

Kyle A. Palmquist
Curriculum Vitae

Department of Biological Sciences
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EDUCATION

2014 Ph.D. in Ecology, University of North Carolina at Chapel Hill, NC
2006 B.S. in Biology, Environmental Studies minor, *magna cum laude*, College of Charleston, SC

PROFESSIONAL EMPLOYMENT

2024 – present: Associate Professor, Marshall University, Department of Biological Sciences, Huntington, WV
2019 – 2024: Assistant Professor, Marshall University, Department of Biological Sciences, Huntington, WV
2022 Visiting Scientist, The Jones Center at Ichauway, Newton, GA
2014 – 2018: Postdoctoral Research Associate and Adjunct Instructor, University of Wyoming, Department of Botany, Laramie, WY
2014: Adjunct Instructor, High Point University, Department of Biology, High Point, NC, Introduction to Biology and Environmental Science Labs

GRANTS AND OTHER FUNDING (Total awards since 2019: \$1,881,442, 98% external)

Grants Awarded

Federal and Regional Grants

2025 – 2030	National Science Foundation, CAREER program, Division of Environmental Biology, Population and Community Ecology Cluster, “Untangling the effects of multiple global change drivers on dryland plant communities to inform land management decisions” (Federal, role: PI). No co-PIs.	\$856,112
2024 – 2028	US Department of Agriculture, Sustainable Agroecosystems, “Forecasting forage response to climate change and shrub control using next generation root data”, (role: co-PI). PI: Andrew Kulmatiski.	\$209,632
2022 – 2025	US Fish and Wildlife Service, “Assessing the future sagebrush core habitats: impacts of climate and climate uncertainty, wildfire and invasive species” (role: co-PI). PI: J.B. Bradford, co-PIs: W.K. Lauenroth, K.E. Doherty & T.E. Remington. Note all funds moved to PI Bradford.	\$224,000
2022 – 2025	US Fish and Wildlife Service, “Identifying sustainable grazing regimes for the 21 st century that prevent cheatgrass invasion and maintain wildlife habitat across the big sagebrush region” (role: PI). Co-PIs: J.B. Bradford, W.K. Lauenroth & D.R. Schlaepfer.	\$84,016
2021 – 2025	Department of Navy, MCRD Parris Island, SC, “Vegetation survey and assessment of vegetation vulnerability to sea-level rise” (role: PI). No co-PIs.	\$189,184

2018 – 2021	USGS Climate Adaptation Science Center, “Big sagebrush plant community response to wildfire and invasive annual grasses in the 21 st century” (role: PI). Co-PIs: J.B. Bradford, W.K. Lauenroth & D.R. Schlaepfer.	\$166,913
2017	USGS, “Modeling the response of big sagebrush plant communities to altered climate and disturbance” (role: co-PI). PI: J.B. Bradford, co-PIs: W.K. Lauenroth.	\$24,000
<i>State Grants</i>		
2025 – 2026	WV NASA Space Grant Consortium, Graduate Student Fellowship to Zak Bartholomew, “The role of urban trees in mitigating large precipitation Events via stemflow and canopy interception” (role: mentor).	\$15,000
2023 – 2024	WV NASA Space Grant Consortium, Graduate Student Fellowship to Jorge Vera, “The role of urban trees in mitigating large precipitation events via stemflow and canopy interception” (role: mentor). Co-mentor: S. Welch.	\$12,000
2022 – 2023	WV NASA Space Grant Consortium, Graduate Student Fellowship to Cody Goodson, “Changes in coastal vegetation distribution over a 23-year period in response to sea-level rise” (role: mentor).	\$12,000
2021 – 2022	WV NASA Space Grant Consortium, Research Initiation Grant, “Data integration for red spruce management: using NASA products to resolve scale mismatches and produce an updated red spruce map” (role: PI). Co-PI: A. Axel.	\$20,000
2020 – 2021	WV NASA Space Grant Consortium, Graduate Student Fellowship to Maggie England, “The future of the big sagebrush ecosystem: plant community response to wildfire and invasive annual grass in a changing climate” (role: mentor).	\$12,000
2019 – 2020	WV NASA Space Grant Consortium, Research Seed Grant, “Quantifying the vulnerability of longleaf pine woodlands to drought” (role: PI). No co-PIs.	\$10,000

Local Grants, Travel Grants, and Student Grants

2025	Weinstein Student Travel Fund Award to Zak Bartholomew, Marshall U (role: mentor)	\$35
2025	Weinstein Student Travel Fund Award to Catherine Schwartzmann, Marshall U (role: mentor)	\$70
2025	Graduate Student Creative Discovery & Research Award to Zak Bartholomew, Marshall U (role: mentor)	\$2,500
2025	Associate for Southeastern Biology Graduate Research Award to Zak Bartholomew, (role: mentor)	\$500
2025	Graduate Student Creative Discovery & Research Award to Catherine Schwartzmann, Marshall U (role: mentor)	\$5,000
2025	NASA WVSGC Research Enhancement Award, Marshall U	\$1,000
2025	Southern Appalachian Botanical Society Student Travel Award to Zak Bartholomew, Marshall U (role: mentor)	\$250
2025	Southern Appalachian Botanical Society Student Travel Award to Jorge Vera, Marshall U (role: mentor)	\$250
2025	Southern Appalachian Botanical Society Student Travel Award to Emma Crouch,	\$250

	Marshall U (role: mentor)	
2025	Weinstein Student Travel Fund Award to Jorge Vera, Marshall U (role: mentor)	\$150
2025	Weinstein Student Travel Fund Award to Emma Crouch, Marshall U (role: mentor)	\$150
2024	Planet Imagery Education and Research Program grant to Zak Bartholomew, Marshall U (role: mentor) – unlimited access to Planet imagery for two years	priceless
2024	National Science Foundation Research and Mentoring for Postbaccalaureates in Biological Sciences (RaMP) Award, Marshall U (role: participant and mentor)	\$20,500
2023	NASA WVSGC Research Enhancement Award, Marshall U	\$940
2023	Faculty Summer Research Award, Marshall U	\$2,000
2023	Dr. Kenneth Carvell Student Award to Jorge Vera, Appalachian Vegetation Management Association (role: mentor)	\$2,000
2023	Garden Club of America Zone VI Fellowship in Urban Forestry to Jorge Vera (role: mentor)	\$7,500
2022	NASA WVSGC Research Enhancement Award, Marshall U	\$1,000
2022	Faculty Summer Research Award, Marshall U	\$2,000
2022	Hedrick Program Grant for Teaching Innovation, “Marshall University Presentation Center: Developing a campus-wide resource to enhance communication fluency across the curriculum”, Marshall U (role: co-PI). PI: C. Brown, co-PIs: J. Snyder-Yuly, S. Underhill, T. Melvin, O. York & H. Narman.	\$5,000
2022	Weinstein Student Travel Fund Award to Cassie Bacon, Marshall U (role: mentor)	\$200
2022	Southeastern Chapter of the Ecological Society of America Student Travel Award to Cassie Bacon, Marshall U (role: mentor)	\$290
2021	Faculty Summer Research Award, Marshall U	\$2,000
2021	Creative Discovery Scholar and Undergraduate Research Scholar Award to Cassie Bacon, Marshall U, “Characterizing plant biodiversity and fire regimes in West Virginia shortleaf pine stands” (role: mentor)	\$5,000
2021	NASA WVSGC Research Enhancement Award, Marshall U	\$500
2021	Creative Discovery Scholar and Undergraduate Research Scholar Award to Khyla Johnson, Marshall U, “Effects of prescribed fire on the understory of Eastern oak forests” (role: mentor)	\$2,500
2020	NASA WVSGC Research Enhancement Award, Marshall U	\$1,000
2020	Creative Discovery Scholar and Undergraduate Research Scholar Award to Aria Searles, Marshall U, “Quantifying the vulnerability of longleaf pine woodlands to drought” (role: mentor)	\$2,500
2020	Faculty Summer Research Award, Marshall U	\$2,000
2019	ADVANCE Path Forward Travel Grant, Marshall U	\$1,000
2019	Faculty Summer Research Award, Marshall U	\$2,000
2019	Quinlan Travel Grant, Marshall U	\$500
2016	WWISE travel grant, Wyoming-EPSCoR, U of Wyoming	\$1,000
2015	Biodiversity Institute, U of Wyoming, “Soil water dynamics and plant biodiversity in big sagebrush ecosystems across space” (role: PI). Co-PI: W.K. Lauenroth.	\$50,000
2015	WWISE travel grant, Wyoming-EPSCoR, U of Wyoming	\$1,600
2015	INBRE Bioinformatics Training Travel Grant, U of Wyoming	\$1,800

