

Associate Professor, Silviculture and Applied Forest Ecology  
S.J. & Jessie E. Quinney College of Natural Resources, Department of Wildland Resources  
Utah State University, 5230 Old Main Hill, Logan, UT 84322-5230  
Email: [justin.derose@usu.edu](mailto:justin.derose@usu.edu)  
Webpage: <http://qcnr.usu.edu/labs/derose/index>  
T.W. Daniel Experimental Forest webpage: <https://qcnr.usu.edu/twdef/>

**EDUCATION**

2009 Ph.D. Ecology, Utah State University  
2004 M.S. Forestry, University of Maine  
2002 Summer visiting student, Hochschule für Forstwirtschaft, Rottenburg, Germany  
2002 B.S. Forestry, *Cum Laude*, Utah State University

**PROFESSIONAL EXPERIENCE**

Aug. 2024 – Current: Associate Professor, Silviculture and Applied Forest Ecology, USU  
Aug. 2019 – 2024: Assistant Professor, Silviculture and Applied Forest Ecology, USU  
May 2011 – Jul. 2019: Research Ecologist, Forest Inventory and Analysis, USDA Forest Service  
Jan. 2010 – May 2011: Postdoctoral Fellow, Utah State University

**PROFESSIONAL RECOGNITION**

2025-current T.W. Daniel Endowed Professor of Forestry  
2022 Quinney College of Natural Resources, Undergraduate Mentor of the Year  
2007-current Society of American Foresters, Certified Forester  
2005-2009 First T.W. Daniel Graduate Fellow, Utah State University  
2004 Ralph H. Griffin Scholarship for outstanding work in silviculture, University of Maine  
2002 Distinguished Service Award, Association of Students Utah State University  
2002 Jardine Juniper Award, College of Natural Resources, Utah State University  
2001 T.W. Daniel Undergraduate Forestry Scholarship, Utah State University

**REFEREED PUBLICATIONS**

**CO-LEAD AUTHOR**

**\*UNDERGRADUATE ADVISEE**

**‡GRADUATE OR POST-DOC ADVISEE**

**†CORRESPONDING AUTHOR**

**\*‡CONTRIBUTED PUBLIC DATA**

**Peer-reviewed (in review):**

Yazzie, J.O., M.E.K. Evans, M.E.K., E.C. Riordan, C.H. Guiterman, **R.J. DeRose**, A. Becenti, F. Thompson. Drought Stress Detected in Tree Rings Suggests an Impending Tipping Point for Forests on the Navajo Nation. *Forest Ecology and Management* (submitted December 2024)

Brienen, R. G.M. Locosselli, S. Krottenthaler, E. Gloor, R. Wrigley, S. Voelker, J. Altman, N. Altmanova, L.D.L. Anderegg, M. Baliva, D. Barua, V. Bazant, B. Black, P. Brown, G. Ceccantini, **R.J. DeRose**, J. Diaz, A. DiFilippo, J. Dolezal, L. Duchesne, C. Earle1, P. Fibich, H. Griesbauer, S. Helama, S. Klesse, K. Korznikov, D. Lindenmayer, S. Liu, L. Lopez, M. Mencuccini, T.A. Nagel, J. Pavlin, N. Pederson, G. Piovesan, C. Restaino, P. Reich, D. Sauchyn, J. Schöngart, J.D. Shaw, D. Smith, R. Sunny, M. Svoboda, R. Villalba, L.J. Wood, C. Zhang. Global variation in tree longevity:

contrasting drivers for angiosperms and gymnosperms. *Nature Communications* (Submitted December 2024)

**DeRose, R.J.** and J.L. Morris. Fire-climate-vegetation linkages in aspen (*Populus tremuloides*) during the late Holocene. *Forest Ecology and Management* (submitted September 2023)

**Peer-reviewed (in revision):**

Trudgeon, A.M., L.L. Yocom, K.A. Nesbit, D.J. McAvoy, and **R.J. DeRose**. Quaking aspen regeneration after roller-felling. *Canadian Journal of Forest Research* (submitted November 2023)

**H-index = 31, total citations = 3274, January 1 2025 (Google Scholar)**

**Peer-reviewed (accepted):**

- [80] Klimas, K.B., L.L. Yocom, B.P. Murphy, S.R. David, P.B. Belmont, J.A. Lutz, **R.J. DeRose**, and S.A. Wall. 2024. A machine learning model to predict wildfire burn severity for pre-fire risk assessments, Utah, USA. *Fire Ecology*.
- [79] Nesbit, K.A. L.L. Yocom, A.M. Trudgeon, P.C. Rogers, D.J. McAvoy, E. Lane, and **R.J. DeRose**. Stand composition and developmental stage affect flammability of quaking aspen forests in Utah, USA. *Canadian Journal of Forest Research*.
- [78] Birch, J. D., **R.J. DeRose**, and J. A. Lutz. 2024. Spruce up your climate analysis: Dendroclimatology of *Picea engelmannii* and *Picea pungens*. *Ecosphere* 15:e70047.
- [77] Evans, M.E.K., Dey, S.M.N., Heilman, K.A., Tipton, J.R., DeRose, R.J., Klesse, S., Schultz, E.L., Shaw, J.D., 2024. Tree rings reveal the transient risk of extinction hidden inside climate envelope forecasts. *Proc. Natl. Acad. Sci. U.S.A.* 121, e2315700121.
- [76] Šenfeldr, M., D.J. Shinneman, S.K. McIlroy, P.C. Rogers, and **R.J. DeRose**. 2024. Climate-growth relationships of quaking aspen (*Populus tremuloides*) in Great Basin, Nevada. *Forest Ecology and Management*. 554 (121664).
- [75] **DeRose, R.J.**, M.A. Windmuller-Campione, K.M. Waring, A.S. Nelson, J.N. Long, and M. Nobel. 2023. What does it mean to be a silviculturist? *Journal of Forestry* 122(2):185-193.
- [74] Kusbach, A., P. Dujka, J. Šebesta, P. Lukeš, **R.J. DeRose**, and P. Maděra. 2023. Ecological classification can help with assisted plant migration in forestry, nature conservation, and landscape planning. *Forest Ecology and Management* 546:121349.
- [73] **DeRose, R.J.** 2023. Conserving lodgepole pine genetic diversity in the face of uncertainty. *Forest Ecology and Management* 545:121235.
- [72] Cabon, A., **R.J. DeRose**, J.D. Shaw, and W.R.L. Anderegg. 2023. Declining tree growth resilience mediates subsequent stand mortality in the U.S. Mountain West. *Global Change Biology* 29(17):4826-4841. (IF=13.21)
- [71] Ols, C., **R.J. DeRose**, M.P. Girardin, M.E.K. Evans, S. Klesse, and V. Trouet. 2023. Detrending climate data prior to climate-growth analyses in dendroecology: a common best practice? *Dendrochronologia* 126094. (IF=3.071)

- [70] ‡Nesbit, K, **R.J. DeRose**, A.M. Trudgeon, P.C. Rogers, and L.L. Yocom. 2023. Quaking aspen's influence on fire occurrence, behavior, and severity. *Forest Ecology and Management, TAMM Review* 521:120752. (IF=4.384)
- [69] Finley, J.B., E. Robinson, and **R.J. DeRose**. 2023. Arroyo formation impacts on an early dryland agricultural community in northeastern Utah, USA. *Geoarchaeology* 38(1):109-126. (IF=1.64)
- [68] ‡Birch, J.D., Y. Chikamoto, **R.J. DeRose**, V. Manvailier, E.H. Hogg, J. Karst, D.M. Love, and J.A. Lutz. 2022. Frost-associated defoliation in *Populus tremuloides* causes repeated growth reductions over 185 years. *Ecosystems* 1-17. (IF=4.345)
- [67] Watt, J., A. Brunelle, S. Brewer, B.J. Bentz, J.L. Morris, and **R.J. DeRose**. 2022. A Holocene record of mountain pine beetle outbreak at Lake of the Woods, Montana, USA. *Western North American Naturalist* 82(3):524-536. (IF=0.311)
- [66] ‡Blomdahl, E.M., J.H. Speer, M. Kaye, N.E. Zampieri, M. Rochner, B. Currey, D. Alving, G. Cahalan, B. Hagedorn, H. Li, R. Oelkers, L. Pelletier, I. Thapa, K. Willson, B.D. Woodward, and **R.J. DeRose**. 2022. Mechanisms of vegetation change in high elevation forests of the Greater Yellowstone Ecosystem. *Journal of Vegetation Science* 33:1-14. (IF=2.685)
- [65] ‡Giebink, C.L., **R.J. DeRose**, M. Castle, J.D. Shaw, and M.E.K. Evans. 2022. Climatic sensitivities derived from tree rings improve predictions of the Forest Vegetation Simulator growth and yield model. *Forest Ecology and Management* 517:120256. (IF=4.384)
- [64] ‡Giebink, C.L., D.J.P. Moore, G.M. Domke, K.A. Heilman, M.E.K. Evans, **R.J. DeRose**, and R.A. Fisher. 2022. The policy and ecology of forest-based climate mitigation: Pitfalls, needs and opportunities. *Plant and Soil* 1-28. special issue on Enhanced Natural Climate Solutions. (IF=4.192)
- [63] **DeRose, R.J.**, R.S. Gardner, R.L. Lindroth, and K.E. Mock. 2022 Polyploidy and growth – defense tradeoffs in natural populations of western quaking aspen. *Journal of Chemical Ecology* 48(4):431-440. (IF=2.59)
- [62] Molinari, R.L., M.F. Bekker, B.D. St. Clair, **R.J. DeRose**, S.G. Kitchen, and S.B. St. Clair. 2022. Legacy effects of facilitation on competitive interactions affect the spatio-temporal development of mixed forest ecosystems. *Ecosphere* 13(3)e3957. (IF=3.171)
- [61] †**M.E.K. Evans, R.J. DeRose**, S. Klesse, M.P. Girardin, K.A. Heilman, M.R. Alexander, A. Arsenault, F. Babst, M. Bouchard, S.M.P. Cahoon, E.M. Campbell, M. Dietze, L. Duchesne, D.C. Frank, C.L. Giebink, A. Gómez-Guerrero, G.G. García, E.H. Hogg, J. Metsaranta, C. Ols, S.A. Rayback, A. Reid, M. Ricker, P.G. Schaberg, J.D. Shaw, P.F. Sullivan, and S.A.V. Gaytán. 2022. Adding tree rings to North America's national forest inventories: an essential tool to guide drawdown of atmospheric CO<sub>2</sub>. *BioScience* 72(3):233-246. (IF=8.589, Issue cover photo, Multiple Press coverage)
- [60] ‡Hackett-Pain, A. J.J. Foest, [+ 30 coauthors], **R.J. DeRose**, [+ 42 coauthors]. 2022. MASTREE+: time-series of plant reproductive effort from six continents. *Global Change Biology* 28(9):3066-3082. (IF=13.21)
- [59] ‡Heilman, K.A., M.C. Dietze, A.A. Arizpe, J. Aragon, A. Gray, J.D. Shaw, A.O. Finley, S. Klesse, **R.J. DeRose**, and M.E.K. Evans. 2022. Ecological forecasting of tree growth: regional fusion of tree-ring and forest inventory data to quantify drivers and characterize uncertainty. *Global Change Biology* 28(7):2442-2460. (IF=13.21, [Ecological Forecasting Award winner](#))

- [58] ‡Schultz, E.L., L. Hulsmann, M.D. Pillet, F. Hartig, D.D. Breshears, S. Record, J.D. Shaw, **R.J. DeRose**, P.A. Zuideman, and M.E.K. Evans. 2022. Climate-driven, but dynamic and complex? A reconciliation of competing hypotheses for species' distributions. *Ecology Letters* 25(1):38-51. (IF=11.27)
- [57] Windmuller-Campione, M.A., **R.J. DeRose**, and J.N. Long. 2021. Landscape-scale drivers of resistance and resilience to bark beetles: a conceptual susceptibility model. *Forests* 12(6):798. (IF=2.633)
- [56] Castagneri, D., G. Vacchiano, A. Hackett-Pain, **R.J. DeRose**, T. Klein, and A. Bottero. 2021. Global meta-analysis reveals different competition effects on tree growth resistance and resilience to drought *Ecosystems*. 1-14. (IF=4.217)
- [55] ‡Carter, V.A., A. Brunelle, M.J. Power, **R.J. DeRose**, M.F. Bekker, I. Hart, S. Brewer, J. Spangler, E. Robinson, M.B. Abbott, S.Y. Maezumi, and B.F. Coddling. 2021. Legacies of Indigenous land use shaped past wildfire regimes in the Basin-Plateau Region, USA. *Communications Earth and Environment*. 2(1):1-19. (IF=7.290, Radio interview press coverage)
- [54] Heaton, M.J., C. Berrett, **R.J. DeRose**, and M.F. Bekker. 2020. Spatial and covariate-varying relationships among dominant tree species in Utah *Environmental and Ecological Statistics*. 27(3):591-607. (IF=1.119)
- [53] ‡Pettit, J.M., S.L. Voelker, **R.J. DeRose**, and J.I. Burton. 2020. Spruce beetle outbreak was not driven by drought stress: evidence from a tree-ring iso-demographic approach indicate temperatures were more important. *Global Change Biology* 26(10): 5829-5843. (IF=10.863)
- [52] ‡Klesse, S., **R.J. DeRose**, F. Babst, B.A. Black, L.D.L. Anderegg, J. Axelson, A. Ettinger, H. Griesbauer, C. Guiterman, J. Harvey, Y.-H. Lo, A. Lynch, C. O'Connor, C. Restaino, D. Sauchyn, J.D. Shaw, D.J. Smith, L. Wood, J. Villeneuve-Diaz, and M.E.K. Evans. 2020. Continental-scale tree-ring-based projection of Douglas-fir growth: Testing the limits of space-for-time substitution. *Global Change Biology* 26(9):5146-5163. (IF=10.863)
- [51] †Frost, S.M., M.E. Alexander, **R.J. DeRose**, and M.J. Jenkins. 2020. Fire-environment analysis: an example of Army Garrison Camp Williams, Utah. *Fire* 3(1):6. (IF=2.73)
- [50] ‡Finley, J.B, E. Robinson, **R.J. DeRose**, and E. Hora-Cook. 2020. Multidecadal climate variability and the fluorescence of Fremont societies in Eastern Utah. *American Antiquity* 85(1):93-112. (IF=2.405)
- [49] Wurtzebach, Z., **R.J. DeRose**, K.A. Pelz, S. Goeking, J.D. Shaw, C. Witt, J. Menlove, S. Healey, and R. Bush. 2019. Forest Inventory and Analysis program: enhancing USFS planning rule assessment, planning, and monitoring. *Journal of Forestry* 118(3):298-306. (IF=2.047)
- [48] ‡Pettit, J.M., J.I. Burton, **R.J. DeRose**, **R.J.**, J.N. Long, and S.L. Voelker, S.L. 2019. An epidemic spruce beetle outbreak changes drivers of Engelmann spruce seedling establishment. *Ecosphere* 10(11):e02912. (IF=3.171)
- [47] Malanson, G.P., **R.J. DeRose**, and M.F. Bekker. 2019. Individual variation and ecotypic niches in simulations of the impact of climatic volatility. *Ecological Modelling* 411:108782. (IF=2.974)

