

TREVOR A. CARTER

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APPOINTMENTS

2024 Wildfire Science Post-Doctoral Scholar
HART Lab | July 2024 – Present | Colorado State University

EDUCATION

2024 Ph.D. | Integrative & Systems Biology | University of Colorado Denver | Advisor: Dr. Brian Buma
2021 M.S. | Botany | University of Wyoming | Advisor: Dr. Daniel Laughlin
2019 B.S. | Environmental Science | University of Nevada, Reno | Advisor: Dr. Beth Leger
B.S. | Forest Management & Ecology ‡ | University of Nevada, Reno
‡ Indicates a double minor in Rangeland Ecology & Management and Ecohydrology

PUBLICATIONS | citations: 25, h-index: 2 **ORCID: 0000-0002-8727-5327**

Peer-Reviewed Publications

6. **Carter TA** & Buma B. 2024. The Distribution of Tree Biomass Carbon within the Pacific Coastal Temperate Rainforest, a Disproportionally Carbon Dense Forest. *Canadian Journal of Forest Research*.
5. Rodman KC, Andrus RA, Carlson AR, **Carter TA**, Chapman TB, Coop JD, Fornwalt PJ, Gill NS, Harvey BJ, Hoffman AE, Kelsey KC, Kulakowski D, Laughlin DC, Morris JE, Negrón JF, Nigro KM, Pappas GS, Redmond MD, Rhoades CC, Rocca ME, Schapira ZH, Sibold JS, Stevens-Rumann CS, Veblen TT, Wang J, Zhang X, and Hart SJ. 2022. Rocky Mountain forests poised to recover following recent bark beetle outbreaks, but with altered composition. *Journal of Ecology*.
4. Hayes KR, **Carter TA**, Cook PA, Twaddell EM, and Buma B. 2022. Supporting Graduate Field Leadership Through Community Sourced Advice, Action, and Policy. *Ecosphere*.
3. **Carter TA**, Hayes KR, and Buma B. 2022. Putting more fuel on the fire... or maybe not? A Synthesis of Spruce Beetle and Fire Interactions in North American Subalpine Forests. *Landscape Ecology*.
2. **Carter TA**, Fornwalt PJ, Dwire KA, and Laughlin DC. 2022. Understory Plant Community Responses to Widespread Spruce Mortality in a Subalpine Forest. *Journal of Vegetation Science*.
1. **Carter TA**, Agneray AC, and Leger EA. 2020. Variability of whitebark pine (*Pinus albicaulis* Engelm.) leaf traits in the Great Basin Desert. *Nevada State Undergraduate Research Journal*.

Other Publications

1. Wessel SA, Fleri JR, Atkins DH, **Carter TA**, Stears AE, Mount HE, Case NW, Albeke SE, and Laughlin DC. 2021. Exploring vegetation virtually with the Global Vegetation Project. *International Associate for Vegetation Science. Bulletin*.

Publications In Review (available upon request)

1. **Carter TA** & Buma B. *In Revision*. Understory Plant Biodiversity is Inversely Related to Carbon Storage in a Carbon Dense Ecosystem. *Ecology and Evolution*.

FUNDING & AWARDS | total funding **\$11,427**

Fellowships & Competitive Grants

2022 International Research Experience for Students | NSF | Puerto Williams, Chile
ISB Doctoral Teaching Fellowship | University of Colorado Denver | **\$5,000**

Small Grants

- 2022 CLAS Graduate Student Travel Grant | University of Colorado Denver | **\$500**
 ISB Graduate Student Travel Grant | University of Colorado Denver | **\$590**
- 2020 A&S Dean's Graduate Scholars | University of Wyoming | **\$2,000**
 Aven Nelson Fellowship in Systematic Botany | University of Wyoming | **\$1,300**
- 2018 Nevada Undergraduate Research Award | University of Nevada, Reno | **\$1,800**
 Mary DeDecker Botanical Grant | CA Native Plant Society, Bristlecone Chapter | **\$237**

Awards

- 2024 CLAS Outstanding PhD Student | University of Colorado Denver
- 2023 ISB Graduate Student Excellence in Research Award | University of Colorado Denver | **\$250**
- 2022 Semi-Finalist | Fulbright Student Program
- 2021 Outstanding Teaching Assistant Award | University of Wyoming | **\$300**
- 2020 Botany Student Award | University of Wyoming | **\$100**
- 2019 Outstanding Senior in Forest Management & Ecology | University of Nevada, Reno
- 2017 Dean's list CABNR | 2017 – 2019 (spring & fall) | University of Nevada, Reno
- 2012 Eagle Scout | Boy Scouts of America

