James A Lutz
T W Daniel Professor of Forestry
SJ & Jessie E Quinney College of Natural Resources
Utah State University, 5230 Old Main Hill, Logan, UT 84322-5230
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EDUCATION

University of Washington **Seattle, WA**

- PhD, Ecosystem Analysis, College of Forest Resources, 2008. Committee Chair; Jerry Franklin
- MS, Ecosystem Analysis, College of Forest Resources, 2005. Committee Chair; Charlie Halpern

Massachusetts Institute of Technology **Cambridge, MA**

- MS/MBA, Sloan School of Management. Committee Chair; John Hauser.
- MS with industrial internship, Department of Electrical Engineering & Computer Science. Committee Chairs; Jon Allen and Burnie West (Schlumberger).
- BS, Electrical Engineering.

APPOINTMENTS

7/2022 to present. Professor, Utah State University, Logan, UT
7/2018 to 6/2022. Associate Professor, Utah State University, Logan, UT
8/2013 to 6/2018. Assistant Professor, Utah State University, Logan, UT
9/2013 to 12/2018. Affiliate Assistant Professor, University of Washington, Seattle, WA
3/2011 to 7/2013. Research Scientist (Principal), University of Washington, Seattle, WA
8/2008 to 2/2011. Research Associate, University of Washington, Seattle, WA

AWARDS

2019 – present: T W Daniel Endowed Professor in Forestry
2020 – 2021 Quinney College of Natural Resources Researcher of the Year
2017 – 2018 Quinney College of Natural Resources Graduate Mentor of the Year
2011 DISCCRS VI Scholar (Dissertations Initiative for the Advancement of Climate-Change Research
Honor Societies: Xi Sigma Pi (Forestry), Eta Kappa Nu (Electrical Engineering), Sigma Xi (Science)

PUBLICATIONS

H-index = 49 and total citations = 9,776 as of January 1, 2024 (Google Scholar)

Peer-Reviewed Journal Publications

§Postdoc
† Graduate student
‡ Undergraduate student

[152] Becker†, K. M. L., and **J. A. Lutz**. 2023. Predicting snag fall in an old-growth forest after fire. *Fire Ecology* 19: 71.

[151] Ku, C-C., J. Tang, W-C. Chao, K-J. Chao, G-Z. M. Song, H-Y. Lin, and **J. A. Lutz**. 2023. Large-diameter trees buffer monsoonal changes to tree biomass over two decades. *Plant Ecology* 224: 1037-1048.

[150] Medeiros, C. D., C. Henry, S. Trueba, I. Anghel, S. D. D. de Leon Guerrero, A. Pivovaroff, L. Fletcher, G. P. John, **J. A. Lutz**, R. M. Alonso, and L. Sack. 2023. The power and importance of predicting climate preferences from mechanistic traits for species and ecosystems. *Functional Ecology* 37(11): 2786-2808.

[149] Birch§, J. D. and **J. A. Lutz**. 2023. Fire regimes of Utah: the past as prologue. *Fire* 6(11): 423.

[148] Delavaux, C. S., J. A. LaManna, J. A. Myers, R. P. Phillips, S. Aguilar, D. Allen, A. Alonso, K. J. Anderson-Teixeira, M. E. Baker, J. L. Baltzer, P. Bissiengou, M. Bonfirm, N. A. Bourg, W. Y. Brockelman, D. F. R. P. Burslem, L-W. Chang, Y. Chen, J-M. Chiang, C. Chu, K. Clay, S. Cordell, M. Cortese, J. den Ouden, C. Dick, S. Ediriweera, E. C. Ellis, A. Feistner, A. L. Freestone, T. Giambelluca, C. P. Giarina, G. S. Gilbert, F. He, J. Holík, R. W. Howe, W. H. Huasca, S. P. Hubbell, F. Inman, P. A. Jansen, D. J. Johnson, K. Král, A. J. Larson, C. M. Litton, **J. A. Lutz**, Y. Malhi, K. McGuire, S. M. McMahon, W. J. McShea, H. Memiaghe, A. Nathalang, N. Norden, V. Novotny, M. J. O'Brien, D. A. Orwig, R. Ostertag, G. G. Parker, R. Pérez, G. Reynolds, S. E. Russo, L. Sack, P. Šamonil, I-F. Sun, M. E. Swanson, J. Thompson, M. Uriarte, J. Vandermeer, X. Wang, I. Ware, G. D. Weiblen, A. Wolf, S-H. Wu, J. K. Zimmerman, T. Lauber, D. S. Maynard, T. W. Crowther, and C. Averill. 2023. Mycorrhizal feedbacks influence forest structure and diversity. *Communications Biology* 6: 1066.

[147] Birch§, J. D., M. B. Dickinson, A. Reiner, E. Knapp, **J. A. Lutz**, and J. R. Miesel. 2023. Heading and backing fire behaviors mediate the influence of fuels on wildfire energy. *International Journal of Wildland Fire* 32(8): 1244-1261.

[146] Qiu, T., M-C. Aravena Acuña, D. Ascoli, Y. Bergeron, M. Bogdziewicz, R. Bonal, T. Bovin, T. Caignard, M. Cailleret, R. Calama, J. J. Camarero, C-H. Chang-Yang, J. Chave, F. Chianucci, B. Courbaud, A. Cutini, A. Das, N. Delpierre, S. Delzon, M. Dietze, S. D. Calderon, L. Dormont, J. Espelta,

T. Fahey, W. Farfan-Rios, J. F. Franklin, C. Gehring, G. Gilbert, G. Gratzer, C. Greenberg, A. Guignabert, Q. Guo, A. Hacket-Pain, A. Hampe, Q. Han, J. Holik, K. Hoshizaki, I. Ibañez, J. Johnstone, V. Journé, T. Kitzberger, J. Knops, G. Kunstler, J. Lageard, J. LaMontagne, F. Lefevre, T. Leininger, J-M. Limousin, **J. A. Lutz**, D. Macias, E. McIntire, C. Moore, E. Moran, R. Motta, J. Myers, T. A. Nagel, M. Noguchi, R. Parmenter, P. Samonil, I. Pearse, I. Perez-Ramos, L. Piechnik, T. Podgorski, J. Poulsen, R. M. Redmond, C. Reid, K. Roman, F. Rodriguez-Sanchez, J. Sanguinetti, C. Scher, B. Seget, S. Sharma, M. Silman, M. Steele, N. Stephenson, J. Straub, S. Sutton, J. Swenson, M. Swift, P. Thomas, M. Uriarte, G. Vacchiano, A. Whipple, T. Whitham, A. Wion, S. Wright, K. Zhu, J. Zimmerman, M. Zywiec, and J. Clark. 2023. Masting is uncommon in trees that depend on mutualist dispersers in the context of global climate and fertility gradients. *Nature Plants* 9: 1044-1056.

[145] Becker†, K. M. L., and **J. A. Lutz**. 2023. Differences in regeneration niche mediate how disturbance severity and microclimate affect forest species composition. *Forest Ecology and Management* 544: 121190.

[144] Birch§, J. D., and **J. A. Lutz**. 2023. Spatial patterns of seedlings dominated by proximity to deadwood and adult trees for *Pinus flexilis* and *Pinus longaeva*. *Forest Ecology and Management* 540: 121049.

[143] Francis, E. J., **J. A. Lutz**, and C. E. Farrior. 2023. Elevated mortality rates of large trees allow for increased frequency of intermediate trees: a hypothesis supported by demographic model comparison with plot and LiDAR data. *Forest Ecology and Management* 540: 121035.

[142] Bogdziewicz, M., M-C. Aravena Acuña, R. Andrus, D. Ascoli, Y. Bergeron, D. Brveiller, T. Boivin, R. Bonal, T. Caignard, M. Cailleret, R. Calama, S. D. Calderon, J. J. Camarero, C-H. Chang-Yang, J. Chave, F. Chianucci, N. L. Cleavitt, B. Courbaud1, A. Cutini, T. Curt, A. Das, H. Davi, N. Delpierre, S. Delzon, M. Dietze, L. Dormont, W. Farfan-Rios, C. A. Gehring, G. S. Gilbert, G. Gratzer, C. H. Greenberg, A. Guignabert, Q. Guo, A. Hacket-Pain, A. Hampe, Q. Han, K. Hoshizaki, I. Ibanez, J. F. Johnstone, V. Journé, T. Kitzberger, J. M.H. Knops, G. Kunstler, R. Kobe, J. G.A. Lageard, J. M. LaMontagne, M. Ledwon, T. Leininger, J-M. Limousin, **J. A. Lutz**, D. Macias, A. Marell, E. J.B. McIntire, E. Moran, R. Motta, J. A. Myers, T. A. Nagel, S. Naoe, K. Noguchi, M. Oguro, H. Kurokawa, J-M. Ourcival, R. Parmenter, I. M. Perez-Ramos, L. Piechnik, T. Podgórski, J. Poulsen, T. Qiu, M. D. Redmond, C. D. Reid, K. C. Rodman, P. Šamonil, J. Holik, C. L. Scher, H. S. Van Marle, B. Seget, M. Shibata, S. Sharma, M. Silman, M. A. Steele, J. N. Straub, I-F. Sun, S. Sutton, J. J. Swenson, P. A. Thomas, M. Uriarte, G. Vacchiano, T. T. Veblen, B. Wright, S. J. Wright, T. G. Whitham, K. Zhu, J. K. Zimmerman, M. Zywiec, and J. S. Clark. 2023. Linking seed size and number to trait syndromes in trees. *Global Ecology and Biogeography* 32(5): 683-694.

