

Mark E. Swanson, PhD

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Work History

2023-present	Associate Professor and Starker Chair of Private and Family Forestry, College of Forestry, Oregon State University
2013-2023	Associate Professor, Landscape Ecology and Silviculture, School of the Environment, Washington State University
2018-2023	Forestry Program Leader, School of the Environment, Washington State University
2016-2018	Associate Director, Graduate Programs, School of the Environment
2011-2015	Affiliate Professor, Crop and Soil Sciences, Washington State University
2007- 2013	Assistant Professor, Landscape Ecology and Silviculture, School of the Environment
2009-present	Principal, Goshawk Ridge Consulting SP (private sector consultancy)

Education

1999-2007	PhD, Forest Ecosystem Analysis, University of Washington <ul style="list-style-type: none">• Dr. Jerry F. Franklin, Major Professor.• Dissertation: "Measurement and modeling of the forest carbon resource in the <i>Nothofagus</i> forests of Tierra del Fuego, Chile"
1995-1999	Bachelor of Science, Forest Management, University of Washington <ul style="list-style-type: none">• Graduated <i>cum laude</i>• Minor area of study: Conservation of Wildland Resources

Current Projects

- Agroforestry systems of the Palouse Bioregion: influences of timber management and grazing on plant community diversity and fuel structure in ponderosa pine woodlands. With Dr. Marcy Ostrom, co-advisor of doctoral student Mark B. Batcheler.
- The Log-Aspect Microsite Project: quantitative assessment of the role of woody debris in altering species-specific survival and growth. Undergraduate researchers: Rudy Engstrom, Gabrielle Mickelson, and the WSU Forestry Club/SAF Chapter.
- Designing Early Seral Ecosystems for Huckleberry Culture and Management in the Pacific Northwest. Graduate student: Margaret I. Magee. Collaborators: Andrew S. Nelson (University of Idaho), Henry D. Adams (WSU), Amit Dhingra (Texas A&M), Norris Boothe (Coeur d'Alene Tribe), Jason Reinhardt (USFS-RMRS).
- Yosemite Forest Dynamics Plot (PIs: Dr. James Lutz, University of Washington, and Dr. Andrew J. Larson, University of Montana). Role: coarse woody debris and detritus analyst.
- Biodiversity of Early Seral Forests in Fire-generated and Intensively Managed Forests. With Dr. Meg Krawchuk (Oregon State Univ.) and others.

Primary research and consulting skills

- Applied botany, with key strength in western North America
- Forest measurements (25 years of industry experience)
- Analysis of succession of terrestrial plant communities
- Multivariate statistics, statistical programming
- Disturbance ecology and management, including prescribed fire

Peer-Reviewed Publications

As of December 2023: 47 journal articles, 3 accessioned data sets, 3 book chapters, 3 peer-reviewed professional papers, and one extension textbook, for a total of 57 peer-reviewed works.

Journal Articles (47)

47. Hülsmann, Lisa, et al.,... plus 52 co-authors, including **Mark E. Swanson**. *In press, 2023*. Latitudinal patterns in stabilizing density dependence in forest communities. *Nature*.
46. Delavaux, Camille S., Joseph A. LaManna, Jonathan A. Myers, Plus 67 co-authors including **Mark E. Swanson**. 2023. Mycorrhizal feedbacks influence global forest structure and diversity. *Communications Biology*. 6(1): 1066.
45. Batcheler, Mark, Marcia Ostrom, Lynne Carpenter-Boggs, **Mark E. Swanson**, Patrick Shults, Carrie Brausieck. 2023. Design and application of silvopasture in Washington State. *Agroforestry Systems* <https://doi.org/10.1007/s10457-023-00905-4>.
44. **Swanson, Mark E.**, Margaret I. Magee, Andrew S. Nelson, Rudy Engstrom and Henry D Adams. 2023. Experimental downed woody debris-created microsites enhance tree survival and growth in extreme summer heat. *Frontiers in Forests and Global Change*. 6: 1224624.
43. Smith, Robert J., Andrew N. Gray, and **Mark E. Swanson**. 2020. Temperate forest plant diversity most commonly peaks in early-seral stages. *Forest Ecology and Management* 475: 118410.
42. Lutz, James A., Soren Struckman, Tucker J. Furniss, C. Alina Cansler, Sara J. Germain, Larissa L. Yocom, Darren J. McAvoy, Crystal A. Kolden, Alistair M.S. Smith, **Mark E. Swanson**, Andrew J. Larson. 2020. Large-diameter trees dominate snag and surface biomass following reintroduced fire. *Ecological Processes* 9(1): 1-13.
41. Ulappa, Amy C.*, Lisa A. Shipley, Rachel C. Cook, John G. Cook, and **Mark E. Swanson**. 2020. Silvicultural herbicides and forest succession affect understory vegetation and nutritional ecology of black-tailed deer in managed forests. *Forest Ecology and Management* 470-471: 118216. (IF= 3.126)
*Graduate student author.
40. Hendrickson, Christopher, Seanna Hewitt, **Mark E. Swanson**, Todd Einhorn, and Amit Dhingra. 2019. "Evidence for pre-climacteric activation of AOX transcription during cold-induced conditioning to ripen in European pear (*Pyrus communis* L.)." *PloS ONE* 14, no. 12 (2019). (IF = 2.806).
39. Stenzel Jeffrey E., Kristina J. Bartowitz, Melannie D. Hartman, James A. Lutz, Crystal A. Kolden, Alistair M. S. Smith, Beverly E. Law, Mark E. Swanson, Andrew J. Larson, William J. Parton, and Tara W. Hudiburg. Fixing a snag in carbon emissions estimates from wildfires. 2019. *Global Change Biology*. <https://doi.org/10.1111/gcb.14716>. (IF= 8.444).
38. Cansler, C. Alina, **Mark E. Swanson**, Tucker J. Furniss, Andrew J. Larson, and James A. Lutz. 2019. Surface fuels before and after reintroduced fire in a Sierra Nevada mixed-conifer forest. *Fire Ecology* 15: 16. <https://doi.org/10.1186/s42408-019-0035-y>. *Accepted, January 2019*.. (IF= 1.756).
37. Chang, Cynthia, Charles Halpern, Joseph Antos, Meghan Avolio, Abir Biswas, James Cook, Roger del Moral, Dylan Fischer, Andres Holz, Robert Pabst, **Mark E. Swanson**, and Donald Zobel. 2019. Testing conceptual models of plant succession across a disturbance gradient. *Journal of Ecology* 2019: 1-14. doi 10.1111/1365-2745.13120. (IF=5.431).
36. Lyon Drew J, **Mark E. Swanson**, Frank L. Young, and Todd Coffey. 2018. Jointed Goatgrass (*Aegilops cylindrica*) spikelet density and biomass increases in continuous no-till winter wheat. *Crop, Forage, and Turfgrass Management*. 4:170011. (No impact factor as of 2018).

35. Lutz, J.A., T.A. Furniss, D.J. Johnson, S. Davies, ... <94 other authors, including **M.E. Swanson**>. 2018. Global importance of large-diameter trees in forests. *Global Ecology and Biogeography*. 2018: 1-16. DOI: 10.1111/geb.12747 (IF= 9.661)
34. Lutz, James A., Andrew J. Larson , and **Mark E. Swanson**. 2018. Advancing fire science with large forest plots and a long-term multidisciplinary approach. *Fire* 2018, 1(1), 5; doi:10.3390/fire1010005. (*No impact factor yet*)
33. **Swanson, Mark E.** 2018. Documenting a regional forest journey: a book review of Olson and van Horne, 'People, Forests, and Change: Lessons from the Pacific Northwest'. *Ecology*. 99 (2): 507-509. 10.1002/ecy.2058.
32. Maletzke, Benjamin T.*, **Mark E. Swanson**, Rich A. Beausoleil, Brian N. Kertson, Gary M. Koehler, Robert B. Wielgus, and Hilary S. Cooley. 2017. Cougar response to a gradient of human development. *Ecosphere* 8(7):e01828. 10.1002/ecs2.1828. (IF₂₀₁₆= 2.287).
*was graduate student during part of publication production.
31. Lutz, James A., Tucker J. Furniss, Sara J. Germain, Kendall M. L. Becker, Erika M. Blomdahl, Sean A. Jeronimo, C. Alina Cansler, James A. Freund, **Mark E. Swanson**, and Andrew J. Larson. 2017. Shrub consumption and immediate community change by reintroduced fire in Yosemite National Park, California, USA. *Fire Ecology* 13(1): 104-125. (IF= 1.422).
30. Larson, Andrew J., C. Alina Cansler, Seth G. Cowdery, Sienna Hiebert, Tucker J. Furniss, **Mark E. Swanson**, and J. A. Lutz. 2016. Post-fire morel (*Morchella*) mushroom production, spatial structure, and harvest sustainability. *Forest Ecology and Management* 377: 16-25. (IF= 2.487).
29. **Swanson, Mark E.** 2016. Elegance within the chaos: bringing complexity science to the forest: Book review of 'Managing Forests as Complex Adaptive Systems: Building Resilience to the Challenge of Global Change'. *Ecology* 97 (7): 1890-1892. (IF=6.421).
28. Keehner, Jon R.*, Robert B. Wielgus, Ben T. Maletzke, and **Mark E. Swanson**. 2015. Effects of male targeted harvest regime on sexual segregation in mountain lion. *Biological Conservation* 192: 42-47. (IF=3.762) *Graduate student co-author (mentored by Wielgus).
27. Stonehouse, Kourtney F.*, Lisa A. Shipley, Jason Lowe, Michael T. Atamian, **Mark E. Swanson**, and Michael A. Schroeder. 2015. Habitat selection by sympatric greater sage grouse and Columbian sharp-tailed grouse. *Journal of Wildlife Management* DOI: 10.1002/jwmg.990. (IF=1.726)
*Graduate student co-author (mentored by Shipley).
26. Larson, Andrew J., James A. Lutz, Daniel C. Donato, James A. Freund, **Mark E. Swanson**, Janneke Hille Ris Lambers, Douglas G. Sprugel, and Jerry F. Franklin. 2015. Spatial aspects of tree mortality strongly differ between young and old-growth forests. *Ecology* 96 (11): 2855-2861. (IF=5.175)
25. Preece, Ellen, Barry C. Moore, and **Mark E. Swanson**. 2015. Identifying best methods for routine ELISA detection of microcystin in seafood. *Environmental Monitoring and Assessment* 187:12 DOI 10.1007/s10661-014-4255-y. (IF=1.679)
*Graduate student co-author (mentored by Moore).
24. Klein, Linda R.*, William G. Hendrix, Jolie B. Kaytes, Virginia I. Lohr, Rodney D. Sayler, **Mark E. Swanson**. 2015. Linking ecology and aesthetics in agricultural landscapes: a case study from the Palouse Region of Washington State, U.S.A. *Landscape and Urban Planning*, 134: 195-209. (IF=3.184).
*Graduate student co-author (mentored by Hendrix).

