Elizabeth K. Perkin

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PROFESSIONAL EXPERIENCE

2025- Juvenile Fish Monitoring Assistant Project Lead, John Day River Basin. Oregon Department of Fish and Wildlife, Canyon City, OR

2021-25 Northern Oregon Coordinator, Native Fish Society, Oregon City, OR

2019-20 Environmental Consultant, Hatfield Consultants, Calgary, AB

2018-19 Visiting Assistant Professor, Environmental Studies, McDaniel College, Westminster, MD

2015-17 Visiting Assistant Professor, Biology, Willamette University, Salem, OR

2013-15 Postdoctoral Research Fellow, Department of Forest and Conservation Sciences, University of British Columbia, Vancouver, BC

EDUCATION

2013 Dr. rer. nat. (PhD), Biology, Freie Universität Berlin, Germany
The effects of artificial lighting on stream and riparian ecosystems

2009 M. S., School of Aquatic and Fishery Sciences, University of Washington
The relationship of soil nitrogen availability and water holding capacity to riparian tree growth on the Queets River, Washington

2004 B. A., Biology, Reed College, Portland, OR
The effects of additional coho salmon carcasses on macroinvertebrate drift in western Oregon streams

TEACHING

Instructor of Record

2019 Urban Ecology, McDaniel College

2018-19 Introduction to Environmental Studies, McDaniel College

2018 Freshwater Ecology, McDaniel College

2016-17 Undergraduate Thesis Supervisor, Willamette University. Lydia Vanderburg, “Illuminating drift differences: Higher nighttime light levels reduce behavioral drift in stream invertebrates.”

2016 River and Riparian Ecology, Willamette University

2016-17 General Ecology, Willamette University

2016-17 Intro Biology: Ecology, Evolution, and Diversity for Majors, Willamette University

2015-16 Intro Biology for Non-majors, Willamette University

2014 Supervisor, Undergraduate Directed Studies Project, University of British Columbia. Sandra Ramsden, “Seasonal variations in Cutthroat Trout foraging behavior.”

Guest Lecturer

2024-26 Management Principles of Pacific Salmon in the Northwest, OSU Cascades

Teaching Assistant
Freie Universität Berlin: Fundamentals of Aquatic Ecology, Evolution and Biodiversity I (Zoology); University of Washington: Watershed Ecology and Management, River Ecology, Attaining a Sustainable Society

PUBLICATIONS (PEER-REVIEWED)

Summary Metrics
Citations: 2876 (Google Scholar)

[13] Aulsebrook, A, Jechow, A, Krop-Benesch, A, Kyba, CCM, Longcore, T, **Perkin, EK**, van Grunsven, RHA. 2022. Nocturnal lighting in animal research should be replicable and realistic. *Biology Letters* 18: 20220035.

[12] Wilson, MJ and **Perkin, EK**. 2021. Going rogue: What scientists can learn about Twitter communication from "alt" government accounts. *PeerJ* 9: e12407.

[11] **Perkin, EK** and Wilson, MJ. 2021. Anthropogenic alteration of flow, temperature, and light as life-history cues in stream ecosystems. *Integrative and Comparative Biology*, DOI: 10.1093/icb/icab024.

[10] Tabor, RA, **Perkin, EK**, Beauchamp, DA, Britt, LL, Haehn, R, Green, J, Robinson, T, Stolnack, S, Lantz, DW, and Moore, ZJ. 2021. Artificial lights with different spectra do not alter detrimental attraction of young Chinook salmon and sockeye salmon along lake shorelines. *Lakes and Reservoir Management* DOI: 10.1080/10402381.2021.1906364.

[9] Dominoni, D, Halfwerk, W, Baird, E, Buxton, R, Fernàndez-Juricic, E, Fristrup, K, McKenna, M, Mennitt, D, **Perkin, EK**, Seymoure, B, Stoner, D, Tennessen, J, Toth, C, Tyrell, L, Wilson, A, Francis, C, Carter, N, and Barber, J. Why conservation biology can benefit from sensory ecology. *Nature Ecology and Evolution* 4: 502-511.

[8] Owens, ACS, Cochard, P, Durrant, J, Farnworth, B, **Perkin, EK,** and Seymoure, B. 2020. Light pollution is a driver of insect declines. *Biological Conservation* 241: 208259.

