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## Publications

- Stern, R.,\* Schaberg, P.G., Rayback, S.A., Hansen, C.F., Murakami, P.F., and Hawley, G.J. Growth trends and environmental drivers of major tree species of the northern hardwood Forest. *Journal of Forestry Research* Accepted: August 2022.
- Evans, M.E.K., DeRose, R. J., Klesse, S., Girardin, M.P., Heilman, K.A., Alexander, M.R., Arsenault, A., Babst, F., Bouchard, M., Cahoon, S.M.P., Campbell, E., Dietz, M., Duchesne, L., Frank, D., Giebink, C., Gomez-Guerrero, A., Gutierrez Garcia G., Hogg, E., Metsaranta J., Ols, C., Rayback, S.A, Reid, A., Ricker, M., Schaberg, P.G., Shaw, J.D., Sullivan, P.F., and Gaytán, S.A.V. 2022. Adding tree rings to North America's national forest inventories: an essential tool to guide drawdown of atmospheric CO<sub>2</sub>. *BioScience*.
- Heeter, K.J.\*, Harley, G.L., Maxwell, J.T., Wilson, R.J., Abatzoglou, J.T., Rayback, S. A Rochner, M.L., Kitchens, K.A. 2021. Tree-ring blue intensity-based temperature reconstructions for the low-to-mid latitude temperate zones of western North America. *Quaternary Science Reviews* 10.1016/j.quascirev.2021.107064
- Stern, R.\*, Schaberg, P.G., Rayback, S.A, Murakami, P., Hansen, C., Hawley, G. 2021. Eastern white pine and eastern hemlock growth: possible tradeoffs in response of canopy trees to climate and pollution. *Canadian Journal of Forest Research*. 10.1139/cjfr-2020-0512.
- Belmecheri, S. Maxwell, R.S., Taylor, A.H., Davis, K.J., Guerrieri, R., Moore, D.J., and Rayback, S.A 2021. Precipitation alters temperate forest response to rising CO<sub>2</sub>. *Global Change Biology*. <https://doi.org/10.1111/gcb.15491>
- Rayback, S. A, Belmecheri, S., Gagen, M. H., Lini, A., Gregory, R.\*\*, and Jenkins, C.\*\* 2020. North American conifer (*Tsuga canadensis*) reveals the complex physiological influences of climate and anthropogenic stressors in mid-latitude forests. *New Phytologist* <https://doi.org/10.1111/nph.16811>
- Rayback, S. A., Duncan, J., Schaberg, P.G., Kosiba, A., Hansen, C. and Murakami, P. 2020. The Dendroecological Network: a cyberinfrastructure for the storage, discovery and sharing of tree-ring and associated ecological data. *Dendrochronologia*. 60: 125678. <https://doi.org/10.1016/j.dendro.2020.125678>
- Harley, G.L., Heeter, K.J.\*, Maxwell, J.T., Rayback, S.A, Maxwell, R.S., Reinemann, T.E.P., and Taylor, A. 2020. Towards broad-scale, long-term temperature reconstructions for Eastern North America using blue light intensity from tree rings. *International Journal of Climatology* <https://doi.org/10.1002/joc.6910>

Stern, R.\*, Schaberg, P.G., Rayback, S.A, Murakami, P., Hansen, C., and Hawley, G. 2020. Red oak growth near its northern range limit: current trends, potential drivers and implications for the future. *Canadian Journal of Forest Research*.



Rayback, S. A., A. Lini, and D. L. Berg\*\*. 2010. Multiple climate signals characterize *Cassiope mertensiana* chronologies for a site on Mount Rainier, Washington, USA. *Physical Geography*. 31: 7906.

Rayback, S. A., and G. H. R. Henry. 2006. Reconstruction of summer temperature for a Canadian High Arctic site from retrospective analysis of the dwarf-shrub, *Cassiope tetragona*. *Arctic, Antarctic, and Alpine Research*. 38: 2: 228.

Ericksen, B., M. Bölter, K. J. Breen\*\*, G. H. R. Henry, E. Lévesque, J-E. Mattsson, C. L. Parker and S. A. Rayback 2006. Environment and site descriptions of an ecological baseline study in the Canadian Arctic: The Tundra Northwest Expedition 1999 (Nunavut and Northwest Territories, Canada). *Polarforschung*. 73: 7788.

Welker, J. M., S. A. Rayback, and G. H. R. Henry. 2005. Arctic and North Atlantic Oscillation phase changes are recorded in the  $\delta^{18}O$  and  $\delta^{13}C$  in *Cassiope tetragona*. *Global Change Biology* 1: 997-1002.

Rayback, S. A., and G. H. R. Henry. 2005. Dendroecology of *Cassiope tetragona* in the Canadian High Arctic. *Canadian Journal of Botany* 83: 1020-1030.

housed on the FEMC website. The database was made publicly available to the larger academic, management and conservation communities in November 2018.

## Teaching

### University of Vermont

GEOG 002: World Natural Environments

GEOG 040: Weather, Climate and Landscapes

GEOG 081: Geotechniques

GEOG 140: Biogeography

GEOG 153: Arctic Canada

GEOG 153: The Circumpolar Arctic

GEOG 148/ENSC 148: Global Environmental Change

GEOG 197: Independent study: The Arctic

GEOG 244: Advanced Topics in Global Change: Dendrochronology

GEOG 246: Advanced Topics in Climate and Water Resources: Paleoclimatology

HCOL 186: Evolving Earth: Anthropogenic Changes to the Environment (S2017)

ENSC 009 Orientation to Environmental Sciences (S2022)