23. Maletzke, Benjamin, Robert Wielgus, Gary Koehler, **Mark E. Swanson**, Hilary Cooley, and Rich Alldredge. 2014. Effects of hunting on cougar spatial organization. *Ecology and Evolution* 4 (11): 2178–2185, June 2014 (IF=1.18)
22. Totman, Michelle E.*, **Swanson, Mark E.**, Toby M. Rodgers, Paul A. McDaniel, Rick A. Rupp, and David J. Brown. 2014. Soil organic carbon stocks in the forests of Mount Rainier National Park, Washington USA. *Soil Science Society of America Journal* (Special Issue: Papers from the North American Forest Soils Conference: The Role of Forest Soils in Sustaining Ecosystem Services, Whitefish, MT, June 16-20, 2013) 78 (S1): S270-S280. (IF=1.980) *Graduate student co-author; mentored by M.E. Swanson.
21. Lutz, James A., Andrew J. Larson, Tucker J. Furniss*, Daniel C. Donato, James A. Freund, **Mark E. Swanson**, Kenneth J. Bible, Jiquan Chen, and Jerry F. Franklin. 2014. Non-random tree mortality and ingrowth maintain equilibrium spatial patterns in an old-growth *Pseudotsuga-Tsuga* forest. *Ecology* 95:2047–2054. <http://dx.doi.org/10.1890/14-0157.1>. (IF= 5.175) * Graduate student co-author.
20. James A. Lutz, Kaitlyn A. Schwindt**, Tucker J. Furniss, James A. Freund*, Andrew J. Larson, **Mark E. Swanson**, Katie I. Hogan**, and Gillian E. Kenagy**. 2014. Community composition and allometry of *Leucothoe davisiae*, *Chrysolepis sempervirens*, and *Cornus sericea*. *Canadian Journal of Forest Research* 44(6): 677-683 (IF=1.852). **Undergraduate co-author. * Graduate student co-author.
19. Skinner, Megan*, Barry C. Moore, and **Mark E. Swanson**. 2014. Hypolimnetic oxygenation in Twin Lakes, WA: Part II: Feeding ecology of a mixed cold and warm water fish community. *Lake and Reservoir Management*. 30(3): 240-249. (IF=0.80) *Graduate student co-author.
18. **Swanson, Mark E.**, John Campbell, Dan Donato, and Nichole M. Studevant**. 2014. Biological associates of early-seral pre-forest in the Pacific Northwest. *Forest Ecology and Management*. (Special issue: Post-Disturbance Forests) 324: 160-171. (IF=2.92) **Undergraduate co-author.
17. Kwit, Charles, David King, Beverly Collins, and **Mark E. Swanson**. 2014. Conservation importance of early post-disturbance temperate forests. Preface article to Special Edition, *Forest Ecology and Management* 324: 158-159 (IF=2.92).
16. Lutz, James A., Andrew J. Larson, James A. Freund, and **Mark E. Swanson**; Kenneth J. Bible. 2013. The importance of large-diameter trees to forest structural heterogeneity. *PLoS One*. <http://dx.plos.org/10.1371/journal.pone.0082784>. (IF=4.1)
15. Peebles, Kaylie A.*, Robert B. Wielgus, Benjamin T. Maletzke, and **Mark E. Swanson**. 2013. Effects of remedial sport hunting on cougar complaints and livestock depredations. *PLoS ONE* 8(11): e79713. doi:10.1371/journal.pone.0079713. (IF=4.10). *Graduate student co-author
14. Moore, Barry C., Benjamin K. Cross, Marc Beutel, Stephen Dent, Ellen Preece & **Mark Swanson**. 2012. Newman Lake Restoration: A Case Study, Part III. Hypolimnetic oxygenation. *Lake and Reservoir Management* 28:311–327. (IF=0.742) *Graduate student co-author
13. Kathie L. Nicholson*, Nathan Tarlyn, Tyler Armour, **Mark E. Swanson** and Amit Dhingra 2012. Effect of phyllotactic position and cultural treatments toward successful direct shoot organogenesis dwarf 'Pixie' grapevine (*Vitis vinifera* L.) *Plant Cell, Tissue & Organ Culture* DOI 10.1007/s11240-012-0173-2. (IF= 1.234) *Graduate student co-author.
12. Lutz, James A., Andrew J. Larson, **Mark E. Swanson**, and James A. Freund*. 2012. Ecological importance of large-diameter trees in a temperate mixed-conifer forest. *PLoS ONE* 7(5): e36131. doi:10.1371/journal.pone.0036131. (IF=4.537). *Graduate student co-author. Article resulted in abundant media exposure, including *BBC Radio News* and *ScienceDaily.com*.

11. Biswas, Shampa, **Mark E. Swanson**, and Harald Vacik. 2012. Natural Resources Depletion in Hill Areas of Bangladesh: A Review. *Journal of Mountain Science*. 9: 147-156. (IF=0.632).
10. Wade T. Tinkham*, Alistair M.S. Smith, Chad Hoffman, Andrew T. Hudak, Michael J. Falkowski, **Mark E. Swanson**, and Paul E. Gessler. 2012. The utility of LiDAR for forest inventory: Investigating height errors from slope and vegetation in a coniferous forest with complex terrain. *Canadian Journal of Forest Research* 42: 413-422. (IF=2.000). *Graduate student co-author.
9. Biswas, Shampa, Harald M. Vacik, **Mark E. Swanson**, and Sirajul M.S. Haque. 2012. Evaluating Integrated Watershed Management using Multiple Criteria Analysis - a case study at Chittagong Hill Tracts in Bangladesh. *Ecological Monitoring and Assessment*, 184:2741–2761. DOI 10.1007/s10661-011-2148-x (IF=1.356).
8. **Mark E. Swanson**, Jerry F. Franklin, Robert L. Beschta, Charles M. Crisafulli, Dominick A. DellaSala, Richard L. Hutto, David B. Lindenmayer, and Frederick J. Swanson. 2011. The Forgotten Stage of Forest Succession: Early Successional Ecosystems on Forest Sites. *Frontiers in Ecology and the Environment*. 9(2): 117-125. (IF=9.113)
7. Biswas, Shampa, Jalal Uddin Md. Shoaib, S.M.S. Sirajul Haque, **Mark E. Swanson**. 2010. Soil chemical properties under modern and traditional farming systems at Khagrachari, Chittagong Hill Tracts, Bangladesh. *Journal of Forestry Research* 21 (4): 8-14. (IF=0.874)
6. Franklin, J.F., and **Mark E. Swanson**. 2010. Long-term ecological research in the forests of the United States: key lessons with application in Chile and around the world. *Revista Chilena de Historia Natural (Chilean Journal of Natural History)* 83: 185-194. (IF=0.723).
5. Kato, Akira, L.* Monika Moskal, Peter Schiess, **Mark E. Swanson**, Donna Calhoun, and Werner Stuetzle. 2009. Capturing crown formation through implicit surface reconstruction. *Remote Sensing of Environment* 113(6): 1148-1162. (IF=4.605) *Graduate student co-author.
4. **Swanson, Mark E.** 2009. Modeling the effects of alternative management strategies on forest carbon in the *Nothofagus* forests of Tierra del Fuego, Chile. *Forest Ecology and Management* 257 (8): 1740-1750. (IF=2.507)
3. **Swanson, Mark E.** 2006. El manejo forestal ecológico en noroeste Norteamérica: una respuesta a un mundo en movimiento. *Bosque Nativo* (Revista de la Agrupación de Ingenieros por el Bosque Nativo).. Valdivia, Chile. (English title: Ecological forest management in northwestern North America: a response to a changing world.) No. 39: 3-9.
2. **Swanson, Mark E.**, David C. Shaw, and Tisha K. Marosi. 2006. Distribution of western hemlock dwarf mistletoe (*Arceuthobium tsugense* [Rosendahl] G.N. Jones subsp. *tsugense*) in mature and old-growth Douglas-fir (*Pseudotsuga menziesii* [Mirb.] Franco) forests. *Northwest Science* 80(3): 207-217.
1. Paun, Dorothy A., Olivier Trendel, Jeffrey Mathews, Mark Mead, Yihai Liu, Kyle H. Cunningham, Julie Nelson, **Mark E. Swanson**, Kevin Hodgson, and Edward B. Kelley. 1999. A Financial Analysis of North American Pulp, Paper and Packaging Firms: A Review of the 1997 Market and Results. Technical Association of the Pulp and Paper Industry Journal, September, 1999 Vol. 82, No. 9.