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Utah State University

Previously

- [46] Morris, J.L., **R.J. DeRose**, T. Brussel, S. Brewer, A. Brunelle, and J.N. Long. 2019. Stable or seral? Fire-driven alternative states in aspen forests of western North America. *Biology Letters* 15, 20190011. (IF=3.703)
- [45] Wine, M.L., S.E. Null, **R.J. DeRose**, and W.A. Wurtsbaugh. 2019. Climatization—negligent attribution of Great Salt Lake desiccation: A comment on Meng (2019). *Climate* 7(5), 67.
- [44] ‡Klesse, S., **R.J. DeRose**, C.H. Guiterman, A.M. Lynch, C.D. O'Connor, J.D. Shaw, and M.E.K. Evans. 2018. Sampling bias overestimates climate change impacts on forest growth in the southwestern United States. *Nature Communications* 9:5336. (IF=14.919)
- [43] Babst, F., P. Bodesheim, N. Charney, A.D. Friend, M.P. Girardin, S. Klesse, D.J.P. Moore, K. Seftigen, J. Björklund, O. Bouriaud, A. Dawson, **R.J. DeRose**, M.C. Dietze, A.H. Eckes, B. Enquist, D.C. Frank, M.D. Mahecha, B. Poulter, S. Record, V. Trouet, R.H. Turton, Z. Zhang, and M.E.K. Evans. 2018. When tree rings go global: Challenges and opportunities for retro- and prospective insight. *Quaternary Science Reviews* 197:1–20. (IF=4.112)
- [42] \*‡Pettit, J.L., **R.J. DeRose**, and J.N. Long. 2018. Climatic drivers of ponderosa pine growth in central Idaho. *Tree-Ring Research* 74:172-184. (IF=1.469)
- [41] Voelker, S.L., **R.J. DeRose**, M.F. Bekker, C. Sriladda, N. Leksungnoen, and R. Kjelgren. 2018. Anisohydric water use behavior links growing season evaporative demand to ring-width increment in conifers from summer-dry environments. *Trees* 32:735-749. (IF=2.529)
- [40] Long, J.N., M. Windmuller-Campione, and **R.J. DeRose**. 2018. Building resistance and resilience: regeneration should not be left to chance. *Forests* 9:270. (IF=2.633)
- [39] ‡Stagge, J.H., D.E. Rosenberg, **R.J. DeRose**, and T.M. Rittenour. 2018. Monthly paleostreamflow reconstruction from annual tree-ring chronologies. *Journal of Hydrology* 557:791-804. (IF=5.722)
- [38] Morris, J.L., S. Cottrell, C.J. Fettig, **R.J. DeRose**, K.M. Mattor, V.A. Carter, J. Clear, J. Clement, W.D. Hansen, J.A. Hicke, and P.E. Higuera. 2018. Bark beetles as agents of change in social–ecological systems. *Frontiers in Ecology and the Environment* 16(S1):S34-S43. (IF=11.123)
- [37] Wurtsbaugh, W.A., C. Miller, S.E. Null, **R.J. DeRose**, P. Wilcock, M. Hahnenberger, F. Howe, and J. Moore. 2017. Decline of the world's saline lakes. *Nature Geoscience* 10:816. (IF=16.908)
- [36] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2017. Building the Forest Inventory and Analysis tree-ring data set. *Journal of Forestry* 115:283-291. (IF=2.047)
- [35] ‡†Barandiaran, D., S.-Y. Wang, **R.J. DeRose**. 2017. Gridded snow water equivalent reconstruction for Utah using Forest Inventory and Analysis tree-ring data. *Water* 9:403. (IF=3.103)
- [34] **DeRose, R.J.**, M.F. Bekker, and J.N. Long. 2017. Traumatic resin ducts as indicators of bark beetle outbreaks. *Canadian Journal of Forest Research* 47:1168-1174. (IF=1.991)
- [33] ‡Carter, V.A., A. Brunelle, T.A. Minckley, J.D. Shaw, **R.J. DeRose**, and S. Brewer. 2017. Climate variability and fire effects on quaking aspen in the central Rocky Mountains, USA. *Journal of Biogeography* 44:1280-1293. (IF=3.324)
- [32] Morris, J.L., S. Cottrell, C.J. Fettig, W.D. Hansen, R.L. Sherriff, V.A. Carter, J.L. Clear, J. Clement, **R.J. DeRose**, J.A. Hicke, and P.E. Higuera. 2017. Managing bark beetle impacts on ecosystems and society: priority questions to motivate future research. *Journal of Applied Ecology* 54:750-60. (IF=6.528)

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- [30] Sun, Y., M.F. Bekker, **R.J. DeRose**, R. Kjelgren, and S.-Y. Wang. 2017. Statistical treatment for the wet bias in tree-ring chronologies: a case study from the Interior West, USA. *Environmental and Ecological Statistics* 24:131-150. (IF=1.119)
- [29] ‡†Britton, J.M., **R.J. DeRose**, K.E. Mock, and J.N. Long. 2016. Herbivory and advance reproduction influence quaking aspen regeneration response to management in southern Utah, USA. *Canadian Journal of Forest Research* 46:674-682. (IF=1.991)
- [28] ‡**DeRose, R.J.**, M.F. Bekker, R. Kjelgren, B.M. Buckley, and E.B. Allen. 2016. Dendrochronology of Utah juniper (*Juniperus osteosperma* (Torr.) Little). *Tree-Ring Research* 72:1-14. (IF=1.469)
- [27] Morris, J.L., **R.J. DeRose**, and A.R. Brunelle. 2015. Long-term landscape changes in a subalpine spruce-fir forest in central Utah, USA. *Forest Ecosystems* 2:1-12. (IF=3.645)
- [26] Gillies, R.R., O.Y. Chung, S.-Y. Wang, **R.J. DeRose**, and Y. Sun. 2015. Added value from 576 years of tree-ring records in the prediction of the Great Salt Lake level. *Journal of Hydrology* 529:962-968. (IF=5.722)
- [25] ‡**DeRose, R.J.**, M.F. Bekker, S.-Y. Wang, B.M. Buckley, R. Kjelgren, T.J. Bardsley, T.M. Rittenour, and E.B. Allen. 2015. A millennium-length reconstruction of Bear River stream flow, Utah. *Journal of Hydrology* 529:524-534. (IF=5.722)
- [24] Zeppenfeld, T.M., Svoboda, **R.J. DeRose**, M. Heurich, J. Muller, P. Ciskova, M. Stary, R. Bace, and D. Donato. 2015. Response of *Picea* forests to stand-replacing bark beetle outbreaks: neighborhood effects lead to direct regeneration. *Journal of Ecology* 52:1402-1411. (IF=6.256)
- [23] **DeRose, R.J.**, and A.J. Leffler. 2014. Simulation of quaking aspen potential fire behavior in northern Utah, USA. *Forests* 5:3241-3256. (IF=2.633)
- [22] ‡**DeRose, R.J.**, K.E. Mock, and J.N. Long. 2014. Cytotype differences in radial increment provide novel insight into aspen reproductive ecology and stand dynamics. *Canadian Journal of Forest Research* 45:1-8. (IF=1.991)
- [21] **DeRose, R.J.** and J.N. Long. 2014. Resistance and Resilience: a conceptual model for silviculture. *Forest Science* 60:1205-1212. (IF=1.664)
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- [19] ‡Bekker, M.F., **R.J. DeRose**, B.M., Buckley, R. Kjelgren, and N.S. Gill. 2014. A 576-year Weber River streamflow reconstruction from tree-rings for contemporary water resource risk assessment in the metropolitan Wasatch Front, Utah. *Journal of the American Water Resources Association* 50:1338-1348. (IF=3.202)
- [18] ‡†Allen, E.B., T.M. Rittenour, **R.J. DeRose**, M.F. Bekker, R. Kjelgren, and B.M. Buckley. 2013. A tree-ring based reconstruction of Logan River streamflow, northern Utah. *Water Resources Research* 49:8579-8588. (IF=5.240)

- [17] **DeRose, R.J.**, B.J. Bentz, J.D. Shaw, and J.N. Long. 2013. Effect of increasing temperatures on the distribution of spruce beetle in Engelmann spruce forests of the Interior West, USA. *Forest Ecology and Management* 308:198-206. (IF=3.558)
- [16] Vacchiano, G., **R.J. DeRose**, M. Svoboda, J.D. Shaw, and R. Motta. 2013. A density management diagram for central European Norway Spruce. *European Journal of Forest Research* 132:535-549. (IF=2.617)
- [15] **DeRose, R.J.**, S.-Y. Wang, and J.D. Shaw. 2013. Feasibility of Forest Inventory and Analysis-collected tree-ring data as climate proxy. *Journal of Hydrometeorology* 14:375-381. (IF=4.349)
- [14] Morris, J.L., A. Brunelle, **R.J. DeRose**, H. Seppä, M.J. Power, V. Carter, and R. Bares. 2013. Using fire regimes to delineate zones in a high-resolution lake sediment record from the western United States. *Quaternary Research* 79:24–36. (IF=2.720)
- [13] **DeRose, R.J.** and J.N. Long. 2012a. Drought-driven disturbance history characterizes a southern Rocky Mountain subalpine forest. *Canadian Journal of Forest Research* 42:1649-1660. (IF=1.991)
- [12] †Moore, P.M., **R.J. DeRose**, H. Van Miegroet, and J.N. Long. 2012. Using silviculture to influence carbon sequestration in southern Appalachian spruce-fir forests. *Forests* 3:317-330. (IF=2.633)
- [11] **DeRose, R.J.** and R.S. Seymour. 2012. Leaf area and structural changes after thinning in even-aged *Picea rubens* and *Abies balsamea* stands in Maine, USA. *International Journal of Forestry Research* 2012:181057.
- [10] **DeRose, R.J.** and J.N. Long. 2012b. Factors influencing the spatial and temporal dynamics of Engelmann spruce mortality during a spruce beetle outbreak on the Markagunt Plateau, Utah. *Forest Science* 58:1-14. (IF=1.664)
- [9] \*Ex, S., **R.J. DeRose**, and J.N. Long. 2011. Succession and stand development of *Cercocarpus ledifolius* woodlands in the Bear River Mountains, UT. *Western Journal of Applied Forestry* 26:183-187. (IF=1.664)
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- [6] **DeRose, R.J.** and \*R. Gardner. 2010. A technique to improve measurement of elusive tree-ring boundaries in aspen (*Populus tremuloides* Michx.). *Tree-Ring Research* 66:75-78. (IF=1.469)
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- [4] **DeRose, R.J.**, and R.S. Seymour. 2010. Patterns of leaf area index during stand development in even-aged balsam fir - red spruce stands. *Canadian Journal of Forest Research* 40:629-637. (IF=1.991)

- [3] **DeRose, R.J.** and J.N. Long. 2009. Wildfire and spruce beetle outbreak: simulation of interacting disturbances in the central Rocky Mountains. *Ecoscience* 16:28-38. (IF=1.950)
- [2] **DeRose, R.J.** and R.S. Seymour. 2009. The effect of site quality on growth efficiency of upper crown class *Picea rubens* and *Abies balsamea* in Maine, USA. *Canadian Journal of Forest Research* 39:1-8. (IF=1.991)
- [1] **DeRose, R.J.** and J.N. Long. 2007. Disturbance, structure, and composition: spruce beetle and Engelmann spruce forests on the Markagunt Plateau, Utah. *Forest Ecology and Management* 244: 16-23. (IF=3.558)

**FUNDING**

LIFETIME FUNDING = \$4,556,431

SINCE STARTING AT USU (\$ TO USU) = \$3,212,594 (\$1,622,922)

\*CURRENTLY ACTIVE

- 2025-2029 \*Training future foresters. USDA National Needs Fellows. (**\$262,500**). PI.
- 2022-2026 \*DISES: Indigenous Forest management in a non-stationary climate. National Science Foundation. **\$1,599,397 (\$236,907)**. Co-PI.
- 2021-2023 \*Forest Inventory and Analysis increment core archiving. USDA Forest Service. (**\$150,000**). PI.
- 2020-2024 \*Balsam woolly adelgid: research to support management of forests threatened by an invasive insect. USDA Forest Service: Western Wildland Environmental Threat Assessment Center. **\$362,600 (\$302,600)**. Co-PI.
- 2021-2023 Hydroclimate variability and the evolution of socioecological complexity in dryland farming communities. National Science Foundation. (**\$288,009**). Co-PI.
- 2020-2022 Strategic and targeted forest fire treatment and mitigation. Forestry, Fire, and State Lands, Utah. (**\$200,000**). Co-PI.
- 2019-2021 Collaborative research on Navajo forest vulnerability. U.S. Geologic Survey, Southwest Climate Adaptation Science Center. **\$306,088 (\$80,926)**. Co-PI.
- 2019-2020 Cedar Mountain Initiative's own aspen monitoring network: establishment of remeasurement plots to evaluate long-term trends. Cedar Mountain Initiative Research Program. (**\$44,000**). PI.

