to Study Climate Change. by Monica Scott (reprinted with permission, MLive/The Grand Rapids Press). InterChange Newsletter. Monday May 13, 2019.

GVSU receives \$1 million grant to study impact of climate change on Arctic vegetation. by Matthew Makowski. In several media outlets including: GVNOW, MLive, GVSU Alumni October ENews, The Holland Sentinel, myZeeland, and The Grand Rapids Press. Friday October 5, 2018.

Profile in Excellence when global is somewhere else. Scholarly and Creative Achievements of the College of Liberal Arts and Science 2016-2017. by Monica Johnstone. July 2017.

National Climate Assessment, two person panel member. West Michigan Week WGUV-PBS. Moderator Patrick Center. Sunday May 11, 2014.

Students Spend Summer in Arctic. Grand Valley Lanthorn. A1. Thursday October 1, 2009.

Grand Valley awarded \$500K to study arctic vegetation as part of NSF study on climate change. Rapid Growth – Grand Rapids. by Deborah Johnson Wood. Thursday September 17, 2009.

Grand Valley State University students to study warming effects on Arctic plants. The Muskegon Chronicle. by Lee Lupo. Thursday September 3, 2009.

GVSU Gets Federal Stimulus Money to Study Arctic Climate Change. Michigan Radio NPR (WUOM 91.7, WFUM 91.1, WVGR 104.1). by Dustin Dwyer. Tuesday 9/1/2009.

Students to Study Arctic Plants. by the Associated Press. In over 25 media outlets including: Grand Rapids Press, Grand Haven Tribune, Chicago Tribune, Fairbanks Daily Newsminer, The Juneau Daily News, Anchorage Daily News, The Marshall News Messenger, St. Petersburg Times, The Miami Herald, The Gainesville Sun, Dallas News, The Houston Chronicle, The Bryan College Station Eagle, The Star-Telegram, The Palm Beach Post, The Herald Tribune, The Examiner, World News Network, KWTX, WTXL, KSLA, WEAR, WZZM, KTUU, KLTU. Tuesday September 1, 2009.

GVSU Research Among Stimulus Projects. WOOD-TV8. by Joe LaFurgey. Monday August 31, 2009.

GVSU Gets Grant to Help Study Arctic Plant Life. WGUV PBS NPR (88.5FM). by Lindsey Smith. Monday August 31, 2009.

The Significance of a Changing Tundra. 88.5 WGUV Public Radio. WGUV Morning Show with Shelley Irwin. 10:30-10:45AM Thursday April 24, 2008.

Student environmental coalition to present Focus the Nation. Grand Valley Lanthorn. by Karin Armbruster. A5 Thursday January 31, 2008.

Hollister to lecture on global warming. Grand Valley Lanthorn. by Michelle Hamilton and Alicia Wireman. A3 Thursday November 8, 2007.

Research in the Arctic. 88.5 WGUV Public Radio. WGUV Morning Show with Shelley Irwin. 10:00-10:30AM Thursday April 19, 2007.

NSF grant awarded to professor for Arctic study. Grand Valley Lanthorn. by Rachel Royer. A3 Monday February 19, 2007.

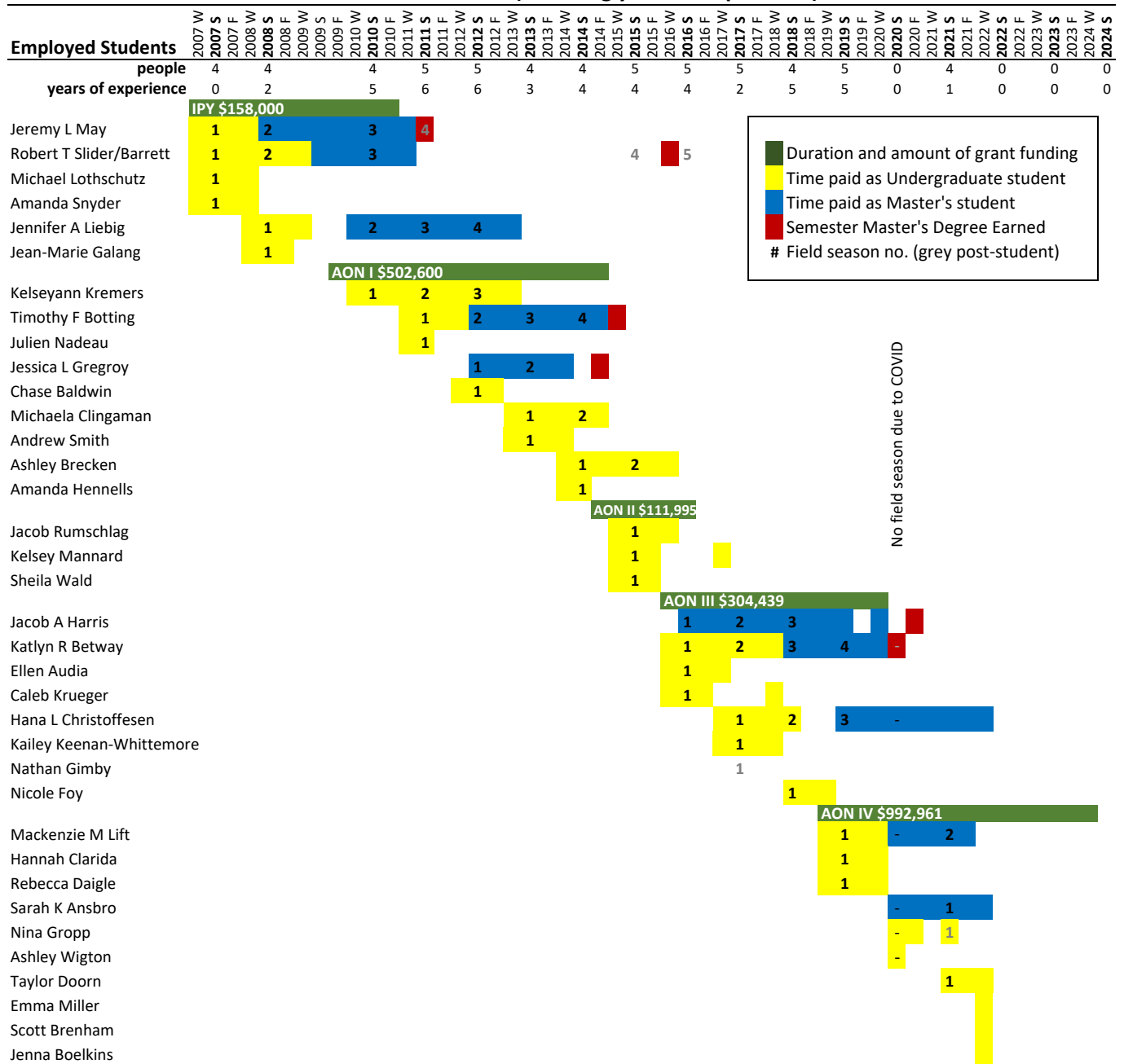
GVSU students headed to Arctic. The Grand Rapids Press. by Aaron Ogg. B2 Monday February 19, 2007.
 NSF funds GVSU arctic warming study. XXMI-TV (FOX 17) FOX News. by Carl Apple. Sunday February 18, 2007.
 Group of 'U' students to journey to Antarctica. The State News. by Amy Bartner. A1 Tuesday January 28, 2003.
 Students leave for conference in the Hague. The State News. by Rachel Wright. A3 Friday November 17, 2000.
 Students explore Alaska. The State News. by Jason Mui. A2 Friday November 10, 2000.
 A warmer Arctic? MSU researchers say the earliest signs of global warming will be seen near the poles. The Kalamazoo Gazette. by Bill Karsean. B1 Sunday April 2, 2000