2015	University of Basel, Switzerland, “Albedo modification impact on global temperate dryland ecosystem water balance” (role: co-PI). PI: D.R. Schlaepfer, co-PIs: J.B. Bradford & W.K. Lauenroth.	\$73,612
2014	International Association for Vegetation Science, Young Scientist Travel Award	\$2,300
2013	Graduate Professional School Travel Award, U of North Carolina Chapel Hill	\$400
2013	Dr. William Coker Fellowship, U of North Carolina Chapel Hill	\$11,500
2013	Alma Holland Beers Scholarship, U of North Carolina Chapel Hill	\$1,500
2013	North Carolina Native Plant Society Shinn Grant	\$1,000
2013	Graduate Student Transportation Grant, U of North Carolina Chapel Hill	\$250
2012	Alma Holland Beers Scholarship, U of North Carolina Chapel Hill	\$1,500
2012	Dr. William Coker Fellowship, U of North Carolina Chapel Hill	\$1,500
2012	Caldwell Travel Scholarship, U of North Carolina Chapel Hill	\$500
2011	Dr. William Coker Fellowship, U of North Carolina Chapel Hill	\$1,850
2010	Alma Holland Beers Scholarship, U of North Carolina Chapel Hill	\$2,950
2008	Mrs. Coker Botany Fellowship, U of North Carolina Chapel Hill	\$20,000
2005	Student Undergraduate Research Fellowship (SURF), “Effects of irrigation timing and water quality on cotton physiology and development, College of Charleston	\$5,000

Grants In Review

2025	National Science Foundation, Long Term Ecological Research in Biology, Division of Environmental Biology, “Trophic Interactions, Global Change and Ecosystem Resilience: Drivers of Invasion and State Transitions in Dryland Ecosystems” (Federal, role: co-PI, submitted June 2025). PI: S. St. Clair, co-PIs: T. Bishop, B. Osbourne.	\$97,276
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Grants Declined

2025	National Center for Airborne Laser Mapping (NCALM) Seed Grant, Zak Bartholomew, Marshall U (role: mentor)	\$45,000
2024	National Science Foundation, Graduate Research Fellowship, Zak Bartholomew, Marshall U (role: mentor)	\$159,000
2024	Marshall U Graduate Student Creative Discovery & Research Award Spring 2025, Evaluating targeted grazing to suppress cheatgrass in big sagebrush ecosystems under future conditions, Catherine Schwartzmann, Marshall U (role: mentor)	\$2,500
2024	National Science Foundation, Division of Environmental Biology, Population and Community Ecology Cluster, “Functionalizing niche partitioning to forecast vegetation shifts” (Federal, role: co-PI, submitted March 2024). PI: A. Kulmatiski.	\$301,794
2023	National Science Foundation, CAREER program, Division of Environmental Biology, Population and Community Ecology Cluster, “Untangling the effects of multiple global change drivers on dryland plant communities to inform land management decisions” (Federal, role: PI, submitted July 2023). No co-PIs.	\$957,818
2023	National Science Foundation, Division of Environmental Biology, Population and Community Ecology Cluster, “Functionalizing root distributions to forecast vegetation shifts” (Federal, role: co-PI, submitted July 2023). PI: A. Kulmatiski.	\$362,345
2022	Research Challenge Grant, “Using data analytics and ecological modeling	\$1,300,000

- to investigate the impacts of climate and land-use changes on West Virginia biodiversity” (State, role: co-PI). PI: A. Axel, co-PIs: A. Mummert, T. Cartwright.
- 2022 US Fish and Wildlife Service, “Livestock grazing and climate change impacts on big sagebrush plant communities” (Federal, role: co-PI). PI: J.B. Bradford, co-PIs: W.K. Lauenroth & D.R. Schlaepfer. \$245,409
- 2021 USGS North-Central Climate Adaptation Science Center, “Interactive effects of climate change and livestock grazing on plant communities within large intact big sagebrush landscapes” (Regional, role: co-PI). PI: J.B. Bradford, co-PIs: W.K. Lauenroth & D.R. Schlaepfer. \$101,291
- 2021 WV NASA Space Grant Consortium, “Status of shortleaf pine vegetation in WV: regeneration, biodiversity, and fire history” (State, role: PI). Co-PI: T. Saladyga. \$10,000
- 2020 Department of Energy, “Quantifying the feedbacks of interacting warming-driven disturbances to ecosystem structure and function in fire-dependent woodlands” (Federal, role: PI). Co-PIs: A. Axel, S. Brantley, M. Bretfeld, L. Giencke & S. Stuber. \$997,352
- 2020 RII Track-1 Letter of Intent, “Biodiversity in the Anthropocene: Impacts of landscape change on ecosystem structure and function in West Virginia” (State, role: co-PI). PI: J. Waldron, co-PIs: A. Axel, H. Malik, S. Welch, J. Anderson, D. Brown & C. Rota.
- 2020 USGS State Water Resources Research Institute, “Red spruce plant community responses to climate change over the last two decades” (State, role: PI). No co-PIs. \$59,510
- 2019 WV NASA Space Grant Consortium, Graduate Student Fellowship – Rebekah Shupe, “Understanding how prescribed fire affected *Quercus* (oak) forests along a soil moisture gradient” (State, role: mentor) \$12,000

PUBLICATIONS

§ undergraduate student author, * graduate student author, † authors contributed equally

Peer-reviewed Publications

- 2025 Shafer, M.R.*, P. Puppo, T.E. Hutchinson & **K.A. Palmquist**. Fire effects on floral abundance of bumble bee host plants in mixed-oak forests. *Fire Ecology* 21, 24. <https://doi.org/10.1186/s42408-025-00367-2>
- 2024 Holdrege, M., D.R. Schlaepfer, **K.A. Palmquist**, W.K. Lauenroth, C.S. Boyd, M.K. Creutzburg, M.R. Crist, K.E. Doherty, T.E. Remington, J.C. Tull, L.A. Wiechman & J.B. Bradford. Climate change amplifies ongoing declines in sagebrush ecological integrity. *Rangeland Ecology and Management* 97: 25-40 (organized special issue for the Sagebrush Conservation Design Phase 2). <https://doi.org/10.1016/j.rama.2024.08.003>
- 2024 Renne, R.R.*, D.R. Schlaepfer, **K.A. Palmquist**, W.K. Lauenroth & J.B. Bradford. Estimating multivariate ecological variables at high resolution using a cost-effective matching algorithm. *Ecosphere* 15: e4811. <https://doi.org/10.1002/ecs2.4811>
- 2024 Holdrege, M.C., D.R. Schlaepfer, **K.A. Palmquist**, M. Crist, K.E. Doherty, W.K. Lauenroth, T.E. Remington, K. Riley, K.C. Short, J.C. Tull, L.A. Wiechman & J.B. Bradford. Wildfire probability estimated from recent climate and fine fuels across the big sagebrush region. *Fire Ecology* 20: 22. <https://doi.org/10.1186/s42408-024-00252-4>