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*Utah State University**Previously*

- 2019 Uinta-Wasatch-Cache and Ashley National Forests, Aspen restoration project. BeSmart: Best Science Management and Research Together. **\$15,000**.
- 2018 Jump-starting the continental-scale assimilation of tree-ring and forest inventory data for carbon cycle science. International Research and Program Development. University of Arizona **\$10,000**.
- 2018-2020 Assimilation of tree-ring and forest inventory data across the interior western U.S. – a hierarchical analysis of patterns and drivers to forecast forest productivity. National Science Foundation, Macrosystems Biology Program. **\$297,024**.
- 2016-2018 Demographic models of interior western U.S. tree distributions – climate in the context of competition, disturbance, and natural enemies. National Science Foundation, Population and Community Ecology Cluster. **\$150,000**.

- 2015-2016 Fire occurrence and frequency in aspen forests on Cedar Mountain. Cedar Mountain Initiative. **\$78,850.**
- 2014-2018 Building high-density, long range hydroclimate resource information from Forest Service survey data. Utah Agricultural Experiment Station, Utah State University. **\$307,104.**
- 2013-2015 WaterSMART: Building decadal prediction of extreme climate for mapping water supply in the Intermountain West. Bureau of Reclamation. **\$147,497.**
- 2012-2014 Developing a decision matrix to guide successful aspen regeneration on Cedar Mountain, Utah. Cedar Mountain Initiative Research Program. **\$98,000.**
- 2011-2013 Potential implication of climate change on spruce beetle occurrence in Engelmann spruce forests of the Intermountain West. Forest Health Protection, Analysis and Reporting Funds. **\$19,000.**
- 2013-2015 Developing a revolutionized, high-resolution tree-ring network in Utah. Utah Agricultural Experiment Station, Utah State University. **\$20,000.**
- 2012 Northern Utah dendroclimatology. Utah State University, Research Catalyst. **\$19,577.**
- 2010 Validation and verification of the Utah and Western Sierra variants of the Forest Vegetation Simulator. USDA Forest Service, Washington Office. **\$16,000.**
- 2010 Use of the Forest Vegetation Simulator to quantify biomass accumulation potential of US forests. Utah State University. **\$20,000.**
- 2009-2011 Forest Inventory and Analysis tree-ring data archiving. Interior West Forest Inventory and Analysis Program **\$50,000.**
- 2009-2011 Analysis of Forest Inventory and Analysis tree-ring data. Interior West Forest Inventory and Analysis Program. **\$30,000.**
- 2009 Streamflow reconstruction for the Logan River. Utah State University. **\$19,930.**
- 2008-2010 Potential consequences of spruce beetle outbreaks on National Forests in Utah. Forest Health Protection Analysis Proposal. **\$15,000.**
- 2006-2008 Spruce-fir disturbance ecology and silviculture (Utah). Ecology Center. **\$10,200.**
- 2006 Using Landsat Thematic Mapper to assess the spatiotemporal dynamics of a large-scale spruce beetle epidemic: quantifying forest structural attributes for outbreak forecasting. Intermountain Region Digital Image Archive Center. **\$20,000.**
- 2002-2004 Spruce-fir production ecology and silviculture (Maine). University of Maine. **\$655.**

## Open-Access Data Contributions

### **30 data contributions since starting at USU**

- [51] Blomdahl, E.M., + [14 coauthors], + **R.J. DeRose**. 2023. *Pinus albicaulis* (PIAL WY071) tree-ring chronology for Bird Mountain, Wyoming. National Center for Environmental Information, NOAA.
- [50] Blomdahl, E.M., + [14 coauthors], + **R.J. DeRose**. 2023. *Pinus contorta* (PIAL WY072) tree-ring chronology for Bird Mountain, Wyoming. National Center for Environmental Information, NOAA.
- [49] Carter, V.A., + [2 coauthors], **R.J. DeRose**, + [6 coauthors]. 2023. Fish Lake, Utah Palmer Drought Severity Index reconstruction (800-2006). National Center for Environmental Information, NOAA.
- [48] Finley, J.B., E. Robinson, **R.J. DeRose**, and E. Hora. 2023. Cub Creek, Utah annual precipitation reconstruction (-55 – 2005). National Center for Environmental Information, NOAA.

- [47] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT575) tree-ring chronology for Mill D South, Utah. National Center for Environmental Information, NOAA.
- [46] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT574) tree-ring chronology for Millcreek Mouth, Utah. National Center for Environmental Information, NOAA.
- [45] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT573) tree-ring chronology for Millcreek Box Canyon, Utah. National Center for Environmental Information, NOAA.
- [44] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT572) tree-ring chronology for Millcreek Bowman Fork, Utah. National Center for Environmental Information, NOAA.
- [43] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT571) tree-ring chronology for Millcreek Alexander Basin, Utah. National Center for Environmental Information, NOAA.
- [42] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT570) tree-ring chronology for Logan Canyon, Utah. National Center for Environmental Information, NOAA.
- [41] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT569) tree-ring chronology for Green Canyon South, Utah. National Center for Environmental Information, NOAA.
- [40] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT568) tree-ring chronology for Green Canyon North, Utah. National Center for Environmental Information, NOAA.
- [39] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT567) tree-ring chronology for Ferguson Canyon, Utah. National Center for Environmental Information, NOAA.
- [38] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT566) tree-ring chronology for Big Cottonwood East, Days Fork, Utah. National Center for Environmental Information, NOAA.
- [37] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT565) tree-ring chronology for Blacksmith Fork, Utah. National Center for Environmental Information, NOAA.
- [36] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT564) tree-ring chronology for Big Cottonwood West, Utah. National Center for Environmental Information, NOAA.
- [35] Wager, D.J., **R.J. DeRose**, and R. Jess. 2023. *Pseudotsuga menziesii* (PSME UT563) tree-ring chronology for Big Cottonwood East, Utah. National Center for Environmental Information, NOAA.
- [34] Birch, J.D., M.F. Bekker, **R.J. DeRose**, and R. Jess. 2021. *Picea engelmannii* (PPTR UT555) tree-ring chronology for T.W. Daniel Experimental Forest, Utah. National Center for Environmental Information, NOAA.
- [33] Birch, J.D., M.F. Bekker, **R.J. DeRose**, and R. Jess. 2021. *Populus tremuloides* (PPTR UT554) tree-ring chronology for T.W. Daniel Experimental Forest, Utah. National Center for Environmental Information, NOAA.
- [32] Birch, J.D., **R.J. DeRose**, and W.R. DeRose. 2021. *Populus tremuloides* (PPTR UT553) tree-ring chronology for Warner Lake, Utah. National Center for Environmental Information, NOAA.
- [31] Birch, J.D., **R.J. DeRose**, C. Xu, and R. Jess. 2021. *Pinus flexilis*. (PIFL UT552) tree-ring chronology for Bear Lake Summit, Utah. National Center for Environmental Information, NOAA.

- [30] Birch, J.D., **R.J. DeRose**, C. Xu, and R. Jess. 2021. *Pseudotsuga menziesii* (PSME UT551) tree-ring chronology for Bear Lake Summit, Utah. National Center for Environmental Information, NOAA.
- [29] Bekker, M.F., **R.J. DeRose**, H. Gray, S. Wortham, and R. Jess. 2021. *Pinus longaeva* (PILO UT550) tree-ring chronology for Red Canyon, Utah. National Center for Environmental Information, NOAA.
- [28] **DeRose, R.J.**, M.F. Bekker, H. Gray, S. Wortham, and R. Jess. 2021. *Juniperus osteosperma* (JUOS UT549) tree-ring chronology for Red Canyon, Utah National Center for Environmental Information, NOAA.
- [27] Birch, J.D., **R.J. DeRose**, and J.A. Lutz. 2020. *Abies bifolia* (ABBI UT545) tree-ring chronology for Cedar Breaks National Monument. National Center for Environmental Information, NOAA.
- [26] Birch, J.D., **R.J. DeRose**, and J.A. Lutz. 2020. *Picea engelmannii* (PCEN UT546) tree-ring chronology for Cedar Breaks National Monument. National Center for Environmental Information, NOAA.
- [25] Birch, J.D., **R.J. DeRose**, and J.A. Lutz. 2020. *Pinus flexilis* (PIFL UT547) tree-ring chronology for Cedar Breaks National Monument. National Center for Environmental Information, NOAA.
- [24] Birch, J.D., **R.J. DeRose**, and J.A. Lutz. 2020. *Pseudotsuga menziesii* (PSME UT548) tree-ring chronology for Cedar Breaks National Monument. National Center for Environmental Information, NOAA.
- [23] ‡Pettit, J.L., **R.J. DeRose**, and J.N. Long. 2019. *Pinus ponderosa* (PIPO ID019) tree-ring chronology for Clearwater River, Idaho. National Center for Environmental Information, NOAA.
- [22] ‡Pettit, J.L., **R.J. DeRose**, and J.N. Long. 2019. *Pinus ponderosa* (PIPO ID018) tree-ring chronology for Kennally Creek, Idaho. National Center for Environmental Information, NOAA.

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*Utah State University*

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*Previously*

- [21] **DeRose, R.J.** 2016. *Pinus monophylla* (UTC00279968) Botanical specimen for Wasatch Range, Utah County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [20] **DeRose, R.J.** 2016. *Pinus edulis* (UTC00279969) Botanical specimen for Wasatch Range, Utah County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [19] **DeRose, R.J.** 2016. *Pinus ponderosa* (UTC00204437) Botanical specimen for Wasatch Range, Utah County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [18] **DeRose, R.J.** 2015. *Pinus edulis* (UTC00275183) Botanical specimen for Wasatch Range, Utah County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [17] **DeRose, R.J.** 2015. *Pinus ponderosa* (UTC00275184) Botanical specimen for Wasatch Range, Wasatch County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [16] **DeRose, R.J.** 2015. *Pinus ponderosa* (UTC00275185) Botanical specimen for Wasatch Range, Salt Lake County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.

- [15] **DeRose, R.J.** 2015. *Pinus monophylla* (UTC00275186) Botanical specimen for Bear River Range, Cache County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [14] **DeRose, R.J.** 2015. *Pinus longaeva* (UTC00275187) Botanical specimen for Pahvant Range, Sevier County, Utah. Physically housed at the Utah State University Herbarium and digitally in Intermountain Biota.
- [13] **DeRose, R.J.**, M.F. Bekker, S.-Y. Wang, B.M. Buckley, R. Kjelgren, T. Bardsley, T.M. Rittenour, and E.B. Allen. 2015. Bear River stream flow reconstruction (800-2010). National Center for Environmental Information, NOAA.
- [12] **DeRose, R.J.**, J. Britton, and E.B. Allen. 2015. *Juniperus osteosperma* (JUOS UT542) tree-ring chronology for Card Canyon, Logan, Utah. National Center for Environmental Information, NOAA.
- [11] Bekker, M.F., **R.J. DeRose**, H. Gray, C. Nielsen, and S.H. Wheeler. 2015. *Juniperus osteosperma* (JUOS UT541) tree-ring chronology for South Fork Chalk Creek, Utah National Center for Environmental Information, NOAA.
- [10] **DeRose, R.J.** 2014. *Populus tremuloides* (POTR UT540) tree-ring chronology for the Pando clone, Fish Lake, Utah. National Center for Environmental Information, NOAA.
- [9] **DeRose, R.J.**, S.-Y. Wang, B.M. Buckley, and M.F. Bekker. 2014. Great Salt Lake water level reconstruction (1426-2005) National Center for Environmental Information, NOAA.
- [8] ‡Allen, E.B., T.M. Rittenour, and **R.J. DeRose**. 2014. *Pseudotsuga menziesii* (PSME UT538) tree-ring chronology for Naomi Peak, Logan, Utah National Center for Environmental Information, NOAA.
- [7] **DeRose, R.J.**, E.B. Allen, J. Britton, L.C. Nam, M. Kershner, and D. Birch. 2014. *Pseudotsuga menziesii* (PSME UT537) tree-ring chronology for Willard Ridge, Utah. National Center for Environmental Information, NOAA.
- [6] **DeRose, R.J.**, E.B. Allen, J. Britton, L.C. Nam, and M. Kershner. 2014. *Pseudotsuga menziesii* (PSME UT536) tree-ring chronology for Maguire Canyon, Utah. National Center for Environmental Information, NOAA.
- [5] Tikalsky, B.P., M.F. Bekker, **R.J. DeRose**, and M. Kershner. 2014. *Pseudotsuga menziesii* (PSME UT535) tree-ring chronology for Big Flat Ridge, Utah. National Center for Environmental Information, NOAA.
- [4] Bekker, M.F., **R.J. DeRose**, B.M. Buckley, R. Kjelgren, and N.S. Gill. 2014. Weber River stream flow reconstruction (1429-2004). National Center for Environmental Information, NOAA.
- [3] ‡Allen, E.B., T.M. Rittenour, **R.J. DeRose**, M.F. Bekker, R. Kjelgren, and B.M. Buckley. 2014. Logan River stream flow reconstruction (1605-2005). National Center for Environmental Information, NOAA.
- [2] **DeRose, R.J.**, E.B. Allen, L.C. Nam, N. Thiet, N. Hoai, D. Martin-Benito, and M.F. Bekker. 2014. *Juniperus scopulorum* (JUSC UT532) tree-ring chronology for Jardine Juniper Trail, Utah. National Center for Environmental Information, NOAA.
- [1] ‡Allen, E.B., L.C. Nam, N. Thiet, N. Hoai, **R.J. DeRose**, and D. Martin-Benito. 2014. *Juniperus scopulorum* (JUSC UT531) tree-ring chronology for Left Hand Fork, Utah National Center for Environmental Information, NOAA.