Submitted

Batcheler, Mark, Matthew M. Smith, Mark E. Swanson, Marcia Ostrom, and Lynne Carpenter-Boggs. Submitted, Dec. 2023. Assessing silvopasture management as a strategy to reduce fuel loads and mitigate wildfire risk. *Nature Sustainability*.

In revision

Swanson, Mark E. *In revision.* Flora and substrates of anthropogenically burned areas in southwest Tierra del Fuego, Chile: composition and edge effects. *Journal of the Torrey Botanical Society*.

Accessioned Data Sets

Cansler, C Alina, Mark E. Swanson, Tucker J Furniss, Andrew J Larson, JA Lutz. 2018. Data for effects of reintroduced fire on surface fuels in a Sierra Nevada mixed-conifer forest. Utah State University.

Lutz, J. A., J. A. Freund, A. J. Larson, **M. E. Swanson**, T. J. Furniss, K. M. L. Becker, E. M. Blomdahl, C. A. Cansler, S. J. Germain, and S. M. A. Jeronimo. 2017. Data for allometric equations of *Chrysolepis sempervirens*, *Cornus sericea*, *Corylus cornuta* ssp. *californica*, and *Leucothoe davisiae*. Utah State University. http://digitalcommons.usu.edu/all_datasets/22/

Lutz, J. A., T. J. Furniss, S. J. Germain, K. M. L. Becker, E. M. Blomdahl, S. M. A. Jeronimo, C. A. Cansler, J. A. Freund, **M. E. Swanson**, and A. J. Larson. 2017. Shrub consumption and immediate community change by reintroduced fire in Yosemite National Park, California, USA; Supplemental Information. Utah State University. http://digitalcommons.usu.edu/all_datasets/21/ure

Professional Papers (non-peer reviewed unless noted)

Note: fifteen consulting reports (2009-2013) on hybrid poplar plantation management and health and a consulting report on forest carbon (Turtleback Preserve, Orcas Island, Washington) are also available upon request. These reports were generated for municipal- and county-level clients.

Swanson, Mark E. and Kayla Johnston. 2023. Brief assessment of ponderosa pine forest health in the Shady Lane area of the municipality of Palouse, Washington, August 2023. Pro bono consulting report for the municipality of Palouse, Whitman County, Washington.

Swanson, Mark E. 2012. Early Seral Forest in the Pacific Northwest: A Literature Review and Synthesis of Current Science. Produced under contract for Cheryl Friesen, Science Liaison, Willamette National Forest, United States Forest Service. *Peer-reviewed.*

Swanson, Mark E., Hiroo Imaki, and Bruce Lippke. 2009. Literature Review on Innovative Silviculture and Management Practices Supportive of Conservation Values. Working Paper 10, Rural Technology Initiative. Forks, WA: Olympic Natural Resources Center, College of Forest Resources, University of Washington. *Peer-reviewed.*

Swanson, Mark E. 2006. An ecological history of the Charles L. Pack Experimental Forest, Eatonville, Washington: natural history, landscape ecology, and forest management. *Paper contracted for the Center for Sustainable Forestry at Charles L. Pack Experimental Forest. Available online at:* http://www.packforest.org/research/Pack_ecolhist.pdf

Swanson, Mark E. 2005. Centuries of change in Pacific Northwest forests: ecological effects of forest simplification and fragmentation. *Chapter in: Saving Washington's Working Forest Land Base: A Forum of the Northwest Environmental Forum at the College of Forest Resources at the University of Washington. Available online at:* <http://www.nwenvironmentalforum.org/ForestForum/topicpapers/tp10.pdf>. *Peer-reviewed.*

Letters

Mark E. Swanson, Jerry F. Franklin, Robert L. Beschta, Charles M. Crisafulli, Dominick A. DellaSala, Richard L. Hutto, David B. Lindenmayer, and Frederick J. Swanson. 2011. A reply to King *et al.* *Frontiers in Ecology and the Environment* 9(6): 320. doi:10.1890/11.WB.017.

DellaSala, Dominick A., James R. Karr, Tania Schoennagel, Dave Perry, Reed F. Noss, David Lindenmayer, Robert Beschta, Richard L. Hutto, **Mark E. Swanson** and Jon Evans. 2006. "Post-fire logging debate ignores many issues." *Science* 314: 51-52.

Book Chapters

Matthew J. Reilly, Jessica Halofsky, Meg A. Krawchuk, Daniel C. Donato, Paul F. Hessburg, James Johnston, Andrew Merschel, **Mark E. Swanson**, Joshua S. Halofsky, and Thomas A. Spies. 2021. Fire Ecology and Management in Pacific Northwest Forests. Chapter 10 in: *Fire Ecology and Management: Past, Present, and Future of US Forested Ecosystems*. Springer Nature.

Scheller, Robert, and **Mark E. Swanson**. 2015. The simulation of forest recovery following disturbances: vegetation dynamics, biomass, carbon, nitrogen, water cycling, aboveground and belowground dynamics. Chapter 10 (pp 263-285) in: Perera, Ajith, Brian Sturtevant, and Lisa Buse. *Modeling Forest Landscape Disturbances*. New York: Springer.

Franklin, Jerry F., and **Mark E. Swanson**. 2007. Forest landscape structure, degradation, and condition: some commentary and fundamental principles. Chapter 12 (pp. 123-137) in: Lindenmayer, David and Richard Hobbs. 2007. *Managing and designing landscapes for conservation: moving from perspectives to principles*. Malden, MA: Blackwell Publishing.

Extension Publications

Magee, Margaret I., and Mark E. Swanson. *In review*. Down woody debris microsites for growing black huckleberry shrubs. Extension Bulletin XXXX, Washington State University, Pullman, Washington.

Swanson, Mark E. 2023. Introduction to Washington's ecosystems: coastal forest to sagebrush steppe, oak savanna to alpine tundra. Master Naturalist Program, Washington State University Extension. *Peer-reviewed*.

Publications in Preparation

Conference Proceedings, Presentations, and Posters

Holt, Dano E., **Mark E. Swanson**, R. Alex Thompson, and Henry D. Adams. 2023. Deciduous canopy tree representation in a mixed forest: impacts on understory plant communities in the Pacific Northwest. COS 107-4. 108th Annual Meeting, Ecological Society of America, Portland, Oregon. August 6-11, 2023.

Magee, Margaret I., **Mark E. Swanson**, Henry D. Adams, Andrew S. Nelson, Norris Boothe, Jason R. Reinhardt. 2023. Down woody debris microsite facilitation for black huckleberry (*Vaccinium membranaceum*) seedlings. *Poster*. 108th Annual Meeting, Ecological Society of America, Portland, Oregon. August 6-11, 2023.

Swanson, Mark E., Andrew S. Nelson, Henry D. Adams, Arjan J.H. Meddens, Amanda T. Stahl, and Rudy T. Engstrom. 2022. Microsite effects on ponderosa pine and Douglas-fir seedling survival and growth. *Invited talk*. 41st Inland Empire Reforestation Council Annual Meeting, Western Forestry and Conservation Association. Coeur d'Alene Resort, Coeur d'Alene, Idaho. March 1st, 2022.

Swanson, Mark E. 2022. Corridors, connectivity, and landscape pattern: important keys to conservation. *Invited Talk*. Forest Landowners Winter School 2022, WSU Forestry Extension. February 26th, 2022.