Professional Meetings Attended

Documenting and Understanding Tundra Ecosystem Changes – 20th ITEX Meeting. September 9-15, 2019. Parma University. Parma, Italy.
Arctic Futures 2050. September 4-6, 2019. National Academy of Science. Washington, D.C.
Integrating Tundra Structure, Function and Change – 19th ITEX Meeting. April 25-27, 2018. Stirling University. Stirling, Scotland.
Michigan Academy of Science, Arts, and Letters. March 9, 2018. Central Michigan University. Mount Pleasant, Michigan.
Arctic Observing Open Science Meeting. November 17-19, 2015. Seattle, Washington.
Integrating Arctic Plant and Microbial Ecology - 21st ITEX meeting. September 16-18, 2015. Uppsala University. Uppsala, Sweden.
sTUNDRA: Scaling Tundra Shrub Expansion from Site to Biome. 24 Feb – 07 Mar 2014. German Centre for Integrative Biodiversity Research (iDiv). Leipzig, Germany.
International Tundra Experiment ITEX: More than 20 years of tundra vegetation change research. September 17-21, 2013. Bergün, Switzerland.
Tundra Change – The Ecological Dimension. November 6, 2012. Aarhus University. Aarhus, Denmark.
20th Anniversary of the International Tundra Experiment (ITEX). January 17-21, 2012. The University of Texas at El Paso. El Paso, Texas.
Michigan Academy of Sciences, Arts, and Letters 115th Annual Meeting. March 11, 2011. Saginaw State University. Saginaw, Michigan.
Climate Change Experiments in High-Latitude Ecosystems. October 14-15, 2010. International Arctic Research Center, University of Alaska. Fairbanks, Alaska.
International Workshop on Tundra Vegetation Change. May 2-6, 2010. Maple Ridge, British Columbia, Canada.
Michigan Academy of Sciences, Arts, and Letters 114th Annual Meeting. March 26, 2010. Calvin College. Grand Rapids, Michigan.
Arctic Observatory Network (AON) 2009 PI Meeting. November 30- December 2, 2009. Boulder, Colorado.
International Polar Year ‘Back to the Future’ (IPY-BTF) Project Meeting. November 10-13, 2009. University of Texas at El Paso. El Paso, Texas.
NCEAS (National Center for Ecological Analysis and Synthesis): Long-term Phenological Changes in Tundra Plants in Response to Experimental Warming and Observed Changes in Climate. October 12-16, 2009. NCEAS. Santa Barbara, California.
West Michigan Regional Undergraduate Science Research Conference. November 1, 2008. Van Andel Research Institute. Grand Rapids, Michigan.
ITEX during the International Polar Year: International Tundra Experiment – 15th Workshop. October 10-12, 2008. Reykjavik, Iceland.
US France Young Engineering Scientists Symposium (YESS) 2007. October 22-24, 2007. French Embassy. Washington D.C.
Arctic Observatories Network (AON) PI Meeting. March 28-30, 2007. Boulder, Colorado.
13th International Tundra Experiment Workshop. January 13-15, 2006. Miami, Florida.
The Ecological Society of America Annual Meeting. August 7-13, 2005. Montreal, Quebec.

- 12th International Tundra Experiment Workshop. September 25-29, 2003. Chena Hot Springs Resort. Fairbanks, Alaska.
- 11th International Tundra Experiment Workshop. October 5-7, 2002. Hotel Finse. Finse, Norway.
- ARCUS 14th Annual Meeting and Arctic Forum. May 15-17, 2002. Arlington Hilton Hotel. Washington, D.C.
- The Arctic System Science Land-Atmosphere-Ice Interactions All Hands Meeting. November 14-17, 2001. Salt Lake City, Utah.
- A Workshop to Address Arctic Science in the Barrow Region: Programmatic and Facilities Needs. April 9-10, 2001. UIC-NARL Facility. Barrow, Alaska.
- ITEX Community Change Workshop. February 15-19, 2001. University Corporation for Atmospheric Research (UCAR). Boulder, Colorado.
- From Decade to Millennium: The 10th ITEX Meeting. September 22-25, 2000. Abisko Scientific Research Station. Abisko, Sweden.
- Pattern to Process: Development of a Signature Program in Land Use and Land Cover Change. April 26, 2000. Michigan State University. East Lansing, Michigan.
- The Arctic System Science Land-Atmosphere-Ice Interactions Science Workshop. February 22-26, 2000. Double Tree Hotel Seattle Airport. Seattle, Washington.
- The Arctic System Science Land-Atmosphere-Ice Interactions Science Workshop. March 11-13, 1999. Double Tree Hotel Seattle Airport. Seattle, Washington.
- A Cross Biome Synthesis of Ecosystem Response to Global Warming. January, 31- February 5, 1999. The National Center for Ecological Analysis and Synthesis (NCEAS). Santa Barbara, California.
- The 9th ITEX Workshop. January 5-9, 1999. Michigan State University. East Lansing, Michigan.
- Barrow Area Research Support Workshop. December 2-4, 1999. Marconi Conference Center. Marshall, California.
- The Earth's Changing Land. GCTE-LUCC Open Science Conference on Global Change. March 14-18, 1998. Barcelona, Spain.
- President Clinton's Arctic Research Commission. August 8, 1997. Barrow, Alaska.
- Science in the Community: A Celebration of the 50th Anniversary of the founding of the Naval Arctic Research Laboratory. August 4-8, 1997. Ilisagvik College. Barrow, Alaska.
- The 8th Annual ITEX Workshop. April 18-22, 1997. Royal Holloway College, University of London. Egham, United Kingdom.
- The Arctic System Science Land-Atmosphere-Ice Interactions Science Workshop. March 27-29, 1997. Battelle Seattle Conference Center. Seattle, Washington.
- The ITEX Synthesis Collaboratory Workshop. December 4-9, 1996. The National Center for Ecological Analysis and Synthesis (NCEAS). Santa Barbara, California.
- The 7th Annual ITEX Workshop. April 26-29, 1996. Danish Polar Center. Copenhagen, Denmark.
- Annual Meeting of the Michigan Academy of Science Arts & Letters. March 1-2, 1996. Alma College. Alma, Michigan.
- The 38th Conference of the International Association for Great Lakes Research. May 28 - June 1, 1995. Michigan State University. East Lansing, Michigan.
- Annual Meeting of the Michigan Academy of Science Arts & Letters. March 10-11, 1995. Ferris State University. Big Rapids, Michigan.