**OTHER PUBLICATIONS****Seven publications since starting at USU**

- [32] Contributed to the Annual Report to the Governor from the Institute of Land, Water, and Air, Chapter 4. Forests & Rangelands, page 78.
- [31] **R.J. DeRose**, Z. Merrill, M. Rochner, and M.F. Bekker. 2022. Variable demographic patterns interact with disturbance and climate to shape limber pine population viability. *Research and Management of High-Elevation Five-Needle Pines in Western North America*. 16:18-27.
- [30] \*Giebink, C.L., **R.J. DeRose**, J.D. Shaw, and M.E.K Evans. 2020. Updating the Forest Vegetation Simulator with climate response recorded in tree rings. In: Brandeis, Thomas J. Celebrating progress, possibilities, and partnerships: Proceedings of the 2019 Forest Inventory and Analysis (FIA) Science Stakeholder Meeting. e-Gen. Tech. Rep. SRS-256.
- [29] Evans, M.E.K., E.L. Schultz, L. Huelsmann, M.D. Pillet, P. Zuidema, D.D. Breshears, S. Record, Hartig, F., J.D. Shaw and **R.J. DeRose**. 2020. Using forest inventory data to build demography-driven models of the geographic distribution: a case study of *Pinus edulis* (two-needle pinon). In: Brandeis, Thomas J. Celebrating progress, possibilities, and partnerships: Proceedings of the 2019 Forest Inventory and Analysis, Science Stakeholder Meeting. e-Gen. Tech. Rep. SRS-256.
- [28] \*Stapleton, M.J.B, and **R.J. DeRose**. 2020. Using dendroclimatology to study a disjunct population of *Pinus ponderosa* in northern Utah. Undergraduate Research and Creativity Opportunity, Final Report.
- [27] Tucker, C., **R.J. DeRose**, and A.Z. Csank. 2019. Exploring whitebark pine tree mortality and Douglas-fir climate response in the Greater Yellowstone area using tree-ring isotopes. 27<sup>th</sup> Annual North American Dendroecological Fieldweek.
- [26] Witt, C. J.D. Shaw, J. Menlove, S.A. Goeking, **R.J. DeRose**, K.A. Pelz, T.A. Morgan, and S.W. Hayes. 2019. Montana's forest resources, 2006-2015. Resource Bulletin. RMRS-RB-30. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.

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*Utah State University**Previously*

- [25] Bekker, M.F., **R.J. DeRose**, M. Rochner, C. Gertler, Z. Merrill, J. Schwager, and S. Wyatt. 2018. Investigating the climate response of limber pine on Bald Ridge, Wyoming. 26<sup>th</sup> Annual North American Dendroecological Fieldweek.
- [24] Wurtsbaugh, W.A., C. Miller, S. Null, **R.J. DeRose**, and P. Wilcock 2018, Can the desiccation of great Salt Lake be stopped? In, Watershed Sciences Faculty Publications, edited, Utah State University, West Valley City, Utah.
- [23] Witt, C., **R.J. DeRose**, S.A. Goeking, and J.D. Shaw. 2018. Idaho's forest resources, 2006-2015. *Resource Bulletin*. RMRS-RB-29. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [22] **DeRose, R.J.**, J.D. Shaw, S.A. Goeking, J. Menlove, C. Witt, T. Morgan, K. Marcille, and C.P. McIver. 2018. Wyoming's forest resources, 2011-2015. Resource Bulletin. RMRS-RB-28. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.

- [21] Malesky, D.M., B.J. Bentz, G.R. Brown, A.R. Brunelle, J.M. Buffington, L.M. Chappell, **R.J. DeRose**, J.C. Guyon II, C.L. Jorgensen, R.A. Loehman, L.L. Lowrey, A.M. Lynch, M. Matyjasik, J.D. McMillin, J.E. Mercado, J.L. Morris, J.F. Negron, W.G. Padgett, R.A. Progar, and C.B. Randall. 2018. Effects of climate change on ecological disturbances [Chapter 8]. In: Halofsky, J.E., D.L. Peterson, J.J. Ho, N.J. Little, and L.A. Joyce, eds. Climate change vulnerability and adaptation in the Intermountain Region [Part 2]. General Technical Report RMRS-GTR-375. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 199-263.
- [20] ‡Britton, J., **R.J. DeRose**, K. Mock, and D. McAvoy. 2017. The regeneration of aspen stands in southern Utah. Utah State University, Extension Fact Sheet.
- [19] Bekker, M.F., R.J. DeRose, J.L. Pettit, A. Bake, S. Bhandari, V. Comeau, J. Cooper, J. McGee, N. Miley, and W. Reed. 2017. Multicentennial precipitation reconstruction for the Clarks Fork drainage. 25<sup>th</sup> Annual North American Dendroecological Fieldweek.
- [18] Thompson, M.T., J.D. Shaw, C. Witt, C.E. Werstak, M.C. Amacher, S.A. Goeking, **R.J. DeRose**, T.A. Morgan, C.B. Sorenson, S.W. Hayes and J. Menlove. 2017. Colorado's forest resources, 2004-2013. Resource Bulletin RMRS-RB-23. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [17] Menlove, J., J.D. Shaw, C. Witt, C.E. Werstak, **R.J. DeRose**, S.A. Goeking, M.C. Amacher, T.A. Morgan, and C.B. Sorenson. 2016. Nevada's forest resources, 2004-2013. Resource Bulletin RMRS-RB-22. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [16] Werstak, C.E., J.D. Shaw, S.A. Goeking, C. Witt, J. Menlove, M.T. Thompson, **R.J. DeRose**, M.C. Amacher, S. Jovan, T.A. Morgan and C.B. Sorenson. 2016. Utah's forest resources, 2003-2012. *Resource Bulletin* RMRS-RB-20. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [15] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2015. Spatiotemporal patterns of ring-width variability in the northern Interior West. In: Stanton, S.M. and G.A. Christensen, comps. 2015. Pushing boundaries: new directions in inventory techniques and applications: Forest Inventory and Analysis symposium 2015. December 8–10; Portland, Oregon. General Technical Report PNW-GTR-931. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- [14] Bekker, M.F. **R.J. DeRose**, J.H. Speer, I. Andreicheck, J.M. Berg, K.L. Costanza, A. Cutter, W.P. Hall, C.B. King, A.N. Reagan, A.K. Stewart, and N.M. Whitney. 2014. 410-year stream flow reconstruction of the South Fork Shoshone River, Wyoming, USA. 24<sup>th</sup> Annual North American Dendroecological Fieldweek.
- [13] **DeRose, R.J.**, S.-Y. Wang, and J.D. Shaw. 2012. Forest Inventory and Analysis-collected tree-ring data as growth and climate proxy. Proceedings from the 2012 Forest Inventory and Analysis Symposium, Moving from status to trends, December 4-6, 2012. General Technical Report GTR-NRS-P-105. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [12] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2011. Validation of the Utah and Western Sierra Variants of the Forest Vegetation Simulator. Final Report to Washington Office, Forest Management Service Center.
- [11] \*Birch, D.S., **R.J. DeRose**, J.N. Long, and J.D. Shaw. 2011. Dendroclimatic study of Utah common pinyon (*Pinus edulis*): possible climatic control on population growth. Undergraduate

Research and Creativity Opportunity, Final Report.

- [10] DeBlander, L.T., J.D. Shaw, C. Witt, J. Menlove, M.T. Thompson, T.A. Morgan, **R.J. DeRose**, and M.C. Amacher. 2010. Utah's forest resources, 2000-2005. Resource Bulletin, RMRS-RB-10. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [9] \*Ex, S., **R.J. DeRose**, J.N. Long, K.E. Mock, and R. Gardner. 2009. Succession and stand development of *Cercocarpus ledifolius* woodlands in the Bear River Mountains, Utah. Undergraduate Research and Creativity Opportunity, Final Report.
- [8] **DeRose, R.J.** 2009. Disturbance ecology and vegetation dynamics at varying spatial- and temporal-scales in southern Rocky Mountain Engelmann spruce forests. Doctoral Dissertation. Utah State University.
- [7] **DeRose, R.J.**, J.N. Long, and J.D. Shaw. 2009. Relationships between forest structure, composition, site, and spruce beetle occurrence in the Intermountain West. In: McWilliams, W., G. Moisen, and R. Czaplewski, comps. 2008. Forest Inventory and Analysis Symposium 2008; October 21-23, 2008; Park City, UT. Proceedings RMRS-P-56CD (39). Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 1CD.
- [6] **DeRose, R.J.**, J.D. Shaw, G. Vacchiano, and J.N. Long. 2008. Improving longleaf pine mortality predictions in the Southern Variant of the Forest Vegetation Simulator. Third Forest Vegetation Simulator Conference, Ft. Collins, CO. Feb. 13-15, 2007. Proceedings RMRS-P-54. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [5] Vacchiano, G., J.D. Shaw, **R.J. DeRose**, and J.N. Long. 2008. Inventory-based sensitivity analysis guides calibration of the large tree diameter growth submodel of the Southern Variant of FVS. Third Forest Vegetation Simulator Conference, Ft. Collins, CO. Feb. 13-15, 2007. Proceedings RMRS-P-54. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [4] Shaw, J.D., G. Vacchiano, **R.J. DeRose**, A. Brough, A. Kusbach, and J.N. Long. 2006. Local calibration of the Forest Vegetation Simulator using custom inventory data. In: Society of American Foresters 2006 National Convention: Pittsburgh, Pennsylvania, October 25-29.
- [3] Allen, M.P. Brose, **R.J. DeRose**, E. Guetersloh, G. Guitierrez-Garcia, J.J. Hayes, J. Halofsky, K.C. Phillip, J.P.A. Shatford, M. Toeneiet, M.W. Kay, and J.H. Speer. 2006. A ridge top fire history in the Blue River Watershed, west-central Cascades, Oregon. 16th Annual North American Dendroecological Fieldweek.
- [2] **DeRose, R.J.** 2004. Leaf area index – relative density relationships in even-aged *Abies balsamea*–*Picea rubens* stands in Maine. Masters Thesis. University of Maine.
- [1] **DeRose, R.J.** and R.S. Seymour. 2004. Leaf area index, relative density and growth efficiency relationships of even-aged balsam fir and red spruce stands. In: Cooperative Forestry Research Institute, 2004 Annual Report. Maine Agricultural and Forest Experiment Station Misc. Report 435.

## INVITED PRESENTATIONS

### Seven invited presentations since starting at USU in 2019

- [31] **DeRose, R.J.** 2024. Legacies of indigenous land use shaped past wildfire regimes. Utah Prescribed Fire Council, Annual Meeting, May 7-8, 2024, Price, Utah.

- [30] **DeRose, R.J.** 2024. Aspen regeneration response to mechanical roller felling. Society of Range Management, Annual Conference, January 28-31, 2024, Sparks, NV. Rangeland Technology and Equipment Council (RTEC): Novel Equipment and Restoration Methods in the Western United States.
- [29] **DeRose, R.J.** 2022. The case for adding tree rings to national forest inventories. University of Montana, Systems Ecology Seminar Series, April 7, 2022.
- [28] **DeRose, R.J.** 2021. Variable demographic patterns interact with disturbance and climate to shape limber pine population viability. High Elevation Five Needle Pine Research Conference, October 5-7, virtual conference.
- [27] **DeRose, R.J.** 2021. Long-term perspectives of aspen management. Western Aspen Alliance Workshop. August 3-4, 2021.
- [26] **DeRose, R.J.** 2021. Stable or seral: 4,000 years of fire and vegetation change in aspen communities? Western North American Naturalist Symposium: Impact of Climate Change on Western North American Ecosystems. April 2, 2021. Virtual Meeting.
- [25] **DeRose, R.J.** 2020. Building the North American National Forest Inventory tree-ring database. Ecological Society of America Annual Meeting special session: Bridging large datasets, databases and field measurements for advancing forest ecophysiology with functional traits: perspectives and challenges. Virtual Meeting, August 3-6.
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- Utah State University*
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- Previously*
- [24] **DeRose, R.J.** 2019. Tales Trees Tell. Intermountain Society of American Foresters Section Meeting, Logan Utah, March 29<sup>th</sup>.
- [23] **DeRose, R.J.** 2019. Landscape-scale silvicultural considerations for resistance and resilience to bark beetle outbreaks. 69th Western Forest Insect Work Conference, Anchorage AK. April 23-25.
- [22] **DeRose, R.J.** 2018. Embracing variability: lessons and opportunities from Forest Inventory and Analysis-based tree-ring data. MtnClim special session: Anticipating climate change impacts in mountains. September 17-21.
- [21] **DeRose, R.J.** 2018. The Forest Inventory and Analysis tree-ring dataset: opportunities and challenges from a representative sample design. Special session at the 2018 Ecological Society of America Annual Meeting, Many and varied ecological lessons learned from the annual rings of trees: insights across scales. New Orleans, Louisiana, August 6-9.
- [20] **DeRose, R.J.** 2018. The Forest Inventory and Analysis tree-ring data set. Invitation to present at the Missoula Fire Lab seminar series, March 15<sup>th</sup>.
- [19] **DeRose, R.J.** 2018. Putting resilience in context: an example from forest management. PAGES funded meeting of EcoRe3 Working Group, University of Utah, May 8-10.
- [18] **DeRose, R.J.** 2017. Traumatic resin ducts and other tree-ring events. PAGES funded Paleoevent Workshop. Manitou Experimental Forest, CO, September 10-14.
- [17] **DeRose, R.J.** 2017. The state of Wyoming forests, and update on the 5-year Forest Inventory and Analysis report. Colorado/Wyoming Society of American Foresters regional meeting. Casper WY May 10-12.
- [16] **DeRose, R.J.** 2016. Silvicultural application of a conceptual framework for resistance and

resilience to spruce beetle outbreaks. North American Forest Insect Work Conference, Washington, D.C., May 31-June 3.