[141] Becker†, K. M. L., and **J. A. Lutz**. 2023. Fire-caused mortality within tree neighborhoods increases growth of *Pinus lambertiana* more than growth of *Abies concolor*. *Forest Ecology and Management* 533: 120845.

[140] Verdú, M., Garrido, J.L., Alcántara, J.M., Montesinos-Navarro, A., Aguilar, S., Aizen, M.A., Al-Namazi, A.A., Alifriqui, M., Allen, D., Anderson-Teixeira, K.J., Armas, C., Bastida, J.M., Bellido, T., Bonanomi, G., Brant-Paterno, G., Briceño, H., Camargo, R., Campoy, J.G., Chaieb, G., Chu, C., Collins, S.E., Condit, R., Constantinou, E., Degirmenci, C.Ü., Delalandre, L., Duarte, M., Faife-Cabrera, M., Fazlioglu, F., Fernando, E.S., Flores, J., Flores-Olvera, H., Fodor, E., Ganade, G., Garcia, M., García-Fayos, P., Gavini, S.S., Goberna, M., Gómez-Aparicio, L., González-Pendás, E., González-Robles, A., Hubbell, S.P., Ipekdal, K., Jorquera, M.J., Kikvidze, Z., Kütküt, P., Ledo, A., Li, B., Liu, H., Lloret, F., López, R.P., López-García, Á., Lortie, C.J., Losapio, G., **Lutz, J.A.**, Luzuriaga, A.L., Máliš, F., Manrique, E., Manzaneda, A.J., Marcilio-Silva, V., Michalet, R., Molina-Venegas, R., Navarro-Cano, J.A., Novotny, V., Olesen, J.M., Ortiz-Brunel, J.P., Pajares-Murgó, M., Parissis, N., Parker, G., Perea, A.J., Pérez-Hernández, V., Pérez-Navarro, M., Pistón, N., Pizarro-Carbonell, E., Prieto, I., Pugnaire, F.I., Ramírez, N., Retuerto, R., Rey, P.J., Rodriguez-Ginart, D.A., Rodríguez-Sánchez, M., Sánchez-Martín, R., Schöb, C., Tavsanoglu, Ç., Tedoradze, G., Tielbörger, K., Touzard, B., Tüfekcioglu, I., Turkis, S., Usero, F.M., Usta-Baykal, N., Valiente-Banuet, A., Vargas-Colin, A., Vogiatzakis, I. and Zamora, R. 2023. RecruitNet: A global database of plant recruitment networks. *Ecology* 104(2): e3923.

[139] Birch§, J. D., **J. A. Lutz**, S. Struckman†, J. R. Meisel, and J. Karst. 2023. Large-diameter trees and deadwood correspond to belowground ectomycorrhizal fungal richness. *Ecological Processes* 12: 3.

[138] Birch§, J. D., Y. Chikamoto, R. J. DeRose, V. Manvailer, E. H. Hogg, J. Karst, D. M. Love, and **J. A. Lutz.** 2022. Frost-induced defoliation in *Populus tremuloides* causes repeated growth reductions over 185 years. *Ecosystems*. https://doi.org/10.1007/s10021-022-00799-w

[137] Howe, A. A., S. A. Parks, B. J. Harvey, S. J. Saberi, **J. A. Lutz**, and L. L. Yocom. 2022. Comparing Sentinel-2 and Landsat 8 for burn severity mapping in western North America. *Remote Sensing* 14(20): 5249.

[136] Birch[§], J. D., **J. A. Lutz**, and J. Karst. 2022. Dancing with Douglas-fir: Determinism dominates fungal community assembly processes. *Journal of Ecology* 110(8): 1857-1870.

[135] Ren, H., J-C. Svenning, X. Mi, **J. A. Lutz**, J. Zhou, and K. Ma. 2022. Scale-dependent species-area relationship: niche-based versus stochastic processes in a typical subtropical forest. *Journal of Ecology* 110(8): 1883-1895.

[134] Fang, J., **J. A. Lutz**, H. H. Shugart, L. Wang, F. Liu, and X Yan. 2022. Continental-scale parameterization and prediction of leaf phenology for North American Forests. *Global Ecology and Biogeography* 31(8): 1603-1615.

[133] Journé, V., R. Andrus, M-C. Aravena, D. Ascoli, Y. Bergeron, R. Berretti, D. Berveiller, M. Bogdziewicz, R. Bonal, T. Boivin, T. Caignard, R. Calama, J. J. Camarero, C-H. Chang-Yang, B. Courbaud, F. Courbet, T. Curt, A. Das, E. Daskalakou, H. Davi, N. Delpierre, S. Delzon, M. Dietze, S. Donoso Calderon, L. Dormont, J. M. Espelta, T. Fahey, W. Farfan-Rios, C. Gehring, G. Gilbert, G. Gratzer, C. Greenberg, Q. Guo, A. Hacket-Pain, A. Hampe, Q. Han, J. HilleRisLambers, K. Hoshizaki, I. Ibanez, J. Johnstone, D. Kabeya, R. Kays, T. Kitzberger, J. Knops, R. Kobe, G. Kunstler, J. Lageard, J. LaMontagne, T. Leininger, J-M. Limousin, **J. A. Lutz**, D. Macias, E. McIntire, C. Moore, E. Moran, R. Motta, J. Myers, T. Nagel, K. Noguchi, J-M. Ourcival, R. Parmenter, I. Pearse, I. Perez-Ramos, L. Piechnik, J. Poulsen, R. Poulton-Kamakura, T. Qiu, M. Redmond, C. Reid, K. Rodman, F. Rodriguez-Sanchez, J. Sanguinetti, L. Scher, H. Schmidt Van Marle, B. Seget, S. Sharma, M. Silman, M. Steele, N. Stephenson, J. Straub, J. Swenson, M. Swift, P. Thomas, M. Uriarte, G. Vacchiano, T. Veblen, A. Whipple, T. Whitham, B. Wright, S. J. Wright, K. Zhu, J. Zimmerman, R. Zlotin, M. Zywiec, and J. Clark. 2022. Globally, tree fecundity exceeds productivity gradients. *Ecology Letters* 25(6): 1471-1482.

[132] Qiu, T., R. Andrus, M. A. Acuña, D. Ascoli, Y. Bergeron, R. Berretti, D. Berveiller, M. Bogdziewicz, T. Boivin, R. Bonal, D. Bragg, T. Caignard, R. Calama, J. J. Camarero, C-H. Chang-Yang, N. Cleavitt, B. Courbaud, C. Francois, T. Curt, A. Das, E. Daskalakou, H. Davi, N. Delpierre, S. Delzon, M. Dietze, S. D. Calderon, L. Dormont, J. Espelta, T. Fahey, W. Farfan-Rios, C. Gehring, G. Gilbert, G. Gratzer, C. Greenberg, Q. Guo, A. Hacket-Pain, A. Hampe, Q. Han, J. HilleRisLambers, K. Hoshizaki, I. Ibañez, J. Johnstone, V. Journé, D. Kabeya, C. Kilner, T. Kitzberger, J. Knops, R. Kobe, G. Kunstler, J. Lageard, J. LaMontagne, M. Ledwon, F. Lefevre, T. Leininger, J-M. Limousin, **J. A. Lutz**, D. Macias, E. McIntire, C. Moore, E. Moran, R. Motta, J. Myers, T. A. Nagel, K. Noguchi, J-M. Ourcival, R. Parmenter, I. Pearse, I. Perez-Ramos, L. Piechnik, J. Poulsen, R. P. Kamakura, M. Redmond, C. Reid, K. Rodman, F. Rodriguez-Sanchez, J. Sanguinetti, C. Scher, W. H. Schlesinger, H. S. Van Marle, B. Seget, S. Sharma, M. Silman, M. Steele, N. Stephenson, J. Straub, I-F. Sun, S. Sutton, J. Swenson, M. Swift, P. Thomas, M. Uriarte, G. Vacchiano, T. Veblen, A. Whipple, T. Whitham, A. Wion, B. Wright, S. Wright, K. Zhu, J. Zimmerman, R. Zlotin, M. Zywiec, and J. Clark. 2022. Limits to reproduction and seed size-number tradeoffs that shape forest dominance and future recovery. *Nature Communications* 13: 2381.