Members of the AEP (including years of experience)



Arctic Ecology Program Outreach Activities (events & talks) by Year

[*First names* are provided for GVSU students; *Middle initials* denote graduate students; † denotes the presenter]

2007

Talk- **R Hollister**†. Global Linkages: The Significance of a Changing Tundra. Polar Science- Global Impact: Lecture series on topics and issues with urgent consequences. November 8, 2007. Grand Valley State University.

Talk- **Robert Slider**†. Barrow Alaska: Perspectives of an Assistant Researcher. Webberville Middle School. December 16, 2007. Webberville, Michigan.

2008

Event- **R Hollister**†, **Jeremy May**†, **Robert Slider**†, **Amanda Snyder**† & **Michael Lothschutz**†. The North Slope Safari. Super Science Saturday Open House: Polar Themes in Science & Culture, International Polar Year 2007-2008. January 26, 2008. Grand Valley State University.

Talk- **R Hollister**†. International Polar Year: Overview of the Arctic and the Changing Tundra. Grand Forum. February 14, 2008. Grand Valley State University.

Talk- **R Hollister**†. Global Warming and the Status and Significance of the Changing Tundra. Michigan Botanical Club – White Pine Chapter. February 16, 2008. Grand Valley State University.

Talk- **R Hollister**†. Polar Climate Change with Focus on Arctic Tundra. Kellogg Biological Station-K12 Partnership for Science Literacy. February 26, 2008. Hickory Corners, Michigan.

Talk- **R Hollister**†. The Arctic and Global Climate Change. Michigan Science Teachers Association. March 8, 2008. Lansing, Michigan.

Talk- **R Hollister**†. Understanding Climate Change in the Arctic. Spring Lake Rotary Club. April 4, 2008. Spring Lake, Michigan.

Talk- **R Hollister**†. Living in the Arctic & Recent Changes in the Arctic. Dwight Rich Elementary School. April 29, 2008. Lansing, Michigan.

Talk- **R Hollister**†. Significance of a Changing Tundra. Spring Lake Library. May 1, 2008. Spring Lake, Michigan.

Talk- **Robert Slider**†. Plant Changes in Barrow and Atkasuk: Perspectives of an Assistant Researcher. Barrow Arctic Science Consortium. August 8, 2008. Barrow, Alaska.

Event- **R Hollister**†. Panel Member. Inter-Disciplinary Panel on Climate Change. October 23, 2008. Grand Valley State University.

Talk- **Robert Slider**†. Arctic Plants & Climate Change. Williamston Middle School. December 15, 2008. Williamston, Michigan.

Talk- **Robert Slider**†. Arctic Plants & Climate Change. Williamston Elementary School. December 16, 2008. Williamston, Michigan.

Talk- **Robert Slider**†. Arctic Plants & Climate Change. Webberville Middle School. December 18, 2008. Webberville, Michigan.

2009

Talk- **Jennifer A. Liebig**†. Experiences as a Field Assistant in Northern Alaska. K-6th grade, St Matthew Lutheran School. May 5, 2009. Walled Lake, Michigan.

Talk- **Robert Slider**†. Climate Change in the Arctic & Work as a Researcher. Williamston Middle School. May 15, 2009. Williamston, Michigan.

2010

Event- **Jennifer A. Liebig[†] & Robert T. Slider[†]**. Exploration of Arctic Ecosystems (guided children ages 3-5 through hands-on experiences in Arctic ecosystems). GVSU Children's Center. November 19, 2010. Grand Valley State University.

Talk- **R Hollister[†]**. Climate Change & the Arctic. Audubon Society. November 16, 2010. Grand Haven, Michigan.

Talk- **R Hollister[†] & Jennifer A. Liebig[†]**. Exploring Climate Change from Michigan to the Arctic. Fall Science Update, Regional Math and Science Center. November 17, 2010. Grand Rapids, Michigan.

2011

Event- **R Hollister[†], Jennifer A. Liebig[†], Jeremy L. May[†], Robert T. Slider[†] & Kelseyann Kremers[†]**. Arctic Life and Carbon Cycling. Super Science Saturday Open House: Celebrating Chemistry Past, Present, Future. January 29, 2011. Grand Valley State University.

Event- **Jennifer A. Liebig[†] & Kelseyann Kremers[†]**. Science in the Arctic. 3rd Grade Hands-on Assembly, West Ottawa Elementary. March 3, 2011. Holland, Michigan.

2012

Talk- **Jennifer A. Liebig[†] & Kelseyann Kremers[†]**. Science in the Arctic. Four 3rd grade classes West Ottawa Elementary. February 20, 2012. Holland, Michigan.

Talk- **Jennifer A. Liebig[†] & Kelseyann Kremers[†]**. Global Climate Change and Vegetation Sampling Methods. Several classrooms with students ranging from 9th to 12th grade, West Michigan Academy of Environmental Science. April 30, 2012. Grand Rapids, Michigan

Talk- **Jennifer A. Liebig[†]**. Arctic Plants and Animals. Elementary school latch key program, St Matthew Lutheran School. May 4, 2012. Walled Lake, Michigan.

Talk- **Jennifer A. Liebig[†] & Timothy Botting[†]**. The Arctic Ecology Program at GVSU. Five 9th grade biology classes, Ottawa Hills High School. May 23, 2012. Grand Rapids, Michigan.

Talk- **R Hollister[†]**. The Significance of a Changing Tundra. Understanding Our Climate Summer Camp, Ilasavik College. July 15, 2012. Barrow, Alaska.

Talk- **Jennifer A. Liebig[†]**. Monitoring Tundra Vegetation Change In Response to a Long-Term Warming Experiment. BASC Schoolyard Saturday Talk. July 28, 2012. Barrow, Alaska.

2013

Talk- **Jennifer A. Liebig[†]**. Life in the Arctic as a Researcher. Presented to three high school classes at West Michigan Academy of Environmental Science. February 19, 2013. Walker, Michigan.

Talk- **Timothy F. Botting[†]**. Discussed research methods and study designs via a presentation and hands-on activities. West Michigan Academy of Environmental Science. April 30, 2013. Walker, Michigan.

Talk- **Jennifer A. Liebig[†]**. The Arctic. 8th/9th grade class and a 4th/5th grade class at Branch Homeschool Coop. May 2, 2013. Big Rapids, Michigan.

Talk- **Jennifer A. Liebig[†]**. Climate Change & Life in the Arctic. 9th grade General Biology class at Crossroads Charter Academy. May 9, 2013. Big Rapids, Michigan.

Talk- **R Hollister[†]**. Significance of a Changing Tundra. Ilisagvik College BBC Hard talk in Barrow. July 18, 2013. Barrow, Alaska.