- [15] **DeRose, R.J.** 2015. The Forest Inventory and Analysis tree-ring data set. Laboratory of Tree-Ring Research Seminar Series, Tucson, AZ, April 1.
- [14] **DeRose, R.J.** 2015. How to build resilience to spruce beetle in Engelmann spruce forests. Workshop design to support incorporation of natural range of variation and climate change into land management planning under the 2012 planning rule. Ogden, UT, March 21-22.
- [13] **DeRose, R.J.** 2015. Spruce beetle in Engelmann spruce forests. Research frontiers at the social-environmental border of bark beetle disturbances, Santa Fe, NM, April 2-3, coincident with Western Forest Insect Work Conference.
- [12] **DeRose, R.J.** 2015. Dendrochronology in Utah. University of Utah, Department of Geography, Spring Colloquium, April 8.
- [11] **DeRose, R.J.** 2014. Tales' tree-rings tell. Department of Wildland Resources Spring Seminar, Utah State University, March 5<sup>th</sup>.
- [10] **DeRose, R.J.** 2013. Disturbance ecology of western U.S. forests. Departmental Seminar, Department of Forest Botany, Dendrology and Geobiocenology, Mendel University, Brno, Czech Republic, September 24<sup>th</sup>.
- [9] **DeRose, R.J.** 2013. Spruce beetle outbreak in the Central Rocky Mountains. Departmental Seminar, Department of Forest Botany, Dendrology and Geobiocenology, Mendel University, Brno, Czech Republic, September 25<sup>th</sup>.
- [8] **DeRose, R.J.** 2013. Tree-rings: science and applications, Intermountain Society of American Foresters spring meeting, Logan, UT, April 12<sup>th</sup>.
- [7] **DeRose, R.J.** 2012. Spruce beetle distribution modeling using Forest Inventory and Analysis data. Entomological Society of America Annual Meeting, Nashville, TN, November 14<sup>th</sup>.
- [6] **DeRose, R.J.** 2011. Exploring the biomass accumulation possibilities from active forest management in Utah forest types. Restoring the West Conference, Logan, UT, October 19<sup>th</sup>.
- [5] **DeRose, R.J.** 2011. Spruce beetle outbreaks in the southern Rocky Mountains. How to incorporate climate change in forest management, Intermountain Society of American Foresters spring meeting, Logan, UT, April 29<sup>th</sup>.
- [4] **DeRose, R.J.,** and J.N. Long. 2011. Effect of antecedent disturbances and drought on a landscape wide spruce beetle outbreak in the southern Rocky Mountains. Association of American Geographers Annual Meeting, Seattle, WA. April 12<sup>th</sup>.
- [3] **DeRose, R.J.,** and J.N. Long. 2010. Resistance and resilience: a silviculturally relevant conceptualization. Society of American Foresters National Convention, Albuquerque NM, October 29<sup>th</sup>.
- [2] **DeRose, R.J.** 2010. Disturbance dynamics on the Markagunt Plateau. Intermountain Society of American Foresters spring meeting, Logan, UT, April.
- [1] **DeRose, R.J.** 2008. Disturbance ecology of the Markagunt Plateau. University of Utah, Department of Geography Colloquium Series, Salt Lake City, UT, December.

**CONTRIBUTED PRESENTATIONS**

**DeRose lead author on 34 of 122 total contributed oral presentations (*poster indicated in parentheses*), 33 delivered since starting at USU, 10 of those delivered by student advisees**

- [122] Formanack, A., M.E.K. Evans, **R.J. DeRose**, J.D. Shaw, K. Ogle 2024. Tree ring width response to climate variability at multiple scales: implications for tree growth to track climate change. Ecological Society of America, Annual Meeting, August 4-9, Long Beach, CA. Oral presentation.
- [121] Martinez, C., J. Tipton, E. Berryman, **R.J. DeRose**, S. Goeking, J.D. Shaw, E. Schultz, and M.E.K. Evans. 2024. Demographic range modeling of a threatened high elevation pine: leveraging forest inventory, tree-ring, and aerial survey data to build a process-based model of extinction risk. Ecological Society of America, Annual Meeting, August 4-9, Long Beach, CA. Poster
- [120] Heilman, K., A. Dawson, M. C. Dietze, **R. J. DeRose**, J.D. Shaw, M. E. K. Evans, G. M. Domke, A. 2024. Incorporating ecological complexity in growth and mortality models through hierarchical data fusion of tree ring and forest inventory data. Ecological Society of America, Annual Meeting, August 4-9, Long Beach, CA.
- [119] Šenfelder, M., D.J. Shinneman, S.K. McIlroy, P. C. Rogers, **R.J. DeRose**. 2024. Variable climate-growth relationships of quaking aspen (*Populus tremuloides*) among Sky Island mountain ranges in the Great Basin, Nevada, USA. TRACE 2024, June 3-8 2024, Brasov, Romania.
- [118] Heilman, K.A., M.E.K. Evans, G. Domke, M. Dietze, **R.J. DeRose**, J.D. Shaw, A. Dawson. 2024. Using ecological forecasting to quantify sensitivity of forest carbon to tree growth and mortality processes. Ecological Forecasting Initiative, Finnish Meteorologica. Institute, Helsinki, Finland. June 11 – 13.
- [117] ‡Giebink, C.L., G.M. Domke, R.A. Fisher, K.A. Heilman, D.J. P. Moore, **R.J. DeRose**, and M.E.K. Evans. 2023. Leveraging data and models to fill gaps in monitoring, reporting, and verification of forest-based climate mitigation. Invited talk for: Natural Climate Solutions from Concepts to Practice - Bridging the Gap Between Science and Action. Ecological Society of America Annual Convention, Portland, Oregon, August 6-11.
- [116] Castagneri, D., G. Vacchiano, A. Hackett-Pain, **R.J. DeRose**, T. Klein, and A. Bottero. 2023. Variable influence of competition on tree growth response to drought. There are no easy recipes for forest management. Tree rings in archaeology, climatology, and ecology. Coimbra, Portugal, May 8-13.
- [115] ‡Jordan, G.B., B.J. Bentz, D.G. Alston, and **R.J. DeRose**. 2023. Balsam woolly adelgid and host forest characteristics: impacts and interactions in the Interior West. Western Forest Insect Working Conference Annual Meeting, Seattle, Washington, April 24-27.
- [114] ‡Wayman, M., B.J. Bentz, and **R.J. DeRose**. Investigating fine-scale dispersal patterns of balsam woolly adelgid (*Adelges piceae* (Ratz.)) in the Intermountain West using a stem-mapping approach. Western Forest Insect Working Conference Annual Meeting, Seattle, Washington, April 24-27.
- [113] Finley, J.B., E. Robinson, **R.J. DeRose**, J.A. Allison, and M.F. Bekker. 2023. High-precision AMS radiocarbon chronologies demonstrate short-lived agricultural village occupations on the northern Colorado Plateau. Society for American Archaeology, Portland, Oregon, March 29-April 2. *Poster*
- [112] ‡Jordan, G.B., B.J. Bentz, D.G. Alston, and **R.J. DeRose**. 2022. Tree and forest interactions between the invasive balsam woolly adelgid (*Adelges piceae*) and subalpine fir in the intermountain

- west. Entomological Society of America Annual Meeting, Vancouver, British Columbia, November 13-16.
- [111] ‡Trudgeon, A.M. and **R.J. DeRose**. 2022. Regeneration of quaking aspen (*Populus tremuloides*) after fire risk reduction treatments. IX International Conference on Forest Fire Research, Coimbra, Portugal, November 11-18.
- [110] Riling, J., **R.J. DeRose**, and A. Nelson 2022. Education: The Intermountain Active Management Tour. Society of American Foresters Annual Convention, Baltimore, Maryland, September 20-24.
- [109] ‡Trudgeon, A.M. and **R.J. DeRose**. 2022. Regeneration of quaking aspen (*Populus tremuloides*) after fire risk reduction treatments. Society of American Foresters Annual Convention, Baltimore, Maryland, September 20-24. *Poster*
- [108] Harley, G.L., S. Maxwell, C. Gentry, K.J. Heeter, **R.J. DeRose**, and M.F. Bekker. 2022. Was the 16<sup>th</sup> century temperature-fire-drought nexus foreshadowing for the Greater Yellowstone Ecosystem? Ameridendro, Montreal, Canada, June 27- July 1. *Poster*
- [107] **DeRose, R.J.** 2022 Adding tree rings to North America's national forest inventories: an essential tool to guide drawdown of atmospheric CO<sup>2</sup>. AmeriDendro, Montreal, Canada, June 27- July 1.
- [106] Wurtsbaugh, W., C. Miller, S. Null, **R.J. DeRose**, and P. Wilcock. 2022. Can the desiccation of Great Salt Lake be stopped? Great Salt Lake Summit. Salt Lake City, Utah, January 5<sup>th</sup>, 2022. *Poster*
- [105] Harley, G.L., S. Maxwell, C. Gentry, K.J. Heeter, **R.J. DeRose**, and M.F. Bekker. 2021. Was the 16<sup>th</sup> century temperature-fire-drought nexus foreshadowing for the Greater Yellowstone Ecosystem? American Geophysical Union Fall Meeting, New Orleans, Louisiana, December 13-17.
- [104] Heilman, K, M. Dietze, A. Arizpe, J. Aragon, A. Gray, J.D. Shaw, S. Klesse, A.O. Finley, **R.J. DeRose**, and M.E.K. Evans. 2021. Carbon accounting of ponderosa pine forests across the interior western U.S. based on tree-ring and forest inventory data. American Geophysical Union Fall Meeting, New Orleans, Louisiana, December 13-17.
- [103] Evans, M.E.K., **R.J. DeRose**, S. Klesse, M.P. Girardin, K. Heilman, M. Dietze, J.D. Shaw, S.M.P. Cahoon, L. Duchesne, D. Frank, C. Giebink, G.M. Gutierrez, E.H. Hogg, J. Metsaranta, S.A. Rayback, P.G. Schaberg, M.R. Alexander, P. Sullivan, and A. Arsenault. 2021. Enhanced forest ecosystem monitoring for carbon accounting and climate mitigation: the case for adding tree rings to North American's national forest inventories. American Geophysical Union Fall Meeting, New Orleans, Louisiana, December 13-17.
- [102] ‡Giebink, C.L., **R.J. DeRose**, J.D. Shaw, M. Castle, and M.E.K. Evans. 2021. Tree rings improve growth and yield predictions of a forest management tool. American Geophysical Union Fall Meeting, New Orleans, Louisiana, December 13-17.
- [101] ‡Jordan, G.B., D.G. Alston, B.J. Bentz, and **R.J. DeRose**. 2021. Balsam woolly adelgid: the effects of forest stand characteristics on *Adelges piceae* susceptibility and damage. Entomological Society of America Annual Convention, Denver, Colorado, October 31 – November 3. *Poster*
- [100] ‡Blomdahl, E.M., J.H. Speer, M. Kaye, N.E. Zampieri, M. Rochner, B. Currey, D. Alving, G. Cahalan, B. Hagedorn, H. Li, R. Oelkers, L. Pelletier, I. Thapa, K. Willson, B.D. Woodward, and **R.J. DeRose**. 2021. Mechanisms of vegetation change in high elevation forests of the Greater Yellowstone Ecosystem. H5II Conference, virtual meeting, October 5-7.
- [99] Heilman, K., J. Argon, A.T. Gray, M.E.K. Evans, M.C. Dietze, A.O. Finley, A.H. Arizpe, J.D. Shaw, S. Klesse, and **R.J. DeRose**. 2021. Carbon accounting of ponderosa pine forests across the