Swanson, Mark E. 2021. A couple of fires in the American West (with some discussion of fuels monitoring and research). *Invited talk*. FOR 433 Fire and Fuel Modeling, Prof. Heather Heward, College of Natural Resources, University of Idaho.

Swanson, Mark E. 2021. Winter scavenging guilds of northern Idaho: a case study from camera trapping data. *Invited talk*. Wildlife Society Student Chapter, Washington State University. Tuesday, March 9th, 2021.

Swanson, Mark E. 2020. An introduction to the early seral pre-forest stage: ecological diversity and management concerns. *Invited talk*. Pinchot Partners Collaborative Working Group, Packwood, Washington.

Swanson, Mark E. 2020. Early succession for non-industrial forest landowners: harvest, habitat, healthy forests, and high diversity. *Invited talk*. Washington State University Forestry Extension- webinar for family forest landowners. Wednesday, August 5th, 2020.

Swanson, Mark E. 2020. Ecological silviculture of ponderosa pine in the Palouse: a photo-rich discussion. *Invited talk*. Spring 2020 Department Seminar Series, Department of Forest, Rangeland, and Fire Sciences, University of Idaho. Wednesday, April 29th, 2020.

Swanson, Mark E. 2019. Defining the messy stage of forest development: recognizing distinctive early seral compositional and structural attributes. *Invited talk*. Early Seral Biodiversity Science & Management Workshop (Forest Biodiversity Research Network), June 10 & 11, 2019, CH2M Alumni Center (725 SW 26th St, Corvallis, OR 97331), Oregon State University.

Swanson, Mark E. (presenter), Amy C. Ulappa, Lisa A. Shipley, Rachel C. Cook, and John G. Cook. 2017. Effect of herbicide on foraging ecology of Columbian black-tailed deer. “Current Topics in Forest Health”, University of Idaho Extension, December 15th 2017. Coeur d'Alene Inn, Coeur d'Alene, Idaho.

Cynthia Chang, Joseph A. Antos, Abir Biswas, James E. Cook, Roger del Moral, Dylan G. Fischer, Charles B. Halpern, Andrés Holz, Robert J. Pabst, **Mark E. Swanson**, and Donald B. Zobel. 2017. Patterns of plant succession across a disturbance gradient. Ecological Society of America Annual Meeting, Portland, Oregon, August 6-11, 2017.

Hanley, Don and **Mark E. Swanson**. 2017. Thinning and pruning. *Invited talk*. Talk given at the “Forest and Range Owner Field Day”, Dayton, Washington, June 24th, 2017. WSU Forestry Extension.

Amy C. Ulappa*, Lisa A. Shipley, Rachel C. Cook, John G. Cook, **Mark E. Swanson**. 2017. Effects of silvicultural herbicides on the nutritional ecology of Columbian black-tailed deer. 97th Annual Meeting of the American Society of Mammalogists, 20 Jun 2017 - 24 Jun 2017, University of Idaho, Moscow, Idaho.

Swanson, Mark E. 2016. Birds in managed forest of the Pacific Northwest. *Invited talk*. Palouse Chapter of the Audubon Society, Moscow, Idaho. Presented in the Fiske Room of the 1912 Center, Wednesday, April 20th, 2016. Contact: Diane Weber, Pullman, Washington, 509- 334-3817.

Inglis, Briana, Landon Charlo, **Mark E. Swanson**, and Daniel H. Thornton. 2016. Camera trap documentation of mammal occurrences in created snag gaps in young coastal temperate conifer forest, northwestern Washington State. Showcase for Undergraduate Research and Creative Activities (SURCA), March 28th, 2016, Senior Ballroom, Compton Union Building, Washington State University, Pullman, Washington.

Rose-Albert, Alex, Lindsay Welfelt, and **Mark E. Swanson**. 2016. Black bear density within ecoregions of the Central Cascades, Washington. Showcase for Undergraduate Research and Creative Activities (SURCA), March 28th, 2016, Senior Ballroom, Compton Union Building, Washington State University, Pullman, Washington.

Swanson, Mark E. Burning Issues: The Past, Present, and Future of Fire and Forest Management in the North American West. *Invited Talk*. The Roots of Contemporary Issues Fall Lecture 2015. Washington State University Department of History. Tuesday, October 20th, 2015. 7:00-8:30 PM, CUB Senior Ballroom.

Swanson, Mark E. 2015. Forest management and birds: a forester's perspective. *Invited talk*. University of Idaho Experimental Forest, Working Forests Field Day, Princeton, ID. University of Idaho College of Natural Resources and University of Idaho Forestry Extension. Saturday, September 26, 2015.

Swanson, Mark E. 2015. Early-seral pre-forest in the Pacific Northwest: diverse conservation values. *Invited talk*, Joint Annual Meeting, Washington State Society of American Foresters (SAF) and the Washington Chapter of The Wildlife Society (TWS-WA), April 15 to 17, 2015.

Ulappa, Amy, Lisa A. Shipley, John Cook, Rachel Cook, and **Swanson, Mark E.** 2015. Early-seral pre-forest in the Pacific Northwest: diverse conservation values. *Invited talk*, Joint Annual Meeting, Washington State Society of American Foresters (SAF) and the Washington Chapter of The Wildlife Society (TWS-WA), April 15 to 17, 2015.

Woodley, Steven, Benjamin Zamora, and **Mark E. Swanson.** 2015. Environmental factors triggering the emergence of *Eustenopus villosus* and *Larinus curtus* within *Centuarea solstitialis* populations on the Kramer Prairie in southeastern Washington State. 86th Annual Meeting, Northwest Scientific Association, Pasco, Washington, April 1-4, 2015.

Hendrickson, Christopher, **Mark E. Swanson,** Todd Einhorn, and Amit Dhingra. 2015. Physiogenomics of European pear ripening. Plant and Animal Genome Conference XXIII, San Diego, CA, January 10-14th, 2015.

Swanson, Mark E. 2014. "Early seral forests: diverse origins, diverse values". *Invited talk*, NCASI West Coast Regional Meeting. The Heathman Lodge, Vancouver, WA, September 24th, 2014.

Swanson, Mark E. 2014. The Sinlahekin: geology, vegetation, disturbance, and landscape pattern. *Invited talk*, 75th Anniversary of the Sinlahekin Wildlife Management Area, Washington Department of Fish and Wildlife. Saturday-Sunday, July 26-27, Sinlahekin Wildlife Management Area, Loomis, WA.

Swanson, Mark E. 2014. Forest succession in the Sierra Nevada: rich patterns, remarkable complexity. *Invited talk*, Rim Fire Technical Workshop on Reforestation, Part 1. Thursday, July 10, USFS Wildland Fire Training Center, McClellan, CA.

Skinner, Megan, Barry C. Moore, and **Mark E. Swanson.** 2013. "The effects of hypolimnetic oxygenation on the diets of brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), and golden shiner (*Notemigonus crysoleucas*) in Twin Lakes, Washington." North American Lake Management Society 2013 Annual Meeting, November 1, 2013, San Diego, CA.

Skinner, Megan, Barry C. Moore, and **Mark E. Swanson.** 2013. "The effects of hypolimnetic oxygenation on the diets of brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), and golden shiner (*Notemigonus crysoleucas*) in Twin Lakes, Washington." North American Lake Management Society 2013 Annual Meeting, November 1, 2013, San Diego, CA.

Totman, Michelle, **Mark E. Swanson,** Toby Rodgers, Paul A. McDaniel, Rick A. Rupp, and David J. Brown. 2013. Soil organic carbon stocks in Mt. Rainier National Park. Poster presented at North American Forest Soils Conference: The Role of Forest Soils in Sustaining Ecosystem Services, Whitefish, MT, June 16-20, 2013.

Skinner, Megan, Barry C. Moore, and **Mark E. Swanson.** Oral Presentation. "The effects of hypolimnetic oxygenation on the diets of brook trout (*Salvelinus fontinalis*) and rainbow trout (*Oncorhynchus mykiss*) in Twin Lakes, Washington." Western Division American Fisheries Society 2013 Annual Meeting, April 17, 2013, Boise, ID.

Totman, Michelle, Paul A. McDaniel, Toby Rodgers, Rick A. Rupp, **Mark E. Swanson,** and David J. Brown. 2013. Estimating soil organic carbon stocks in Mt. Rainier National Park. Poster presented at

Washington Society of Professional Soil Scientists (WSPSS) Joint Winter Meeting with the Northwest Forest Soils Council (NWFSC), Okanogan-Wenatchee National Forest Headquarters, Wenatchee, WA, March 7, 2013.

Haeuser, Emily, **Mark E. Swanson**, Richard A. Rupp, Eva Strand. 2013. Spatiotemporal Encroachment Patterns of Conifers into Shrub-Steppe Areas in the Sinlahekin Wildlife Area, Washington State. Poster presented at the 84th Northwest Scientific Association Annual Meeting, Portland, OR, March 20-23, 2013.

