

# Lorena M. Benitez

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<https://blogs.ed.ac.uk/lorenabenitez/>

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## EDUCATION

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<b>PhD in Atmospheric and Environmental Sciences</b>	2022- Present
Satellite Data in Environmental Science Centre for Doctoral Training (SENSE CDT) School of Geosciences, University of Edinburgh, Edinburgh, UK	
<b>Master of Environmental Science</b>	2020
Yale School of the Environment, Yale University, New Haven, CT	
<b>Bachelor of Arts in Integrative Biology</b>	2017
Harvard University, Cambridge, MA	

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## Awards and Fellowships

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<b>NSF Graduate Research Fellowship- Honorable Mention</b>	2020
<b>Best Master's Presentation, Yale Forestry &amp; Environmental Studies Research Conference</b>	2020
<b>Leadership Scholarship (\$50,000), Yale School of Forestry and Environmental Studies</b>	2018-2020
<b>George Peabody Gardner Fellowship (\$24,000), Harvard University</b>	2017

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## Job Experience

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<b>Smithsonian Conservation Biology Institute, Front Royal, VA</b>	
Graduate Fellow, GIS Lab	2024
Movement of Life Intern	2020-2021
<b>School of Geosciences, University of Edinburgh, Edinburgh, UK</b>	
A Socio-Ecological Observatory for Southern African Woodlands ( <a href="#">SEOSAW</a> ) Project Officer	2021- 2023
Resolving the current and future carbon dynamics of the dry tropics ( <a href="#">SECO</a> ) Project Officer	2021-2022

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## Publications

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- Benitez, L.**, Muchawona, A., Bowers, S., Chinofunga, A., Nyamugadza, E., Gotore, T., & Ryan, C.M. (In Prep). Mapping the vegetation of Zimbabwe and assessing its composition, diversity, and carbon stocks.
- Crews, S.A., **Benitez, L.**...Stabach, J.A. (In Prep). Agent-based model predicts corridors in the fragmented landscape of Athi-Kaputiei Plains, Kenya. *Ecological Applications*.
- Gotore, T., Muchawona, A., Ryan, C.M., **Benitez, L.**, Gumbo, S.C., Godlee, J.L., Mograbi, P., Murepa, R., Mutete, P., Nyamugadza, E., Tembani M.C., Archibald, S. (In Review). Tree-tree competition as a major constraint on growth in the teak woodlands of Zimbabwe. *Biotropica*.
- Davies, R., Staver, C., Ahrends, A., Archibald, S., Bauman, D., Heath, B., te Beest, M., **Benitez, L.**...Ryan, C. (In Review). Fire, herbivory, and drought-tolerance differentiate three savanna tree functional syndromes across African savannas. *New Phytologist*.
- Carreiras, J.M.B., Higginbottom, T., Godlee, J.L., Harrison, S., **Benitez, L.**...Quegan, S. & Ryan, C.M. (In Review). Determinants of L-Band backscatter in dry tropical ecosystems: implications for biomass mapping. *Remote Sensing of Environment*.
- Pilon, N. et al. (2025) Open letter: There are more than just trees and forests to be conserved and restored. *Plants, People, Planet*. <https://doi.org/10.1002/ppp3.10635>
- Benitez, L.**, Parr, C.L., Sankaran, M., & Ryan, C.M. (2024). Fragmentation in patchy ecosystems: call for functional not approach. *Trends in Ecology and Evolution*. 10.1016/j.tree.2024.09.004
- Davies, R., Ryan, C.M., Harrison, R.C., Dexter, K., Ahrends, A., **Benitez, L.**, ... Edwards, D. (2023). Precipitation gradients drive high turnover in the world's largest savanna woodland. *Ecography*, e06720.
- Benitez, L.**, Kilian, J. W., Wittemyer, G., Hughey, L. F., Fleming, C. H., Leimgruber, P., ... & Stabach, J. A. (2022). Precipitation, vegetation productivity, and human impacts control home range size of elephants in dryland systems in northern Namibia. *Ecology and Evolution*, 12(9), e9288.
- Benitez, L.**, & Queenborough, S. A. (2021). Fruit trees drive small-scale movement of elephants in Kibale National Park, Uganda. *Biotropica*, 53(6), 1620-1630.
- Benitez, L.** (2020) Using protected area shape to model the impact of hunting and access on the survival of an economically valuable species. *Tropical Resources Bulletin*, 39.

Jones, K. E., **Benitez, L.**, Angielczyk, K. D., & Pierce, S. E. (2018). Adaptation and constraint in the evolution of the mammalian backbone. *BMC Evolutionary Biology*, 18(1), 172.