- interior western U. S. based on tree-ring and forest inventory data: Drivers of carbon stock and flux and their uncertainties. Ecological Society of America Virtual Annual Meeting, August 2-6.
- [98] Dey, S., K. Heilman, M.E.K. Evans, E.L. Schultz, **R.J. DeRose**, J.D. Shaw, S. Klesse, and J. Tipton. 2021. A range-wide network of tree-ring data reveals variation in growth of common piñon across space and time. Ecological Society of America Virtual Annual Meeting, August 2-6.
- [97] Rideout, E., D.G. Alston, B.J. Bentz, **R.J. DeRose**, and G. Jordan. 2021. Filling life history gaps of the invasive *Adelges piceae* in the Intermountain West. Pacific Branch of the Entomological Society of America Virtual Meeting, April 5-7.
- [96] Kelly Heilman, M.C. Dietze, J.D. Shaw, **R.J. DeRose**, S. Klesse, A.O. Finley, J. Argon, A.T. Gray, A.H. Arizpe, and M.E.K. Evans. 2020. Assimilation of tree-ring and forest inventory data to forecast future growth responses of *Pinus ponderosa*. Ecological Society of America Virtual Annual Meeting, August 3-6.
- [95] Margaret, E.K. Evans, S. Klesse, **R.J. DeRose**, F. Babast, B. Black, L.D.L. Anderegg, J. Axelson, A. Ettinger, C.H. Guiterman, G.L. Harley, J. Harley, Y.-H. Lo, A. Lynch, C. O'Connor, C. Restaino, D. Sauchyn, J.D. Shaw, D. Smith, J. Villenuaeva-Diaz, and L. Wood. Continental-scale tree-ring-based projection of Douglas-fir growth – testing the limits of space-for-time substitution. Ecological Society of America Virtual Annual Meeting, August 3-6.
- [94] Riordan, E.C., S. Klesse, F. Babst, A.P. Williams, J.D. Shaw, **R.J. DeRose**, A.O. Finley, and M.E.K. Evans. 2020. Spatial data aggregation underestimates variability in tree-growth response to climate. Ecological Society of America Virtual Annual Meeting, August 3-6.
- [93] ‡Giebink, C. **R.J. DeRose**, M. Castle, J.D. Shaw, and M.E.K. Evans. 2020. Updating a forest management tool with climate response recorded in tree rings. Ecosystem resilience and change in an uncertain world. Hosted by Center for Climate Adaptation Science and Solutions, Southwest Climate Adaptation Science Center. Tucson, Arizona, May 5<sup>th</sup>.
- [92] Evans, M. E. K., Huelsmann, L., Pillet, M., S. Record, D. Breshears, J. D. Shaw, P. Zuidema, F. Hartig, and **R. J. DeRose**. 2019. Demographic range modeling reveals that climate is insufficient to explain a species' distribution. Forest Inventory and Analysis Stakeholder Science Meeting, Knoxville, Tennessee, November 19-21.
- [91] ‡Giebink, C. L., **R. J. DeRose**, M. Castle, J. D. Shaw, M. E. K. Evans. 2019. Updating the Forest Vegetation Simulator with climate response recorded in tree rings. Forest Inventory and Analysis Stakeholder Science Meeting, Knoxville, Tennessee, November 19-21.
- [90] Schultz, E. P. Zuidema, **R.J. DeRose**, M.E.K. Evans, D.D. Breshears, L. Hulsmann, F. Hartig, and J.D. Shaw. 2019 A demographic perspective on the ecological niche and the geographic distribution: a range-wide analysis of climate and competition as factors limiting vital rates of *Pinus edulis*. Ecological Society of America Annual Meeting, Louisville, Kentucky, August 11-16.

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*Utah State University*

*Previously*

- [89] **DeRose, R.J.** 2019. Forest Inventory and Analysis program: enhancing USFS planning rule assessment, planning, and monitoring. National Silviculture Workshop, Bemidji Minnesota, May 21-23<sup>rd</sup>.

- [88] Merrill, Z. M. Roechner, M.F. Bekker, and **R.J. DeRose**. 2019. Investigating the climate response of limber pine (*Pinus flexilis*) for climate reconstruction in Greater Yellowstone Ecosystem. American Association of Geographers Annual Meeting, Washington D.C. April 3-7. *Poster*
- [87] Wurtsbaugh, W.A., C. Miller, S.E. Null, **R.J. DeRose**, P. Wilcock, M. Hahnenberger, F. Howe, and J. Moore. 2018. Can the desiccation of Great Salt Lake be stopped? Great Salt Lake Watershed Symposium. 12<sup>th</sup> annual Salt Lake County Watershed symposium, November 5<sup>th</sup>.
- [86] D. Castagneri, A. Bottero, A. Hackett Pain, **R.J. DeRose**, T. Klein, and G. Vacchiano. 2018. Competition modulates tree growth response to drought: a global review. Italian conference of silviculture in Turin, Italy, November.
- [85] Windmuller-Campione, M.A., **R.J. DeRose**, and J.N. Long. 2018. Impacts of multiple bark beetle species to forest resilience in the Interior western, USA. Society of American Foresters 2018 National Convention, Portland, Oregon, October 3-6.
- [84] Pelz, K.A., Z. Wurtzebach, **R.J. DeRose**, C. Perovich, and M. Ehrmann. 2018. Using Forest Inventory and Analysis data to facilitate an adaptive management approach to forest plan revision. Society of American Foresters 2018 National Convention, Portland, Oregon, October 3-6.
- [83] Wurtzebach, Z., **R.J. DeRose**, and K.A. Pelz. 2018. Enhancing planning rule assessment, planning, and monitoring with the Forest Inventory and Analysis Program. Society of American Foresters 2018 National Convention, Portland, Oregon, October 3-6.
- [82] **DeRose, R. J.** 2018. Where do trees occur in the Interior West? Society of American Foresters 2018 National Convention, Portland, Oregon, October 3-6.
- [81] Evans, M. E. K., Huelsmann, L., Pillet, M., S. Record, D. Breshears, J. D. Shaw, P. Zuidema, F. Hartig, and **R. J. DeRose**. 2018. Demographic range modeling reveals that climate is insufficient to explain a species' distribution. MtnClim meeting, Rocky Mountain Biological Laboratory, Crested Butte, Colorado, September 20.
- [80] Klesse, S., **R.J. DeRose**, J. Axeslon, J.S. Littell, C. Restaino, and M.E.K. Evans. 2018. Ecological forecasting of future tree growth based on tree rings: A continental-scale analysis of Douglas-fir (*Pseudotsuga menziesii*). Ecological Society of America Annual Conference. New Orleans, Louisiana, August 6-9.
- [79] Pillet, M.D., **R.J. DeRose**, S. Record, D. Breshears, J.D. Shaw, and M.E.K. 2018. Demographic range modeling reveals that climate is insufficient to explain species distributions. Ecological Society of America Annual Conference. New Orleans, Louisiana, August 6-9.
- [78] Evans, M. E. K., Huelsmann, L., Pillet, M., S. Record, D. Breshears, J. D. Shaw, P. Zuidema, F. Hartig, and **R. J. DeRose**. 2018. Demographic range modeling reveals that climate is insufficient to explain a species' distribution. Ecological Society of America Annual Conference. New Orleans, Louisiana, August 6-9.
- [77] Bekker, M.F., **R.J. DeRose**, and J.M. Pettit. 2018. New bristlecone pine data in Utah: climate response from its eastern range limits. 10<sup>th</sup> WorldDendro Conference, Thimphu, Bhutan, June 2-22.
- [76] Bekker, M.F., **R.J. DeRose**, and J.N. Long. 2018. Spruce beetle outbreaks and traumatic resin ducts. American Association of Geographers Annual Meeting, New Orleans, Louisiana, April 10-14.
- [75] Finley, J.B., E. Robinson, **R.J. DeRose**, and E. Hora-Cook. 2018. Fremont maize cultivation and latest Holocene climate variability in the Cub Creek Archaeological district, Dinosaur National Monument. Society for American Archaeology 83<sup>rd</sup> Annual Meeting, Washington, DC, April 11-15.

- [74] **DeRose, R.J.** 2017. The future of Engelmann spruce in the west: climate, spruce beetle outbreaks, and advance reproduction. Society of American Foresters National Convention, Albuquerque, New Mexico, November 17.
- [73] **DeRose, R.J.** 2017. Age-related trends in growth increment for Douglas-fir and ponderosa pine. Forest Inventory and Analysis, Science Stakeholder Meeting. Park City, Utah, October 24.
- [72] Mock, K.E., A. Howe, J.N. Long, **R.J. DeRose**, O. Burney, and S. Landhäusser. 2017. Triploid aspen in the US: occurrence and implications. International Union of Forest Research Organizations 125th Anniversary Congress 2017, Freiburg, Germany, September 18-22.
- [71] Mock, K.E., A. Howe, J.N. Long, **R.J. DeRose**, O. Burney, and S. Landhäusser. 2017. Triploid aspen in western landscapes: why they might matter. 14th Biennial Conference of Science and Management on the Colorado Plateau and Southwest Region. Flagstaff, Arizona, September 11-14.
- [70] Klesse, S., M.E.K. Evans, and **R.J. DeRose**. 2017. Differences in sampling design influence tree-ring derived climate sensitivity: Implications for forest vulnerability assessment. Ecological Society of America Annual Conference, Portland, Oregon, August 6-11.
- [69] Evans, M. E. K., **R.J. DeRose**, S. Klesse, J. Aragon, A. Grey, M. Pillet, A. Arizpe, J. D. Shaw, and M. C. Dietze. 2017. Combined use of tree-ring and forest inventory data to infer the influences on growth of *Pinus ponderosa* in northern Arizona. Ecological Society of America Annual Conference, Portland, OR, August 6-11.
- [68] Long, J.N., and **R.J. DeRose**. 2017. Building resistance and resilience: the importance of regeneration treatments. Understanding the cost of inadequate reforestation. Conference in April, Portland, OR. Invitation to Jim Long.
- [67] ‡Stagge, J.H., D.E. Rosenburg, **R.J. DeRose**, and T.M. Rittenour. 2017. Monthly paleostreamflow reconstruction from annual tree-ring chronologies. Spring Run-Off Conference, Utah State University. March 28-29.
- [66] Hora-Cook, E., J.B. Finley, and **R.J. DeRose**. 2016. Radio carbon dating agricultural behaviors: a Uinta Basin case study. Invited talk for PAGES meeting, Climate, Population, Food Workshop, November 8-11.
- [65] ‡Stagge, J.H., D.E. Rosenburg, **R.J. DeRose**, and T.M. Rittenour. 2016. Monthly paleostreamflow reconstruction from annual dendrochronologies for water systems analysis. American Geophysical Union, Fall Meeting, December 12-16.
- [64] Pelz, K.A., and **DeRose, R.J.** 2016. The whole picture: assessing patterns in Engelmann spruce regeneration associated with spruce beetle-caused mortality across broad landscapes. North American Forest Insect Work Conference, Washington, D.C., May 31-June 3.
- [63] Goeking, S., and **R.J. DeRose**. 2016. Application of the Forest Inventory and Analysis Program. Broad-scale monitoring workshop, Laramie Wyoming, Region 2. May 11-12.
- [62] ‡Riley, K, Rittenour, T, **R.J. DeRose**, and J. Pierce. 2016. A 7000-year wildfire reconstruction from southwest Utah reveals relations among climate, vegetation, and the timing of arroyo cut-fill dynamics. Utah State University Spring Runoff Conference, Logan, UT, April 5-6.
- [61] Pelz, K.A., S. Goeking, and **R.J. DeRose**. 2016. Variability in piñon-juniper woodlands across the Interior West: What can we learn from broad-scale datasets to improve restoration outcomes? Poster presentation at Sagebrush Ecosystem Conservation: All lands, all hands Conference, Salt Lake City, UT, February 23-25.

- [60] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2015. Spatiotemporal patterns of ring-width variability in the northern Interior West. 2015 Forest Inventory and Analysis Science Symposium: Pushing Boundaries – New directions in Inventory Techniques and Applications. Portland, Oregon, December 7-10.
- [59] **DeRose, R.J.**, K.E. Mock, and J.N. Long. 2015. The Pando aspen stand, regeneration ecology, and stand dynamics: new insights on genetic diversity. Society of American Foresters National Convention, Baton Rouge, Louisiana, November 3-7.
- [58] ‡Carter, V, J.L. Morris, and **R.J. DeRose**. 2015. Long-term perspectives on aspen-fire dynamics. Restoring the West 2015: restoration and fire in the Interior West. Logan, UT, October 28 & 29.
- [57] Bekker, M.F., **R.J. DeRose**, R.K. Kjelgren, S.-Y. Wang, and T. Rittenour. 2015. Management implications and applications of reconstructed hydroclimatic variability in the eastern Great Basin. Utah State University Spring Runoff Conference, Logan, UT, March 31 - April 1st.
- [56] Cutter, A.L., M.F. Bekker, **R.J. DeRose**, J.H. Speer, J.M. Berg, I. Andreiheck, K.K.L. Constanza, W.P. Hall, C.B. King, A.N. Reagan, A.K. Stewart, and N.M. Whitney. 2015. 410-year streamflow reconstruction of the south fork Shoshone River, Wyoming, USA. American Association of Geographers Annual Meeting, Chicago, IL, April 21-15.
- [55] Berg, J.M., M.F. Bekker, **R.J. DeRose**, J.H. Speer, J.M. Berg, I. Andreiheck, K.K.L. Constanza, W.P. Hall, C.B. King, A.N. Reagan, A.K. Stewart, and N.M. Whitney. 2015. 410-year streamflow reconstruction of the south fork Shoshone River, Wyoming, USA. Pacific Ecology and Evolution Conference, Vancouver Island, Canada, February 26-28.
- [54] ‡Barandiaran, D., S.-Y. Wang, and **R.J. DeRose**. 2014. Snow water equivalent reconstruction using FIA tree ring data. American Geophysical Union Fall Meeting, San Francisco, California, December 15-19.
- [53] ‡Britton, J.M., **R.J. DeRose**, J.N. Long, and K.E. Mock. 2014. Contemporary silviculture promotes persistence and reproduction of a foundation forest species. Society of American Foresters Annual Convention, Salt Lake City, Utah, October 8-11. Abstract published in *Journal of Forestry* 113(1):172.
- [52] **DeRose, R.J.**, S.-Y. Wang, J.D. Shaw, and J.N. Long. 2014. Building an unprecedented spatiotemporal tree-ring data set. Society of American Foresters Annual Convention Salt Lake City, Utah, October 5-11. Abstract published in *Journal of Forestry* 113(1):162.
- [51] **DeRose, R.J.**, S.-Y. Wang, J.D. Shaw. 2014. Using inventory-based tree-ring data as a proxy for historical climate: investigating the Pacific decadal oscillation and teleconnections. International Union of Forestry Research Organizations World Congress, Salt Lake City, Utah, October 5-11. *Poster*. Abstract published in *The International Forestry Review* 16(5):405.
- [50] ‡Barandiaran, D., S.-Y. Wang, and **R.J. DeRose**. 2014. Snow water equivalent reconstruction using FIA tree ring data. Mountain Climate Research Conference, Midway, Utah, September 15-18.
- [49] Bekker, M.F., **R.J. DeRose**, and S.-Y. Wang. 2014. Lessons from centennial- and millennial-length reconstructions of northern Utah's hydroclimate from tree rings. Mountain Climate Research Conference, Midway, Utah, September 15-18.
- [48] **DeRose, R.J.**, S.-Y. Wang, J.D. Shaw. 2014. Feasibility of high-density climate reconstruction based on Forest Inventory and Analysis-collected tree-ring data. MtnClim – Mountain Climate Research Conference, Midway, Utah, September 15-18.