Talk- **Jennifer A. Liebig[†] & Kelseyann Kremers[†]**. Discussed global climate change and college research opportunities. Several classrooms with students ranging from 9th to 12th grade at Watervliet High School. May 17, 2013. Watervliet, Michigan.

2014

None.

2015

Event Organizer/Leader- **R Hollister[†]**, **Timothy F. Botting[†]**, **Ashley Brecken[†]** & **Shelia Wald[†]**. Life with 24 Hours of Light. Super Science Saturday Open House: The Wonder of Light. January 24, 2015. Grand Valley State University.

2016

Talk- **R Hollister[†]**. Ongoing Research. Atqasuk Community Meeting. June 11, 2016. Atqasuk, Alaska.

Talk- **R Hollister[†]**. How Vegetation Research is Done. West Michigan Academy of Environmental Science. September 22, 2016. Grand Rapids, Michigan.

2017

Event- **R Hollister[†]**, **Katlyn Betway[†]**, **Kailey Keenan-Whittemore[†]**, **Ellen Audia[†]** & **Hana Christoffersen[†]**. Arctic Research. Science Night at the Museum; Grand Rapids Public Museum (GRPM). April 18, 2017. Grand Rapids, Michigan. **Won Staff Award for Best Display (Hands-on for all!)**

Event- **R Hollister[†]**. Tundra Tours! Experience the Arctic. West Michigan Academy of Environmental Science. May 31-June 2, 2017. Grand Rapids, Michigan.

Talk- **Jacob A. Harris[†]**. Ongoing Research. Atqasuk Community Meeting. June 11, 2017. Atqasuk, Alaska.

Event- **Katlyn Betway[†]** & **Jacob A. Harris[†]**. Engaging Youth in Tundra Ecology. Utqiagvik Science Fair. August 3, 2017. Utqiagvik, Alaska.

Talk- **Jacob A. Harris[†]**. The International Tundra Experiment (ITEX). Aquinas College. November 8, 2017. Grand Rapids, Michigan.

2018

Talk- J May[†] & **Katlyn Betway[†]**. Research Opportunities in Climate Change Science. West Michigan Academy of Environmental Science. January 26, 2018. Grand Rapids, Michigan.

Talk- **R Hollister[†]**. Science, Climate Change & Arctic Research. Three sections of AP Environmental Science, Jenison High School. May 3, 2018. Jenison, Michigan.

Talk- **R Hollister[†]**. Ongoing Research. Atqasuk Community Meeting. June 11, 2018. Atqasuk, Alaska.

Event- **Hana Christoffersen[†]**, **Katlyn R. Betway[†]** & **Jacob A. Harris[†]**. Engaging Youth in Tundra Ecology. Utqiagvik Science Fair. August 2, 2018. Utqiagvik, Alaska.

Talk- **Jacob A. Harris[†]**. Changes in Tundra. Utqiagvik Science Fair. August 2, 2018. Utqiagvik, Alaska.

Event- **R Hollister[†]**. Table Leader –Climate Change in the Arctic. Civil Conversations on Climate Change. October 25, 2018. Grand Valley State University.

2019

Talk- **R Hollister[†]**. What is the New Arctic? 2019 Annual Conservation Banquet Dwight Lydell Chapter - Izaak Walton League of America. March 2, 2019. Grand Rapids, Michigan.

Event- **R Hollister[†]** & **Hana Christoffersen[†]**. Tundra Ecology. Atqasuk School. April 25, 2019. Atqasuk, Alaska.

Event- **R Hollister[†]**, J May[†], **Jacob A. Harris[†]** & **Katlyn R. Betway[†]**. Tundra Tours! Experience the Arctic. West Michigan Academy of Environmental Science. May 16-20, 2019. Grand Rapids, Michigan.

Talk- **Hana L. Christoffersen[†]**. ITEX in Atqasuk and Utqiagvik. Atqasuk Community Meeting. July 23, 2019. Atqasuk, Alaska.

Event- **Hana L. Christoffersen[†]**, **Katlyn R. Betway[†]** & **Mackenzie Lift[†]**. Engaging Youth in Tundra Ecology. Utqiagvik Science Fair. July 17, 2019. Utqiagvik, Alaska.

2020

Talk- **R Hollister[†]**. Permafrost? Arctic Change. Sunday Assembly. Wyoming, Michigan, January 19, 2020.

Event- **R Hollister**[†]. Climate Crisis Townhall. Young Democratic Socialists of America. GVSU. February 6, 2020.

Talk- **R Hollister**[†]. Climate Change in the Arctic: Terrestrial Ecosystem Change. Climate Change Education Solutions Summit and Michigan Climate and Land Change Lecture Series 2020-21. GVSU (virtual). November 18, 2020.

2021

Talk- **R Hollister**[†] & Kaare Sikuaq Erickson[†]. The Warming Arctic. Great Decisions Global Discussions, World Affairs Council of Western Michigan. Western Michigan (virtual). March 15, 2021.

Talk- **R Hollister**[†]. The Melting Arctic. Grand Forum. GVSU (virtual). May 6, 2021.

Talk- **R Hollister**[†] & **Mackenzie M. Lift**[†]. Ecosystem Studies. UICS Outreach and Engagement Podcast. Utqiagvik, Alaska. September 15, 2021.

Talk- **R Hollister**[†]. Great Decisions, Competition in the Arctic. Hope Academy of Senior Professionals (HASP). Hope College. September 27, 2021.

Event- **R Hollister**[†]. Common Wetland Plants of Michigan. Michigan Wetland Association. Virtual. July 13 & 20, 2021.

Arctic Ecology Program

Academic Presentations (talks & posters) by Year

[*First names* are provided for GVSU students; *Middle initials* denote graduate students; † denotes the presenter]

2005

Poster- **R Hollister**† & P Webber. Response of tundra vegetation to warming. Ecological Society of America Annual Meeting. August 7-13, 2005. Montreal, Quebec.

2006

Talk- **R Hollister**†. Above & belowground plant biomass response to experimental warming. International Tundra Experiment Science Workshop 2006. January 13-15, 2006. Miami, Florida.

2007

Talk- **R Hollister**†. Global Linkages: The Significance of a Changing Tundra. Polar Science- Global Impact: Lecture series on topics and issues with urgent consequences. November 8, 2007. Grand Valley State University.

Talk- **R Hollister**†. Impact of warming on tundra vegetation. Studies in Antarctic System Science. November 28, 2007. University of Texas at El Paso (UTEP): On-line lecture.

Talk- **R Hollister**†. Response to the physical environment in tundra. US France Young Engineering Scientists Symposium (YESS) 2007. October 22, 2007. Washington D.C.

Talk- S Oberbauer†, **R Hollister**, J Welker, J Klein, W Gould, P Sullivan, B Sveinbjornsson, K Boggs, & C Lewis. Study of Arctic ecosystem changes in the IPY using the International Tundra Experiment (ITEX). Arctic Observatories Network (AON) PI Meeting. March 28-30, 2007. Boulder, Colorado.