[131] Šamonil, P., P. Daněk, **J. A. Lutz**, K. J. Anderson-Teixeira, J. Jaroš, J. Phillips, A. Rousová, D. Adam, A. J. Larson, J. Kašpar, D. Janik, I. Vašíčková, E. Gonzalez-Akre, and M. Egli. 2022. Tree mortality may drive landscape formation: comparative study from ten temperate forests. *Ecosystems* https://doi.org/10.1007/s10021-022-00755-8

[130] Teich[§], M., K. M. L. Becker[†], M. S. Raleigh, and **J. A. Lutz**. 2022. Large-diameter trees affect snow duration in post-fire old-growth forests. *Ecohydrology* 15(2): e2414.

[129] Piponiot, C., K. J. Anderson-Teixeira, S. J. Davies, D. Allen, N. A. Bourg, D. F.R.P. Burslem, D. Cárdenas, C-H. Chang-Yang, G. Chuyong, S. Cordell, H. S. Dattaraja, Á. Duque, S. Ediriweera, C. Ewango, Z. Ezedin, J. Filip, C. Giardina, A. Hector, R. Howe, C-F. Hsieh, S. Hubbell, F. M. Inman-Narahari, A. Itoh, D. Jánik, D. Kenfack, K. Král, **J. A. Lutz**, J-R. Makana, S. McMahon, W. McShea, X. Mi, M. Bt. Mohamad, V. Novotný, M. J. O'Brien, R. Ostertag, G. Parker, R. Pérez, H. Ren, G. Reynolds, M. D. Md Sabri, L. Sack, A. Shringi, S-H. Su, R. Sukumar, I-F. Sun, H. S. Suresh, D. W. Thomas, J. Thompson, M. Uriarte, J. Vandermeer, Y. Wang, I. M. Ware, G. D. Weiblen, T. J. S. Whitfeld, A. Wolf, T. L. Yao, M. Yu, Z. Yuan, J. K. Zimmerman, D. Zuleta, and He. C. Muller-Landau. 2022. Distribution of biomass dynamics in relation to tree size in forests across the world *New Phytologist* 234(4): 1664-1677.

[128] Needham, J. F., D. J. Johnson, C-H. Chang-Yang, K. J. Anderson-Teixeira, N. A. Bourg, S. Bunyavejchewan, N. Butt, M. Cao, D. Cárdenas, Y-Y. Chen, G. Chuyong, H. S. Dattaraja, S. J. Davies, A. Duque, C. E. N. Ewango, E. S. Fernando, C. D. Fletcher, R. Foster, Z. Hao, T. Hart, C-F. Hsieh, S. P.

Hubbell, A. Itoh, D. Kenfack, A. J. Larson, **J. A. Lutz**, J-R. Makana, Y. Malhi, T. Marthews, W. McShea, M. B. Mohamad, M. D. Morecroft, N. Norden, P. S. Ong, G. Parker, A. Shringi, R. Sukumar, I-F. Sun, H. S. Suresh, S. Tan, D. W. Thomas, J. Thompson, M. Uriarte, R. Valencia, T-L. Yao, S. L. Yap, Z. Yuan, Y. Hu, J. K. Zimmerman, D. Zuleta, and S. M. McMahon. 2022. Demographic composition, not demographic diversity, predicts biomass and turnover across temperate and tropical forests. *Global Change Biology* 28(9): 2895-2909.

[127] Germain†, S. J., and **J. A. Lutz**. 2022. Climate warming may weaken stabilizing mechanisms in old forests. *Ecological Monographs* 92(2): e1508.

[126] Gonzalez-Akre, E., C. Piponiot, M. Lepore, V. Herrmann, **J. A. Lutz**, J. Baltzer, C. Dick, G. Gilbert, F. He, M. Heym, P. Jansen, D. Johnson, N. Knapp, K. Kral, D. Lin, Y. Malhi, S. McMahon, J. Myers, D. Orwig, D. Rodriguez-Hernandez, S. Russo, J. Shue, X. Wang, A. Wolf, T. Yang, S. J. Davies, K. J. Anderson-Teixeira. 2022. allo-db: An R package for biomass estimation at globally distributed extratropical forest plots. *Methods in Ecology and Evolution* 13(2): 330-338.

[125] Furniss†, T. J., A. J. Das, P. J. van Mantgem, N. L. Stephenson, and **J. A. Lut**z. 2022. Crowding, climate, and the case for social distancing among trees. *Ecological Applications* 32(2): e2507.

[124] Fang, J., **J. A. Lutz**, H. H. Shugart, and X. Yan. 2022. Predicting soil mineralized nitrogen dynamics with fine root growth and microbial processes in temperate forests. *Biogeochemistry* 158: 21-37.

[123] Zhang, J., Z. Zhang, **J. A. Lutz**, C. Chu, J. Hu, G. Shen, B. Li, Q. Yang, J. Lian, M. Zhang, X. Wang, W. Ye, and F. He. 2022. Drone-acquired data reveal the importance of forest canopy structure in predicting tree diversity. *Forest Ecology and Management* 505: 119945.

[122] Anderson-Teixeira, K. J., V. Herrmann, C. Rollinson, B. Gonzalez, E. B. Gonzalez-Akre, N. Pederson, R. Alexander, C. D. Allen, R. Alfaro-Sánchez, T. Awada, J. L. Baltzer, P. J. Baker, J. D. Birch§, S. Bunyavejchewin, P. Cherubini, S. J. Davies, C. Dow, R. Helcoski, J. Kašpar, **J. A. Lutz**, E. Q. Margolis, J. Maxwell, S. McMahon, C. Piponiot, S. Russo, P. Šamonil, A. Sniderhan, A. J. Tepley, I. Vašíčková, M. Vlam, and P. Zuidema. 2022. Joint effects of climate, tree size, and year on annual tree growth derived from tree-ring records of ten globally distributed forests. *Global Change Biology* 28(1): 245-266.

[121] Larson, A. J., S. M. A. Jeronimo, P. F. Hessburg, **J. A. Lutz**, N. A. Povak, C. A. Cansler, V. R. Kane, and D. J. Churchill. 2022. Tamm Review: Ecological principles to guide post-fire forest landscape management in the Inland Pacific and Northern Rocky Mountain Regions. *Forest Ecology and Management* 504: 119680.

[120] Churchill, D. J., S. M. A. Jeronimo, P. F. Hessburg, C. A. Cansler, N. A. Povak, V. R. Kane, **J. A. Lutz**, and A. J. Larson. 2022. Post-fire landscape evaluations in eastern Washington, USA: Assessing the work of contemporary wildfires. *Forest Ecology and Management* 504: 119796.

[119] Cansler, C. A., V. R. Kane, B. N. Bartl-Geller, D. J. Churchill, P. F. Hessburg, N. A. Povak, **J. A. Lutz**, J. T. Kane, and A. J. Larson. 2021. Postfire treatments alter forest canopy structure up to three decades after fire. *Forest Ecology and Management* 119872.

[118] Cansler, C. A., V. R. Kane, P. F. Hessburg, J. T. Kane, S. M. A. Jeronimo, **J. A. Lutz**, N. A. Povak, D. J. Churchill, and A. J. Larson. 2022. Previous wildfires and management treatments moderate subsequent fire severity. *Forest Ecology and Management* 504: 119764.

