Lorena M. Benitez

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EDUCATION

Master of Environmental Science 2020
Yale School of the Environment,
Yale University, New Haven, CT

B.A. in Integrative Biology 2017
Harvard University, Cambridge, MA

Awards and Fellowships

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

Grants

TRI Endowment Fellowship ($7,000), Tropical Resources Institute 2019
Schiff Fund for Wildlife Habitat, and the Environment ($2,000), Yale University 2019
Master's Research Grant ($3,000), Yale Institute for Biospheric Studies 2019
Summer Research Grant ($4,667), Yale School of Forestry and Environmental Studies 2019
Undergraduate Research Grant ($2,500), Harvard Museum of Comparative Zoology 2016
Harvard College Research Program Grant ($2,100), Harvard University 2016
Harvard College Research Program Grant ($1,000), Harvard University 2016
Harvard College Research Program Grant ($3,000), Harvard University 2015

Publications

Benitez, L., Kilian, W., Wittemyer, G., Hughey, L.C., Fleming, C.H., Leimgruber, P., & Stabach, J.A. (In Prep) Environmental and anthropogenic factors predict elephant home range size across Namibia.

Benitez, L. & Queenborough, S. A. (In Review) Fruit Trees Drive Small-Scale Movement of African Elephants in the Forests of Kibale National Park, Uganda. *Biotropica.*

Benitez, L. (Accepted) Using Protected Area Shape to Model the Impact of Hunting and Access on the Survival of an Economically Valuable Species. *Tropical Resources Bulletin.*

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.

Research Experience

Smithsonian Conservation Biology Institute, Front Royal, VA — Summer 2020-Present
Movement of Life Intern, Advisor: Jared Stabach
Variation in home range size and movement strategies of elephants across Namibia;
Examination of riparian vegetation structure using digital elevation models;
Visualization of aquatic movements using acoustic telemetry

Save the Elephants, Nairobi, Kenya — Summer 2020
Remote volunteer, Advisor: Chris Thouless
Review of elephant radio and GPS collaring projects across Africa

Yale University- Master's Research, New Haven, CT — 2019-2020
Advisor: Susan G. Clark
Patterns of Resource Availability near Elephant Trails and
Spatiotemporal Use of Trails in Kibale National Park, Uganda

Rare and Endangered Species Trust (REST), Outjo, Namibia — Fall 2017-Spring 2018
Researcher and Primary Animal Caretaker
Featured in BBC Documentary: *Pangolins- The World's Most Wanted Animal*
Collected data on pangolin feeding behavior/Animal rehabilitation

Harvard University, Cambridge, MA — Fall 2015-Summer 2017
Undergraduate researcher, Advisor: Stephanie Pierce
Adaptation v. constraint in the mammalian vertebral column;
Geometric morphometric examination of amniote vertebral
morphology and the evolution of the mammalian thoracolumbar region

Koobi Fora Field School, Lake Turkana, Kenya — Summer 2016
George Washington University; Advisor: Andrew Barr
NSF Fellowship Recipient
Comparison of Late Pleistocene Faunal Abundance in the Shungura
and Koobi Fora Formations of the Turkana Basin, Kenya

Ecology, Environmental and Conservation Biology REU, Cape Coast, Ghana — Summer 2015
University of Cape Coast/ Washington and Lee University; Advisor: John Blay
NSF Fellowship Recipient
Fecundity and fertility in a stunted population of Black-Chinned Tilapia

Harvard University, Cambridge, MA — Fall 2013-Summer 2015
Undergraduate researcher, Advisor: Hopi Hoekstra
Comparative morphology of arboreal and terrestrial mammal species;
Comparative morphology of semi-arboreal and terrestrial subspecies
of Peromyscus maniculatus via X-rays and histology;
Behavioral assay on climbing behavior and balance tail morphology
in Peromyscus maniculatus