- [47] \*Baur, A., M. Kershner, and **R.J. DeRose**. 2014. Sensitivity of subarctic trees to highway-related effects on permafrost. Utah State University Student Showcase. Paper 14. *Poster*
- [46] Sriladda, C. **R.J. DeRose**, M.F. Bekker, R.K. Kjelgren, B.M. Buckley. 2014. Potential reconstruction of paleo-vapor pressure deficit and seasonal balance from Rocky Mountain and Utah juniper ring increment. Utah State University Spring Run-Off Conference, Logan, Utah, April 1-2.
- [45] Bekker, M.F., **R.J. DeRose**, and S.-Y. Wang. 2014. Tree-ring reconstruction of Great Salt Lake level for hydroclimate diagnostics. Utah State University Spring Run-Off Conference, Logan, Utah, April 1-2.
- [44] ‡Allen, E.B., T.M. Rittenour, **R.J. DeRose**, R.K. Kjelgren, and B.M. Buckley 2014. Dendro-hydrologic reconstruction of the Logan River, northern Utah. Utah State University Spring Run-Off Conference, Logan, Utah, April 1-2.
- [43] **DeRose, R.J.**, E.B. Allen, T. Bardsley, M.F. Bekker, R.K. Kjelgren, T.M. Rittenour, and S.-Y. Wang. 2014. Multicentennial length stream flow reconstructions for the Bear River reveal substantial pre-settlement variability. Utah State University Spring Run-Off Conference, Logan, Utah, April 1-2.
- [42] Bekker, M.F., **R.J. DeRose**, S.-Y. Wang, and B.M. Buckley. 2014. A new tree-ring network reveals peculiar climate modes influencing levels of Great Salt Lake, Utah, USA. 9<sup>th</sup> International Conference on Dendrochronology, Melbourne, Australia, January 13-14.
- [41] Bekker, M.F., **R.J. DeRose**, R.K. Kjelgren, and B.M. Buckley. 2014. The (very good) dendrochronological potential of Utah juniper (*Juniperus osteosperma*) in northern Utah. 9<sup>th</sup> International Conference on Dendrochronology, Melbourne, Australia, January 13-14.
- [40] ‡Britton, J.M., **R.J. DeRose**, J.N. Long, and K.E. Mock 2013. Evaluation of treatment success in *Populus tremuloides* – Implications for management. Restoring the West, Logan, UT, October 16-17.
- [39] ‡Britton, J.M., **R.J. DeRose**, J.N. Long, and K.E. Mock. 2013. Evaluation of treatment success in *Populus tremuloides* – Implications for management. Society of American Foresters Annual Convention, Charleston, South Carolina, October 23-27. Abstract published in *Journal of Forestry* 112(1):159.
- [38] **DeRose, R.J.**, S.-Y. Wang, J.D. Shaw, and J.N. Long. 2013. Exploring the spatiotemporal variability of interior Douglas-fir and pinyon pine forests. Society of American Foresters Annual Convention, Charleston, South Carolina, October 23-27.
- [37] **DeRose, R.J.**, S.-Y. Wang, and J.D. Shaw. 2013. A new fine-scale gridded tree-ring data set for Utah. Forest Inventory and Analysis-collected tree-ring data for climate prediction. Second American Dendrochronology Conference, Tucson, Arizona, May 13-17.
- [36] **DeRose, R.J.**, S.-Y. Wang, and J.D. Shaw. 2013. Forest Inventory and Analysis-collected tree-ring data for climate prediction. 2013 11<sup>th</sup> Climate Predictions Application Science Workshop, Logan, Utah, April 23-25.
- [35] **DeRose, R.J.**, S.-Y. Wang, and J.D. Shaw. 2012. Investigating Forest Inventory and Analysis-collected tree-ring data from Utah as a proxy for historical climate. 2012 Forest Inventory and Analysis Science Symposium, Baltimore, Maryland, December 4-6.

- [34] **DeRose, R.J.**, and A.J. Leffler. 2012. Potential fire behavior and resilience in aspen. Society of American Foresters, Annual Convention, Spokane, Washington, October 24-28. Abstract published in *Journal of Forestry* 110(8):562.
- [33] Baker, F., **R.J. DeRose**, S. Zeglen, and M. Cleary. 2012. Drought-mediated influence of dwarf mistletoe on lodgepole pine growth. Western International Forest Disease Conference, Lake Tahoe, California, October 8-12.
- [32] **DeRose, R.J.** 2012. A preliminary reconstruction of the Great Salt Lake elevation. 2012 Annual Meeting of the Great Plains/Rocky Mountain Division of Association of American Geographers, Park City, Utah, October 11-13.
- [31] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2012. Reconciling validation and sensitivity analyses of the Utah Variant of the Forest Vegetation Simulator. 4<sup>th</sup> Forest Vegetation Simulator Conference, Ft. Collins, Colorado, April 17-19.
- [30] Wang, S.-Y. (contribution by **DeRose**) 2012. Dendrohydrology of the Wasatch Front. Utah State University Spring Run-Off Conference, Logan, Utah, April 3-4.
- [29] Bekker, M.F., E.B. Allen, and **R.J. DeRose**. 2012. Streamflow reconstructions for the southern Wasatch Front, Utah. Utah State University Spring Run-Off Conference, Logan, Utah, April 3-4.
- [28] ‡Allen, E.B., T.M. Rittenour, M.F. Bekker, **R.J. DeRose**, B.M. Buckley, and R.K. Kjelgren. 2012. Reconstructed flows of the Logan River, Utah. Utah State University Spring Run-Off Conference, Logan, Utah, April 3-4.
- [27] Rittenour, T.M., E.B. Allen, R.K. Kjelgren, S.-Y. Wang, L. Hipps, R. Gillies, C. Sriladda, **R.J. DeRose**, M.F. Bekker, and B.M. Buckley. 2012. The Wasatch Dendroclimatology Research group: multi-disciplinary investigations into the paleo-hydroclimatology of northern Utah as recorded in tree-ring response. Utah State University Spring Run-Off Conference, Logan, Utah, April 3-4.
- [26] Vacchiano, G., **R.J. DeRose**, M. Svoboda, and R. Motta. 2012. Application of a density management diagram to stability and management of Norway spruce in central-southern Europe. European Forest Institute, Forest Models for Research and Decision Support in Sustainable Forest Management, Pierroton, Bordeaux, France, March 1-2.
- [25] Bekker, M.F., E.B. Allen, and **R.J. DeRose**. 2012. Streamflow reconstructions for the southern Wasatch Front, Utah. Association of American Geographers Annual Meeting, New York, New York, February 24-28.
- [24] ‡Allen, E.B., T.M. Rittenour, M.F. Bekker, **R.J. DeRose**, B.M. Buckley, and R.K. Kjelgren. 2012. Reconstructed flows of the Logan River, Utah. Association of American Geographers Annual Meeting, New York, New York, February 24-28.
- [23] **DeRose, R.J.**, and J.D. Shaw. 2012. Spatially unbiased tree-ring climate analysis using Forest Inventory and Analysis-collected increment cores. Association of American Geographers Annual Meeting, New York, New York, February 24-28.
- [22] **DeRose, R.J.**, K.E. Mock, and J.N. Long. 2012. Radial growth differences in aspen: influence of ploidy in the Pando stand. Society of Range Management Annual Convention, Spokane Washington, January 29-February 3.
- [21] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2011. Modeled future spruce beetle occurrence using Intermountain West Forest Inventory and Analysis data. Society of American Foresters National Convention, Honolulu, Hawaii, November 2-6.

- [20] ‡Allen, E.B., T.M. Rittenour, and **R.J. DeRose**. 2011. The Geological Society of America, Joint Rocky Mountain/Cordilleran Section Meeting, Logan, Utah, May 18-20.
- [19] ‡Allen, E.B., T.M. Rittenour, and **R.J. DeRose**. 2011. Application of tree-ring data from the Bear River Range, northern Utah to reconstruct drought variability. Utah State University, Spring Run-Off Conference, Logan, Utah, March 29-30.
- [18] Baker, F., **R.J. DeRose**, S. Zeglen, and M. Cleary. 2010. Lodgepole pine dwarf mistletoe spread model. Western International Forest Disease Conference, Victoria, British Columbia, October 4-8.
- [17] Shaw, J.D., J.N. Long, M.T. Thompson, and **R.J. DeRose**. 2010. Population-wide mortality in multiple forest types in western North America: onset, extent, and severity of impacts as indicators of climatic influence. XXIII International Union of Forest Research Organizations World Congress, Seoul, South Korea, August 23-28. *Poster*. Abstract published in *The International Forestry Review* 12(5):45.
- [16] **DeRose, R.J.**, J.D. Shaw, and J.N. Long. 2010. Forest Inventory and Analysis tree-ring data: a wealth of information. Society of American Foresters National Convention, Albuquerque, New Mexico, October 26-30.
- [15] ‡Gardner, R., K. Mock, C. Rowe, and **R.J. DeRose**. 2010. Ecological tradeoffs in western aspen: differences in resistance and tolerance between and within genotypes. Center for Integrated BioSystems, Utah State University, Logan, Utah, March 5.
- [14] **DeRose, R.J.**, and J.N. Long. 2009. Silvicultural considerations for resistance and resilience of Engelmann spruce to spruce beetle outbreaks in the Intermountain West. Society of American Foresters National Convention. Orlando, Florida, September 30-October 4.
- [13] \*Ex, S., and **R.J. DeRose**. 2009. Succession and stand development of *Cercocarpus ledifolius* woodlands in the Bear River Mountains, Utah. Utah State University Research Symposium, Logan, Utah, April 1.
- [12] **DeRose, R.J.**, and J.N. Long. 2008. Biological legacies and seedling bank dynamics of a spruce beetle-killed Engelmann spruce landscape. Ecological Society of America Annual Conference, Milwaukee, Wisconsin, August 3-8.
- [11] **DeRose, R.J.**, J.N. Long, and J.D. Shaw. 2008. Relationships between forest structure, composition, site and spruce beetle occurrence in the Intermountain West. Forest Inventory and Analysis Biennial Conference, Park City, Utah, October 21-23.
- [10] **DeRose, R.J.**, J.N. Long, and J.D. Shaw. 2008. Multi-scale effects of spruce beetle outbreaks on Engelmann spruce forests in Utah. Society of American Foresters National Convention, Reno, Nevada, November 5-8.
- [9] **DeRose, R.J.**, and J.N. Long. 2007. Wildfires and spruce beetle outbreaks: interacting disturbances in the central Rocky Mountains. IUFRO Natural Hazards and Natural Disturbances in Mountain Forests, Trento, Italy, September 18-21.
- [8] **DeRose, R.J.**, J.D. Shaw, G. Vacchiano, and J.N. Long. 2007. Improving longleaf pine mortality predictions in the Southern Variant of the Forest Vegetation Simulator. Third Forest Vegetation Simulator Conference, Ft. Collins, Colorado. February 13-15.
- [7] Shaw, J.D., G. Vacchiano, **R.J. DeRose**, A. Brough, A. Kusbach, and J.N. Long. 2006. Local Calibration of the Forest Vegetation Simulator (FVS) Using Custom Inventory Data. Society of American Foresters National Convention, Pittsburgh, Pennsylvania, October 25-29.

- [6] **DeRose, R.J.** Effect of the spruce beetle (*Dendroctonus rufipennis*) on Engelmann spruce (*Picea engelmannii*) forests near Midway Face on the Markagunt Plateau, southern Utah. 2006. Utah State University Graduate Student Exposition, Logan, Utah, April 5<sup>th</sup>.
- [5] **DeRose, R.J.**, and R.S. Seymour. 2004. Leaf area index-relative density relationships in even-aged *Abies balsamea-Picea rubens* stands in Maine. Abstract In: Proc. Eastern CANUSA Forest Science Conference, University of New Brunswick, Fredericton, New Brunswick, Canada, October 15-16.
- [4] **DeRose, R.J.**, and R.S. Seymour. 2004. Leaf area index-relative density relationships in even-aged *Abies balsamea-Picea rubens* stands in Maine. Abstract In: Proc. Association of Graduate Student Research Exposition, University of Maine, Orono, Maine, April 9-18.
- [3] **DeRose, R.J.**, and R.S. Seymour. 2004. Leaf area index-relative density relationships in even-aged *Abies balsamea-Picea rubens* stands in Maine. New England Society of American Foresters, 84th Annual Winter Meeting, Burlington, Vermont, March 23-26.
- [2] **DeRose, R.J.**, and R.S. Seymour. 2004. Leaf area index-relative density relationships in even-aged *Abies balsamea-Picea rubens* stands in Maine. Abstract In: Proc. Northeast Biological Graduate Student Conference, University of Maine, Orono, Maine, February 27-29.
- [1] **DeRose, R.J.**, and R.S. Seymour. 2004. Relationships between structure, leaf area, and relative density in even-aged spruce-fir stands in Maine. Cooperative Forestry Research Unit, annual meeting, University of Maine, Orono, Maine, January 15.