Totman, Michelle, Paul A. McDaniel, Toby Rodgers, Rick A. Rupp, **Mark E. Swanson**, and David J. Brown. 2013. Estimating soil organic carbon stocks in Mt. Rainier National Park. Poster presented at the Third Robert E. Allan Plant Breeding Symposium, Monday, March 25th, 2013, Ensminger Pavilion, Washington State University.

Unger, Rachel, Misha R. Manuchehri, Ian C. Burke, and **Mark E. Swanson**. 2013. Effect of wheat population on wheat yield and yield parameters: a case for increasing planting rates. Western Society of Weed Science Meeting. San Diego, CA, March 11 – 14, 2013.

Preece, Ellen P., Barry C. Moore, and **Mark E. Swanson**. 2012. "Identifying Best Methods for Detecting Microcystin in Fish Muscle." Washington State Lake Protection Association. 2012 Annual Meeting. Oct. 24-26, Wenatchee, WA. "The Future of Lakes: The Next Generation of Limnology Research and Mitigation".

Preece, Ellen P., Barry C. Moore, and **Mark E. Swanson**. 2012. "Detection and Quantification of the Cyanotoxin, Microcystin, in Fish Muscle Tissue." North American Lake Management Society. 2012 International Symposium: Nov. 7-9, Madison, WI, "Lakes in the Landscapes".

Unger, Rachel, Dave Huggins, Ian Burke, William Pan, **Mark E. Swanson**, David Uberuaga. 2012. "Field-Scale Changes in Soil Profile N After 10 Years of Continuous No-Tillage." Agronomy Abstracts. American Society of Agron. 2012 Annual Meetings: Oct. 21-24, Cincinnati, OH, "Visions for a Sustainable Planet".

Kwit, Charles, David King, James Runkle, Lara Souza, Beverly Collins, and **Mark E. Swanson**, (organizers). 2012. Organized Oral Session 14, "Conservation Value and Dynamics of Early Post-Disturbance Temperate Forests in North America", 97th Annual Meeting, Ecological Society of America, Portland, Oregon, August 2012.

Swanson, Mark E. 2012. "Conservation value of the early stage of succession in western U.S. forest." 97th Annual Meeting, Ecological Society of America, Portland, Oregon, August 5-10, 2012. Organized Oral Session 14, "Conservation Values and Dynamics of Early Post-disturbance Temperate Forests in North America". August 7th, 2012. *Resulted in abundant media exposure, including New York Times (in press), Seattle's KIRO FM, UPI.com, and ScienceDaily.com.*

Detto, Matteo, and **Mark E. Swanson**. 2012. A comparison of topographic relations across forest types in the CTFS Network: Methods and preliminary results. Center for Tropical Forest Science, 4th annual Forest Dynamics Plot network annual workshop: "Dimensions of Biodiversity", July 17-August 3rd, 2012, School of Environmental and Forest Sciences, University of Washington, Seattle, Washington.

Dhingra, Amit, Kathie Nicholson, Nathan Tarlyn, Derick Jiwan, Scott Schaeffer, **Mark E. Swanson**, Kate Evans. 2012. Manipulating Fruit Genomes – Discovery to Application. World Congress on In Vitro Biology (Society for In Vitro Biology), June 3-7, 2012, Bellevue, Washington.

Swanson, Mark. E. 2012. "What is... the matrix? Conservation in multiple-use forest environments of the 21st century". Annual Meeting of the Northwest Scientific Association, "Meeting Forest Conservation Goals in the 21st Century", March 28-31, 2012, Owyhee Plaza Hotel, Boise, Idaho (<http://www.northwestscience.org/2012meeting>).

Swanson, Mark E. 2012. “Hybrid poplar as a multi-functional, multi-product crop (The view from the hybrid poplars: agriculture and forestry as a continuum of practice)”. Invited lecture, Department of Crops and Soils Sciences seminar series, Washington State University. Monday, February 13th, 2012. Available online at: http://css.wsu.edu/seminar/soils_2012-1.htm.

Unger, Rachel, **Mark E. Swanson**, Ian Burke, David Huggins, Eric Gallandt, and Stewart Higgins. 2012. “Analyzing Terrain Attribute Effects on Italian Ryegrass Presence using Zero-Inflated Poisson and Poisson GLM.” West. Soc. Weed Sci. Abst., March 12-15, 2012, Peppermill Resort, Reno, Nevada.

Unger, Rachel, **Mark E. Swanson**, Ian Burke, Dave Huggins, Eric Gallandt, and Stewart Higgins. 2012. “The Effects of Crop Rotation and Terrain Attributes on the Weed Seed Bank.” West. Soc. Weed Sci. Abst., March 12-15, 2012, Peppermill Resort, Reno, Nevada.

Lutz, James A., Andrew J. Larson, and **Mark E Swanson**. 2011. The Western Forest Initiative- the Yosemite and Wind River Forest Dynamics Plots: Assessing the Ecosystem Consequences of Climate Variability and Climate (*Poster and Presentation*). DISCCRS (DISsertations initiative for the advancement of Climate Change ReSearch) VI, October 22 - 29, 2011, La Foret Conference Center, Colorado Springs, Colorado.

Shiple, Lisa, **Mark E. Swanson**, Amy Ulappa, John Cook, and Rachel Cook. 2011. Effects of intensive forestry on black-tailed deer nutrition. NCASI West Coast Regional Meeting. The Heathman Lodge, Vancouver, WA, September 22, 2011.

Unger, Rachel, Ian Burke, **Mark E. Swanson**, Dave Huggins, Eric Gallandt, Stuart Higgins. 2011. The effects of crop rotation and topography on the weed seed bank in the Palouse wheat region of Washington State. American Society of Agronomy Meeting. San Antonio, TX, October 16 -19, 2011.

Swanson, Mark E. 2011. Scientific Presenter at: PacifiCorp/Rocky Mountain Elk Foundation Field Day: Early Seral Habitat in Managed Forests. Heritage Park Events Center, Ariel, Washington, June 24th, 2011.

Swanson, Mark E. and Rebecca L. Greenwood. 2011. The effects of thinning on maturation-phase Douglas-fir/western hemlock forests in the central Washington Cascades. 11th Annual North American Forest Ecology Workshop, Roanoke, Virginia, June 19-23, 2011.

Swanson, Mark E. 2011. “The value and management of early-successional stands”. University of Idaho and Washington State University Cooperative Extension System. 19th Annual Family Forester’s Workshop, Coeur d’Alene Resort, Coeur d’Alene, Idaho. January 21st, 2011. *Invited presentation*.

Swanson, Mark E. 2010. “Matrix management in the 21st century: ecological and technological considerations.” International Forum for Adaptability Science II: Technologies for a Sustainable Society. Nov. 30–Dec. 3, 2010, Tohoku University, Sendai, Japan. *Invited presentation*.

Swanson, Mark E. 2010. “Hybrid poplar as a regional bioethanol feedstock: its development, production, and economics.” Western Sun Grant Annual Meeting, October 13th, 2010, Vancouver, WA. Part of the Biomass Fuels Summit 2010, October 12-13, Hilton Hotel, Vancouver, Washington.

Emerson, Paul, G. Beauchamp, Robert Heyduck, Jeffrey C. Kallestad, Mick O’Neill, Richard Shuren, Brian Stanton, and **Mark E. Swanson**. 2010. Hybrid poplar suitability for regional deployment as a bio-fuel feedstock. International Poplar Symposium, Orvieto, Italy, September 20 – 25, 2010.

Swanson, Mark E. 2010. “Early seral forest: some concluding thoughts” Early Seral Forest: We Know We Need It- How Do We Get It? Central Cascades Adaptive Management Partnership and NW Oregon Ecology Group, LaSells-Stewart Conference Center, Oregon State University, Corvallis, Oregon. April 28th, 2010. *Invited presentation*.

Franklin, Jerry F., James A. Lutz, Andrew J. Larson, James A. Freund, Mark E. Harmon, Robert Van Pelt, Kenneth Bible, **Mark E. Swanson**, and Keala Hagmann. 2009. A critical window on reality: long-term forest plots. 94th Annual Ecological Society of America Meeting: "Ecological Knowledge and Society", August 2009, Albuquerque, New Mexico.

William S. Keeton, Per Angalstam, Yuri Bihun, Jiquan Chen, Mykola Chernyavskyy, Brigitte Commarmot, Jerry F. Franklin, Andrew J. Larson, David Lindenmayer, Jared Nunery, Thomas Spies, **Mark E. Swanson**, and Robert Van Pelt. 2008. A global meta-analysis of temperate old-growth forests: structural characteristics, carbon storage, and management implications for montane ecosystems. *Mountain Forests in a Changing World: Advances in research on sustainable management and the role of academic education*. April 2 - 4, 2008, University of Natural Resources and Applied Life Sciences, Vienna, Austria.

Kato, Akira, L. Monika Moskal, **Mark E. Swanson**, Peter Schiess, and Donna Calhoun. (2007b) A wrapped surface reconstruction method of LIDAR points to identify tree crown attributes, *Proceedings of CRSS/ASPRS 2007 Fall Conference*, Ottawa, Canada, Nov. 2007.