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## Academic Service

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**University of Edinburgh:** Biosphere research seminar organizer, SENSE student representative, PGR student committee representative, Crew art renovation organizer

**International Union for the Conservation of Nature (IUCN) World Conservation Congress**, Marseille, France

Head of Delegation for the Yale Tropical Resources Institute, 2021

Graduate Assistant to the IUCN World Commission on Protected Areas Beyond the Aichi Targets Task Force, 2021

**Ad Hoc Reviewer:** Ecology & Society, International Journal of Biodiversity & Conservation, Environment and Natural Resources Journal, Biodiversitas Journal of Biological Diversity

**International Society of Tropical Foresters Conference (ISTF)**, New Haven, CT

Content Director, 2020; Poster Coordinator, 2019

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## Presentations

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### Invited

2022 Benitez, L. **Elephant-landscape interactions across scales: Case studies from Uganda and Namibia**, CREAM Futures, Ecological and Forestry Applications Research Centre (CREAF), Autonomous University of Barcelona, Barcelona, Spain.

2022 Benitez, L. **Elephants, Trails, and Fruit Trees: A Case Study from Kibale National Park, Uganda**, Behaviour, Physiology and Ecology Seminar Series (BEPSS), Bangor University, Virtual.

### Contributed

2024 Benitez, L., Muchawona, A., Bowers, S., Chinofunga, A., Nyamugadza, E., Gotore, T., & Ryan, C. M. A new floristic map for Zimbabwe reveals net growth across main vegetation types. *Contributed Talk*. **Regional Conference on Forests**. Harare, Zimbabwe and remote.

2023 Benitez, L., Muchawona, A., Bowers, S., Chinofunga, A., Nyamugadza, E., Gotore, T., & Ryan, C. M. Mapping the vegetation of Zimbabwe and assessing its composition, diversity, and carbon stocks. *Flash Talk*. **Savanna Science Network Meeting**, Kruger, South Africa.

2021 Benitez, L., Kilian, W., Wittemyer, G., Hughey, L.F., Fleming, C.H., Leimgruber, P., and Stabach, J.A. Environmental and anthropogenic factors predict elephant home range size across Namibia. *Contributed Talk*. **Ecological Society of America Conference**, Virtual.

2020 Benitez, L.M. Fruit Trees Influence Elephant Movement in East African Forests. *Flash Talk*. **Yale Forestry & Environmental Studies Research Conference**, New Haven, CT.

2020 Benitez, L.M. Resource Acquisition and Path Efficiency of Elephant Trails in Kibale National Park, Uganda. *Flash Talk*. **Tropical Resources Institute Research Symposium**, New Haven, CT.

2020 Benitez, L.M. Reconciling the Role of Elephants in Restoration. *Flash Talk*. **International Society of Tropical Foresters Conference**, New Haven, CT.

2019 Benitez, L.M., Watts, D.P. Determining the Drivers and Efficiency of Elephant Trails in Kibale National Park, Uganda. *Poster*. **The Wildlife Society Conference**, Reno, NV.

2017 Benitez, L.M., Llera, C., Biernat, M., Braun, D.R., Hammond, A.S., Patterson, D.B., Barr, W.A. The Implications of Faunal Abundance for Pleistocene Paleoenvironments in the Turkana Basin, Northern Kenya. *Poster*. **Paleoanthropology Society Conference**, Vancouver, BC.

2017 Benitez, L.M., Jones, K.E., and Pierce, S.E. Vertebral Anatomy and Locomotor Evolution in Mammals: A Geometric Morphometrics Approach. *Poster*. **Society of Integrative and Comparative Biology Conference**, New Orleans, LA.

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## Teaching & Outreach

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### Tutoring/Demonstrating

University of Edinburgh (2024-5): Conservation Science, Ecosystems & Global Change, Ecological and Environmental Sciences Field Course, SENSE Field Skills Training, Ecological and Environmental Analysis

Yale University (2019-20): Principles of Ecology and Evolutionary Biology, Genetics and Development, Comparative Anatomy of Vertebrates

**Instructor**, Emission Factor from Deforestation Training Workshop, Harare, Zimbabwe

2022

**Logistics Coordinator**, SEOSAW Herbaceous Protocol Training Workshop, Morogoro, Tanzania

2022

**Instructor**, SEOSAW Data Cleaning and Analysis Workshop, Harare, Zimbabwe

2022

**Course Organizer**, Global Conservation Policy and Planning Independent Study, Yale University

2020