- 2023 Martyn, T.E.*, **K.A. Palmquist**, J.B. Bradford, D.R. Schlaepfer & W.K. Lauenroth. Plant community predictions support the potential for big sagebrush range expansion adjacent to the leading edge. *Regional Environmental Change* 23: 27. <https://doi.org/10.1007/s10113-022-01999-9>
- 2023 Holdrege, M.C.*, A. Kulmatiski, K.H. Beard & **K.A. Palmquist**. Precipitation intensification increases shrub dominance in arid, not mesic, ecosystems. *Ecosystems* 26: 568-584. <https://doi.org/10.1007/s10021-022-00778-1>
- 2022 Saladyga, T.†, **K.A. Palmquist**† & C. Bacon§. Fire history and vegetation data reveal ecological benefits of recent high-severity fires in the Cumberland Mountains, West Virginia, USA. *Fire Ecology* 18: 1-21. <https://doi.org/10.1186/s42408-022-00143-6>
- 2022 Jordan S.E.*, **K.A. Palmquist**, I.G. Burke & W.K. Lauenroth. Small effects of livestock grazing intensification on diversity, abundance, and composition in a dryland plant community. *Ecological Applications*: e2693. <https://doi.org/10.1002/eap.2693>
- 2021 Smith, A.J.*, D.R. Schlaepfer, **K.A. Palmquist**, I.C. Burke & W.K. Lauenroth. Allometric modeling of bunchgrasses in big sagebrush plant communities. *Rangeland Ecology and Management* 79: 77-86. <https://doi.org/10.1016/j.rama.2021.07.009>
- 2021 **Palmquist, K.A.**, D.R. Schlaepfer, R.R. Renne*, S.C. Torbit, K.E. Doherty, T.E. Remington, G. Watson, J.B. Bradford & W.K. Lauenroth. Divergent climate change effects on widespread dryland plant communities driven by climatic and ecohydrological gradients. *Global Change Biology* 27: 5169-5185. <https://doi.org/10.1111/gcb.15776>
- 2020 Bradford, J.B., D.R. Schlaepfer, W.K. Lauenroth & **K.A. Palmquist**. Robust ecological drought projections for drylands in the 21st century. *Global Change Biology* 26(7): 3906-3919. <https://doi.org/10.1111/gcb.15075>
- 2020 Jordan, S.E.*, **K.A. Palmquist**, J.B. Bradford & W.K. Lauenroth. Soil water availability shapes species richness in mid-latitude shrub steppe plant communities. *Journal of Vegetation Science* 31(4): 646-657. <https://doi.org/10.1111/jvs.12874>
- 2019 Renne, R.R. *, D.R. Schlaepfer, **K.A. Palmquist**, J.B. Bradford, I.C. Burke & W.K. Lauenroth. Soil and stand structure explain shrub mortality patterns following global change-type drought and extreme precipitation. *Ecology* 100(12): e02889. <https://doi.org/10.1002/ecy.2889>
- 2019 Bradford, J.B., D.R. Schlaepfer, W.K. Lauenroth, **K.A. Palmquist**, J. Chambers, J. Maestas & S. Campbell. Climate-driven shifts in soil temperature and moisture regimes suggest opportunities to enhance assessments of dryland resilience and resistance. *Frontiers in Ecology and Evolution* 7: 358 (*invited paper*). <https://doi.org/10.3389/fevo.2019.00358>
- 2019 Lindquist, L.W.§, **K.A. Palmquist**, S.E. Jordan* & W.K. Lauenroth. Impacts of climate change on groundwater recharge in Wyoming big sagebrush ecosystems are contingent on elevation. *Western North American Naturalist* 79(1): 4. <https://doi.org/10.3398/064.079.0104>
- 2019 Pennington, V.E.*, J.B. Bradford, **K.A. Palmquist** & W.K. Lauenroth. Patterns of big sagebrush plant community composition and stand structure in the western United States. *Rangeland Ecology and Management* 72(3): 505-514. <https://doi.org/10.1016/j.rama.2018.11.013>

- 2018 **Palmquist, K.A.**, T.E. Martyn*, D.R. Schlaepfer, J.B. Bradford & W.K. Lauenroth. STEPWAT2: an individual-based model for exploring the impact of climate and disturbance on dryland plant communities. *Ecosphere* 9(8): e02394. <https://doi.org/10.1002/ecs2.2394>
- 2018 Rottler, C.M.*, I.C. Burke, **K.A. Palmquist**, J.B. Bradford & W.K. Lauenroth. Current reclamation practices after oil and gas development do not speed up succession or plant community recovery in big sagebrush ecosystems in Wyoming. *Restoration Ecology* 26: 114-123. <https://doi.org/10.1111/rec.12543>
- 2018 Peet, R.K., **K.A. Palmquist**, T.R. Wentworth, M.P. Schafale, A.S. Weakley & M.T. Lee. Carolina Vegetation Survey: an initiative to improve regional implementation of the U.S. National Vegetation Classification. *Phytocoenologia* 48(2): 171-179 (*invited paper*). DOI:10.1127/phyto/2017/0168
- 2017 Pennington, V.E.*, **K.A. Palmquist**, J.B. Bradford & W.K. Lauenroth. Climate and soil texture influence patterns of forb species richness and composition in big sagebrush plant communities across their spatial extent in the western US. *Plant Ecology* 218: 957-970. <https://doi.org/10.1007/s11258-017-0743-9>
- 2016 **Palmquist, K.A.**, D.R. Schlaepfer, J.B. Bradford & W.K. Lauenroth. Spatial and ecological variation in dryland ecohydrological responses to climate change: Implications for management. *Ecosphere* 7(11): 1-20. <https://doi.org/10.1002/ecs2.1590>
- 2016 Pennington, V.E.*, D.R. Schlaepfer, J.L. Beck, J.B. Bradford, **K.A. Palmquist** & W.K. Lauenroth. Sagebrush, greater sage-grouse, and the occurrence and importance of forbs. *Western North American Naturalist* 76(3): 298-312. <https://doi.org/10.3398/064.076.0307>
- 2016 **Palmquist, K.A.**, D.R. Schlaepfer, J.B. Bradford & W.K. Lauenroth. Mid-latitude shrub steppe plant communities: Climate change consequences for soil water resources. *Ecology* 97(9): 2342-2354. <https://doi.org/10.1002/ecy.1457>
- 2016 Lopez, B.L., K.R. Burgio, M.B. Carlucci, **K.A. Palmquist**, A. Parada, V.P. Weinberger & A.H. Hulbert. A new framework for inferring community assembly processes using phylogenetic information, relevant traits, and environmental gradients. *One Ecosystem* 1 (e9501): 1-24. <https://doi.org/10.3897/oneeco.1.e9501>
- 2016 **Palmquist, K.A.**, R. K. Peet & S.C. Carr. Xeric longleaf pine vegetation of the Atlantic and East Gulf Coast Coastal Plain: an evaluation and revision of associations within the U.S. National Vegetation Classification. *Proceedings of the US National Vegetation Classification* 1(1): 1-70. <https://proceedings.usnvc.org/articles/57>
- 2015 Mitchell, S.M, **K.A. Palmquist**, S. Cohen & N.L. Christensen. Patterns of vegetation composition and diversity in pine-dominated ecosystems of the Outer Coastal Plain of North Carolina: Implications for ecosystem restoration. *Forest Ecology and Management* 356: 64-73. <https://doi.org/10.1016/j.foreco.2015.07.035>
- 2015 Martyn, T.*, C.W. Beltz*, **K.A. Palmquist**, V.E. Pennington*, C.M. Rottler* & W.K. Lauenroth. Daubenmire versus line-point intercept: a response to Thacker et al. (2015). *Rangelands* 37(4): 158-160. <https://doi.org/10.1016/j.rala.2015.05.004>
- 2015 **Palmquist, K.A.**, R.K. Peet & S.R. Mitchell. Scale-dependent responses of longleaf pine vegetation to fire frequency and environmental context across two decades. *Journal of Ecology* 103: 998-1008. <https://doi.org/10.1111/1365-2745.12412>

- 2014 **Palmquist, K.A.**, R.K. Peet & A.S. Weakley. Changes in plant species richness following reduced fire frequency and drought in one of the most species-rich savannas in North America. *Journal of Vegetation Science* 25: 1426-1437. <https://doi.org/10.1111/jvs.12186>
- 2014 Coyle, J.R.†, F.W. Halliday, B.E. Lopez, **K.A. Palmquist**, P.A. Wilfahrt & A.H. Hurlbert. Using trait and phylogenetic diversity to evaluate the generality of the stress-dominance hypothesis in eastern North American tree communities. *Ecography* 37: 1-13 (editor's choice). <https://doi.org/10.1111/ecog.00473>

Manuscripts in Review or Revision

- Goodson, C.* , J. Holloway, A. Axel, Z. Bartholomew, P. Puppo, P. Debowsky & **K.A. Palmquist**. In Revision. Characterizing and Mapping Coastal Vegetation on a Sea Island in the Southeastern USA. Vegetation Classification and Survey.
- Knapp, B., J. Fraser, J. Baggs, V.E. Chhatre, D. Clabo, C.D. Crouch, D.C. Dey, S.M. Hossain, S.B. Jack, J.M. Kabrick, K.R. Kidd, S. McNulty, C. Nordman, M.G. Olson, **K.A. Palmquist**, M. Pelkki, C.M. Schalk, M.C. Stambaugh, J.M. Varner & J.L. Willis. In Review. Shortleaf pine (*Pinus echinata*): management challenges, knowledge gaps, and opportunities for an unsung species. *Journal of Forestry*.