Akira Kato, Monika L. Moskal, **Mark E. Swanson**, Donna Calhoun, and Peter Schiess. A wrapped-surface reconstruction method of LIDAR points to identify tree crown attributes. Canadian Remote Sensing Society/American Society of Photogrammetry and Remote Sensing Fall Conference, Oct. 28th-Nov. 1st, 2007. Ottawa, Canada.

Franklin, Jerry F. and **Mark E. Swanson**. "Attributes of early successional communities on forest sites." Early Seral Forest Symposium, "What is a 'Good' Forest Opening? And is the Future a Concern?" Oregon State University, Corvallis, Oregon, January 30th, 2007.

Swanson, Mark E. "Two maturation-phase Douglas-fir stands in the Wind River: composition, structure and dynamics." Wind River Canopy Crane Research Facility Science Symposium, Carson, Washington, June 8-9, 2006.

Swanson, Mark E., Linda E. Storm, Daniela J. Shebitz and Carson B. Sprenger. "Emerging Research Fronts in Traditional Fire Ecology." Northwest Scientific Association, 78th Annual Meeting, Corvallis, Oregon, Oregon State University Press. 23-26 March 2005.

Swanson, Mark E., Miller, A., Poling, V., Honea, J., and Travers, V. "Environmental Science and Resource Management: The Redesignated Undergraduate Curriculum of the UW College of Forest Resources." Presented at the EFS West's Sustainability and Higher Education Conference "Defining the Vision for Higher Education", October 21-23rd (Thurs.-Sat.), 2004- Portland, Oregon.

Swanson, Mark E. "A landscape-scale carbon inventory in Tierra del Fuego, Chile". Presented at the Puget Sound Chapter of the Society of American Foresters meeting, held at the University of Washington College of Forest Resources. April 18th, 2003.

Swanson, Mark E., and Marosi, Tisha K. "Distribution of Hemlock Dwarf Mistletoe (*Arceuthobium tsugense* ssp. *tsugense*) in a mature Douglas-fir (*Pseudotsuga menziesii*) forest". Presented at Northwest Science 2003, held at the Olympic Natural Resources Center, Forks, WA. March 27th, 2003.

Swanson, Mark E. "Measuring and mapping large blocks of young and mature forests near the Wind River Canopy Crane Research Facility." Wind River Canopy Crane Research Facility Science Symposium, Carson, Washington, June 17-18, 2000.

Other Publications

Swanson, Mark E., and 7 student co-authors. In revision. Forest stewardship plan developed for Riverside School District, Chattaroy, Spokane County, Washington. Part of a practicum class on development of management plans in forestry.

Swanson, Mark E., and 5 student co-authors. 2011. Forest stewardship plan developed for Tom and Cheryl Kammerzell, Colfax, Washington. *Approved by Washington Department of Natural Resources in March 2011.*

Swanson, Mark E. 2010. Managing forests for climate change. *Northwest Woodlands* (Society of American Foresters). Spring, 2010: 12-15.

Swanson, Mark E. 2010. Student SAF chapter thrives at Washington State University. *Western Forester* (Society of American Foresters), 55 (2): 20-21.

Swanson, Mark E., and 24 student co-authors. 2010. A Proposed Management Plan for the 19-Acre Treatment Stand Located at Sravasti Abbey, Newport, Pend Oreille County, Washington State. Consulting document produced for Sravasti Abbey, Newport, Washington. *Approved by Washington Department of Natural Resources in November 2010.*

Funding

Funded

Krawchuk, Meg, Matthew Betts, **Mark E. Swanson**, James Rivers, and Jake Verschuy1. 2023. Synthesis and Application of Research on the Biodiversity of Early Seral Forests in Fire-generated and Intensively Managed Forests. Fish and Wildlife Habitat in Managed Forests program, College of Forestry, Oregon State University. 07/01/2023-12/31/2024. \$137,164.

Swanson, Mark E. 2021-2023. Revitalization of wildland fire program at Washington State University: funding for tools, fireline clothing, fire packs, ignition devices, and other equipment. Assorted sources, including private donors, Weyerhaeuser Company, the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS), Sierra Pacific Industries, and others. ~\$35,000 received to date.

Ostrom, Marcy, **Mark E. Swanson**, and Mark B. Batcheler. 2021. Silvopasture in the inland Northwest: analysis of forest communities and fuel structures. WSU Partnership with National Agroforestry Center. \$40,000.

Swanson, Mark E. 2021. Long-term Silvicultural Research in the Northern Rockies: Updates and Results-Subaward. USDA Forest Service Rocky Mountain Research Station, Moscow, Idaho. Research Joint Venture Agreement with University of Idaho and USFS. \$10,000.

Swanson, Mark E., Andrew S. Nelson, Amit Dhingra, Norris Boothe, and Sean M. Alexander. 2021. Designing Early Seral Ecosystems for Huckleberry Culture and Management in the Pacific Northwest. Emerging Research Issues in Washington Agriculture, College of Agricultural, Human, and Natural Resource Sciences, Washington State University. Internal grant offering. \$68,217.

Wheeler, David L., and **Mark E. Swanson**. 2021. From waste to food: conversion of organic waste substrates into gourmet edible and medicinal mushrooms in Washington. Emerging Research Issues in Washington Agriculture, College of Agricultural, Human, and Natural Resource Sciences, Washington State University. Internal grant offering. \$80,000.

Batcheler, Mark, Marcy Ostrom, and **Mark E. Swanson**. 2020. Silvopasture in the inland Pacific Northwest: effects of fire, grazing, and timber management on fuel structure and vascular plant diversity. Western SARE Grant. \$37,500 funding application.

Krawchuk, Meg (CoF, OSU), Matthew G. Betts (CoF, OSU), **Mark E. Swanson** (Washington State University), James W. Rivers (CoF, OSU). 2019. Wildfire-IFM bird study: biodiversity in natural and managed early seral forests of southern Oregon. National Council of Air and Stream Improvement (NCASI). 4/1/2019 – 3/30/2023. \$323,000.

Krawchuk, Megan, Matthew G. Betts, Mark E. Swanson, and James W. Rivers. 2016. “Seed grant: Wildfire-IFM bird study: biodiversity in natural and managed early seral forests of southern Oregon.”

National Council for Air and Stream Improvement, Corvallis, Oregon. \$20,000.

Thornton, Dan, and Mark E. Swanson. 2014. Demographics and wildlife use of created snags in second-growth temperate conifer forest. Snohomish County PUD. \$33,065. Supports M.S. student.

Lutz, James A., Andrew J. Larson, Mark E. Swanson, and James A. Freund. 2013. "Post Rim Fire assessment of fuel consumption and mortality in the Yosemite Forest Dynamics Plot." USDO National Park Service (Emergency Funds In Support of Monitoring Efforts) for 2014 Yosemite Forest Dynamics Plot re-measurement. \$59,064.

Swanson, Mark E. 2011. Design and implementation of an ecological integrity protocol for the Sinlahekin Wildlife Management Area: a prototype methodology for east Cascadian forests. Funding agency: Washington Department of Fish and Wildlife, Olympia, Washington. \$61,154. *Graduate student: Emily Haeuser (M.S. level).*

The Influence of Forest Herbicides on the Nutritional Ecology of Black-tailed Deer in Western Washington. \$200,000. Washington Department of Fish and Wildlife. Co-P.I. Lisa A. Shipley, **Mark E. Swanson**, John Cook, Rachel Cook. (6/11 – 5/14).

Landscape restoration and spatial responses of bighorn sheep in Sinlahekin Wildlife Management Area. Washington Department of Fish and Wildlife. \$30,000. Co-P.I: **Mark E. Swanson** and Lisa A. Shipley. (5/10-8/12). *Graduate student: Tiffany Baker (M.S. level).*

Mark E. Swanson and David J. Brown, 2011. Soil carbon flux in forests of the Mount Rainier region: effect of topography, elevation, and intensive management. Funding agency: Natural Resource Conservation Service. \$150,000 plus instrumentation costs. *Graduate student: Michelle Totman (M.S. level).*

Washington State University, Greenwood Resources, and ZeaChem Corporation. 2007-2010. Hybrid poplar as a regional bioethanol feedstock: its development, production, and economics. Funding agency: Western Sun Grant subcontract T-0013A. \$494,794. PI: **Mark E. Swanson** (in lieu of Dr. Jon D. Johnson, deceased).

Swanson, Mark E., and Randy L. Burke. 2010. Coarse woody material, litter, and duff characteristics in an old-growth Sierran mixed-conifer forest (Yosemite Forest Dynamics Plot): correlation with overstory and topographic variables. Funding agency: College of Agricultural, Human, and Natural Resources: Undergraduate Research & Creative Project Proposal. \$1,000.