[117] Qiu, T., M-C. Aavena Acuna, R. Andrus, D. Ascoli, Y. Bergeron, R. Berretti, M. Bogdziewicz, T. Boivin, R. Bonal, T. Caignard, R. Calama, J. J. Camarero, C. Clark, B. Courbaud1, S. Delzon, S. D. Calderon, W. Farfan-Rios, C. A. Gehring, G. S. Gilbert, C. H. Greenberg, Q. Guo, J. Hille Ris Lambers, H. Hoshizaki, I. Ibanez, V. Journe, C. L. Kilner, R. Kobe, W. D. Koenig, G. Kunstler, J. M. Montagne, M. Ledwon, **J. A. Lutz**, R. Motta, J. A. Myers, T. A. Nagel, K. Noguchi, C. Nunez, I. S. Pearse, C. Perez-Izquierdo, L. Piechnik, J. Poulson, R. Poulton-Kamakura, M. D. Redmond, C. D. Reid, K. C. Rodman, C. L. Scher, H. S. Van Marle, B. Seget, S. Sharma, M. Silman, J. J. Swenson, M. Swift, M. Uriarte, G. Vacchiano, R. Valencia, A. V. Yacht, T. T. Veblen, A. V. Whipple, T. G. Whitham, A. P. Wion, J. Wright, K. Zhu, J. K. Zimmerman, M. Zywiec, and J. S. Clark. 2021. Is there tree senescence? The fecundity evidence. *Proceedings of the National Academy of Sciences of the United States of America* 118(34): e2106130118.

[116] Germain†, S. J., and **J. A. Lutz**. 2021. Shared friends counterbalance shared enemies in old forests. *Ecology* 102(11): e03495.

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PRESENTATIONS Since 2013 (for all, first author = presenter)

Invited

J. A. Lutz. "Land". Panel on the 2021 report to the Governor on the Land, Water, and Air of Utah. Salt Lake City, Utah, December 14, 2021.

Germain†, S. J. and **J. A. Lutz.** Canary in the old-growth: Yew survival limited by extreme drought. Society for American Foresters Regional Meeting, Online, April 23, 2021.

Lutz, J. A. 2020. Global importance of large-diameter trees. Nanyang Technological University, Singapore. February 12, 2020.

Lutz, J. A. 2020. The importance of deadwood in tropical forests. Nanyang Technological University, Singapore. March 12, 2020.

Germain†, S. J. and **J. A. Lutz**. Parsing density dependence to better predict climate change impacts in forests. CTFS-ForestGEO Analytical Workshop. Nanyang Technological University, Singapore. July 3, 2019.

Larson, A. J., R. T. Belote, N. A. Povak, C. A. Cansler, D. J. Churchill, P. F. Hessburg, **J. A. Lutz**, and V. R. Kane. Do wildfires follow fire-prone forest restoration principles? North American Forest Ecology Workshop. Flagstaff, Arizona, June 24, 2019.

Germain†, S. J. and **J. A. Lutz**. Climate warming may hinder coexistence among forest trees. Wind River Forest Dynamics Plot NSF Symposium. Carson, Washington. June 10, 2019.

Furniss†, T. J., A. J. Larson, V. R. Kane, and **J. A. Lutz**. 2019. Advancing fire science with unprecedented forest demography data. Rocky Mountain Research Station Fire Lab Seminar Series 2018-2019. Missoula, MT. April 4.

Lutz, J. A. and E. M. Blomdahl†. The Utah Forest Institute. Utah All Lands, All Hands Conference, Salt Lake City, February 6, 2019.

Lutz, J. A. Current Fire Research. Presented to the Utah Natural Resources Coordinating Committee. Logan, September 18, 2018.

Lutz, J. A. Catastrophic Fire: What can be done? Panelist at the US House Natural resources Committee forum. Salt Lake City. August 30, 2018.

Lutz, J. A. Deadwood protocols and comparisons among temperate forests. Smithsonian ForestGEO workshop, Nové Hrady, Czech Republic, July 31, 2018.

Lutz, J. A. Why the world needs big trees. Science Unwrapped, Logan, October 6, 2017

Lutz, J. A. Fire, drought, and big trees. Yosemite Forum, Yosemite Valley, March 14, 2017.

Lutz, J. A. Non-traditional graduate students in ecology. University of Idaho, Moscow. November 16, 2016.

Lutz, J. A. Forest structure at global scales. Smithsonian ForestGEO workshop. Jengfengling, Hainan, China. July 19, 2016.

Lutz, J. A, K. Král, D. Janík, D. Adam, and T. Vrška. CTFS deadwood protocol. Smithsonian ForestGEO workshop. Jengfengling, Hainan, China. July 18, 2016.

Lutz, J. A. Understanding fire and forests in Utah. Utah NRCC Breakfast Briefing. Salt Lake City. April 19, 2016.

Lutz, J. A. Research in the Yosemite and Utah Forest Dynamics Plots. Smithsonian ForestGEO Workshop. March 10, 2015.

Lutz, J. A. Little things in big plots: Watching trees in Washington, California, and Utah. Utah State University College of Natural Resources seminar. February 4, 2015.

Lutz, J. A. Global diversity of large-diameter trees. Smithsonian ForestGEO workshop. August 1, 2014. Xishuangbanna, People's Republic of China.

Lutz, J. A. The Yosemite Forest Dynamics Plot data sets and protocols. University of Idaho PHOENIX symposium. April 18, 2014. Moscow, Idaho.

Lutz, J. A. The value of observation: longitudinal data and ecosystem change. University of Montana Plum Creek Distinguished Lecture Series and Northwest Science Association Annual Meeting, March 26-28, 2014, Missoula, Montana.

Kolden, C. A., **J. A. Lutz,** J. A. Abatzoglou, C. A. Cansler, J. T. Kane, J. W. van Wagtendonk, and C. H. Key. Climate drivers of forest pattern: development of wildfire refugia. University of Montana Plum Creek Distinguished Lecture Series and Northwest Science Association Annual Meeting, March 26-28, 2014, Missoula, Montana.

Lutz, J. A. Restoring what? Big trees, pattern, process, and large, longitudinal data sets. Restoring the West Conference. October 16, 2013, Logan, Utah.

Lutz, J. A. Quantifying fire regime attributes: trends in fire and drought in western forests. Interagency Fire Science Webinar. May 8, 2013.

Lutz, J. A. Fire, water, people and time: mechanisms of long-term change in western forests. Utah State University seminar. Logan, Utah, March 18, 2013.

Lutz, J. A. Fire, water, wind and time: towards quantitative descriptions of changing western forests. Portland State University. Portland, Oregon, February 4, 2013.

Lutz, J. A. Meet, Greet, and Teach: How Big is Your Data? Interdisciplinary Teaching on Environmental Issues. University of Washington. Seattle, Washington, February 26, 2013.

Contributed

Munyaka, V., K. Oringa, S. Cote, R. Kinyanjui, W. E. Lukens, **J. A. Lutz**, K. McNulty, L. Michel, and D. J. Pepppe. Reconstruction of Early Miocene paleoflora and paleoclimate of Koru region (Nyanza Province, western Kenya): Implications fo early hominoid evolution. Geological Society of America annual meeting, October 9, 2022. Denver, Colorado.

Delavaux, C., and 92 co-authors including J. A. Lutz. 2022. Mycorrhizal feedbacks linked to global forest biodiversity gradient. The 11th annual International Conference on Mycorrhiza. Beijing, PRC.

Luu, H. J. Hille Ris Lambers, **J. A. Lutz**, M. Metz and R. S. Snell. 2022. Seed production response to climate and its effect on forest species composition. ESA Annual meeting.

Henn, J. J., J. A. Lutz and 15 co-authors. 2022. Functional diversity of morphological and chemical defense traits reveal abiotic and biotic drivers of tree community assembly. ESA Annual Meeting.

Furniss†, T. J. and **J. A. Lutz**. 2021. *Translating error into ecology: What uncertainty in fire severity maps and mortality models can tell us about fire effects*. Organized oral session at the Association for Fire Ecology 9th International Fire Ecology and Management Congress. Nov. 30, 2021.

Francis, E. J., **J. A. Lutz**, and C. E. Farrior. 2020. Integrating LiDAR measurements of canopy structure, forest inventory data, and a simple forest dynamics model to understand fundamental drivers of forest canopy structure. AGU Fall Meeting.

Kane, V. R., C. A. Cansler, J. T. Kane, B. Bartl-Geller, N. A. Povak, **J. A. Lutz**, D. Churchill, P. F. Hessburg, and A. J. Larson. 2020. Burn severity, repeat fires, and forest management interact to influence forest structure in northeastern Washington, USA. ESA 2020.

Clark, J., **J. A. Lutz**, and 55 co-authors. 2020. Interactions that control the pace of forest change in North America. ESA 2020

Nasto, M. K., E. M. Blomdahl†, and **J. A. Lutz**. 2020.The Utah Fire Atlas: Quantifying wildfire size, severity, and frequency in the Beehive State. ESA 2020.

Furniss†, T. J., and **J. A. Lutz**. 2020. Big plots, big trees, and big fires: Enhancing our ecological understanding of fire effects with unprecedented field data. ESA 2020.