Manuscripts in Preparation

- Chenoweth, D.A.* , I.C. Burke, **K.A. Palmquist** & W.K. Lauenroth. Recovery of the dominant shrub species on natural gas well pads in a widespread mid-latitude dryland. Target journal: *Restoration Ecology*.
- England, M.* , J.B. Bradford, R.R. Renne*, W.K. Lauenroth, D.R. Schlaepfer & **K.A. Palmquist**. The future of the big sagebrush ecosystem: plant community response to wildfire and invasive annual grass in a changing climate. Target journal: *Global Change Biology*.
- Shupe, R.* , T.E. Hutchinson, A.C. Axel & **K.A. Palmquist**. The effects of fire on oak forest regeneration: a 25-year study. Target journal: *Forest Ecology and Management*.
- Shupe, R.* , T.E. Hutchinson, K. Johnson§ & **K.A. Palmquist**. The long-term effects of prescribed fire on species richness and composition of the herbaceous layer in mixed-oak forests. Target journal: *Plant Ecology*.

Book Chapters

- In review **Palmquist, K.A.** & T. Saladyga. Understory plant community dynamics in shortleaf pine ecosystems. In: C. Crouch, D. Dey, J. Kabrick and B. Knapp, eds. *The Ecology and Management of Shortleaf Pine Ecosystems*, Chapter 3, First edition. CABI Publishing.
- 2018 Reeves, M.C., M.E. Manning, J.P. DiBenedetto, **K.A. Palmquist**, W.K. Lauenroth, J.B. Bradford, & D.R. Schlaepfer. Effects of climate change on rangeland vegetation in the northern Rockies. In: J.E. Halofsky, J.E. and D.L. Peterson, eds. *Climate Change and Rocky Mountain Ecosystems*, Chapter 7, First edition. Springer International Publishing, Switzerland. [Pages 97-114](#).
- 2014 Peet, R.K., **K.A. Palmquist** & S.M. Tessel. Herbaceous layer species richness of southeastern forests and woodlands: patterns and causes. In: F.S. Gilliam, ed. *The Herbaceous Layer in Forests of Eastern North America*, Chapter 10, Second edition. Oxford University Press, New York, New York. [Pages 255-276](#).

Non-peer Reviewed Publications

- 2023 Fridley, J.D & **K.A. Palmquist**. Herbaceous Vegetation, Species Richness in. Encyclopedia of biodiversity, 3rd Edition, Volume 2, Elsevier: 711-718. <https://doi.org/10.1016/B978-0-12-822562-2.00109-2> (*invited contribution*).
- 2016 Tessel, S.M., **K.A. Palmquist** & R.K. Peet. Species-Area Relationships. In Oxford Bibliographies Online: Ecology. Ed. David Gibson. New York: Oxford University Press. DOI: [10.1093/OBO/9780199830060-0147](https://doi.org/10.1093/OBO/9780199830060-0147).

Data Releases

- 2024 Holdrege, M.C., D.R. Schlaepfer, **K.A. Palmquist**, D.M. Theobald, J.B. Bradford. Current and projected sagebrush ecological integrity across the Western U.S., 2017-2100: U.S. Geological Survey data release. <https://doi.org/10.5066/P13RXYZJ>.
- 2022 Saladyga, T., **K.A. Palmquist**, C.M. Bacon§. 2022. NOAA/WDS Paleoclimatology - Saladyga - Wall Fork, Kanawha State Forest - PIEC - ITRDB WV033. NOAA National Centers for Environmental Information. <https://doi.org/10.25921/9bxs-ef58>.
- 2022 Saladyga, T., **K.A. Palmquist**, C.M. Bacon§. 2022. NOAA/WDS Paleoclimatology - Saladyga fire data from Hite Fork, Cumberland Mountains - IMPD USHF-001.. NOAA National Centers for Environmental Information. <https://doi.org/10.25921/tfqp-p594>.
- 2022 **Palmquist, K.A.** Divergent climate change effects on widespread dryland plant communities driven by climatic and ecohydrological gradients, Dryad Dataset. <https://doi.org/10.5061/dryad.3tx95x6ht>.
- 2022 **Palmquist, K.A.**, R.R. Renne*, D.R. Schlaepfer, W.K. Lauenroth & J.B. Bradford. High-resolution maps of projected big sagebrush plant community biomass for 52 future climate scenarios using multivariate matching algorithms: U.S. Geological Survey data release. <https://doi.org/10.5066/P9DR9G1Y>.
- 2021 Renne, R.R.*, **K.A. Palmquist**, D.R. Schlaepfer, W.K. Lauenroth & J.B. Bradford. High-resolution maps of big sagebrush plant community biomass using multivariate matching algorithms: U.S. Geological Survey data release. <https://doi.org/10.5066/P9MNKWS4>.

TEACHING EXPERIENCE

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|---------------------------|----------------------------------------------------------------------------------------------------------------------|
| 2025F, '24F | Principles of Ecology lecture and lab (BSC 320 1012), Marshall U, 4 credits, 6 contact hours, writing intensive |
| 2025Sp, '22Sp, '20F | Graduate Seminar I (BSC 660), Marshall U, 2 credits, 2 contact hours |
| 2025Sp, '20F | Graduate Seminar II (BSC 662), Marshall U, 1 credit, 2 contact hours |
| 2025Sp, '23F, 21Sp, '19Sp | Plant Ecology lecture and lab (BSC 430/530), Marshall U, 4 credits, 6 contact hours |
| 2023F | Thesis (BSC 681), Marshall U, 2 to 5 credits, enrollment = 3 |
| 2023F | Guest lecture in Principles of Ecology (BSC 320) on Community Structure |
| 2023Sp | Thesis (BSC 681), Marshall U, 3 credits, enrollment = 3 |
| 2022F | Principles of Ecology lecture and lab (BSC 320 101 & 102), Marshall U, 4 credits, 9 contact hours, writing intensive |
| 2022F, '21Sp | Thesis (BSC 681), Marshall U, 5 credits, enrollment = 2 |

2022F	Guest lecture in Graduate Seminar I (BSC 660) on Data Literacy, Marshall U
2022Sp	Guest lecture in University Chorus on climate change impacts and solutions, Marshall U
2022Sp	Guest lectures in Principles of Ecology (BSC 320) on Interspecific Competition and Community Structure and lab on Plant Population Sampling, Marshall U
2022Sp	Guest lecture in Plant Taxonomy (BSC 416/516) on collecting and identifying plants for research purposes, Marshall U
2021F, '20Sp, '19F	Principles of Ecology lecture and lab (BSC 320 101 & 102), Marshall U, 4 credits, 9 contact hours
2021Sp	Thesis (BSC 681), Marshall U, 6 credits, enrollment = 2
2020F	SpTp: Terrestrial Ecosystem Ecology lecture (BSC 480/581), Marshall U, 3 credits, 3 contact hours
2019F	Guest lecture in BSC 120 Principles of Biology Honors on career pathways in ecology, Marshall U
2016F	Terrestrial Ecosystem Ecology lecture, U of Wyoming, 3 credits, 3 contact hours
2015F	Vegetation Ecology lab, U of Wyoming, 1 credit, 3 contact hours
2014Sp	Introduction to Biology lab, High Point University, 1 credit, 3 contact hours
2014Sp	Introduction to Environmental Science lab, High Point University, 1 credit, 3 contact hours

TEACHING PRESENTATIONS

- Peckham, R., **K. Palmquist** & R. Rabe. Communicating climate change, locating race in journalism, and other challenges in teaching communication fluency. Marshall University. (February 11, 2022).
- Peckham, R., R. Rabe, J. Ruff, J. Maxwell, B. Eng, M. Allenger, **K. Palmquist** & T. Chowdhury. An interdisciplinary look at teaching communication fluency. iPED Conference, Marshall University. Virtual. (May 5, 2021).