Talk- **R Hollister**†. The International Tundra Experiment (ITEX) activities and findings at Barrow and Atkasuk. Presentations as part of an NSF site visit. June 28, 2007. Barrow, Alaska.

2008

Talk- **R Hollister**†. The Impact of Warming on Arctic Vegetation. Annis Water Research Institute Seminar. January 17, 2008. Grand Valley State University.

Poster- **Jeremy May**† & **R Hollister**. Plant community changes in northern Alaska over the past 12 years. West Michigan Regional Undergraduate Science Research Conference. November 1, 2008. Grand Rapids, Michigan.

Poster- **Robert Slider**† & **R Hollister**. Plant responses to temperature in Barrow and Atkasuk, Alaska. West Michigan Regional Undergraduate Science Research Conference. November 1, 2008. Grand Rapids, Michigan.

Poster- **Jenny Liebig**†, **R Hollister** & **Jeremy May**. High Arctic and low Arctic vegetation responses to climate change. West Michigan Regional Undergraduate Science Research Conference. November 1, 2008. Grand Rapids, Michigan.

Poster- **Jean-Marie Galang**† & **R Hollister**. The response of warming on the flowering of Arctic plants. West Michigan Regional Undergraduate Science Research Conference. November 1, 2008. Grand Rapids, Michigan.

Talk- **Jeremy May**† & **R Hollister**. Plant community changes in northern Alaska in response to warming. ITEX during the International Polar Year: International Tundra Experiment – 15th Workshop. October 10-12, 2008. Reykjavik, Iceland.

Talk- **Robert Slider**† & **R Hollister**. Plant responses to experimental and natural warming in Barrow and Atkasuk, Alaska. ITEX during the International Polar Year: International Tundra Experiment – 15th Workshop. October 10-12, 2008. Reykjavik, Iceland.

Poster- **R Hollister**†, **Jeremy May**, **Robert Slider**, **Amanda Snyder** & **Michael Lothschütz**. Grand Valley State University REU projects at Barrow & Atkasuk. ITEX during the International Polar Year: International Tundra

Experiment – 15th Workshop. October 10-12, 2008. Reykjavik, Iceland.

Talk- **R Hollister**, P Webber, **Robert Slider**[†], Fritz Nelson & Craig Tweedie. Soil temperature and thaw response to air warming varies with changing vegetation. Ninth International Conference on Permafrost. June 29 - July 3, 2008. Fairbanks, Alaska.

Poster- **Jeremy May**[†]. Plant community changes in northern Alaska in response to warming. Student Scholarship Day. April 9, 2008. Grand Valley State University.

Talk- **Robert Slider**[†]. Insulating properties of changing tundra vegetation. Student Scholarship Day. April 9, 2008. Grand Valley State University.

Talk- **Michael Lothschütz**[†]. Response of the arctic wet meadow sedge, *Carex aquatilis*, to changing temperature. Student Scholarship Day. April 9, 2008. Grand Valley State University.

Poster- **Amanda Snyder**[†]. Overall performance of *Cassiope tetragona* in a climate changing environment. Student Scholarship Day. April 9, 2008. Grand Valley State University.

Poster- **Jeremy May**, **Robert Slider**, **Amanda Snyder**, **Michael Lothschütz** & **R Hollister**[†]. Grand Valley State University REU projects at Barrow & Atkasuk during the 2007 field season. Arctic Observatories Network (AON) PI Meeting. March 17-18, 2008. Palisades, New York.

2009

Poster- **Jennifer Liebig**[†], **R Hollister** & **Jeremy L. May**. Changes in distribution of northern and southern Arctic plant species due to warming. West Michigan Regional Undergraduate Science Research Conference. October 31, 2009. Grand Rapids, Michigan.

Talk- **R Hollister**[†]. Lessons learned from past ITEX synthesis efforts. International Polar Year ‘Back to the Future’ (IPY-BTF) Project Meeting. November 10-13, 2009. El Paso, Texas.

Poster- **R Hollister**[†], **Jeremy L. May**, **Robert T. Slider** & **Jennifer Liebig**. Monitoring the response of tundra vegetation to temperature at Barrow and Atkasuk, Alaska. Arctic Observatory Network (AON) 2009 PI Meeting. November 30- December 2, 2009. Boulder, Colorado.

Poster- S Oberbauer[†], **R Hollister**, J Klien & J Welker. IPY Arctic Observing Networks. Collaborative Research: Study of Arctic ecosystem changes in the IPY using the International Tundra Experiment. Arctic Observatory Network (AON) 2009 PI Meeting. November 30- December 2, 2009. Boulder, Colorado.

Poster- S Oberbauer[†], **R Hollister**, C Tweedie & J Welker. Arctic Observing Networks: Collaborative Research: Sustaining and amplifying the ITEX AON through automation and increased interdisciplinarity of observations. Arctic Observatory Network (AON) 2009 PI Meeting. November 30- December 2, 2009. Boulder, Colorado.

Talk- J Brown[†], K Hinkel, **R Hollister**, S Oberbauer, F Nelson, V Romanovsky, N Shiklomanov, M Sturm, C Tweedie & P Webber. Barrow Arctic Terrestrial Observatory (BATO): An IPY Legacy. American Geophysical Union (AGU) Fall Meeting. December 14–18, 2009. San Francisco, California.

2010

Talk- **R Hollister**[†]. Why Tundra Matters. CLAS Research Colloquium. February 18, 2010. Grand Valley State University.

Poster- **Jennifer A. Liebig**[†], **Jeremy L. May** & **R Hollister**. Characteristics that predict success for warmed tundra vegetation. 140th International Arctic Workshop. March 10-12, 2010. Winter Park, Colorado.

Poster- **Robert T. Slider**[†] & **R Hollister**. Tundra plant responses to over a decade of experimental warming. 140th International Arctic Workshop. March 10-12, 2010. Winter Park, Colorado.

Talk- **Jennifer A. Liebig**[†], **Jeremy L. May**, **Robert T. Slider** & **R Hollister**. Warming the tundra: Changes in cover of species groups. Michigan Academy of Sciences, Arts, and Letters 114th Annual Meeting. March 26, 2010. Grand Rapids, Michigan.

Talk- **Jeremy L. May**[†] & **R Hollister**. Effects of long term warming on vegetation in northern Alaska. Michigan Academy of Sciences, Arts, and Letters 114th Annual Meeting. March 26, 2010. Grand Rapids, Michigan.

Talk- **Robert T. Slider**[†] & **R Hollister**. Detection and attribution of long-term changes in vegetation phenology and growth in northern Alaska. Michigan Academy of Sciences, Arts, and Letters 114th Annual Meeting. March

26, 2010. Grand Rapids, Michigan.

Talk- **Jeremy L. May[†] & R Hollister**. Vegetation community response to long term experimental warming in Northern Alaska. Student Scholarship Day. April 14, 2010. Grand Valley State University.