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Churchill, D., A.J. Larson, P.F. Hessburg, V.R. Kane, S. Jeronimo, M. LeFevre, N.A. Povak, C.A. Cansler, **J.A. Lutz**. 2019. Are wildfires restoring landscapes? AFE Fire Congress. 11/18/2019. Tucson, AZ, USA

Kane, J., C.A. Cansler, V. Kane, N. Povak, D. Churchill, **J. A. Lutz**, P. Hessburg, A. Larson, L.M. Moskal. 2019. Relative importance of drivers of burn severity in eastern Washington. AFE Fire Congress. 11/21/2019. Tucson, AZ, USA

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Kane, V. R., C. A. Cansler, D. Churchill, P. Hessburg, N. Povak, A. J. Larson, and **J. A. Lutz**. An evaluation of landscape-scale fire-induced change in Washington State, USA. North American Forest Ecology Workshop, Flagstaff, Arizona, June 19, 2019.

Larson, A. J., R. T. Belote, N. A. Povak, C. A. Cansler, D. J Churchill, P. F. Hessburg, **J. A. Lutz**, and V. R. Kane. Do wildfires follow fire-prone forest restoration principles? North American Forest Ecology Workshop, Flagstaff, Arizona, June 19, 2019.

Tamjidi†, J., and **J. A. Lutz**. Long term effects of fire on soil enzymes and soil hydrological properties in the Sierra Nevada, California, USA. Department of Wildland Resources Graduate Symposium, Utah State University. Logan, Utah. April 12, 2019.

Germain†, S. J. and **J. A. Lutz**. Attenuation of associational resistance in a compound-disturbance landscape. Department of Wildland Resources Graduate Symposium, Utah State University. Logan, Utah. April 12, 2019.

Furniss†, T. J. and **J. A. Lutz**. 2019. Interactive effects of drought, fire, and bark beetles on tree mortality in the Sierra Nevada, California. Wildland Resources Dept. Graduate Research Seminar. Logan, UT. April 12.

Furniss†, T. J., S. M. A. Jeronimo†, V. R. Kane, A. J. Larson, and **J. A. Lutz**. 2019. Quantifying uncertainty in satellite-derived fire severity using actual tree mortality. International Association for Landscape Ecology 2019 Annual Meeting. Fort Collins, CO. April 8.

Furniss†, T. J., A. J. Larson, V. R. Kane, and **J. A. Lutz**. 2019. Spatial elements of fire-related mortality Intermountain Society of American Foresters Annual Meeting. Logan, UT. March 29.

Kane, V. R., E. K. Blomdahl†, J. A. Lutz, J. T. Kane, and G. Asner. 2018. Fisher and Spotted Owl habitat from airborne lidar data. Sequoia National Park Science Symposium. Three Rivers, California, November 2018.

Birch†, J. D., **J. A. Lutz**, E. H. Hogg, S. W. Simard, R. Pelletier, and J. Karst. Forest in freefall: 50 years of demography and spatial interactions in the southern boreal forest. IAVS, Bozeman, Montana, July 2018.

Jeronimo†, S. M. A., T. J. Furniss†, V. R. Kane, A. J. Larson, and **J A. Lutz**. New approaches to fire mortality modelling incorporating spatially explicit multi-scale structure. Fire Continuum Conference, Missoula, Montana. May 2018

LeFevre, M. E., Povak, N. A., D. Churchill, C. A. Cansler, V. R. Kane, P. Hessburg, J. T. Kane, **J. A. Lutz**, and A. J. Larson. Influence of wildfire severity and post-fire timber salvage on forest regeneration in mixed-conifer forests. Fire Continuum Conference, Missoula, Montana. May 2018

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Kane, J. T., N. A. Povak, V. R. Kane, C. A. Cansler, **J. A. Lutz**, D. J. Churchill, P. F. Hessburg, and A. J. Larson. Modeling fire severity in eastern Washington using mapped surfaces of climate, weather, and topography. Fire Continuum Conference, Missoula, Montana. May 2018

Meddens, A. J. H., C. A. Kolden, A. Martinez, J. Steenvoorden, E. K. Strand, **J. A. Lutz**, and A. T. Hudak. Patterns and conservation value of fire refugia in the northwestern United States. Fire Continuum Conference, Missoula, Montana. May 2018

Germain†, S. J. and **J. A. Lutz**. Time-varying covariates and the Cox proportional hazards assumption using tree mortality as a working example. Biostatistics Graduate Symposium, Utah State University. Logan, Utah. April 23, 2018.

Tamjidi†, J., and **J. A. Lutz**. Changing soil properties after fire occurrence in the Yosemite Forest Dynamic Plot. Graduate Student Research Symposium, Utah State University. Logan, Utah. April 12, 2018.

Germain†, S. J. and **J. A. Lutz**. Climate modifies competitive interactions in a late-seral Douglas-fir forest. Graduate Student Research Symposium, Utah State University. Logan, Utah. April 12, 2018.

Alexander, S. M., M. E. Swanson, and **J. A. Lutz**. Multiscale analysis of forest neighborhood of Pacific yew trees in an old-growth *Pseudotsuga-Tsuga* forest, southern Washington Cascades. Pullman, Washington, April 2018.

Peppe, D. J., A. L. Deino, S. G. Driese, D. L. Fox, J. Kingston, R. N. Kinyanjui, W. E. Lukens, **J. A. Lutz**, L. A. Michel, K. O. Oginga, S. Cote, T. Lehmann, L. MacLatchy, K. McNulty, E. Miller, I. O. Nengo, and J. Rossie. Early Miocene paleoclimate and paleoenvironments across east Africa. GSA Annual Meeting, Seattle, Washington, October 2017.

Oginga, K. O., D. J. Peppe, W. E. Lukens, **J. A. Lutz**, and L. A. Michel. Paleoclimate and paleoenvironmental reconstruction of the early Miocene Tinderet sites in western Kenya and their implications for hominid evolution. GSA Annual Meeting, Seattle, Washington, October 24, 2017.

LaManna, J. A., S. A. Mangan, A. Alonso, N. A. Bourg, W. Y. Brockelman, S. Bunyavejchewin, L. W. Chang, J. M. Chiang, G. B. Chuyong, K. Clay, R. Condit, S. Cordell, S. J. Davies, T. J. Furniss†, C. P. Giardina, I. A. U. Nimal Gunatilleke, C. V. S. Gunatilleke, F. He, R. W. Howe, S. P. Hubbell, C. F. Hsieh, F. M. Inman-Narahari, D. Janík, D. J. Johnson, D. Kenfack, L. Korte, A. J. Larson, **J. A. Lutz**, S. M. McMahon, W. J. McShea, H. R. Memiaghe, A. Nathalang, V. Novotny, P. S. Ong, D. A. Orwig, R. Ostertag, G. G. Parker, R. P. Phillips, L. Sack, I. F. Sun, J. S. Tello, D. W. Thomas, B. L. Turner, D. M. Vela Díaz, T. Vrška, G. Weiblen, A. Wolf, S. Yap, and J. A. Myers. 2017. Negative density dependence contributes to global patterns of plant biodiversity. Ecological Society of America Annual meeting. Portland, Oregon. August 6-11, 2017.

Becker†, K. M. L., and **J. A. Lutz**. Effects of low- to moderate-severity fire on snag dynamics in an old-growth forest, Sierra Nevada, California, USA. Ecological Society of America Annual meeting. Portland, Oregon. August 6-11, 2017.

Shoot, C., V. R. Kane, C. Babcock, S. M. A. Jeronimo, **J. A. Lutz** and L. M. Moskal. Airborne LiDAR-derived structure metrics can be used to predict understory presence. Ecological Society of America Annual meeting. Portland, Oregon. August 6-11, 2017.

Kolden, C. A., A. J. H. Meddens, J. T. Abatzoglou, C. A. Cansler, and **J. A. Lutz**. Refugia under fire: the impacts of climate change on wildfire refugia persistence and resilience. Ecological Society of America Annual meeting. Portland, Oregon. August 6-11, 2017.

Furniss†, T. J., and **J. A. Lutz**. Improving fire mortality models for Sierra Nevada mixed-conifer forests. Utah State University Graduate Research Symposium. April 14, 2017.

Germain†, S. J., and **J. A. Lutz**. Spring precipitation alters background mortality of late-seral tree species in an old-growth Douglas-fir forest. Utah State University Graduate Research Symposium. April 14, 2017.

Blomdahl†, E. M., and **J. A. Lutz**. Fine-scale spatial characteristics of unburned patches in the central Sierra Nevada, California, USA. Utah State University Graduate Research Symposium. April 14, 2017.