STUDENT MENTORING

Master's Students

- 2025 – present Dave Boak, MS in Biological Sciences, Marshall U
- 2024 – present Zak Bartholomew, MS in Biological Sciences, Marshall U
- 2024 – present Catherine Schwartzmann, MS in Biological Sciences, Marshall U
- 2022 – present Jorge Vera, MS in Biological Sciences, Marshall U
- 2022 – 2024 Moses Shafer, MS in Biological Sciences, Marshall U
- 2024 Sara Slack, MS in Biological Sciences, Marshall U
- 2022 – 2023 Cody Goodson, MS in Biological Sciences, Marshall U
- 2019 – 2022 Maggie England, MS in Biological Sciences, Marshall U, The future of the big sagebrush ecosystem: plant community response to grazing, wildfire, and invasive annual grass in a changing climate
- 2019 – 2021 Rebekah Shupe, MS in Biological Sciences, Marshall U, The effects of fire on oak-forest plant communities along soil moisture gradients: a 25-year study

2015 – 2018 Co-adviser, Samuel Jordan's MS in Forestry and Environmental Studies, Yale U, Impacts of grazing and ecohydrology on plant biodiversity patterns in big sagebrush ecosystems

Undergraduates

Capstone/Senior Internship

2024F Emma Crouch, Senior Capstone in Biological Sciences, Marshall U
2024Sp Alijah Kuhn, Senior Capstone in Biological Sciences, Marshall U
2023Sp Leslie Titus, Senior Capstone in Biological Sciences, Marshall U
2023Sp Jacob Webb, Senior Capstone in Biological Sciences, Marshall U
2021F Matthew Roswall, Senior Capstone in Biological Sciences, Marshall U
2021Su Mary Doherty, Senior Capstone in Biological Sciences, Marshall U
2021Su Cassie Bacon, Internship in Natural Resources and the Environment, Marshall U
2021Sp Khyla Johnson, Senior Capstone in Biological Sciences, Marshall U
2020F Jordan Bowman, Senior Capstone in Biological Sciences, Marshall U
2020F Aria Searles, Senior Capstone in Biological Sciences, Marshall U

Directed Research

2025F – present Hunter David, BS in Computer Science, Marshall U
2025F Emma Crouch, Independent Study in Biological Sciences, Marshall U
2024 – 2025 Noah Manuszak, NSF RaMP Postbaccalaureate student, Marshall U
2023F – present Emma Crouch, BS in Biological Sciences and BS in Environmental Science, Marshall U
2023 – 2024 Alexis Belt, MA in Education, Marshall U
2022F Michael Novotny, BS in Computer Science, Marshall U
2022Su Jacob Webb, BS in Biological Sciences, Marshall U
2022Su Peyton DeBowsky, BS in Ecology and Evolutionary Biology, UConn
2019Su Reyna Abreu-Vigil, BS in Natural Resources and the Environment, Marshall U
2019Su Moses Shafer, BS in Natural Resources and the Environment, Marshall U
2019 Frederick Pierson, BS in Computer Science, Marshall U
2019 Chandler Hakaup, BS in Computer Science, U of Wyoming
2016 – 2018 Lukas Lindquist, BS in Environmental Science, U of Wyoming

Graduate Student Committee Member

Marshall U, MS in Biological Sciences or Environmental Sciences

2024 – present Samuel McGrath, MS in Environmental Sciences, Marshall U
2023 – present Briana Spadavecchia, MS in Biological Sciences, Marshall U
2022 – present Sarah Ebert, MS in Biological Sciences, Marshall U
2022 – present Casey Hitchens, MS in Biological Sciences, Marshall U
2022 – present McKenzie Merritt, MS in Biological Sciences, Marshall U
2023 – 2025 Rebecca Foy, MS in Biological Sciences, Marshall U
2022 – 2025 Emily Langer, MS in Biological Sciences, Marshall U
2022 – 2024 Carissa Adams, MS in Biological Sciences, Marshall U
2022 – 2024 Matthew Gacheney, MS in Biological Sciences, Marshall U
2021 – 2024 Anna McCallum, MS in Biological Sciences, Marshall U
2021 – 2023 Hal Guthrie, MS in Biological Sciences, Marshall U, not completed
2021 – 2022 Zachary Shamblin, MS in Biological Sciences, Marshall U
2019 – 2023 Katie Biggert, MS in Biological Sciences, Marshall U, not completed

2019 – 2022 Fen Annarino, MS in Biological Sciences, Marshall U

Marshall U, MA in Biological Sciences

2022 – 2024 Hannah Blake, MA in Biological Sciences, Marshall U

2023 – 2024 Mary Zulauf, MA in Biological Sciences, Marshall U

2020 – 2023 Beth Stepp, MA in Biological Sciences, Marshall U

2020 – 2022 Madeline Thompson, MA in Biological Sciences, Marshall U

Other Institutions

2024 – present Damaris Chenoweth, Ph.D. in Ecology, Yale U

2024 – present Jared Gorrell, M.S in Biology, Austin Peay State U

2019 – present Joanna Spooner, Ph.D. in Ecology, U of North Carolina Chapel Hill

2019 – 2021 Martin Holdrege, Ph.D. in Ecology, Utah State U

INVITED PRESENTATIONS

* graduate student author

Palmquist, K.A., A. Axel & K. Biggert*. Evaluation of existing red spruce data products in West Virginia. Central Appalachian Red Spruce Initiative Annual Meeting. Virtual. (November 15, 2023)

Palmquist, K.A. Quantifying the effects of multiple global change drivers on plant biodiversity to inform land management decisions. Artists, Scholars, & Innovators: A Lecture Series. Marshall University, Huntington WV. (October 12, 2023)

Palmquist, K.A., J.B. Bradford, M.E. England*, W.K. Lauenroth, D.R. Schlaepfer, R. Renne*, K. Doherty, S. Torbit & G. Watson. Big sagebrush plant community response to wildfire and cheatgrass invasion in a changing climate. Northwest Regional Invasive Species and Climate Change (RISCC) Network Symposium. Virtual. (September 15, 2021)

Palmquist, K.A. Community assembly and longleaf pine plant biodiversity across space and time. The Jones Center Seminar Series. Newton, GA. (July 1, 2021)

Palmquist, K.A. Individual-based modeling as a tool to quantify the interacting effects of climate change and disturbances on plant communities over large geographic areas. Data Science Seminar Series, Marshall University. Virtual. (April 21, 2021)

Palmquist, K.A. Vulnerability of dryland plant communities to climate change and disturbance in the 21st century. Department of Biological Sciences Seminar Series, University of Alberta. Virtual. (April 16, 2021)

Palmquist, K.A. Vulnerability of dryland plant communities to climate change and disturbance in the 21st century. Department of Biology Seminar Series, University of Nebraska at Omaha. Virtual. (November 18, 2020)

Palmquist, K.A. Response of big sagebrush plant communities to climate change, grazing, and cheatgrass throughout the 21st century. USGS Climate Adaptation Science Centers, Climate Change Science and Management Webinar Series. (September 23, 2020)

Palmquist, K.A. Vulnerability of dryland plant communities to climate change and disturbance throughout the 21st century. Department of Biological Sciences Seminar Series, Marshall University. Huntington, WV. (September 11, 2020)

- Palmquist, K.A.** Emerging vulnerabilities of dryland plant communities to climate change and livestock grazing throughout the 21st century. Department of Biology Seminar Series, Miami University of Ohio. Oxford, OH. (October 10, 2019)
- Palmquist, K.A.** Plant biodiversity and climate change impacts in temperate ecosystems. US Forest Service Northern Research Station Seminar Series. Delaware, OH. (April 21, 2019)
- Palmquist, K.A.** How high-performance computing can benefit ecological research at the University of Wyoming. Advanced Research Computing Center workshop at the University of Wyoming. Laramie, WY. (June 17, 2017)
- Palmquist, K.A. & R.K. Peet.** Small-scale species richness in longleaf pine savannas: patterns and drivers. Botanical Society of America Annual Meeting. New Orleans, LA. (July 27, 2013)
- Palmquist, K.A., R.K. Peet, J.M. White & K. Israel.** Long-term vegetation change in contrasting North Carolina ecosystems. Ecological Society of America Annual Meeting. Portland, Oregon. (August 2012)
- Palmquist, K.A., R.K. Peet & A.S. Weakley.** Species richness patterns, compositional shifts, and turnover in the longleaf pine ecosystem across 18 years. College of Charleston Biology Lecture Series. Charleston, SC. (2011)