TEACHING EXPERIENCE

Instructor of Record

- 2023 Biostatistics (44 students) | BIOL 3763 | University of Colorado Denver

Guest Lectures

- 2024 "Writing Panel" | BIOL 6705 | University of Colorado Denver
- 2022 "T-Tests: Paired vs. Two Sample" | BIOL 3763 | University of Colorado Denver
 "Generalizability of Disturbance Ecology" | BIOL 7010 | University of Colorado Denver

Teaching Assistant

- 2022 Biostatistics (35 students) | BIOL 3763 | University of Colorado Denver
 Organisms to Ecosystems (21 students) | BIOL 2010 | University of Colorado Denver
- 2021 Organisms to Ecosystems (30 students) | BIOL 2010 | University of Colorado Denver
 General Biology (29 students) | LIFE 1010 | University of Wyoming
- 2020 Vegetation Ecology (39 students) | BOT 5700 | University of Wyoming
- 2018 Range and Forest Plants (undergrad lab assistant) | NRES 345 | University of Nevada, Reno

Supplemental Instructive Experience

- 2022 BioBlitz (27 participants) | ISB Seminar | University of Colorado Denver
- 2020 Lesson Plan Creator | Global Vegetation Project | University of Wyoming

MENTORSHIP

Undergraduate Students

- 2020 Carl LaNore | University of Wyoming

Group Mentoring

- 2022 Peer Connections Program (3 students) | University of Colorado Denver
- 2018 NevadaFIT Mentor (8 students) | University of Nevada, Reno

SYNERGISTIC ACTIVITIES

University Service

- 2022 Graduate Student Representative | ISB Advisory Committee | University of Colorado Denver
- 2019 CABNR recruitment promotion | University of Nevada, Reno
- 2018 Natural Resources Club Coalition | University of Nevada, Reno

- 2018 Student Advisory Board | Department of Natural Resources | University of Nevada, Reno
 2017 Student Ambassador | University of Nevada, Reno
 2016 Arboretum Board | University of Nevada, Reno

Outreach & Public Engagement

- 2023 Guest Speaker | NerdNite Denver (invited talk)
 2022 Guest Speaker | NerdNite Denver (contributed talk)
 2021 Guest Speaker | NerdNite Denver (contributed talk)
 2019 Guest Speaker | California Native Plant Society, Bristlecone Chapter (invited talk)
 Co-organizer | Earth Week | University of Nevada, Reno

Ad-Hoc Manuscript Reviews

Ecology and Evolution, Diversity and Distributions, Journal of Ecology

PRESENTATIONS

Invited

- 2023 **Carter TA**. Why do trees in Alaska matter for climate change? College of Liberal Arts and Sciences Mixtape. University of Colorado Denver. Nov. 9, 2023 (*10-minute oral presentation*).
Carter TA, Buma B. A systems biology investigation into the permanently humid ecoregion of the Pacific Coastal Temperate Rainforest. Alaska Coastal Rainforest Center. Oct. 18, 2023 (*20-minute oral presentation*).
 2022 **Carter TA**, Buma B. Historical Contexts Shape the Distribution of Tree Biomass Carbon in a Globally Relevant, Carbon Dense Forest. Coastal Margins Research Coordination Network Webinar. Nov. 11, 2022 (*15-minute oral presentation*).