Poster- **Robert T. Slider[†] & R Hollister**. Why the top of the world is on the top of our minds: GVSU's research on the impacts of Climate Change in the Arctic. Student Scholarship Day. April 14, 2010. Grand Valley State University.

Talk- **Jennifer A. Liebig[†], Jeremy L. May & R Hollister**. Predicting responses of arctic plants to warming with species distribution maps. Student Scholarship Day. April 14, 2010. Grand Valley State University.

Talk- **R Hollister[†] & Jeremy L. May**. Impacts of long-term warming on vegetation at Barrow and Atqasuk. International Workshop on Tundra Vegetation Change. May 2-6, 2010. Maple Ridge, British Columbia, Canada.

Talk- **R Hollister[†]**. Experiment: Long-term warming at Barrow and Atqasuk. Climate change Experiments in High-Latitude Ecosystems. October 14-15, 2010. Fairbanks, Alaska.

Poster- **Kelseyann Kremers[†] & R Hollister**. Response of *Luzula arctica* and *Luzula confusa* to warming in Barrow and Atqasuk, Alaska. West Michigan Regional Undergraduate Science Research Conference. October 30, 2010. Grand Rapids, Michigan.

2011

Talk- **Kelseyann Kremers[†] & R Hollister**. Long-term response of *Luzula arctica* and *Luzula confusa* to warming in the Alaskan Tundra. Michigan Academy of Science, Arts, and Letters. March 11, 2011. Saginaw, Michigan.

Talk- **Jennifer A. Liebig[†], Jeremy L. May, Robert T. Slider & R Hollister**. Phenology of arctic plant species as indicator of response to warming. Michigan Academy of Science, Arts, and Letters. March 11, 2011. Saginaw, Michigan.

Talk- **Robert T. Slider[†] & R Hollister**. Which factor to use? Predicting Arctic plant responses to warming. Michigan Academy of Science, Arts & Letters. March 11, 2011. Saginaw, Michigan.

Talk- **Jeremy L. May[†] & R Hollister**. Predicting long-term tundra plant community change in response to warming. Student Scholarship Day. April 13, 2011. Grand Valley State University.

Talk- **Robert T. Slider[†] & R Hollister**. What makes an arctic plant predictable? Student Scholarship Day. April 13, 2011. Grand Valley State University.

Poster- **Jennifer A. Liebig[†] & R Hollister**. Connecting differences in phenology to changes in arctic plant communities. Student Scholarship Day. April 13, 2011. Grand Valley State University.

Poster- **Kelseyann Kremers[†] & R Hollister**. Long-term response of *Luzula arctica* and *Luzula confusa* to warming in the Alaskan tundra. Student Scholarship Day. April 13, 2011. Grand Valley State University.

2012

Poster- **Jeremy L. May[†] & R Hollister**. Heterogeneous response to warming of tundra vegetation in Northern Alaska. 20th Anniversary of the International Tundra Experiment. January 17-21, 2012. El Paso, Texas.

Poster- **Kelseyann Kremers[†] & R Hollister**. Response of graminoids to increased temperature in the Arctic. 20th Anniversary of the International Tundra Experiment. January 17-21, 2012. El Paso, Texas.

Poster- **Timothy Botting[†] & R Hollister**. Impacts of experimental warming on *Carex aquatilis-stans* in northern Alaska. 20th Anniversary of the International Tundra Experiment. January 17-21, 2012. El Paso, Texas.

Poster- **Jennifer A. Liebig[†] & R Hollister**. Exploring for traits that predict plant response to warming. 20th Anniversary of the International Tundra Experiment. January 17-21, 2012. El Paso, Texas.

Talk- **Jeremy L. May[†], R Hollister & S Oberbauer**. Response to warming of tundra vegetation in northern Alaska. Florida International University Biology Research Symposium. January 28, 2012. Miami, Florida.

Talk- **Jennifer A. Liebig[†] & R Hollister**. Using abiotic measures to predict arctic plant communities. Michigan Academy of Science, Arts, and Letters, Alma College. March 2, 2012. Alma, Michigan.

- Poster- **Jennifer A. Liebig[†] & R Hollister**. Arctic ecology in West Michigan classrooms. Student Scholarship Day. April 11, 2012. Grand Valley State University.
- Talk- **Timothy Botting[†] & R Hollister**. Impacts of experimental warming on phenology and growth of *Carex aquatilis-stans* in northern Alaska. Grand Valley State University's Student Scholarship Day. April 11, 2012. Grand Valley State University.
- Poster- **Jennifer A. Liebig[†] & R Hollister**. Finding grouping schemes to better predict tundra plant response to warming. From Knowledge to Action. International Polar Year. April 22-27, 2012. Montreal, Quebec, Canada.
- Poster- **Kelseyann Kremers[†] & R Hollister**. Consistency of graminoid response to warming in the Alaskan tundra. International Polar Year: From Knowledge to Action. April 22-27, 2012. Montreal, Quebec, Canada.
- Poster- **Timothy Botting[†] & R Hollister**. Impacts of experimental warming on phenology and growth of *Carex aquatilis-stans* in northern Alaska. International Polar Year 2012: From Knowledge to Action. April 22-27, 2012. Montreal, Quebec, Canada.
- Talk- **R Hollister[†]**. Phenological changes in tundra plants in response to climate warming using the International Tundra Experiment (ITEX) Network. Tundra Change – The Ecological Dimension. November 6, 2012. Aarhus, Denmark.
- Poster- **Chase Baldwin[†] & R Hollister**. The response of the arctic sedge genus *Carex* to climate change in the Arctic. West Michigan Regional Undergraduate Science Research Conference. November 17, 2012. Grand Rapids, Michigan.
- Poster- **Jennifer A. Liebig[†] & R Hollister**. Understanding plant community change in long-term vegetation monitoring sites in northern Alaska. AGU Fall Meeting. December 3-7, 2012. San Francisco, California.