In Preparation

Reinhardt, Jason, **Mark E. Swanson**, John Byrne, Sean Smith, Jennifer Costich-Thompson, AJ Helgenberg. 2023. Assessing silvicultural system impacts on plant community composition, pollinator habitat, and invasive plants in the Northern Rocky Mountains. Funding agency: Forest Service Research & Development Bipartisan Infrastructure Law, Ecosystem Restoration Research Project Proposal. \$195,000.

Pending

Submitted Grants

Not Funded

Ostrom, Marcia, **Mark E. Swanson**, and Mark B. Batcheler. 2021. Optimizing benefits of silvopasture systems in the interior Pacific Northwest: influences on fuel structure and vascular plant diversity. ID# 21-1-01-40. Joint Fire Sciences Program. 10/1/2021-9/30/2023. \$24,479.

Hessburg, Paul F. (PI), Nicholas Povak (co-PI), Mark E. Swanson (co-PI), Brion Salter (co-PI), and James Dickinson (co-PI). 2015. Early-successional habitats and high severity fires: Comparing early 20th and

21st century area and patch sizes in the Inland Northwest and Rocky Mountain regions. Funding agency: Joint Fire Sciences Program. Requested: \$345,110.

Chang, Cynthia (PI), Abir Biswas (co-PI), Thomas H. DeLuca (co-PI), Dylan Fischer (co-PI), Andres Holz (co-PI), Robert Pabst (co-PI), Mark Swanson (co-PI), Charles M. Crisafulli (senior personnel), Kristin Sweeney (senior personnel). From Barren Plains to Old-Growth Forests in 35 Years : The Effect of Disturbance Intensity on Succession After a Major Volcanic Eruption. 2018. Preliminary Proposal. Funding agency: National Science Foundation (Long-Term Research in Environmental Biology). Requested: \$100,000.

Charlo, Landon and **Mark E. Swanson**. January 2015. Supplementary funding for: 'Demographics and wildlife use of created snags in second-growth temperate conifer forest (Snohomish County PUD)'. Funding agency: Intertribal Timber Council and the USDA Forest Service Southern Research Station Native American Natural Resource Research Scholarship. Requested: \$3,000.

Edburg, Steven L., Lamb, Brian, Liu, Heping, Vaughan, Joe, Adam, Jenifer, Evans, Dave, and **Swanson, Mark E.** Development of a Low Cost Airborne Platform for Earth System Process Measurements. NSF Major Research Instrumentation (Program Solicitation 11-503), \$1,327,930. *Submitted 09/17/2012. Declined.*

Lutz, James A., Andrew J. Larson, **Mark E. Swanson**, James A. Freund, and Gus Smith. September 2013. Disturbance mediated self-organization of forest composition and structure. National Science Foundation Rapid Response Research (RAPID) review due to the impacts of the Rim Fire on the Yosemite Forest Dynamics Plot. \$200,000.

Edburg, Steven L., Meddens, Arjan J.H., and **Swanson, Mark E.** Quantifying Snag Fall Rates and Decomposition along a Chronosequence of Insect-Affected Forests to Improve an Earth System Model. DOE Terrestrial Ecosystem Science DE-FOA-0000749. \$427,301. *Invited to submit full proposal, 9/19/2012. Submitted by funding agency deadline, 11/12/2012. Not funded.*

Bishop, John, Cynthia Chang, Janneke Hille Ris Lambers, and Mark E. Swanson. 2013. Elucidating temporal dynamics of stochastic and deterministic successional mechanisms across stress and disturbance gradients at Mount St. Helens. National Science Foundation, Division of Ecosystem Biology - Population and Community Ecology.

Garcia-Perez, Manuel, Su Ha, Claudio Stockle, Usama E. Zaher, and **Mark E. Swanson**. Submission January 2012. Selective Pyrolysis and Novel Bio-oil Refinery Concept to Sustainably Produce Aviation Fuels and Sequester Carbon from Forest and Agricultural Wastes. Funding agency: National Science Foundation. Requested amount: \$1,999,926.

Shipley, Lisa A., John G. and Rachel C. Cook, and **Mark E. Swanson**. Testing the Forage Resource Evaluation Model (FRESH-DEER) at the Stand Level with Black-tailed Deer. Funding agency: United States Forest Service. \$300,000. *Currently tabled by agency due to low funding levels.*

Balancing Overstory and Understory Values in Agroforestry through Thinning: Effects on Non-timber Forest Products and Forest Ungulates. \$427,286. USDA NIFA AFRI Foundational. Co-P.I. L.A. Shipley, M. Swanson. (12/12 – 5/16).

Eisenberg, Cristina, Daniel C. Donato, **Mark E. Swanson**, Jerry F. Franklin, and William Fagan. Reassessing the Universality of Trophic Cascades: Context Dependence by Setting and Sere in Pacific Northwest Forest Ecosystems. Funding agency: National Science Foundation. \$1,523,895.

Service Work- Selected Items

At Oregon State University

- Manager, Cameron Tract (270 acres), Adair Village, Oregon
- ...more to come!

At Washington State University

- Junior faculty mentor for three junior faculty in the School of the Environment over period 2015-present.
- Elliott State Research Forest Scientific Advisory Panel, Oregon State University. *Invited member.*
- Invited Keynote Speaker, ASWSU Faculty and Staff Awards, Friday, April 14th, 2017.
- Participant, LEAD21 Leadership Development Program, 2015-2016.
- Data Analytics Degree Development Workgroup, October 31st, 2014- present. Commissioned by Provost Dan Bernardo. Contact: Dr. Ron Mittelhammer, Dean, CAHNRS. mittelha@wsu.edu.
- Faculty reviewer, WSU Strategic Plan 2014-2019. Contact: Dr. Rebecca Craft, (509) 335-5040, craft@wsu.edu.
- Leader, CAHNRS task force on statistical/quantitative resources. Contact: Dean of CAHNRS, Dr. Ron C. Mittelhammer, mittelha@wsu.edu, 509-335-1706. Worked with Dr. Mittelhammer and others to develop and analyze a statistical expertise and needs survey for CAHNRS faculty, staff, and graduate students.
- Lead author of the following report: *Swanson, Mark E. and Keith A. Blatner. December 2013. Results of the CAHNRS Statistics Expertise Inventory: a report. Office of the Dean, College of Agricultural, Human and Natural Resource Sciences, Washington State University.*
- Development of CAHNRS Quantitative Consortium (CQC) concept to address statistical/analytical needs within CAHNRS. Foundational letter submitted to Deans Bernardo, Kidwell, and Cavalieri on November 15th, 2011. Currently (Fall 2013) working with Dean Mittelhammer.
- Selected to Provost's Leadership Academy, Washington State University, December 2011-December 2012.
- Associate Editor, *Northwest Science*, March 15, 2018
- Associate Editor, *Western Journal of Applied Forestry*, May 2012-2014.

For full record of University service, please see or request service work document, "Mark E. Swanson- Service, WSU".

Awards, Honors, and Scholarships

- Involvement Advisor of the Year, 2015-2016, Associated Students of Washington State University, for work with the student chapters of the Society of American Foresters (Forestry Club) and The Wildlife Society. Awarded on April 25th, 2016.
- Inducted Member, Washington State University Teaching Academy, November 2014.
- Nominated for Sahlin Award for Excellence in Instruction, September 2013.
- Promoted to rank of Associate Professor in the School of the Environment, March 5th, 2013. Effective August 16th, 2013.
- R.M. Wade Excellence in Teaching Award, March 2012. *Highest teaching award in CAHNRS.*
- Invited participant, Provost's Leadership Development Program, 2011-2012
- "Teaching Faculty Member of the Year", Department of Natural Resource Sciences, Washington State University, 2008-2009 academic year
- "Outstanding Mentor" Award (one of 120 recipients), Women & Leadership Alliance Forum, Washington State University, 2008-2009 academic year

- Peer-elected speaker, College of Forest Resources Graduation Ceremony, June 8th, 2007.
- Dean's Exemplary Student Award for service to community at the College of Forest Resources, University of Washington, 2004-2005.
- Teaching Assistant of the Year, College of Forest Resources, University of Washington, 2002-2003.
- Pack Forest Scholarship, Spring Quarter 1998.
- National Merit Scholar, 1995-1999.
- R.D. Merrill Forestry Scholarship, Fall Quarter 1995.
- University of Washington Annual Dean's List, 1995-1999.
- National Honor Society scholar, University of Washington, 1995-1999.
- Xi Sigma Pi Forestry Honor Society, Alpha Chapter, 1998-present.
- Phi Eta Sigma Honor Society, 1996-1999.
- Byron and Alice Lockwood Scholar, Winter 2004.
- Finalist for College of Forest Resources 2001-2002 Teaching Assistant of the Year.