Professional Service

Scientific Committee Reviewer 2021
International Congress for Conservation Biology, Kigali, Rwanda
Head of Delegation for the Tropical Resources Institute 2021
World Conservation Congress, Marseille, France
Conference Organizer: Content Director 2020
International Society of Tropical Foresters Conference (ISTF), New Haven, CT
Conference Organizer: Poster Coordinator 2019
International Society of Tropical Foresters Conference (ISTF), New Haven, CT

Contributed Presentations

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.
2016 **Benitez, L.M**., Llera, C., Biernat, M., Braun, D.R., Hammond, A.S., Patterson, D.B., Barr, W.A. Comparison of Faunal Abundance Between the Koobi Fora and Shungura Formation. *Oral Presentation*. **Koobi Fora Field School Professional Development Workshop**, Birmingham, AL.

Broader Impacts

Conservation Biology Student Interest Group, New Haven, CT
Logistics Coordinator 2019- 2020
Tropical Resources Institute (TRI), New Haven, CT
Research Assistant 2018- 2020
Harvard Museums of Science and Culture, Cambridge, MA
Student Board Member 2015- 2017
Research Assistant for Director Jane Pickering 2016
Harvard College Conservation Society (HCCS), Cambridge, MA
Project Leader, The Forest Fund 2017
Project Leader, Oceanic Society: Blue Habits 2016

Teaching Experience

Teaching Assistant

Principles of Ecology and Evolutionary Biology, Yale College	2020
Genetics and Development, Yale College	2019, 2020
Comparative Anatomy of Vertebrates Lab, Yale College	2019
Comparative Anatomy of Vertebrates, Yale College	2019

Course Organizer

Global Conservation Policy and Planning Independent Study, Yale FE&S	2020

Mentorship and Outreach

Yale Pathways to Science, High School Outreach Program, New Haven, CT 2020
Yale F&ES Masters Peer Mentoring Program, New Haven, CT 2019-2020
Japan America Academic Center (JAAC), Mentor, Tokyo, Japan 2017
World Pangolin Day Celebration, Primary Organizer, Harvard Natural History Museum 2017

Skills

Research

GIS, Camera trapping, Animal handling, Sampling/transect design, Forestry metrics, CT scanning, Geometric morphometrics, Photogrammetry, Dissection, Histology, Microscopy

Computer Software

R, ArcGIS, QGIS, Google Earth Engine, Git, Maxent, Circuitscape, Agisoft Metshape, Materialise Mimics, Meshlab, MorphoJ, ImageJ

Licenses

Class E driver's license, Remote Pilot- Small Unmanned aircraft system

Languages

French: Intermediate

Workshops

Introduction to Continuous-Time Movement Modeling for Animal Tracking Data, The Wildlife Society Conference, 2020
NASA Applied Remote Sensing (ARSET) training: "Understanding Phenology with Remote Sensing", 2020
NASA Applied Remote Sensing (ARSET) training: "Advanced Webinar: Forest Mapping and Monitoring with SAR Data", 2020
NASA Applied Remote Sensing (ARSET) training: "UN Biodiversity Lab: Introduction and Training", 2020
Open Standards for the Practice of Conservation, Case Study Leader, 2020
NASA Applied Remote Sensing (ARSET) training: "Earth Observations for Indigenous-Led Land Management", 2019
Introduction to Structured Decision-Making and Spatial Planning with Marxan, 2018
LiDAR and 3D in the ESRI ArcGIS Platform, 2018
Introduction to Remote Sensing with Google Earth Engine, 2018

References

Lacey Hughey
Program Manager,
Movement of Life Initiative,
Smithsonian Conservation Biology Institute
Conservation Ecology Center,
Smithsonian National Zoological Park
HugheyL@si.edu

Jared Stabach
Ecologist & Program Coordinator,
Movement of Life Initiative,
Smithsonian Conservation Biology Institute
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Simon Queenborough
Musser Director of Tropical Resources Institute,
Senior Lecturer and Research Scientist,
Yale School of the Environmental,
Yale University
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