Germain†, S. J., and **J. A. Lutz**. Tree death and forest dynamics in old-growth Douglas-fir forests. Society of American Foresters Intermountain Annual Meeting. Logan, Utah. March 31, 2017.

Furniss†, T. J., and **J. A. Lutz**. Habitat heterogeneity and species coexistence in subalpine forests of the Colorado Plateau. Society of American Foresters Intermountain Annual Meeting. Logan, Utah. March 31, 2017.

Meddens, A. J. H., C. A. Kolden, **J. A. Lutz**, J. T. Abatzoglou, and A. T. Hudak. Spatial and temporal patterns of unburned areas within fire perimeters in the northwestern United States from 1984 to 2014. AGU San Francisco, California, December 16, 2016.

Meddens, A. J. H., C. A. Kolden, **J. A. Lutz**, J. T. Abatzoglou, and A. T. Hudak. Spatial and temporal patterns of unburned areas within fire perimeters in the northwestern United States from 1984 to 2014. Northwest Climate Science Conference, Skamania, Washington. November 14-16, 2016.

Shoot, C., V. R. Kane, L. M. Moskal, S. A. Jeronimo, **J. A. Lutz**, and J. T. Kane. Using LiDAR to detect and predict shrub locations. EARSeL. Krakow, Poland, September 15, 2016.

Vela Diaz, D. M., M. J. Spasojevic, J. W. Dalling, B. L. Turner, J. A. LaManna, J. A. Myers, and 27 co-authors including **J. A. Lutz**. MacArthur's niche hypothesis revisited: the role of niche space, niche breadth and niche overlap in explaining global patterns of species diversity. 53rd Annual Meeting of the Association for Tropical Biology and Conservation. Montpellier, France. June 2016.

Becker†, K. M. L., and **J. A. Lutz**. Snag demography before and after fire in an old-growth forest. Intermountain Society of American Foresters Meeting. Logan, Utah, April 22, 2016.

Blomdahl†, E. M., and **J. A. Lutz**. Small-scale unburned patches in the Yosemite Forest Dynamics Plot. Intermountain Society of American Foresters Meeting. Logan, Utah, April 22, 2016.

Becker†, K. M. L., and **J. A. Lutz**. Fire ecology of small-diameter trees in an old-growth forest. Wildland Resources Research Symposium. Logan, Utah, April 15, 2016.

Meddens, A., C. A. Kolden**, J. A. Lutz**, and J. Abatzoglou. The distribution and occurrence of wildfire refugia under a changing climate. 6th Northwest Climate Conference. Coeur D'Alene, Idaho, November 3-5, 2015.

Shoot, C., S. Jeronimo, V. Kane, M. Moskal, **J. Lutz**, and J. Kane. Using LiDAR to detect shrub locations and characteristics. Precision Forestry Cooperative. Seattle, Washington, October 22, 2015.

Spasojevic, M. J., **J. A. Lutz**, S. M. McMahon, A. J. Larson, G. G. Parker, and C. Catano. Species-pool functional diversity and environmental heterogeneity jointly influence beta-diversity in temperate forests. Ecological Society of America Annual Meeting. August 2015.

Shoot, C., S. M. A. Jeronimo†, V. Kane, M. Moskal, and **J. Lutz**. Use of LiDAR to detect shrubs. Northwest Science Association Annual Meeting, April 1-4, 2015, Pasco, Washington.

Kolden, C. A., **J. A. Lutz**, J. A. Abatzoglou, C. A. Cansler, J. T. Kane, J. W. van Wagtendonk, and C. H. Key. Climate drivers of forest pattern: development of wildfire refugia. University of Montana Plum Creek Distinguished Lecture Series and Northwest Science Association Annual Meeting, March 26-28, 2014, Missoula, Montana.

Dickerson-Lange†, S., **J. A. Lutz**, K. A. Martin†, M. S. Raleigh†, R. Gersonde, and J. D. Lundquist. Evaluating observational methods to quantify snow duration under diverse forest canopies. AGU 2014.

Dickerson-Lange†, S., J. D. Lundquist, R. Gersonde, T. E. Link, **J. A. Lutz**, S. Mallach, A. W. Nolin, and A. Snover. Testing an empirical model of snowpack duration using citizen science field observations from the mountains of the Pacific Northwest: Results and Lessons from a Citizen Science Campaign. Pacific Northwest Climate Science Conference, 9/9/2014.

Dickerson-Lange†, S., J. D. Lundquist, R. Gersonde, T. E. Link, **J. A. Lutz**, S. Mallach, A. W. Nolin, and A. Snover. Predicting optimal forest management strategies to maximize snowpack duration across the Pacific Northwest. Pacific Northwest Climate Science Conference, 9/6/2014.

Stavros, E. N., C. Ramirez, Z. Tane, V. R. Kane, R. McGaughey, **J. A. Lutz**, J. Boland, and D. S. Schimel. Unprecedented remote sensing data products from before and after the Rim Fire, Sierra Nevada, California. Ecological Society of America 99th Annual Meeting, Sacramento, California, August 10-15, 2014.

Kane, V. R., C. A. Cansler, N. A. Povak, D. Churchill, M. North, D. F. Smith, and **J. A. Lutz**. Biophysical controls on forest structure and fire severity in Yosemite National Park. Ecological Society of America 99th Annual Meeting, Sacramento, California, August 10-15, 2014

Kane, V. R., **J. A. Lutz**, R. McGaughey, and M. North. Forests and fires: Insights from LiDAR. Southern Sierra Fire and Hydroclimate Workshop. 2014.

Stavros, E. N., J. Abatzoglou, Z. Tane, V. Kane, S. Veraverbeke, R. McGaughey, **J. A. Lutz**, N. K. Larkin, D. McKenzie, E. A. Steel, C. Ramirez, J. Boland, and D. Schimel. Regional likelihood of very large wildfires over the 21St century across the western United States: motivation to study individual events like the Rim Fire, a unique opportunity, with unprecedented remote sensing data. Large wildland fires conference; May 19-23, 2014; Missoula, MT.

Barth†, M. A. F., A. J. Larson, and **J. A. Lutz**. Historical fire regime heterogeneity in a Sierra Nevada mixed-conifer forest. Northwest Scientific Association 85th Annual Meeting, March 26-29, 2014. Missoula, Montana.

Barth†, M. A. F., A. J. Larson, and **J. A. Lutz**. Incorporating uncertainty into forest reconstructions: Implications for developing historical reference conditions. Society for Ecological Restoration 5th World Conference. October 6-11, 2013. Madison, Wisconsin.

Dickerson-Lange†, S., J. D. Lundquist, R. Gersonde, T. E. Link, **J. A. Lutz**, S. Mallach, A. W. Nolin, and A. Snover. Predicting optimal forest management strategies to maximize snowpack duration across the Pacific Northwest. Pacific Northwest Climate Science Conference, 9/6/2013.

WORKSHOPS

Dimensions of Biodiversity, Smithsonian Institution, Zové Hrady, Czech Republic, July 16 – August 2, 2018

Software and Data Carpentry. Utah State University, Logan, Utah. February 9-10, 2017.

Dimensions of Biodiversity, Smithsonian Institution & Chinese Academy of Sciences, Hainan, People's Republic of China, July 8 – July 21, 2016.

ForestGEO Principal Investigators' Workshop, Smithsonian Institution, Washington, D.C., March 9-13, 2015.

Dimensions of Biodiversity, Smithsonian Institution & Chinese Academy of Sciences, Xishuangbanna, People's Republic of China, July 25 – August 10, 2014.

PHOENIX Fire Science, University of Idaho, Moscow, ID, April 14-16, 2014.

Dimensions of Biodiversity, Smithsonian Institution & Chinese Academy of Sciences, Front Royal, VA, August 2013.

Dimensions of Biodiversity, Smithsonian Institution & Chinese Academy of Sciences, Seattle, WA, August 2012.

Dimensions of Biodiversity, Smithsonian Institution & Chinese Academy of Sciences, Changbai and Beijing, People's Republic of China, July 17 – August 1, 2011.

TEACHING

Utah State University

WILD 3820 Forest Plants (undergraduate). 2014 – Present.

WILD 4560 Forest Ecology of the Sierra Nevada & White Mountains (field). 2014 – 2018.

WILD 6730 Forest Community Ecology (graduate). 2013, 2015, 2017, 2021

CAS 6888 Leadership and Followership. 2017 – 2021.

University of Washington

ESRM 442 Forest Ecology of the Sierra Nevada & White Mountains (field). 2009 – 2013.