ORGANIZED SESSIONS AT SCIENTIFIC CONFERENCES

- 2024 Session organizer, Symposium: Fire History and Fire Effects in Southeastern U.S. Ecosystems – Implications for Management, Association for Southeastern Biologists Annual Meeting, Chattanooga, TN (accepted).
- 2023 Session co-organizer, Inspire: 21st-century Trajectories of Big Sagebrush Plant Communities, Ecological Society of America Annual Meeting, Portland, OR.
- 2022 Session organizer, Vegetation Inventory, Classification, Mapping and Dynamics across Borders: Promoting Collaboration between the US National Vegetation Classification and Canadian National Vegetation Classification, Ecological Society of America Annual Meeting, Montreal, Canada.
- 2021 Session organizer, Short Course 5: Quantitative Analysis in Plant Community Ecology using R, Ecological Society of America Annual Meeting, Virtual.
- 2021 Session organizer, Joint Mixer of the Vegetation Section, ESA Vegetation Panel and North American Section of IAVS and Tribute to Michael G. Barbour and Eddy van der Maarel, Ecological Society of America Annual Meeting, Virtual.
- 2020 Session organizer, Vegetation Section and ESA Vegetation Panel Mixer, Ecological Society of America Annual Meeting, Virtual.
- 2020 Session Co-organizer, “Inspire: 21st-century Trajectories of Big Sagebrush Plant Communities”, Ecological Society of America Annual Meeting, cancelled due to COVID-19

ORAL PRESENTATIONS AT SCIENTIFIC CONFERENCES

§ undergraduate student author, * graduate student author (9 additional presentations as a postdoc and 4 additional presentations as a graduate student not shown)

- 2024 **Palmquist, K.A.,** T.F. Hutchinson, R.F. Shupe*, M.R. Shafer*, K. Johnson§ & P. Puppo. The effects of fire frequency on mixed-oak forest plant communities of southeastern Ohio. Association for Southeastern Biologists Annual Meeting, Chattanooga, TN.

- 2024 Holdrege, M.C., D.R. Schlaepfer, **K.A. Palmquist**, W.K. Lauenroth, C.S. Boyd, M.K. Creutzburg, M.R. Crist, K.E. Doherty, T.E. Remington, J.C. Tull, L.A. Wiechman & J.B. Bradford. Climate change promotes declines in sagebrush habitat quality. Society for Range Management Annual Meeting, Reno NV.
- 2024 Schlaepfer, D.R., M. Holdrege, J.B. Bradford, **K.A. Palmquist** & W.K. Lauenroth. Five ideas for improving climate adaptation in sagebrush ecosystems. Society for Range Management Annual Meeting, Reno NV.
- 2023 **Palmquist, K.A.**, R.R Renne*, D.R. Schlaepfer, M. Holdrege, J.B. Bradford & W.K. Lauenroth. Implications of climate-driven shifts of C₃ and C₄ perennial grass abundance in big sagebrush ecosystems. Ecological Society of America Annual Meeting, Portland, OR.
- 2023 England, M.E*, M.C. Holdrege, R.R Renne*, J.B. Bradford, D.R. Schlaepfer, W.K. Lauenroth, K.E. Doherty & **K.A. Palmquist**. Big sagebrush plant community response to wildfire and invasive annual grasses in a changing climate. Ecological Society of America Annual Meeting, Portland, OR.
- 2023 Holdrege, M.C., **K.A. Palmquist**, D.R. Schlaepfer, W.K. Lauenroth & J.B. Bradford. How will climate change alter the extent of core sagebrush areas? Ecological Society of America Annual Meeting, Portland, OR.
- 2023 **Palmquist, K.A.**, K. Biggert* & A. Axel. Evaluating existing red spruce data products in West Virginia. Association for Southeastern Biologists Annual Meeting, Winston-Salem, NC.
- 2022 Bradford, J.B., **K.A. Palmquist**, W.K. Lauenroth & D.R. Schlaepfer. Understanding the future of sagebrush habitat areas under climate change. USGS Ecosystems Mission Area Info Transfer Workshop, Virtual, >100 attendees.
- 2022 Bradford, **K.A. Palmquist**, W.K. Lauenroth, R. Renne* & D.R. Schlaepfer. Understanding climate change and ecological drought impacts on dryland vegetation and plant communities: how we use AIM data, Webinar, >75 participants.
- 2022 Holdrege, M.C, **K.A. Palmquist**, M. England*, R.R. Renne*, D.R. Schlaepfer, K.E. Doherty, T.E. Remington, W.K. Lauenroth & J.B. Bradford. Grazing management may moderate the effects of climate change on big sagebrush plant communities. 16th Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region, Flagstaff, AZ.
- 2022 Shupe, R.*, T. Hutchinson, K. Johnson§ & **K. Palmquist**. The effects of fire frequency on species richness and composition of the herbaceous layer in mixed-oak forests over 25 years. Association for Southeastern Biologists Annual Meeting, Little Rock, AK.
- 2022 Bradford, J.B., **K.A. Palmquist**, W.K. Lauenroth, D.R. Schlaepfer, R. Renne*, K. Doherty, M.E. England*, S. Torbit, T. Remington & G. Watson. Sagebrush plant communities and climate change: insights from new research results. Briefing to BLM, FWS and USGS, Virtual.
- 2022 Bradford, J.B., **K.A. Palmquist**, W.K. Lauenroth, D.R. Schlaepfer, R. Renne*, K. Doherty, M.E. England*, S. Torbit, T. Remington & G. Watson. Climate change and sagebrush ecosystems. USGS Climate Adaptation Science Center network meeting, Virtual.
- 2021 Saladyga T., **K. Palmquist** & C. Bacon§. Divergence in the fire history of two mixed pine-oak forests: implications for prescribed fire and forest resiliency in the Central Appalachians. 9th International Fire Ecology and Management Congress, Virtual.

- 2021 **Palmquist, K.A.**, R.R. Renne*, D.R. Schlaepfer, J.B. Bradford & W.K. Lauenroth. Grazing and climate change interact to influence big sagebrush plant community functional type composition. Ecological Society of America Annual Meeting, Virtual.
- 2021 Holdrege M.C.* , K. Beard, A. Kulmatiski & **K.A. Palmquist**. Response of sagebrush-dominated ecosystems to increased precipitation intensity. Ecological Society of America Annual Meeting, Virtual.
- 2021 **Palmquist, K.A.**, R. Peet, M. Schafale, S. Carr, T. Wentworth & A. Weakley. Dry-mesic longleaf pine vegetation of Atlantic and East Gulf Coast Coastal Plain: Vegetation classification and biogeography. Association for Southeastern Biologists Annual Meeting, Virtual.
- 2021 Shupe, R.* , T.F. Hutchinson, A. Axel & **K. Palmquist**. The effect of fire on oak-forest regeneration: A 25-year study. Association for Southeastern Biologists Annual Meeting, Virtual.
- 2020 **Palmquist, K.A.**, R.R. Renne*, D.R. Schlaepfer, J.B. Bradford & W.K. Lauenroth. Grazing and climate change interaction to shape sagebrush plant community composition. Ecological Society of America Annual Meeting, Virtual (**cancelled due to COVID-19**).
- 2019 **Palmquist, K.A.**, J.B. Bradford, D.R. Schlaepfer, R.R. Renne* & W.K. Lauenroth. Climate change impacts on shrub steppe plant communities vary with environmental context and geography. Ecological Society of America Annual Meeting, Louisville, KY.
- 2019 Jordan, S.E.* , **K. Palmquist**, I.C. Burke & W.K. Lauenroth. Livestock grazing reduces grass cover but does not affect richness or composition in big sagebrush communities. Ecological Society of America Annual Meeting, Louisville, KY.
- 2019 Schlaepfer, D.R., W.K. Lauenroth, J.B. Bradford & **K. Palmquist**. Unexpected heterogeneity and more severe droughts in parts of drylands globally under solar geoengineering. Ecological Society of America Annual Meeting, Louisville, KY.
- 2019 **Palmquist, K.A.** & R.K. Peet. Plant species richness patterns are shaped by multiple ecological processes across space in the longleaf pine ecosystem. Association for Southeastern Biologists Annual Meeting, Memphis, TN.