## TEACHING

### Utah State University, instructor

**NR2000:** Professional Orientation to Natural Resources, 1 credit (fall 2019, 2020, 2021, 2022)

**WILD3850:** Vegetation and Habitat Management, 3 credits (spring 2020, 2021, 2022, 2023)

**WILD5700:** Forest Assessment and Management, 3 credits (spring 2020, 2021, 2022, 2023)

### Guest lecturer

**WILD2400:** Wildland Resource Techniques, 3 credits (fall 2019, 2020, 2021, 2022)

**WILD4750:** Natural Resource Assessment, 3 credits (fall 2019, 2020, 2021, 2022)

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### *Utah State University*

### *Previously*

### Instructor:

**WILD4950/6900:** Dendroclimatology, Utah State University, 2 credits (spring 2014)

**WILD5700:** Forest Assessment and Management, Utah State University, 3 credits (spring 2011)

**WILD4850:** Vegetation and Habitat Management, Utah State University, 3 credits (fall 2010)

**WILD4750:** Natural Resource Assessment, Utah State University, 3 credits (fall 2010)

### Other Teaching (guest lecture/field course/teaching assistant):

**GEOG5712:** Paleoenvironmental Field Methods for Geographers, University of Utah, June 2016-2019

**ANTH3320:** Archaeology of Climate Change, Utah State University, spring 2017

**WILD5710:** Disturbance Ecology, Utah State University, fall 2016, 2017

**WILD4750:** Inventory, Monitoring and Assessment, Utah State University, fall 2006-2009, 2011-2018

**WILD4850:** Vegetation and Habitat Management. Introductory Forest Stand Dynamics on the T.W. Daniel Experimental Forest, and Natural Resource Assessment Field Trip, Utah State University, fall 2006-2009

**WILD5700:** Forest Assessment and Management, Utah State University, spring 2006-2008

**WATS/CLIM3820:** Climate Change (dendrochronology), Utah State University, March 25, 2008 and March 27, 2007

**WILD6990:** Historical Ecology (dendrochronology), Utah State University, March 6, 2007

**FES408/409:** Teaching Assistant for Silviculture, University of Maine, fall 2002-2003

## ADVISING AND MENTORING

### Primary advisor:

#### *Completed graduate students*

- Katheryn Little, M.S., 2020-2022. *Currently employed full time as a Forester on the Grand Mesa National Forest*
- Jaycee Cappaert, M.S., 2020-2023. *Currently working for Grand Canyon Trust*
- Allison Trudgeon, M.S., 2020-2023. *Currently employed full time by Forest Service Research and Development*
- Grayson Jordon, M.S., 2021-2023. *Currently employed full time by Utah State University*

#### *Current graduate students*

- Jonathon Ott, M.N.R., 2021-present
- Erika Blomdahl, Ph.D., 2019-present
- Michael Wayman M.S., 2022-present

#### *Postdoctoral co-advisor:*

- Dr. Stefan Klesse, 2017-2019. *Currently employed as a scientist for the Swiss Federal Research Institute*
- Dr. James Stagge, 2016-2018. *Currently employed as an assistant professor at The Ohio State University*

### Graduate student committees:

#### *Completed*

- Justin Britton (M.S. 2014, USU Wildland Resources)
- Vachel Carter (Ph.D. 2016, University of Utah, Department of Geography)
- Marcella Windmuller-Campione (Ph.D. 2016, USU Wildland Resources)
- Daniel Barandiaran (Ph.D. 2017, USU Plant, Soils, and Climate Department)
- Jessika Pettit (M.S. 2018, USU Wildland Resources)
- Kerry Riley (Ph.D. 2019, USU Department of Geosciences)
- Mark Kreider (M.S. 2020, USU Wildland Resources)
- Courtney Giebink (M.S. 2021, University of Arizona, Laboratory of Tree-Ring Research)
- David Soderberg (Ph.D. 2021, USU Wildland Resources)

- Sara Germain (Ph.D. 2022, USU Wildland Resources)
- Kelly Kerr (Ph.D. 2022, University of Utah, Department of Biology)
- Kendall Becker (Ph.D. 2022, USU Wildland Resources)
- Kristen Nesbit (M.S. 2023, USU Wildland Resources)

**Current**

- Alex Howe (Ph.D. 2018 – present, USU Wildland Resources)
- Kipling Klimas (Ph.D. 2020 – present, USU Wildland Resources)
- Soren Struckman (Ph.D. 2020 – present, USU Wildland Resources)
- Mariah Walzer (M.S. 2021 – present, USU Department of Sociology and Anthropology)
- James Walton (M.S. 2021 – present, USU Wildland Resources)

**Undergraduate research mentoring:**

- Michael Stapleton (2019-20)
- Donovan Birch (2010-11)
- Richard Gardner (2009-10)
- Seth Ex (2008-09)

**Grants and awards to advisees:**

- Michael Wayman, Ecology Center Research Support, \$4000, 2023
- Grayson Jordan, Ecology Center Research Support, \$4000, 2021/2022
- Allison Trudgeon, Ecology Center Research Support, \$8000, 2021/2022
- Kristin Nesbit, Ecology Center Research Support, \$8,000, 2021/2022
- Erika Blomdahl, Ecology Center Research Support, \$4000, 2021
- Jaycee Cappaert, Ecology Center Research Support, \$4000, 2021
- Erika Blomdahl. Climate Adaptation Science Fellowship. \$34,000, 2020-2021
- Michael J.B. Stapleton. Using dendrochronology to study a disjunct population of *Pinus ponderosa* in northern Utah. Undergraduate Research and Creative Opportunities Grant, \$1000, 2019-2020
- Donovan Birch. Two-needle pinyon pine population response to climate in Utah. Undergraduate Research and Creative Opportunities Grant, \$1000, 2010-11
- Seth Ex. Succession and stand development of *Cercocarpus ledifolius* woodlands in the Bear River Mountains, Utah. Undergraduate Research and Creative Opportunities Grant, \$1004, 2008-2009

**SERVICE****Professional:**

2017 – present: Science Chair and Faculty Chair for the Intermountain Society of American Foresters

2022 – present, and 2019: Planning Committee: Intermountain Society of American Foresters, Active Management Tour

2019 – present, and 2013: Restoring the West conference committee

2022, 2020: *Forest Science*, Guest editor

2018: Workshop organizer (with Dr. Margaret Evans and Dr. Stefan Klesse). Coordinated a North American-wide tree-ring data network collected in forest inventory plots – held at the Laboratory of Tree-Ring Research, University of Arizona

2011 – 2019: Adjunct Assistant Professor, Department of Wildland Resources at Utah State University

2014: Session chair and moderator at the joint IUFRO-SAF International convention special session on Forest Inventory and Analysis. Salt Lake City, UT, October 5-11

2013: Tree-ring reconstructions of stream flow and applications in Wasatch water management. University of Utah campus

2011: Invited judge for the Utah State University, Graduate Student Symposium

2009: Session chair for the Fire and Fuels Effects section of the 2009 North American Forest Ecology Workshop Biennial Conference in Logan, UT

**Professional memberships:** Society of American Foresters, Xi Sigma Pi, Tree-Ring Society, Ecological Society of America

**Peer-reviewed journal reviewer:**

*AIMS Environmental Research, American Journal of Botany, Agricultural Research Journal, Arctic, Antarctic, and Alpine Research, Canadian Journal of Forest Research, Climate Research, Dendrochronologia, Ecology, Ecological Applications, Ecological Modelling, Ecosphere, Environmental Research Letters, Fire Ecology, Forests, Forest Ecology and Management, Forest Science, Frontiers in Forests and Global Change, Global Change Biology, International Journal of Biodiversity and Conservation, International Journal of Forest Research, Journal of Biogeography, Journal of Forestry, Journal of Geophysical Research – Biogeosciences, Journal of Hydrology, Journal of Hydrometeorology, New Forests, Plant Biosystems, PLOS ONE, Proceedings of the National Academy of Sciences, Southern Journal of Applied Forestry, Tree-Ring Research, Trees – Structure and Function, Remote Sensing of Environment, Water, Water Resources Research.*

**Proposal reviewer:**

Czech Science Foundation, MITACS – Canada, National Science Foundation (Geography and Spatial Sciences, Hydrological Sciences Program), USDA National Institute of Food and Agriculture Grants, Swiss National Science Foundation

**Other publication reviewer:**

Numerous internal U.S.D.A. National Forest System and Forest Inventory and Analysis documents including General Technical Reports, Research Bulletins, and Research Notes

**University:**

2019 – present: Reviewer for Forestry Extension, Agricultural Extension, and Utah Master Naturalist Program

2020 – present: Liaison between U.S. Forest Service and USU for the T.W. Daniel Experimental Forest

2019: Undergraduate Research and Creative Opportunities Grant reviewer

2007 – 2008: Department of Wildland Resources, Departmental Representative to the Graduate Student Senate, Utah State University

2005 – 2007: College of Natural Resources, Senator for the Graduate Student Senate, Utah State University

2003 – 2004: Forest Ecosystem Science, Departmental Representative to the Association of Graduate Students, University of Maine

2001 – 2002: Intermountain Society of American Foresters Student Chapter, Forestry Club President, Utah State University

**Departmental:**

2019 – present: Academic advisor for Forest Ecology and Management undergraduates (n=62)

2019 – present: Faculty representative for the Student Chapter of the Intermountain Society of American Foresters, Forestry Club

2019 – present: Wildland Resources Curriculum Committee, Forest Ecology and Management Committee

2019 – 2020: Contribute to the Society of American Foresters re-accreditation process

2019 – 2023: Undergraduate Internship advisor

**OUTREACH**

2023: Invited presentation to the Utah Legislature, Natural Resources, Agriculture, and Environment subcommittee on the subject of ‘roller-felling’ treatments for aspen regeneration and fire mitigation

2013, 2017, 2019, 2020, 2022: Invited participation in silviculture evaluation panels for U.S. Forest Service, silviculture certification panel

2020, 2022: Participate in Rocky Mountain Regional Silviculture module of the National Advanced Silviculture Program for the U.S. Forest Service

2021, 2023: Participate in the Reforestation module for the U.S. Forest Service

2017: Invited to participate in the workshop that led to the publication of “Design of a workshop process to support consideration of natural range of variation and climate change for land management planning under the 2012 planning rule”. March 21-22, Ogden, UT

2016 – 2018: Invited to participate in the Intermountain Adaptation Partnership to create a climate change adaptation document. I contributed to the Disturbances chapter in addition to the workshop

2014, 2017 – 2019: Invited instructor, North American Dendroecological Field Week

2016: More tools to stretch limited water supplies for Utah’s future: a facilitated climate/urban water workshop for water agencies. Weber Water Conservancy District, Ogden, UT, April 18

2015: Co-organized meeting for private landowners associated with the Cedar Mountain Initiative, Cedar City, UT, June 3

2015: Short workshop: hydroclimate variability in the Wasatch: bridging research and management. Weber Water Conservancy District, Ogden, UT, April 15

2011: How do we interpret past insect disturbances from tree rings? Utah State University Science Unwrapped Presentation Series

2010: Conservation Education Proposal. Taught forest ecology to elementary school children

2004: Project Learning Tree workshop: K-12 instructor, Orono, Maine.

## PRESS

**October 21<sup>st</sup> 2024:** [Climate change research in Utah Statesmen](#). Interviewed by Aubrey Holdaway.

**September 12<sup>th</sup> 2024:** [USU researchers pair tree rings with climate data to understand forest climate adaptation](#). Interviewed by Taylor Emerson. [Long format video](#). [Short format video](#).

**May 19 2024:** [The oldest wood in Utah](#). Extension video interview from the Utah Prescribed Fire Council meeting.

**March 17<sup>th</sup> 2023:** Interviewed by Brian Maffly, Salt Tribune Reporter for ‘[Legislature gave \\$1 million to sell company’s ‘roller felling’ to federal land managers: The company 106 Reforestation claims their proprietary methods can restore aspen and improve stream flows.](#)’ Interview about the results of my co-PI research project: Strategic and targeted forest fire treatment and mitigation.

**February 3<sup>rd</sup> 2022:** ‘[Treasure in tree rings: using untapped tree ring data to calculate carbon sequestration](#)’ **Multiple reports on peer reviewed paper #61:** Adding Tree Rings to North America’s National Forest Inventories: An Essential Tool to Guide Drawdown of Atmospheric CO2. (Eureka alert: [link 1](#)), (Eurasia review: [link 2](#)), (Science daily: [link 3](#)), (Eos: [link 4](#))

**January 26<sup>th</sup> 2022:** ‘[Future forests will have smaller trees and soak less carbon](#)’ **Report on peer reviewed paper #59:** Ecological forecasting of tree growth: regional fusion of tree-ring and forest inventory data to quantify drivers and characterize uncertainty.

**June 24<sup>th</sup> 2021:** Live question and answer on Jefferson Public Radio program. Underground History, co-hosted by Chelsea Rose, Department of Anthropology, Southern Oregon University. ‘[Underground History: how cultural fire curtailed catastrophic burning](#)’ **Interview on peer reviewed paper #55** Legacies of Indigenous land use shaped past wildfire regimes in the Basin-Plateau Region, USA.