[7] Wilson, MJ, Ramey, TL, Donaldson, MR, Germain, RR, and **Perkin, EK.** 2016. Communicating science: sending the right message to the right audience. *FACETS* 1: 127-137.

[6] Degen, T, Mitesser, O, **Perkin, EK**, Weiß, N-S, Oehlert, M, Matting, E, and Hölker, F. 2016. Street-lighting: sex-independent impacts on moth movement. *Journal of Animal Ecology* 85: 1352-1360.

[5] **Perkin, EK**, Hölker, F, Tockner, K, and Richardson, JS. 2014. Artificial light as a disturbance to light-naïve streams. *Freshwater Biology* 59: 2235-2244.

[4] **Perkin, EK**, Hölker, F, Heller, S, and Berghahn, R. 2014. Artificial light and nocturnal activity in Gammarids. *PeerJ* 2:e279; DOI 10.7717/peerj.279.

[3] **Perkin, EK**, Hölker, F, and Tockner, K. 2014. The effects of artificial lighting on adult aquatic and terrestrial insects. *Freshwater Biology* 59: 368-377.

[2] **Perkin, EK**, Hölker, F, Richardson, JS, Sadler, JP, Wolter, C, and Tockner, K. 2011. The influence of artificial light on freshwater and riparian ecosystems: questions, challenges, and perspectives. *Ecosphere* 2: 122.

[1] Hölker, F, Wolter, C, **Perkin, EK**, and Tockner, K. 2010. Light pollution as a biodiversity threat. *Trends in Ecology and Evolution* 25: 681-682.

SUBMITTED

Herzog, SP, Orr, MR, Winters, H, Fritz, J, **Perkin, EK**, et al. Restoration of an intermittent stream: A transdisciplinary approach to managing tradeoffs. *Water Resources Research*.

GRANTS AND RESEARCH AWARDS

2026 Cottonwood Creek Instream Restoration Response Monitoring. Oregon Watershed Enhancement Board. $392,875.

2024 Molalla River Fire Restoration. Private Forest Accord Grant. $505,785.00

2023 Molalla River Fire Restoration. Oregon Watershed Enhancement Board. $850,000.

2022 Molalla River Fire Restoration. Bureau of Land Management. $281,279.

2022 Molalla River Fire Restoration. Oregon Watershed Enhancement Board. $1.2 million.

2021 Lower Deschutes River Stewardship Project. M&T Bank Grant. Funding to support stewardship and education projects by a member of the Confederated Tribes of Warm Springs. $17,500 USD.

2016 Aquatic Luminous Environment Grant, Zoological Lighting Institute. **Perkin, E. K.** Determining the Plasticity of Larval Mayfly Response to Artificial Lighting. $5000 USD.

2016 Liberal Arts Research Collaborative (LARC), Willamette University. **Perkin, E. K.,** and Lenox, S. Streams of Consciousness: Using Creative Writing and Lab Experiments to Better Understand our Relationship to Light and Streams. $21,200 USD.

2012 Ecological Society of America Student Section Travel Award. $500 USD.

2011 University of British Columbia Graduate Student International Research Mobility Award. $1500 CAD.

2010 North American Benthological Society President's Fund Award. $900 USD.

2008 Galen and Helen Maxfield Fisheries Scholarship, University of Washington. The Relationship of Soil Nitrogen Availability and Water Holding Capacity to Riparian Tree Growth on the Queets River, Washington. $7673 USD.

2007 H. Mason Keeler Lake Washington Fund in Fisheries, University of Washington. The Relationship of Soil Nitrogen Availability and Water Holding Capacity to Riparian Tree Growth on the Queets River, Washington. $2489 USD.

2003 Milton L. Fischer Field Memorial Fellowship, Reed College. The Effects of Hatchery Salmon Carcasses on Aquatic Insects in Western Oregon Streams. $3000 USD.

2002 Independent Summer Research Project Award, Reed College. The Effects of Juniper Stand Density on Riparian Plant Diversity. $3000 USD.

INVITED TALKS

2024 World Fisheries Congress. Seattle, WA. Panel Member, Aquaculture-aided Fisheries Enhancement, Conservation, and Restoration: Towards Responsible Development and Effective Reform.