CFR 501 Forest Community Ecology (graduate). 2006, 2007

ADVISING

Graduate

Committee chair – Soren Struckman (PhD current), Kendall M. L. Becker (PhD 2022), Casey Snider (PhD current), Sara Germain (PhD 2022), Tucker J. Furniss (PhD 2021), Jelveh Tamjidi (MS 2020), Erika Blomdahl (MS 2018), Camille Stephens (MNR 2017), Tucker J. Furniss (MS 2016), Kendall M. L. Becker (MS 2014, UW).

Committee member – McKinley Nevins (PhD current, Washington State University), Alex Howe (PhD current), Jan Ng (PhD 2022, UC Davis), Jessica Murray (PhD current), Megan Licht (PhD current), Douglas Hardman (PhD current, UI), José Camilo Fague (PhD 2018), Sean Jeronimo (PhD 2018, UW), Nate Hough-Snee (PhD 2016), Susan Dickerson-Lange (PhD 2016, UW), Cody Dangerfield (MS 2020), Kevin Turnblom (MNR 2015), Mark Raleigh (PhD 2013, UW), Kael Martin (MS 2012, UW).

Undergraduate Advisees

Bella Wetzler (URCO/QCNR research, 2020-2021), Emily Liese (independent research, 2020), Shawnee Tebbs (independent research, 2019), Tiana Price (independent research, 2018), Emily Black (independent research, 2018), Michael Gudmundson (Independent research and thesis, 2017-2018), Matt Bishop (URCO research, 2016-2017), Liz Winters (Honors project, 2015), and 27 undergraduate senior projects at University of Washington.

Undergraduate Trainees

Jake Burgoyne (2020 – 2021), Lauren Walker (2020), Isabella Wetzler (2020 – 2021), Annie Baker (2019), Grace Chovil (2019), Rosanise O'dell (2019), Ty Siepert (2019), Soren Struckman (2019), Mitchel Westmoreland (2019), Justine Cornwall (2018), Shawnee Tebbs (2018), Matt Munson (2016 – 2018), Joanne Lim (2017), Sylvia Tan (2017), Michael Gudmundson (2016), Vincent Bennett (2016), Tim Young (2016), Paige Stephens (2016), Linnea Lopez (2016), Katelynn Hall (2016), Matt Bishop (2016), Joseph Cooper (2015), Dawni Jenkins (2015), Cherydan Onishi (2015), Sara Germain (2014, 2015, 2016), Kacy Severinsen (2013, 2014), Kyle Neuberger (2014), James Walker (2014), Meghan Graham (2014 – 2016), Sariah Hosteenez (2014).

SERVICE

Department

2018: Search Committee Member, Silviculture and Applied Ecology

2018 – Present: Tenure and Promotion Committees (Larissa Yocom, Justin DeRose, Darren McAvoy)

2017 – 2019: Quinney Scholarship Committee (2018 Chair)

2013 – Present: Curriculum committee

2016: Search Committee Chair, Fire Ecology

College

2018 – Present: P&T Ombudsperson

2018 – Present: Graduate Council

2018 – Award Selection Committee

2017 – Present: College Scholarship Committee

2013 – Present: Faculty advisor, Xi Sigma Pi

University

2021 – 2022: QCNR Dean Search Committee

2021 – Present: Chapter author and liaison for President's Institute of Land, Water, and Air

2018 – 2021: Admissions, Honors Program

2016 – Present: UAES Project Review (4)

2015: USU Office of Research, Undergraduate Research and Creative Opportunities (URCO) grant review panel

2015 – 2016: USU Biology, Faculty Search Committee, Microbial Ecology

2014 – 2015: USU Biology, Faculty Search Committee, Community Ecology

2014: USU Aviation, Women in Aviation, conference award selection committee

Professional

Ecological Society of America, Society of American Foresters, Association for Fire Ecology

2019 – Present: Associate Editor: *Ecological Processes*

2017 – Present: Associate Editor: *Fire*

2016 – 2017: Guest Editor, *Land* Special Issue on wildfire

2012 – Present: National Ecological Observation Network (NEON): Advisory committee, plant biomass and productivity working group.

2012: International symposium organizer: Smithsonian Dimensions of Biodiversity Symposium 2012

2011 – 2012: Oral session organizer. Ecological Society of America 97th Annual Meeting

2010 – Present: Associate Editor: *Fire Ecology.*

Manuscript reviewer – *Biological Conservation, Canadian Journal of Forest Research, Ecological Applications, Ecological Monographs, Ecology, Ecosphere, Fire, Fire Ecology, Forest Ecology and Management, Geophysical Research Letters, Global Ecology and Biogeography, International Journal of Wildland Fire, Journal of Ecology, Journal of Forest Research, Landscape Ecology, Madroño, New Forests, Northwest Science, Plant Ecology, PLOS ONE,* Princeton University Press*, Remote Sensing of Environment, Restoration Ecology, Science of the Total Environment,* Smithsonian Institution Press*,* The Pragmatic Bookshelf*, Western North American Naturalist,* University of California Press, US Forest Service, US Geological Survey, US National Park Service.

Proposal reviewer – National Science Foundation of Switzerland, National Science Foundation of the Czech Republic, Canadian Science Foundation, National Science Foundation (individual grant reviewer and panel member), Joint Fire Science Program (panel member), Smithsonian CTFS Research Grants (panel member), Kearney Foundation, National Park Service, Northern Arizona University Mission Research Board, UW School of Forest Resources Equipment Grants (chair).

External tenure/promotion reviewer – 2014, 2015, 2020, 2022.

Policy Review
2018 – Associate Editor for the Washington Forest Practices Board (Stand Structure, Tree Mortality and Large Wood Recruitment in Riparian Buffers on Fish-Bearing Streams in Eastern Washington: Comparison of the Standard Rule and the All Available Shade Prescription for Bull Trout Habitat)

2016 – Reviewer for the Washington Forest Practices Board (Riparian stand conditions and buffer tree mortality rates)

2015 – Reviewer for the California Spotted Owl Conservation Assessment (Forest Ecology and Fire Ecology)

2013 – Reviewer for the Yosemite National Park Merced River Plan (California black oak population monitoring)

OUTREACH

Management Outreach
Yosemite National Park. Presentation of research from the Yosemite Forest Dynamics Plot to managers. May 31, 2022.

Utah State University 2021 Report to the Governor on Land, Water, and Air. Salt Lake City, December 14, 2021.

Joint Fire Science Program Outreach Webinar. Panelist. The Work of Wildfires. October 21, 2020.

Yosemite National Park Fire and Landscape Ecology Section Chief – Summary of Rim Fire mortality in the Rockefeller Grove. February 11, 2015.

Smithsonian ForestGEO Director – Discussion of high-elevation mixed-conifer forest ecology. October 3-4, 2014. Cedar Breaks National Monument.

Cedar Breaks National Monument Superintendent and staff – Colorado Plateau forest ecology, research and monitoring needs and methodology. June 2014, Cedar Breaks National Monument.

Yosemite National Park Fire and Resource Management – Provided data and advice during Rim Fire incident. August-September 2013.

National Park Service and USDA Forest Service fire ecologists and managers – Webinar on quantifying fire regime attributes at the scale of management units. Interagency Fire Science Webinar. May 8, 2013.

Smithsonian ForestGEO Director and Smithsonian ForestGEO Temperate Plot Coordinator – Discussion of Pacific Slope forest ecology and science needs. October 12-18, 2012. Gifford Pinchot National Forest and Yosemite National Park.

Yosemite National Park Superintendent – Discussion of prescribed fire ecology and desired outcomes in the Hodgdon Meadows burn. June 2012, Yosemite National Park.

Yosemite National Park Head of Science – Discussion of forest demography and large-diameter tree abundances. June 2012, Yosemite National Park.

Yosemite National Park Fire Management Burn Boss – Discussion of firing plans and units for south fork of the Tuolumne River watershed. June 2011, Yosemite National Park.

Yosemite National Park Head of Fire and Aviation Management – Discussion of snowpack, ignition probability, and probabilistic budgeting. November 2011, Yosemite National Park.

Community Outreach
Cache County Utah riparian restoration outreach, April 4, 2016.

Rim Fire Research. Publicity release by Yosemite National Park. March 2015.

Community and Landscape Ecology. Half-day seminar for the Master Naturalist's Program. City of Bellevue, Washington. February 24, 2012.

Forest Ecology and Management. Full-day seminar and field trip for Keio University summer exchange students. Seattle and North Bend, Washington. August 13, 2012.