Organizations

- Courtesy Faculty Appointment, Oregon State University, 2018-present
- Faculty Advisor, Washington State University Forestry Club (affiliated with Society of American Foresters), August 2007-present.
- Pinchot Partners collaborative working group, Packwood, WA, 2006-present.
- Working Forest Forum, Northwest Environmental Forum, University of Washington and other institutions, 2005-present.
- American Society of Photogrammetry and Remote Sensing, April 2008- present.
- Society of American Foresters, 2002-present.
- University of Washington College of Forest Resources Alumni Association, 2000-present. Trustee of board, 2004 to present.
- Charles L. Pack Experimental Forest Management Plan Revision Committee (College of Forest Resources, University of Washington), beginning January 2006.
- Agrupación de Ingenieros Forestales por el Bosque Nativo. (Association of Professional Foresters for the Native Forest). Valdivia, Chile. 2004-present.
- University of Washington Forest Club, 1995-2005.

Work Experience

- June 2018- September 2021: Consultant for Idaho Forest Group- specialized forest measurements in support of forest remote sensing research. Management of up to four employees at a time, data analysis, project management. ~\$150,000 per year gross contract amounts.
- August 2013- present: Associate Professor of Landscape Ecology and Silviculture, School of the Environment, Washington State University, Pullman, Washington.
- August 2007-2013 : Assistant Professor of Landscape Ecology and Silviculture, Department of Natural Resource Sciences, Washington State University. Pullman, Washington
 - WashingtonView Team Project Leader, March 2008- present
 - Affiliate professor, Dept. of Crop and Soil Sciences, February 2012-present.
- Consultant in hybrid poplar measurement and management for several government agencies, including City of College Place (Washington), City of Woodburn (Oregon), and King County Solid Waste (Washington).
- Winter 2007- Consultant for Forestpark, Inc. Ecological and economic analysis of an ecologically-designed real estate development model in Washington State.
- Summer 2004- Forest research technician (surveyor), Cedar River Watershed. Employer: Seattle Public Utilities, North Bend, Washington.
- Summer 2000-Summer 2003- Forest research technician, College of Forest Resources, University of Washington
- Fall 1999-Winter 2000- Forest researcher, Trillium Corporation, Bellingham, Washington
- Measurement of coarse woody debris, live and dead standing trees, soil profiles, and other ecosystem components in *Nothofagus pumilio*/*N. betuloides*-dominated forest in Tierra del Fuego, Chile.
- Summer 1999- Forest research technician, College of Forest Resources, University of Washington
- Forestry-related and botanical measurements in a number of studies.
- Demonstration of Ecosystem Management Options: understory plant response to different overstory retention levels.
- Remeasurement of permanent vegetation plots at Mt. St. Helens National Volcanic Monument.
- Botanical remeasurements of clearcut site at Starrbright Creek, Oregon.
- Understory plant measurements at the Wind River Canopy Crane, GPNF, WA.
- Establishment of permanent measurement plots in mature forest on the Gifford Pinchot National Forest, WA, to assess forest development.
- Summer 1998- Forest research technician, College of Forest Resources, University of Washington
- Summer 1997- Timber inventory technician, Longview Fibre Company, Longview, Washington
- Summer 1996- Wildlife habitat measurement technician, western Washington, for University of Washington Wildlife Sciences.

Teaching Experience

- ◆ **Washington State University, Pullman, WA.** Instructor for classes in resource science and management.
 - *SOE 301 Forest Plants and Ecosystems.* Fall semesters 2018-2021.
 - *SOE 302 Arid Lands Plants and Ecosystems.* Spring semesters 2019-2023.
 - *SOE 305 Silviculture.* Fall Semester 2007-2009, 2011-2023.
 - *SOE 420 Practicum: Long-Term Research in Forest Ecosystems: Old Growth Forests of Yosemite* (linked with the Yosemite Forest Dynamics Plot, yfdp.org, and the Western Forest Initiative, <http://westernforestinitiative.org/>).
 - *SOE 430 Wildland Fire Ecology and Management* (taught as SOE 492-03). Fall semester 2021-2023.
 - *SOE 484 Forest Management and Planning.* Spring semester 2018, 2020, 2022.
 - *SOE 485 Forest Disturbance Ecology.* Spring semester 2020, 2021, and 2023.
 - *SOE 492-02.* Practicum in forestry consulting. Numerous semesters, including Fall 2021.
 - *SOE 493 Graduate Seminar.* Spring semester 2018.
 - *NATRS 464/564 Landscape Ecology.* Spring Semesters 2008-2015.

- *NATRS 595 Graduate Seminar- Research Communication*. Fall semesters 2008-2009.
- *NATRS 419 Practicum in Restoration Forestry*. Spring Semester 2009-2010.
- *NATRS 519 Section 2- Introduction to Statistical Programming in R*. Spring semesters 2011 and 2012, and Fall semester 2012.
- *SOILS 502- Introduction to Statistics in R*. Co-taught with David J. Brown. Fall semester 2013.
- *NATRS 419 and 479- forest research summer intensives*. Summers 2008-2013.
- Substantial ad hoc mentoring of graduate and undergraduate students in statistics, forest ecology, landscape ecology, and other disciplines.
- R.M. Wade Award for Excellence in Teaching and Learning, 2011-2012. (Highest teaching award in CAHNRS).
- Top ten finalist for “Outstanding Mentor Among Teaching Faculty”, 2009
- “Outstanding Teaching Award”, 2008-2009, Dept. of Natural Resource Sciences
- ◆ **University of Washington, Seattle, WA.** Teaching assistantships consisting of every activity associated with course management. Typically collaborated with Dr. Jerry F. Franklin.
 - *ESC 322 Forest Ecosystems*. Fall 1997. Teaching assistant on field exercises.
 - *ESC 490a Stand Development in Natural Forests*. Summer 2000, Summer 2001.
 - *ESC 490a Alternative Silvicultural Methods*, Summer 2002.
 - *ESC 490A Natural Forests and Their Development: Research at the Andrews Experimental Forest*. Summer 2003.
 - *ESC 490b Ecology of Old Growth Forests*. Summer 2000, Summer 2001, Summer 2002.
 - *ESC 440ZN Case studies in ecosystem management*. Fall 2000, Fall 2001.
 - *ESC 441 Landscape Ecology*. Winter 2001, Winter 2002 (including 18 lecture hours), Winter 2003 (including 30 lecture hours), and Winter 2004 (including 30 lecture hours).
 - *ESC 320/520c Natural Resource Issues: Old-Growth and Forest Management*. Spring 2001, Spring 2002, Spring 2003.
 - *FM 425 Ecosystem Management*. Fall 2002, Fall 2003 (contracted lecturer).
 - *BIO 180 Introductory Biology for Majors*, Winter 2004, Spring-Fall-Winter 2005, Winter 2007. Field trip designer and instructor.
 - Pre-doctoral Lectureship, Spring Quarter, 2004.
- ◆ **Peninsula College, Port Angeles, WA.**
 - Natural Resource Issues with Dr. Daniel Underwood. Summer 2001. Forest biometry, developmental ecology in a field course setting.
- ◆ **Oregon State University/Earthwatch Institute Student Challenge Awards.** Forest biometry, experimental design, and basic forest ecology with high school students. With Dr. David C. Shaw and Dr. Barbara Schrader (OSU). 2001: “Integrated Forest Research in a Threatened Ecosystem: the Willamette Valley Oak Woodlands, Oregon”. 2003: “Establishment of a Long-Term Riparian Research Site at the Wind River Experimental Forest”, Wind River Experimental Forest, Washington.

Skills

- Wilderness First Responder- certified by National Outdoor Leadership School, Lander, WY. Course taken 03/10/2017-03/19/2017. Contact: NOLS main office, 800-710-6657.
- American Tree Farm System Certified Inspector (January 20th, 2010).
- Software: Microsoft Office, Adobe Pagemaker. Statistical packages: R (10 years), SAS (3 years of effective experience), PC-ORD (5 years).
- Spatial analysis: ESRI ArcGIS 8.x and 9.x (including geoprocessing with Python), ArcView 3.x GIS programs (6+ years). ERDAS Imagine 8.0 (3 years, including Spatial Modeler) and ENVI image processing software package (3 years). Tripod Data Systems (TDS) Survey Works (Survey Link, Foresight survey processing software)(2 years). Landis-II forest landscape simulation model.
- Forest management software: Landscape Management System (LMS), STEWPLAN, FVS.
- Mensuration and surveying techniques including: Spiegel Relaskop, diopter prisms, other cruising devices, Nikon DTM-Series surveying total stations, Tripod Data Systems Recon, and Trimble (XRS Pro) surveying GPS and Garmin (and other brands) handheld GPS.

- Experienced field botanist. Regional expertise: Pacific Northwest, California, northern Baja California, and Patagonian Chile.
- Experience with backcountry travel and extended periods in remote areas in a field-work setting.
- Fluent in Spanish (including working in a forestry setting with Spanish-speaking people); proficiency in German; very basic competency in French.
- Participated in and led numerous prescribed fires in eastern Washington and northern Idaho. Experienced with burn plan scoping and development. Currently completing requirements for Washington State Department of Natural Resources Certified Prescribed Burner credential, 2023-2024.