2024 Oregon Chapter of the American Fisheries Society. Bend, OR. Watershed-scale Post-fire Restoration and Monitoring.

2023 Oregon Rewilding Conference, Camp Sherman, OR. The 3 Rs: Restoration, Reintroduction, and Redds—Bringing Springers Back to the Molalla.

2021 Gonzaga University, Spokane, WA. Research Seminar. Confluence: The intersection of humans and rivers.

2021 Susquehanna University, Selinsgrove, PA. Research Seminar. Shedding light on urban streams.

2021 Society for Integrative and Comparative Biology Annual Meeting. Online. Invited Talk. Light Waters: How anthropogenic light alters river ecosystems.

2017 University of Washington, Tacoma. Research Seminar. Rivers of Light: Artificial light and its potential interactions with temperature & flow in urban streams.

2016 Gorge Night Sky Symposium, The Dalles, OR. Keynote. The effects of light pollution on river and riparian ecosystems.

2016 King County Water and Land Resources Division, Seattle, WA. Invited Talk. Rivers of light: how artificial light at night affects stream ecosystems.

2015 International Dark Sky Association Annual General Meeting, Phoenix, AZ. Invited Speaker. Artificial light at night: impacts to fishes.

2015 School of Aquatic and Fisheries Sciences, University of Washington, Seattle, WA. Departmental Seminar Speaker. Rivers of light: how artificial light at night affects stream ecosystems.

2013 First International Conference on Artificial Light at Night, Berlin, Germany. Plenary speaker. Artificial light and streams ecosystems: what we know and where we're headed.

2013 Annual Professional Biology Conference, Richmond, BC. Artificial light and stream ecosystems: what we know and where we're headed.

2008 Leibniz-Institute for Freshwater Ecology and Inland Fisheries, Berlin. Colloquia of the Institute. Relationship between soil N availability and riparian tree growth on the Queets River, WA.

HONORS & AWARDS

2015 "Scaling Up" Faculty Mentoring Network. Ecological Society of America and Quantitative Undergraduate Biology Education and Synthesis. Included up to $1000 to attend the Life Discovery Conference in March 2016.

2013 Best Student Oral Presentation in Applied Research. Society for Freshwater Science Annual Meeting.

SELECT CONFERENCE PRESENTATIONS

†*Signifies undergraduate researcher*

2026 Perkin, E. K., Tattam, I, & White, S. M. A river divided: The past, present, and (reunited?) future of the Deschutes River. Western Division American Fisheries Society. Portland, OR. Oral Presentation.

2018 Perkin, E. K. & Vanderberg, L. V.† Stream insect acclimation to artificial light at night. Artificial Light at Night Conference. Snowbird, UT. Oral Presentation.

2016 Perkin, E. K. & Richardson, J. S. Seasonal variation in foraging and competitive behaviors in Coastal Cutthroat Trout. Society for Freshwater Science Annual Meeting. Sacramento, CA. Oral Presentation.

2014 Perkin, E. K. & Richardson, J. S. The effects of artificial light at night on trout activity and foraging behavior. Artificial Light at Night Conference. Leicester, UK. Oral Presentation.

2013 Perkin, E. K., Hölker, F., Tockner, K., & Richardson, J. S. The short-term effects of artificial light on different trophic levels in small streams. Society for Freshwater Science Annual Meeting. Jacksonville, FL. Oral Presentation.

2011 Perkin, E. K., Hölker, F., & Tockner, K. Artificial light interferes with the dispersal of adult aquatic insects across the terrestrial landscape. North American Benthological Society Annual Meeting. Providence, RI. Oral Presentation.

2008 Perkin, E. K. & Naiman, R. J. Soil N availability, water holding capacity and riparian tree growth. Annual Meeting of the Ecological Society of America. Milwaukee, WI. Poster.

GRADUATE COMMITTEE MEMBER

Daphne Chevalier, Masters Student, University of British Columbia

PROFESSIONAL/INSTITUTIONAL SERVICE

2026 Jointly organized special session (with Ian Tattam and Seth White), Deschutes RiverLab: A New Model for River Research Collaboration. Western Division American Fisheries Society. Portland, OR.

2024- Board Member, Freshwaters Illustrated.

2023-2026 Legislative Committee, Oregon Chapter, American Fisheries Society.

