

Ethan S. Duvall

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last updated 11/26/2023

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EDUCATION

PhD | Ecology and Evolutionary Biology - Advisor: Dr. Alex Flecker
Cornell University, Department of Ecology and Evolutionary Biology

2020–present

BS | Environmental Science - Emphasis: Terrestrial Ecology
Western Washington University, Huxley College of the Environment

2016–2019

HONORS AND AWARDS

- Andrew '78 & Margaret Paul Graduate Fellowship in the Life Sciences: 2023
- Amazon Center for Environmental Education & Research ([ACEER](#)) Conservation Fellow: 2022
- Theodore Gordon Flyfishers ([TGF](#)) Scholar Award: 2021
- Cornell University First-year Graduate Fellow in Life Sciences: 2020
- Thomas Henry Huxley Award Recipient – ***“This award recipient demonstrated exceptional scholastic achievement and has been involved in the community, served Huxley College, and has shown all-around excellence in environmental studies”***: 2019
- Honorary Commencement Speaker ([link to video](#)) – Huxley College of the Environment, WWU: 2019

PUBLICATIONS

- Duvall, E., Derry, L., McIntyre, P., and A. Flecker. (*In preparation*). Flight and phenology shape bird body stoichiometry.
- Abraham, A., Duvall, E., Hempson, G., le Roux, E., et al. ... C. Doughty (*In preparation*). Sodium constrains herbivore densities across sub-Saharan Africa.
- Duvall, E., Roman, J., Pearson, H., Le Roux, E., Malhi, Y., and A. Abraham (*In review*). Rethinking the carbonization of animals. *Science Policy Forum*
- Duvall, E. and McLaughlin, J. (*In review*). Evaluating river-dependent birds as restoration indicators after Elwha dam removals. *Ecological Indicators*
- Duvall, E., Hoeneisen, N., Suárez, E., and A. Flecker (*In press*). Geophagy by a large herbivore (capybara, *Hydrochoerus hydrochaeris*) driven by a human sodium supply. *Biotropica*
- Abraham, A., Doughty, C., Plummer, K., and E. Duvall (*In press*). Supplementary bird feeding as an overlooked contribution to local phosphorus cycles. *Frontiers in Ecology and the Environment*
- Duvall, E., Griffiths, B., Clauss, M., and A. Abraham (**2023**). Allometry of sodium requirements and mineral lick use among herbivorous mammals. *Oikos*
- Abraham A., Duvall, E., le Roux, E., Ganswindt, A., Clauss, M., Doughty, C., and A. Webster (**2023**). Anthropogenic supply of nutrients in a wildlife reserve may compromise conservation success. *Biological Conservation*
- Duvall, E., Schwabe, E., and K. Steensma (**2023**). A win-win between farmers and an apex-predator: investigating the relationship between bald eagles and dairy farms. *Ecosphere*

- Abraham, A., **Duvall, E.**, Ferraro, K., Webster, A., Doughty, C., le Roux, E., and D. Ellis-Soto. (2022). Understanding anthropogenic impacts on zoogeochemistry is essential for ecological restoration. *Restoration Ecology*
- Buchanan, B., Sethi, S., Cuppett, S., Jackman, G., Lung, M., Zarri, L., **Duvall, E.**, et al. (2022) A machine learning approach to identify barriers in stream networks demonstrates high prevalence of unmapped riverine dams. *Journal of Environmental Management*
- **Duvall, E.** (2022). Spatiotemporal responses of bald eagles to changes in salmon carcass availability in the Pacific Northwest. *Northwest Science*

PRESENTATIONS

- **Duvall, E.** (2023) Mega-herbivores need more salt. Cornell University, *Department of Ecology and Evolutionary Biology December Symposium* **Awarded best student oral presentation**
- **Duvall, E.** (2023) Zoogeochemistry: exploring animal roles in earth's elemental cycles *University of Toronto, Department of Biology Seminar Series* **Invited talk for seminar series**
- **Duvall, E.**, Griffiths, B., Clauss, M., and A. Abraham (2023) Drivers of sodium deficiency, supplementation, and dispersal by large herbivores. *Ecological Society of America (ESA) Conference* **Invited talk for special session**
- **Duvall, E.**, Derry, L., McIntyre, P., Flecker, A. (2023) Patterns of variation in the ionomics of birds. *Conference on Biological Stoichiometry* **Awarded best student oral presentation**
- **Duvall, E.**, Derry, L., Flecker, A. (2022) Stoichiometry of birds and implications for ecosystem ecology. *Ecological Society of America (ESA) Conference*
- **Duvall, E.**, McLaughlin, J. (2022) Riverbird responses to dam removals on the Elwha River. *Salish Sea Ecosystem Conference*
- **Duvall, E.**, McLaughlin, J. (2021) Riverbird responses to dam removals on the Elwha River. *Olympic National Park Science Symposium*
- **Duvall, E.** (2019) Nooksack River Bald Eagles: Current Status and Conservation Recommendations. *Whatcom Wildlife Advisory Committee*
- **Duvall, E.**, Jones, R., and Pollack, S. (2018) River-dependent bird responses to impacts of dam removal. *Western Washington University Scholars Week*

PROFESSIONAL POSITIONS

- Teaching Assistant | Cornell University, Ithaca, NY **2020-current**
 - BIOG 1445: Comparative Anatomy and Physiology
- GIS Program Lead | Cascade Water Alliance, Bellevue, WA **2018-2020**
 - Led the development, implementation, and management of Cascade's GIS program
 - Oversaw GIS web application development for asset and water management
 - Static/interactive map development and spatial data analysis in support of organization needs: RFP/RFQ/Public Works; legal, planning, engineering and operations issues; algae/invasive plant treatment, stormwater, etc.
- Environmental Intern | Cascade Water Alliance, Bellevue, WA **2018-2019**
- Teaching Assistant, Ecology Field Camp | WWU, Bellingham, WA **2018-2019**
- Field Technician | Washington Department of Fish and Wildlife, Bellingham, WA **2017-2018**
- Wildlife Monitoring Technician | WWU Department of Biology, Bellingham, WA **2016-2017**
- Outdoor Recreational Guide | Compass Outdoor Adventures, North Bend, WA **2014-2017**
- Committee Member | North Bend Parks and Rec. Committee, North Bend, WA **2014-2016**

SCIENCE COMMUNICATION

- CBC Radio (2023, April 1). Eagles are eating cows instead of salmon – and farmers are happy Retrieved from <https://www.cbc.ca/player/play/2188569155552> **Selected feature in podcast**
- USA TODAY (2023, March 18). Bald eagles adapt after climate change diminishes salmon Retrieved from <https://www.usatoday.com/story/news/nation/2023/03/18/bald-eagles-adapt-after-climate-change/11470297002/> **Selected feature in popular press**
- Duvall, E. (2023, April 4). Riverbirds: An Integrative Measure of Ecosystem Health. *Gordon's Quill* Volume 34: "Thoughts on Conservation" **Selected written magazine article**
- Duvall, E. (2023, January 18). Reflections On Ecotourism And Wildlife Conservation In The Peruvian Amazon [Blog post]. Retrieved from <https://aceer.org/reflections-on-ecotourism-and-wildlife-conservation-in-the-peruvian-amazon/> **Selected written blog article**
- Duvall, E. (2020, June 20). Why save water in the PNW? [Blog post]. Retrieved from <https://weneedwater.org/why- conserve-water-in-the-pnw/>
- Duvall, E. (2019, December 11). Eagles, Salmon, and a Free-flowing River [Blog post]. Retrieved from <https://www.americanrivers.org/2019/12/eagles-salmon-and-a-free-flowing-river/>



- Instagram: <https://www.instagram.com/ethanduvall.ecology/> (4200+ followers)

RESEARCH GRANTS

- 2023: The Athena Fund for Research at the Cornell Lab of Ornithology (\$8,380)
- 2023: Cornell Chapter of Sigma Xi Graduate Research Award (\$1,000)
- 2023: Cornell Latin American and Caribbean Studies Program (LACS) Research Grant (\$1,500)
- 2022: USFQ-Cornell Global Strategic Collaboration Award (\$10,000 – split equally)
- 2022: Cornell Lab of Ornithology Undergraduate Experiential Learning Grant (\$5,000)
- 2022: Cornell Agriculture & Life Sciences Graduate Travel Fund (\$2,000)
- 2022: Theodore Gordon Flyfisher's Scholar Award (\$5,000)
- 2020: The Athena Fund for Research at the Cornell Lab of Ornithology (\$5,635)
- 2020: Sustainable Biodiversity Fund; Atkinson Center for Sustainability (\$7,000)
- 2019: Dean's Fund of Sustainability Studies Award; Huxley College of the Environment (\$1,000)
- 2018: Washington Chapter of The Wildlife Society Research Grant Award (\$600)

LEADERSHIP & VOLUNTEER POSITIONS

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| • Founder: Amazon Research and Conservation Collaborative (ARCC) <ul style="list-style-type: none">◦ Certified 501(C)(3) non-profit organization in the United States | 2024-present |
| • President: Tropical Biology & Conservation GSA, Cornell University | 2021-present |
| • Youth Mentor, The Learning Web , Ithaca, NY | 2021-present |
| • Cornell EEB Graduate Student Recruitment Committee, Cornell University, NY | 2021-present |
| • Co-leader: Community Listening and Outreach Committee Cornell Lab of Ornithology | 2020-2022 |
| • Vice President: Tropical Biology & Conservation GSA, Cornell University | 2021-2022 |
| • Treasurer: Biogeochemistry GSA, Cornell University | 2021-2022 |
| • Committee Member: North Bend Parks and Recreation, North Bend, WA | 2014-2016 |
| • Co-founder: Be the Change Leadership Conference, North Bend, WA | 2014-present |

CERTIFICATES AND SKILLS

- Wilderness First Aid certificate, AVH Global (current as of April 2023)
- River Studies and Leadership certificate; River Management Society
- ACA Swiftwater Rescue Certificate: Level 2

- GIS software: ArcGIS Pro; ArcGIS Online; ESRI Products; QGIS
- Statistical languages/programs: R, RStudio, Python, SQL, MATLAB, Java
- Other software: NetLogo, Dragonfly, Google Earth Engine

- Laboratory nutrient analyses: inductively coupled mass spectrometry; gas chromatography
- Spatial data processing: remote sensing; image analysis; LiDAR; radio telemetry
- Wildlife tracking and survey methods: camera trapping, acoustic identification (birds, amphibians)

ORGANIZATIONS AND AFFILIATIONS

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| • Global Zoogeochemistry Network | 2023-current |
| • Association for Tropical Biology and Conservation (ATBC) member | 2022-current |
| • Ecological Society of America (ESA) member | 2022-current |
| • Northwest Scientific Association member | 2021-current |
| • River Management Society member | 2019-current |
| • Washington Chapter of the Wildlife Society member | 2019-2020 |
| • Puget Sound ESRI User Group member | 2018-2020 |