2013

- Poster- **Chase Baldwin[†] & R Hollister**. Growth and reproductive effort of the sedge genus *Carex* in response to climate change in northern Alaska. Student Scholars Day. April 10, 2013. Grand Valley State University.
- Poster- **Kelsey Kremers[†] & R Hollister**. 2013. Consistency of short-term and long-term response of Arctic plants to warming. The International Tundra Experiment: More than 20 Years of Research. September 17-21, 2013. Bergun, Switzerland.
- Poster- **Jeremy L. May[†] & R Hollister**. 2013. Heterogeneous response of tundra vegetation to warming. The International Tundra Experiment: More than 20 Years of Research. September 17-21, 2013. Bergun, Switzerland.
- Poster- **Timothy F. Botting[†] & R Hollister**. Landscape level analyses of vegetation cover in northern Alaska. American Geophysical Union Fall Meeting. December 9-13, 2013. San Francisco, California.
- Poster- **Chase Baldwin[†] & R Hollister**. Growth and reproductive effort of the sedge genus *Carex* in response to climate change in northern Alaska. Student Scholars Day. April 10, 2013. Grand Valley State University.
- Talk- **Jennifer A. Liebig[†] & R Hollister**. Using abiotic measures to predict Arctic plant communities. Michigan Academy of Science, Arts, & Letters. March 22, 2013. Holland, Michigan.
- Talk- **R Hollister[†]**. ITEX a history of collaboration & high impact syntheses. The International Tundra Experiment: More than 20 Years of Research. September 17-20, 2013. Bergün, Switzerland.
- Talk- **Robert T. Barrett[†] & R Hollister**. Arctic plant responses to changing abiotic factors in northern Alaska. The International Tundra Experiment: More than 20 Years of Research. September 17-20, 2013. Bergün, Switzerland.
- Talk- **Timothy F. Botting[†] & R Hollister**. Analyzing vegetation cover change at the landscape level from Barrow, Alaska. The International Tundra Experiment: More than 20 Years of Research. September 17-20, 2013. Bergün, Switzerland.
- Talk- **Jessica L. Gregory[†] & R Hollister**. Structural comparison of Arctic plant communities across a soil moisture gradient in response to climate warming in northern Alaska. The International Tundra Experiment: More than

20 Years of Research. September 17-20, 2013. Bergün, Switzerland.

2014

- Poster- **Andrew Smith[†]** & **Michaela Clingaman[†]**. Predicting landscape heterogeneity in thaw depth in Arctic Alaska. Michigan Academy of Science, Arts, & Letters. February 28, 2014. Rochester, Michigan.
- Talk- **Jessica L. Gregory[†]** & **R Hollister**. Understanding change in vegetation cover in a wet meadow tundra community. Michigan Academy of Science, Arts, & Letters. February 28, 2014. Rochester, Michigan.
- Talk- **Andrew Smith[†]** & **Michaela Clingaman[†]**. Predicting landscape heterogeneity in thaw depth in Arctic Alaska. Student Scholars Day. April 9, 2014. Grand Valley State University.
- Talk- **Jessica L. Gregory[†]** & **R Hollister**. Understanding change in vegetation cover in a wet meadow tundra community. Student Scholars Day. April 9, 2014. Grand Valley State University.

2015

- Poster- D Walker[†], U Bha, A Breen, M Buchhorn, L Druckenmiller, A Kade, D Murray, J Peirce, M Raynolds, L Wirth, F Daniëls, H Bültmann, I Alsos, D Ehrich, R Ims, M Edwards, H Epstein, W Gould, H MeltoPe, S Talbot, J Šibík, S Hennekens, M Walker, D Cooper, J Ebersole, S Elmendorf, **R Hollister**, P Webber, C Iversen, V Sloan, M Jorgenson, M Lee, R Peet, M MacKenzie, U Schickhoff, C Tweedie & S Villarreal. A hierarchic approach for examining pan-arctic vegetation with a focus on the linkages between remote-sensing & plot-based studies: A prototype example from Toolik Lake, Alaska. AGU Fall Meeting. December 14-18, 2015. San Francisco, California.
- Poster- **R Hollister[†]**, S Oberbauer & C Tweedie. Understanding documented vegetation change in Northern Alaska. 2015 Arctic Observing Open Science Meeting. November 17-19, 2015. Seattle, Washington.
- Poster- **Shelia Wald[†]**. A site comparison in the phenological response of Arctic White Heather (*Cassiope Tetragona*) to climate change. West Michigan Undergraduate Research Conference. November, 2015. Grand Rapids, Michigan.
- Talk- **R Hollister[†]**. Making sense of two decades of vegetation change at Barrow & Atkasuk. Integrating Arctic Plant & Microbial Ecology - 21st ITEX meeting. September 16-18, 2015. Uppsala, Sweden.
- Talk- **Ashley Brecken[†]** & **R Hollister**. The long term response of *Salix rotundifolia* to experimental warming. Integrating Arctic Plant & Microbial Ecology - 21st ITEX meeting. September 16-18, 2015. Uppsala, Sweden.
- Talk- **Timothy F. Botting[†]** & **R Hollister**. Documenting vegetation cover changes in northern Alaska. Michigan Academy of Science, Arts & Letters. March 13, 2015. Berrien Springs, Michigan.

2016

- Poster- **Jacob Rumschlag[†]** & **R Hollister**. Changes in arctic vegetation growth: Using GIS to spatially distribute variances over time to help understand the effects of climate change. Student Scholarship Day. April 13, 2016. Grand Valley State University.

2017

- Talk- **R Hollister[†]**. Communicating what climate change really means. CLAS Faculty Research Colloquium. September 15, 2017. Grand Valley State University.
- Poster- **Ellen Audia[†]** & **R Hollister**. Arctic plant response to abiotic factors in northern Alaska. Student Scholarship Day. April 12, 2017. Grand Valley State University.
- Poster- **Kelsey Mannard[†]** & **R Hollister**. Reproductive changes in the sedge *Carex aquatilis* in northern Alaska in response to experimental & climatic warming. Student Scholarship Day. April 12, 2017. Grand Valley State University.
- Poster- **Katlyn Betway[†]** & **R Hollister**. The effects of climate change on *Eriophorum triste*; An Arctic graminoid species. Student Scholarship Day. April 12, 2017. Grand Valley State University.
- Talk- **R Hollister[†]**. Climate change impacts on tundra vegetation. CLAS Faculty Research Colloquium. February 16, 2017. Grand Valley State University.

Talk- **R Hollister**[†]. Tundra vegetation change research at GVSU. Geography Capstone Course (GPY 495). February 14, 2017. Grand Valley State University.

2018

Poster- **Jacob A. Harris**[†], **Timothy F. Botting** & **R Hollister**. Observed vegetation change in northern Alaska across the landscape. Michigan Academy of Science, Arts, & Letters. March 9, 2018. Mount Pleasant, Michigan.

Poster- **Katlyn Betway**[†] & **R Hollister**. Examining plant traits as drivers of vegetation change in tundra communities. GVSU Student Scholarship Day. April 11, 2018. Grand Valley State University.

Poster- **Hana Christoffersen**[†] & **R Hollister**. Using remotely-sensed hyperspectral data to help understand vegetation cover change at Utqiagvik, Alaska. GVSU Student Scholarship Day. April 11, 2018. Grand Valley State University.

Poster- **Jacob A. Harris**[†] & **R Hollister**. Observed vegetation change in northern Alaska across the landscape. GVSU Student Scholarship Day. April 11, 2018. Grand Valley State University.

Poster- **Kailey Keenan-Whittemore**[†], **Jacob A. Harris** & **R Hollister**. Monitoring change in species density over time in Arctic Alaska. GVSU Student Scholarship Day. April 11, 2018. Grand Valley State University.

Poster- **Caleb Krueger**[†] & **R Hollister**. Soil is the new teapot: How tea bags tell us about global carbon cycling. GVSU Student Scholarship Day. April 11, 2018. Grand Valley State University.