Forest Ecology and Management. Full-day seminar and field trip for Keio University summer exchange students. Seattle and North Bend, Washington. August 10, 2011.

Land Use History in the Puget Sound Region. Full-day seminar and field trip for Keio University summer exchange students. Seattle and North Bend, Washington. August 8, 2010.

Press Interviews
2022 – Salt Lake Tribune (commentary on 2022 fire season)

2022 – ABC 4 News (live interview on tree-snow interactions)

2021 – NPR's Science Friday (12-minute piece on Big Trees)

2021 – ABC 4 News (live interview on fire severity in Utah)

2020 – Wired, Sole24Ore, Columbia Insight

2019 – BBC (TV, radio, web) – A decade of research in Yosemite

2018 – New York Times

2017 – Herald Journal, Ogden Standard Examiner

2016 – The Missoulian, The Union Democrat

2015 – National Geographic, Smithsonian Magazine

2014 – Fresno Bee (newspaper), Radio Free Europe (article and radio), Smithsonian (newsletter), Herald-Journal (newspaper), QCNR in the News (newsletter), Standard-Examiner (newspaper)

2013 – Smithsonian (newsletter), HJ Andrews Newsletter (newsletter), USDA Forest Service Pacific Northwest Research Station (newsletter)

2012 – Our Amazing Planet (webzine), Mariposa Gazette (newspaper), American Forests (newsletter), New York Times (newspaper), University of Montana (press release), University of Washington (press release), Washington State University (press release)

2011 – Portuguese RTP TV (Half-hour TV special)

2010 – BBC Radio (US and international), BBC World News America (US and international), BBC News (web)

2009 – BBC Earth News (web), Frontiers Dispatches (newsletter), BBC World News America (TV, radio, web), BBC news (TV, web), BBC news (TV, web), BBC Earth News (web), Denman Lecture (TV)

FUNDING

As of 1/1/2023, over $6,000,000 in funding received from competitive grants as PI or Co-PI (amounts reflect institutional receipts only), with over $350,000 of internal grants. In addition, my students have obtained over $750,000 in funding with my assistance.

EMPLOYMENT

8/13 to present **Utah State University, S. J. & Jessie E. Quinney College of Natural Resources** **Logan, UT**
Assistant, Associate, and Professor, Forest Ecology

Principal Investigator, Yosemite Forest Dynamics Plot, Wind River Forest Dynamics Plot, and Utah Forest Dynamics Plot. Plan, fund, organize and supervise research in these three Smithsonian-affiliated forest demography research programs. Field sampling is through largely volunteer (undergraduate students, graduate students, ecologists and citizens) research pulses. Project web sites: http://yfdp.org http://wfdp.org http://ufdp.org

2/11 to 7/13 **University of Washington, College of the Environment** *Research Scientist* **Seattle, WA**
Investigated long-term vegetation change in western coniferous forests including climate-fire relationships, spatial and structural patterns of fire in Yosemite National Park (LiDAR/Landsat), multi-decadal trends in carbon sequestration in the presence of fire in Sequoia Kings Canyon and Yosemite National Parks, and relationships between canopy structure and snow accumulation and retention.

8/08 to 2/11 *Research Associate*: Analyzed relationships between understory and overstory during canopy closure in *Pseudotsuga–Tsuga* forests, effects of scaling on species envelope models and climate change.

7/03 to 8/08 *Teaching Assistant*: Ecosystem Management in the Sierra Nevada, Wildland Recreation and Amenity Management, Society and Sustainable Environments.

Research Assistant: Analyzed permanent sample plot data in *Pseudotsuga–Tsuga* forests. Field work at H. J. Andrews Experimental Forest and Cedar River Watershed. Led field crews.

2/01 to 7/03 **HSBC Investment Bank** *Managing Director and Global Head of Securities IT* **London, England**
Responsible for equity related systems world-wide (cash, derivatives, research, corporate finance, customer management, revenue analysis, risk, middleware, global order routing, and web delivery). Supported IT development for 8000-person international organization. Mentored staff in quantitative techniques, project management, and quality improvement. Reported to Investment Banking CEO and HSBC Group IT Manager. Annual budget: 100MM. Direct headcount: 289. Indirect headcount: 600.

1/99 to 2/01 **Hidden Light Consulting** *Principal* **Bellevue, WA**
Provided capital markets consulting. Specialized in exchange systems, straight through processing and process automation. Customers: HSBC Japan, Sanwa Securities Japan, Templeton Japan.

12/96 to 12/98 **HSBC Securities Japan** *Head of Front Office Systems* **Tokyo, Japan**
Responsible for all trading systems - arbitrage decision support, volume-weighted average price crossing automation and trading algorithmics, and automated link to back office. Mostly paperless system used Unix servers, Windows NT clients, Sybase, TIBCO, Cisco, Netscape, and Trimble GPS. Developed intranet for training. Team of 17 used VB, VC++, Perl, Softbench, Purify and Quantify, Apache and GNU. Implementation with “no single point of failure” philosophy with auditing capabilities.

12/93 to 12/96 **Lehman Brothers** *Vice President Trading Services* **Tokyo, Japan**
6/95 to 12/96 Responsible for index arbitrage technology. Improved transaction throughput and mean time to repair through bottleneck analysis and queue simulation. Developed Ministry of Finance required tracking for restricted stock. Managed development of Osaka Stock Exchange futures system and Baikai display. Familiar with trading techniques for stocks, warrants, convertible bonds, futures and options. Developed profitable statistical arbitrage model. Used BARRA (risk modeling), FAME (historical analysis) and parallel analytics running on 20+ workstations. Advised bankers and clients on trading technologies and extended character set (CJK) software. Extensive n+1 system redundancy.

12/93 to 6/95 Managed market data and distribution systems in Japan, Hong Kong and Singapore (10MM budget). Saved 2MM per year while user count increased 25%. Re-negotiated contracts; cut vendors 20%. Developed calculators (rate contribution, real time ratio calculation, Black-Sholes implied volatilities). Implemented Singapore system in new facility; Hong Kong system during restack.

7/92 to 12/93 **Teknekron Software Systems** *Client Technical Services Regional Manager Asia* **Tokyo, Japan**
Managed projects for CSFB, JP Morgan, and NAB throughout Asia. Responsible for 800K direct revenues and 5MM indirect revenues. Involved in consulting, sales, proposal generation, customer management and product specification. Negotiated contracts, license agreements, pricing policies, collections and channel management. Established distributors in Australia, HK and Singapore.

6/88 to 7/92 **Micrognosis** *Manager Trading Room Technology* **New York, NY**
6/91 to 7/92 Projects in dealing room design, market data services, cost optimization, trading network design, and network throughput optimization. Derivative and portfolio pricing, distributed computation.

1/89 to 6/91 *Manager Trading Room Technology* **Tokyo, Japan**
Manager for 15MM Mitsubishi Bank project. Supervised software sales, development, integration and acceptance. System "cut over" on schedule (70% new components).

6/88 to 1/89 *Product Manager* **Campbell, CA**
Marketing Manager for trading software. Presented products to sales force and distributors. Set pricing and discount structures (profit responsibility). Developed product and sales documentation.

1982-1988 **Schlumberger Technologies** *Project Leader* **San Jose, CA**
12/86 to 6/88 Developed object oriented graphical programming environment for Automatic Test Equipment (ATE). Supervised four engineers and capital budget of 360K. Developed presentations and demonstrations.

9/85 to 12/86 *Senior Product Marketing Engineer*
Analyzed ATE market growth rates, competition, finances, sales strategies, products and pricing. Managed X.25 network project. Recruited at MIT, RPI and Cornell.

1982-1985 *Associate Engineer* and *Summer Intern* (Summer '82, Summer '83, 7/84-1/85)
Developed extensible, rule-based Computer Aided Engineering (CAE) software. Designed, built, programmed and characterized high accuracy (±10 ρS) timing circuits and test fixtures.

SKILLS Software: Adobe Creative Suite, ArcGIS, C, C++, ENVI, Lisp, Matlab, Modtran, MySQL, PC-ORD, Perl, R, S-Plus, SPSS, Trimble Office, and VB. Surveying: Trimble, Leica, and Topcon GPS; Haglöf hypsometer; Nikon, Leica, and Topcon Total stations. Languages: rusty Japanese and French.

CERTIFICATIONS FAA licenses: Private Pilot (Airplane Single Engine Land, Rotorcraft Helicopter); Remote Pilot (Small Unmanned Aircraft System, Part 107). FCC licenses: GROL/Radar, GMDSS Operator/Maintainer, Amateur (General, KD7GJN). Wilderness First Responder. SCUBA (NAUI).