2022-2023 Technical Advisory Committee, Kellogg Creek Dam Removal, North Clackamas Watershed Council.

2022-2023 Deschutes River Water Quality Stakeholder Group Convener.

2021-2023 Science and Policy Committee, American Fly Fishing Trade Association.

2018 Singleton-Mathews Farm property management committee, McDaniel College.

2015 Reviewed applications for Instars undergraduate program, Society for Freshwater Science.

2014 Jointly organized special session (with John Richardson), Emerging Issues in Freshwater Ecology. Joint Aquatic Sciences Meeting, Portland, OR.

2012 Jointly organized special session (with Franz Hölker), Ecological Effects of Artificial Light at Night. Annual Meeting of the Ecological Society of America, Portland, OR.

2012 Reviewer for undergraduate travel award committee, Society for Freshwater Science.

2011 Jointly organized special session (with John Richardson), Conservation Challenges for Organisms with Complex Life-Cycles. North American Benthological Society Annual Meeting. Providence, RI.

2011 Served as an Instars Graduate Mentor. North American Benthological Society Annual Meeting. Providence, RI.

Reviewer for the following publications and agencies:

Animal Behaviour, Aquatic Sciences, Aquatic Ecology, Biological Conservation, Biology Letters, Biological Reviews, Ecological Applications, Ecological Entomology, Ecology, Ecosphere, Entomological News, Environmental Conservation, Freshwater Biology, Freshwater Science, Frontiers in Ecology and the Environment, Geosciences, Global Change Biology, Integrative and Comparative Biology, Journal of Applied Ecology, Journal of Experimental Marine Biology and Ecology, Limnologica, Limnology, PLOS ONE, Scientific Reports, Washington Department of Natural Resources, and Urban Ecosystems.

Reviewer for the following funding agencies:

French National Research Fund, Hungarian Science Research Fund, National Environment Research Council (U.K.), The Ohio State University Grants Program, Polish National Science Centre, and Washington Sea Grant.

NON-PEER REVIEWED PUBLICATIONS/REPORTS

2026 Murderers Creek Annual Report. ODFW, John Day, OR.

2020 Apetowun Creek Reconstruction 2020 Annual Aquatics Summary Report. Hatfield Consultants, Calgary, AB.

2020 2019 Wolverine Mine Environmental Effects Monitoring Program Annual Report. Hatfield Consultants, Vancouver, BC.

2020 2019 Willow Mine Environmental Effects Monitoring Program Annual Report. Hatfield Consultants, Vancouver, BC.

2020 2019 Brule Mine Environmental Effects Monitoring Program Annual Report. Hatfield Consultants, Vancouver, BC.

2019 Musreau Creek Pipeline Release: Aquatic Effects Assessment. Hatfield Consultants, Calgary, AB.

2019 Fall 2019 Water Quality Screening Assessment for the CNOOC Wetlands and Waterbodies Monitoring Program. Hatfield Consultants, Vancouver, BC.

2019 Apetowun Creek Reconstruction 2019 Annual Aquatics Summary Report. Hatfield Consultants, Calgary, AB.

SCIENCE OUTREACH/COMMUNICATION

2022 Deschutes River Update. Native Fish Society “Lunch and Learn” Public Talk.

2019 A surprising effect of light pollution: It disrupts aquatic insects. The Revelator. Online News Magazine published by the Center for Biological Diversity
URL: https://therevelator.org/light-pollution-aquatic-insects/

2018 Darkness and Enlightenment: Looking for a world without light pollution. Stranger’s Guide. Online News Magazine.
URL: https://strangersguide.com/articles/darkness-and-enlightenment/

2017 Science Storytelling in Salem, Salem, OR. The Mayfly Caper. Public Talk

2015 Anecdotal Evidence, Vancouver, BC. Finding My Home Stream. Public Talk

2012 Science Slam. Competitive talk to the public of Berlin. Artificial light and the dispersal of adult aquatic insects…oder Wie Batman der Herren der Fliegen wurde. Voted best talk by the audience of 500+

2009 Hölker, F., Voigt, C., Wolter, C., **Perkin, E. K.**, and Tockner, K. Der Verlust der Nacht ist auch ein ökologisches Problem. Leibniz Gemeinschaft Zwischenruf 2: 18-21. (Policy brief, in German)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Fisheries Society 2014-present