POSTER PRESENTATIONS AT SCIENTIFIC CONFERENCES

§ undergraduate student author, * graduate student author

- 2025 Bartholomew, Z.* , C. Goodson*, J. Holloway & **K.A. Palmquist**. Mapping coastal vegetation to evaluate salt marsh decline in South Carolina, USA. Ecological Society of America Annual Meeting, Baltimore, MD.
- 2025 Manuszak, N. *, J. Vera*, S. Welch, E. Moss & **K.A. Palmquist**. Functional trait differences influence interception ability for evergreen and deciduous tree species. Ecological Society of America Annual Meeting, Baltimore, MD.
- 2025 Schwartzmann, C.* , D. Blumenthal, J. Kray, L. Porensky, K. Hopping, K. Walter*, M. Sorrentino, M. Holdrege, D.R. Schlaepfer, J.B. Bradford, W.K. Lauenroth & **K.A. Palmquist**. Functional type utilization rates under targeted grazing across the big sagebrush region. Ecological Society of America Annual Meeting, Baltimore, MD.

- 2024 **Palmquist, K.A.**, J. Bradford, W. Lauenroth, M. Holdrege & D. Schlaepfer. Understanding the effects of climate change and disturbance on rangeland plant communities. Society for Range Management Annual Meeting, Reno NV.
- 2024 Vera, J. S. Welch, E. Moss & **K. Palmquist**. Ecological Services of Urban Trees on Marshall University's Campus. College of Science Research Expo, Marshall U, Huntington, WV.
- 2024 Vera, J. S. Welch, E. Moss & **K. Palmquist**. Ecological Services of Urban Trees on Marshall University's Campus. Marshall U Research & Creativity Symposium, Marshall U, Huntington, WV.
- 2023 Shafer, M.*, Puppo, P., T. Hutchinson & **K. Palmquist**. Long-term effects on fire frequency on floral abundance and bumble abundance. Ecological Society of America Annual Meeting, Portland, OR.
- 2023 Chenoweth, D.A.*, I.C. Burke, **K.A. Palmquist** & W.K. Lauenroth. Recovery of the dominant shrub species on natural gas well pads in a widespread midlatitude dryland. Ecological Society of America Annual Meeting, Portland, OR.
- 2023 Webb, J.§, M. Shafer*, T. Hutchinson, P. Puppo & **K. Palmquist**. Effects of prescribed fire on *Microstegium vimineum* abundance in the forest understories of the Wayne National Forest, Ohio. College of Science Research Expo, Marshall U, Huntington, WV.
- 2023 Shafer, M.*, J. Webb§, T. Hutchinson, P. Puppo & **K. Palmquist**. Long-term effects of fire frequency on floral abundance and bumblebee abundance. College of Science Research Expo, Marshall U, Huntington, WV.
- 2023 Shafer, M.*, J. Webb§, T. Hutchinson, P. Puppo & **K. Palmquist**. Long-term effects of fire frequency on floral abundance and bumblebee abundance. Marshall U Research & Creativity Symposium, Marshall U, Huntington, WV.
- 2023 Titus, L.E.§, S.M. Welch & **K.A. Palmquist**. An exploration of sublethal predation effects and flora at the Becker Wildlife Center, West Virginia. College of Science Research Expo, Marshall U, Huntington, WV.
- 2023 McCallum, A.*, A. Atkinson, J. Cantrell, W. Dillman, S.M. Welch, **K. Palmquist** & J.L. Waldron. Effects of Vegetation and Historical Land Use on the Occurrence of an Endemic Anuran. Southeastern Partners in Amphibian and Reptile Conservation (SEPARC) Annual Meeting, Black Mountain, NC.
- 2022 Johnson, K.§, R.F. Shupe*, T.F. Hutchinson & **K.A. Palmquist**. Fire effects on the herbaceous layer of mixed-oak forests over 25 years. Marshall U Research & Creativity Symposium, Marshall U, Huntington, WV.
- 2022 Bacon, C.§, T. Saladyga & **K. Palmquist**. Recent high-severity fires promote plant diversity in mixed pine-oak forests of West Virginia. Marshall U Research & Creativity Symposium, Marshall U, Huntington, WV.
- 2022 Johnson, K.§, R.F. Shupe*, T.F. Hutchinson & **K.A. Palmquist**. Fire effects on the herbaceous layer of mixed-oak forests over 25 years. College of Science Research Expo, Marshall U, Huntington, WV.
- 2022 Bacon, C.§, T. Saladyga & **K. Palmquist**. Recent high-severity fires promote plant diversity in mixed pine-oak forests of West Virginia. College of Science Research Expo, Marshall U, Huntington, WV.

- 2022 Bacon, C.§, T. Saladyga & **K. Palmquist**. Recent high-severity fires promote plant diversity in mixed pine-oak forests of West Virginia. Association for Southeastern Biologists Annual Meeting, Little Rock, AK.
- 2021 Searles, A.§ & **K.A. Palmquist**. Quantifying the effects of drought on longleaf pine plant communities. Association for Southeastern Biologists Annual Meeting, Virtual.
- 2020 Shupe, R.*, T.F. Hutchinson & **K. Palmquist**. The effects of prescribed fire on oak-forest plant communities over 25 years. Ecological Society of America Annual Meeting, Virtual.
- 2020 England, M.E.*, D.R. Schlaepfer, J.B. Bradford, W.K. Lauenroth & **K.A. Palmquist**. The future of the big sagebrush ecosystem: plant community response to wildfire and invasive annual grass in the 21st century. Ecological Society of America Annual Meeting, Virtual.
- 2020 Shupe, R.*, T.F. Hutchinson & **K.A. Palmquist**. The effects of prescribed fire on oak-forest plant communities over 25 years. Association for Southeastern Biologists Annual Meeting, Jacksonville, FL (**cancelled due to COVID-19**).

AWARDS, HONORS, AND NOMINATIONS

- 2024 – 2025 John and Frances Rucker Outstanding Graduate Advisor Award, Huntington Campus, acknowledges the contributions of Marshall's outstanding graduate advisors, Marshall U, WV
- 2023 – 2024 Pickens-Queen Teacher Award Nominee and Finalist, recognizes the importance of teaching at Marshall University and provides encouragement and incentive for teaching achievement by newer faculty members, Marshall U, WV
- 2023Sp John Marshall Scholar Award, provides Marshall University faculty with a semester of teaching release to develop a significant scholarly output, Marshall U, WV
- 2022 – 2023 Distinguished Artists and Scholars Junior Award, recognizes distinction in the fields of artistic and scholarly activity on the part of Marshall University faculty, Marshall U, WV
- 2021 Invitation to participate: North-Central Regional Invasive Species and Climate Change Working Group
- 2020 Nomination: International Association for Vegetation Science Vegetation Classification Working Group
- 2019 Nomination: International Association for Vegetation Science, Council of 40 persons
- 2016 Own It! Award Nominee, given by WY EPSCoR to honor outstanding women in STEM fields
- 2013 Eugene P. Odum Award, given by the SE Chapter of the Ecological Society of America for the best oral presentation on ecological research given by a student at the Association for Southeastern Biologists Annual Meeting, \$500
- 2012 University of North Carolina Impact Award, recognizes graduate students whose research contributes to the educational, economic, physical or social well-being of the citizens of North Carolina, \$500

RESEARCH COVERAGE

- 2019 What an unprecedented sagebrush die off – and its' even more surprising recovery – taught us. Casper Star Tribune.

2019 Big sagebrush die-off in southwestern Wyoming: the rest of the story. Castilleja, Publication of the Wyoming Native Plant Society: 38 (3).