Contributed

- 2024 **Carter TA**. Carbon Dynamics in the Pacific Coastal Temperate Rainforest: An Ecosystem Science Approach. Seminar. Department of Integrative Biology at University of Colorado Denver. Apr 19, 2023 (*50-minute seminar*).
Carter TA, Buma B. Understory Plant Biodiversity is Inversely Related to Carbon Storage in a Carbon Dense Ecosystem. International Association of Landscape Ecology. Apr 4, 2024 (*15-minute oral presentation*).
Carter TA, Buma B. Understory Plant Biodiversity is Inversely Related to Carbon Storage in a Carbon Dense Ecosystem. Front Range Student Ecology Symposium. Feb. 2, 2024 (*15-minute oral presentation*).
 2023 **Carter TA**, Buma B. A systems biology investigation of the permanently humid ecoregion of the coastal temperate North American rainforest. BioBlitz. Department of Integrative Biology at University of Colorado Denver. Sep. 1, 2023 (*3-minute oral presentation*).
Carter TA, Buma B. Historical Contexts Shape the Distribution of Tree Biomass Carbon in a Globally Relevant, Carbon Dense Forest. Front Range Student Ecology Symposium. Feb. 23, 2023 (*poster presentation*).
 2022 **Carter TA**, Hayes KR, Buma B. Putting more fuel on the fire... or maybe not? A synthesis of spruce beetle and fire interactions in North American subalpine forests. Guild of Rocky Mountain Ecologists and Evolutionary Biologists. Sep 24, 2022 (*15-minute oral presentation*).
Carter TA, Hayes KR, Buma B. Putting more fuel on the fire... or maybe not? A synthesis of spruce beetle and fire interactions in North American subalpine forests. Student Seminar. Department of Integrative Biology at University of Colorado Denver. Sep 9, 2022 (*15-minute oral presentation*).
Carter TA, Atkins DH, Dwire KA, Fleri JR, Fornwalt PJ, Hayes KR, Mount HE, Siefert A, Stears AE, Twaddell EM, Wessel SA, Buma B, Laughlin DC. Root Traits are Poor Predictors of the

- Understory Plant Community Response to Widespread Spruce Mortality a Decade After Disturbance. Ecological Society of America. Aug 15, 2022 (*15-minute oral presentation*).
- Carter TA**, McNicol G, Buma B. Missing the Forest for the Trees: Above and Below Ground Carbon in a Carbon Dense Ecosystem. International Association of Landscape Ecology. Apr 13, 2022 (*15-minute oral presentation*).
- Carter TA**, McNicol G, Buma B. Missing the Forest for the Trees: Above and Below Ground Carbon in a Carbon Dense Ecosystem. Front Range Student Ecology Symposium. Feb 25, 2022 (*15-minute oral presentation*).
- Carter TA**, McNicol G, Buma B. Exploring Spatial Patterns in Above and Below Ground Carbon in One of the Most Carbon Dense Ecosystems. Student Seminar. Department of Integrative Biology at University of Colorado Denver. Feb 17, 2022 (*15-minute oral presentation*).
- 2021 **Carter TA**, Fornwalt PJ, Dwire KA, Laughlin DC. Changes in Understory Plant Communities Following Widespread Spruce Mortality in a Subalpine Forest. Seminar. Department of Botany at University of Wyoming Botany. Apr 15, 2021 (*50-minute seminar*).
- Carter TA**, Fornwalt PJ, Laughlin DC. Changes in Understory Plant Communities Following Widespread Spruce Mortality in a Subalpine Forest. Symposium. Program in Ecology at University of Wyoming. Feb 19, 2021 (*3-minute oral presentation*).
- 2020 **Carter TA**, Fornwalt PJ, Laughlin DC. Changes in Understory Plant Communities Following Widespread Spruce Mortality in Subalpine Forests. Ecological Society of America. Aug 4, 2020 (*Poster presentation*).
- Carter TA**, Fornwalt PJ, Laughlin DC. Changes in Understory Plant Communities Following Widespread Spruce Mortality in Subalpine Forests. Symposium. Program in Ecology at University of Wyoming. Feb 14, 2020 (*Poster presentation*).
- 2019 **Carter TA**, Fornwalt PJ, Laughlin DC. Plant Responses to Spruce Beetle Armageddon. Seminar. Department of Botany at University of Wyoming. Oct 24, 2019 (*10-minute oral presentation*).
- Carter TA**, Fornwalt PJ, Laughlin DC. Plant community responses to widespread spruce mortality in the Snowy Range, Wyoming. Guild of Rocky Mountain Ecologists and Evolutionary Biologists. Sep 8, 2019 (*15-minute oral presentation*).
- Carter TA**, Agneray AC, Leger EA. Changes in leaf morphology in whitebark pine using decades of herbarium specimens. Nevada Undergraduate Research Symposium. May 6, 2019 (*Poster presentation*).

SPECIAL SESSIONS, WORKSHOPS, & TRAININGS

- 2024 Fundamentals in Ecosystem Ecology | The Cary Institute of Ecosystem Science | Millbrook, NY
- 2022 Coastal Rainforest Network Research Coordination Network NSF Workshop | Arcata, CA
- 2022 Wilderness First Aid | Backcountry Pulse Wilderness Medicine Education

PROFESSIONAL AFFILIATIONS

- Society of American Foresters | 2020 – present
- Ecological Society of America | 2019 – present
- US Chapter of the International Association of Landscape Ecology | 2019 – present