Poster- **Katlyn Betway**[†] & **R Hollister**. Examining plant traits as drivers of vegetation change in tundra communities. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Poster- **Hana Christoffersen**[†] & **R Hollister**. Using remotely-sensed hyperspectral data to help understand vegetation cover change at Utqiagvik, AK. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Poster- **Jacob A. Harris**[†] & **R Hollister**. Observed vegetation change in northern Alaska across the landscape. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Poster- **Kailey Keenan-Whittemore**[†], **Jacob A. Harris** & **R Hollister**. Monitoring change in species density over time in Arctic Alaska. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Poster- **Caleb Krueger**[†] & **R Hollister**. Soil is the new teapot: How tea bags tell us about global carbon cycling. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Poster- P Olivas, S Oberbauer[†], J May, C Tweedie & **R Hollister**. Peak season CO₂ fluxes in OTC-warmed & control plots in wet & dry tundra at two ITEX sites in northern Alaska, 2000-2017. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Talk- **Katlyn Betway**[†] & **R Hollister**. Changes in tundra vegetation due to warming. Michigan Academy of Science, Arts, & Letters. March 9, 2018. Mount Pleasant, Michigan.

Talk- J Assmann[†], I Myers-Smith, A Phillimore, A Bjorkman, R Ennos, J Prev  y, G Henry, N Schmidt & **R Hollister**. Snowmelt & temperature -but not sea-ice- explain variation in tundra spring plant phenology at coastal ITEX sites. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Talk- **Katlyn Betway**[†] & **R Hollister**. Exploring plant traits as predictors of changes in vegetation cover. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Talk- **Jacob A. Harris**[†], **R Hollister** & **Timothy F. Botting**. Changes in vegetation cover across the landscape over time at Atkasuk & Utqiagvik, Alaska. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Talk- J May[†], S Oberbauer, **R Hollister**, *Katlyn Betway* & *Jacob A. Harris*. Effects of warming on growth rates & remotely-sensed normalized difference vegetation index (NDVI) values across eight ITEX sites in Northern Alaska. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

Talk- S Vargas[†], G Ramirez, G Ramirez, C Andresen, N Healey, J May, S Oberbauer, **R Hollister** & C Tweedie. Multi-scale analysis of vegetation phenological variability on the North Slope of Alaska. Integrating Tundra Structure, Function & Change – 19th ITEX Meeting. April 25-27, 2018. Stirling, Scotland, United Kingdom.

2019

Talk- **R Hollister**[†]. Using the ITEX-AON network to document and understand terrestrial ecosystem change in the New Arctic. GVSU Biology Special Talk. February 20, 2019. Grand Valley State University.

Poster- *Nicole Foy*[†] & **R Hollister**. The effects of climate change on *Carex aquatilis* and *Eriophorum angustifolium* in Atkasuk, Alaska. GVSU Student Scholarship Day. April 10, 2019. Grand Valley State University.

Poster- *Hana L. Christoffersen*[†] & **R Hollister**. Assessing landscape-level vegetation change via remotely-sensed hyperspectral data and traditional ground-based measurements. Documenting and Understanding Tundra Ecosystem Changes – 20th ITEX Meeting. September 9-15, 2019. Parma, Italy.

Talk- *Katlyn R. Betway*[†] & **R Hollister**. Variation in tundra plant traits across a latitudinal gradient. Documenting and Understanding Tundra Ecosystem Changes – 20th ITEX Meeting. September 9-15, 2019. Parma, Italy.

Talk- S Vargas, **R Hollister**[†], J May, S Oberbauer, C Tweedie & S Elmendorf. ITEX-AON Arctic phenocam synthesis. Documenting and Understanding Tundra Ecosystem Changes – 20th ITEX Meeting. September 9-15, 2019. Parma, Italy.

Talk- J May[†], S Oberbauer, **R Hollister**, C Tweedie & J Welker. Role of tundra community cover in seasonal albedo values at four sites in northern Alaska. Documenting and Understanding Tundra Ecosystem Changes – 20th ITEX Meeting. September 9-15, 2019. Parma, Italy.

Poster- T Fuson[†], S Vargas, R Cody, S Escarzaga, S Oberbauer, **R Hollister** & C Tweedie. Identifying Decadal Time-scale Patterns and Controls of Tundra Land Surface Stability Across the North Slope of Alaska using Repeat Terrestrial Light Detection and Ranging (T-LiDAR). American Geophysical Union (AGU) Fall Meeting 2019. December 9-13, 2019. San Francisco, California.

Poster- K Huemmmrich[†], S Vargas, C Tweedie, P Campbell, E Middleton & **R Hollister**. Examining Tundra Greening from Ground-based to Satellite Observations. American Geophysical Union (AGU) Fall Meeting 2019. December 9-13, 2019. San Francisco, California.

2020

Talk- **R Hollister**[†]. Tundra vegetation change. NREM Seminar, Iowa State University. January 31, 2020. Ames, Iowa.

Talk- **R Hollister**[†]. Using the ITEX-AON network to document and understand terrestrial ecosystem change in the New Arctic. Environmental Science Seminar Series. February 27, 2021. University of Texas at El Paso.

Poster- *Katlyn R. Betway*[†], **R Hollister**, J May, *Jacob A. Harris*, W Gould & S Oberbauer. Linking vegetation change with functional traits in a changing Arctic. GVSU Student Scholarship Day. April 8, 2020. Grand Valley State University [on-line].

Poster- *Hannah Clarida*[†] & **R Hollister**. Effects and changes in permafrost depth in Atkasuk, Alaska. GVSU Student Scholarship Day. April 8, 2020. Grand Valley State University [on-line].

Poster- *Rebecca Daigle*[†] & **R Hollister**. Using GIS to analyze graminoid and shrub composition change from 1997 to 2017 at Atkasuk, Alaska. GVSU Student Scholarship Day. April 8, 2020. Grand Valley State University [on-line].

Poster- *Jacob A. Harris*[†], **R Hollister** & *Timothy F. Botting*. Annual vegetation change on the ARCSS subplots at Atkasuk and Utqiagvik, Alaska. GVSU Student Scholarship Day. April 8, 2020. Grand Valley State University [on-line].

Poster- **Mackenzie Lift[†]** & **R Hollister**. Linking C-flux with tundra vegetation. GVSU Student Scholarship Day. April 8, 2020. Grand Valley State University [on-line].

Talk- **R Hollister[†]**. The New Arctic: Terrestrial ecosystem change. KBS Seminar Series, Michigan State University. September 11, 2020. Hickory Corners, Michigan [on-line].

2021

Poster- K Huemmrich[†], S Vargas, C Tweedie, P Campbell, **R Hollister** & E Middleton. Examining Tundra Greening from Ground-based to Satellite Observations. Annual Sciences & Exploration Directorate Poster Party, Goddard Space Flight Center. January 23, 2021. Greenbelt, Maryland.