PROFESSIONAL SERVICE

2022 – present Co-lead, Climate Change Subgroup, Sagebrush Conservation Design Phase 2 Working Group

2021 – present Research Committee Member, Central Appalachian Spruce Restoration Initiative

2020 – present Member, Ecological Society of America Vegetation Classification Panel

2019 – present Associate Editor and co-Regional Editor, Southeast Coastal Plain Region, US National Vegetation Classification Review Board

2020 – 2025 Associate Editor, Plant Ecology

2022 Expert Interview, Social Study of Science, Conservation, and Community Engagement, Cal Garrett, PhD student, University of Illinois at Chicago, IL

2020 – 2022 Member at Large, Southern Appalachian Botanical Society Council

2021 – 2022 Guest Associate Editor, Forests, “Applied Forest Classification”

2019 – 2021 Chair, Vegetation Section of the Ecological Society of America

2019 – 2021 Council Member, Ecological Society of America

2017 – 2019 Vice Chair, Vegetation Section of the Ecological Society of America

2015 – 2017 IAVS Young Scientist’s Section Steering Committee

DEPARTMENTAL, COLLEGE, AND UNIVERSITY SERVICE

University Service

2023 – present Member, Research Computing Advisory Group, Marshall U

2023 – present Member, Graduate Student Strategic Enrollment Plan Committee, Marshall U

2020 – present Faculty Senator, Department of Biological Sciences, College of Science, Marshall U

2020 – present Member, Campus Sustainability Committee, Marshall U

2019 – present Member, Campus Tree Committee, Marshall U

2024Sp, ‘21Sp Faculty representative at commencement ceremony, Marshall U

2023Sp Faculty Senate Liaison on the Legislative Affairs Committee, Marshall U

2023Sp Member, College of Science Dean Search Committee, Marshall U

2024Sp, ‘23Sp Science Olympiad, Forestry Event, Marshall U

2020 – 2022 Faculty Senate Liaison on the Research Committee, Marshall U

2021Sp Panel member, Earth Day climate change discussion, Marshall U

2019 – present Recommendation letter writer, 70 letters for students applying for scholarships, professional and graduate school, or employment

College Service

2023 – present Member, College of Science Strategic Planning Committee, Marshall U

2020 – present Chair, College of Science Greenhouse Subcommittee, Marshall U

2024Sp Science Olympiad admitted students reception, College of Science, Marshall U

2023F Mason county schools fair and recruitment event, College of Science, Point Pleasant High School, Point Pleasant, WV

2023Sp Research presentation to the Marshall U Environmental Science Association (MESA)

2023Sp Research presentation to high school students at Charleston Catholic High School, Charleston, WV

2022 Member, Science Building Ad Hoc Committee, Marshall U

2020Sp 6th Science Olympiad recruitment event, College of Science, Marshall U

2020Sp Class of 2024 reception for admitted students, College of Science, Marshall U

2019F Senior Capstone poster presentations in Mathematics, College of Science, Marshall U

Departmental Service

2024 – present Chair, Department of Biological Sciences Graduate Committee, Marshall U

2024 – present Faculty mentor, Dr. Pamela Puppo, Department of Biological Sciences Graduate Committee, Marshall U

2024– present Faculty teaching mentor, Dr. Cheyenne Tait, Department of Biological Sciences Graduate Committee, Marshall U

2022 – present Member, Biostatistics Curriculum Working Group, Marshall U

2021 – present Co-organizer, Plants Group, monthly lab meeting of Puppo, Palmquist & Shakirov lab groups to train students in plant biology, Marshall U

2019 – present Co-chair, Department of Biological Sciences Seminar Series, Marshall U

2019 – present Member, Department of Biological Sciences Curriculum Committee, Marshall U

2020 – 2025 Chair, Department of Biological Sciences Scholarships and Grants Committee, Marshall U

2024, '21, '19, Green and White Day recruiting event (N = 4)

2024Sp Peer evaluation of Dr. Anne Axel's teaching, Department of Biological Sciences, Marshall U

2024Sp Graduate recruitment event on behalf of the Department of Biological Sciences, Marshall U

2023F Community outreach on behalf of the Department of Biological Sciences at the National Christmas Tree event, Highlawn Elementary School, Huntington, WV

2023F Outreach and recruitment with Wayne High School students on behalf of the Department of Biological Sciences – research overview and tour of Palmquist lab, Marshall U

2021F Letter of support for Dr. Anne Axel, for the 2021-2022 Marshall and Shirley Reynolds Outstanding Teaching award

MANUSCRIPT AND CONFERENCE REVIEWS

2024 Reviewer, Ecosphere (1), Vegetation Classification and Survey (2)

2023 Reviewer, Journal of Vegetation Science (1), Ecosystems (1)

2023	Review of the Guide to the Classification of the Natural Communities of North Carolina (4 th approximation), Wet Pine Savannas (1) and Dry Longleaf Pine Communities (1)
2022	Reviewer, Ecosphere (1), Restoration Ecology (1), Science (1), Western North American Naturalist (1)
2021	Reviewer, Canadian Journal of Forest Research (1), Journal of Ecology (2), Journal of Vegetation Science (1)
2020	Reviewer, Ecological Monographs (2), Global Change Biology (1), Global Ecology and Biogeography (1), Restoration Ecology (1), Vegetation Classification and Survey (1)
2019	Reviewer, Global Ecology and Biogeography (1), Vegetation Classification and Survey (1)
2014 – 2018	Reviewer, Journal of Vegetation Science (7), Western North American Naturalist (4), Plant Ecology (2), Global Ecology and Biogeography (2), American Journal of Botany (1), Community Ecology (1), Ecology (1), Fire Ecology (1), Functional Ecology (1), Journal of Ecology (1), Landscape Ecology (1), Restoration Ecology (1), Southwestern Naturalist (1), Wetlands (1)

CONFERENCE REVIEWS

2025	Peer review of student CVs, Career Central, Ecological Society of America Annual Meeting
2025, '24, '23	Judge, Multiple student awards, Annual meeting of the Association for Southeastern Biologists
2023	Moderator, Ecology: Communities A, Annual meeting of the Association for Southeastern Biologists
2022	Judge, Southern Appalachian Botanical Society Outstanding Student Poster Presentation Award and Southern Appalachian Botanical Society Outstanding Student Oral Presentation Award, Annual meeting of the Association for Southeastern Biologists
2019 – 2021	Judge, Robert P. McIntosh Award, the best recent paper in Vegetation Ecology, given by the Vegetation Section of the Ecological Society of America
2020	Reviewer, Ecological Society of America Late-breaking Poster Abstracts
2020	Reviewer, Ecological Society of America Contributed Abstracts
2020	Reviewer, Ecological Society of America Session Proposals
2015, 2018 – 2021	Judge, Tom Damman Award, the best student oral presentation in Vegetation Science at the annual meeting of the Ecological Society of America
2015, 2019 – 2020	Judge, Murray F. Buell Award and E. Lucy Braun Award, the best student oral presentation and best student poster presentation at the annual meeting of the Ecological Society of America
2014	Judge, Quatterman-Keever Award, the best student poster in ecology at the annual meeting of the Association for Southeastern Biologists

GRANT REVIEWS

2023 Panel reviewer for NSF Track 2 proposals
2020 Reviewer, USGS Climate Adaptation Science Center proposals
2017 External reviewer for NSF, Division of Environmental Biology

COMMUNITY SERVICE

2024 – present Huntington Citizen Urban Forestry Committee, Marshall U representative
2024 STEM outreach and educational activities with Northern Arapaho high school students on the Arapaho Ranch, WY

PROFESSIONAL DEVELOPMENT

Research

2024 Cayuse Sponsored Projects Virtual Training, organized by MURC, Marshall U
2022, '19 NSF CAREER workshop, organized by MURC, Marshall U
2022 North Central RISC (Regional Invasive Species & Climate Change Network) 2022 Science Integration Workshop, virtual
Sp '22, F '21, Faculty Academic Writing Network, organized by CTL, Marshall U
Sp '21, Sp '20
2020 Write winning grants seminar, organized by MURC, Marshall U
2020 WV NASA Space Grant Consortium Grant Application Workshop, organized by MURC, Marshall U

Teaching

2021 Writing across the Curriculum Workshop, Center for Teaching & Learning, Marshall U
2021 NOAA Big Data Lunch and Learn Webinar Series, WVU and NOAA, virtual
2020 – 2021 Faculty Learning Community lead by Rachael Peckham (Hedrick Teaching Fellow), Center for Teaching & Learning, Marshall U
2021 Mental Health First Aid USA training, Marshall U
2020 Teaching and Learning Cooperative, Center for Teaching & Learning, Marshall U, virtual
2020 TRACE Tuesday, Center for Teaching & Learning, Marshall U
2020 EREN-NEON flexible learning webinar: plants in the human altered environment project, virtual
2020 Assessment in an online course, WVNET, virtual
2020 Best practices in discussion board, WVNET, virtual
2020 Designing your syllabus for an online/hybrid or web-enhance course, WVNET, virtual
2020 iPED regional conference on teaching and learning, CTL, Marshall U, virtual
2020 New faculty promotion and tenure strategies for success sessions, CTL, Marshall U

PROFESSIONAL MEMBERSHIPS

Association of Southeastern Biologists
Central Appalachian Spruce Restoration Initiative Research Committee
Ecological Society of America – Member of Southeastern Chapter and Vegetation Section
International Association for Vegetation Science
Southern Appalachian Botanical Society

The Honor Society of Phi Kappa Phi, Marshall University Chapter