

# