Ethan S. Duvall

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EDUCATION

PhD | Cornell University, Department of Ecology and Evolutionary Biology **2020–present**
Advisor: Dr. Alex Flecker

BS | Western Washington University, Huxley College of the Environment **2016–2019**
Environmental Science - Emphasis: Terrestrial Ecology

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.**, Doughty, C., Roman, J., Pearson, H., Le Roux, E., Malhi, Y., and A. Abraham (*In preparation*). Rethinking the carbonization of animals. *Science Policy Forums*
- **Duvall, E.**, Derry, L., McIntyre, P., and A. Flecker. (*In preparation*). Flight and phenology shape bird body stoichiometry. *PNAS*
- Abraham, A., **Duvall, E.**, Hempson, G., le Roux, E., et al. … C. Doughty (*In review*). Sodium constrains herbivore densities across sub-Saharan Africa. *Nature*
- **Duvall, E.** Hoeneisen, N., Suárez, E., and A. Flecker (*In review*). 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 review*). Supplementary bird feeding as an overlooked contribution to local phosphorus cycles. *Frontiers in Ecology and the Environment*
- **Duvall, E.** and McLaughlin, J. (*In review*). Evaluating river-dependent birds as restoration indicators after Elwha dam removals. *Ecological Indicators*
- **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)** 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 & ACADEMIC 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**
- Environmental Intern | Cascade Water Alliance, Bellevue, WA **2017-2018**
- Teaching Assistant, Ecology Field Camp | WWU, Bellingham, WA **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: Cornell Chapter of Sigma Xi Graduate Research Award ($1000)
- 2023: Cornell Latin American and Caribbean Studies Program (LACS) Research Grant ($1500)
- 2022: USFQ-Cornell Global Strategic Collaboration Award ($10,000 – split equally)
- 2022: Cornell Lab of Ornithology Undergraduate Experiential Learning Grant ($5000)
- 2022: Cornell Agriculture & Life Sciences Graduate Travel Fund ($2000)
- 2022: Theodore Gordon Flyfisher's Scholar Award ($5000)
- 2020: The Athena Fund for Research at the Cornell Lab of Ornithology ($5635)
- 2020: Sustainable Biodiversity Fund; Atkinson Center for Sustainability ($7000)
- 2019: Dean's Fund of Sustainability Studies Award; Huxley College of the Environment ($1000)
- 2018: Washington Chapter of The Wildlife Society Research Grant Award ($600)

LEADERSHIP & VOLUNTEER POSITIONS

- Founder: Amazon Research and Conservation Collaborative (ARCC) **2023-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

- Global Zoogeochemistry Network **2023-current**
- Association for Tropical Biology and Conservation (ATBC) member **2022-current**
- Ecological Society of America 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**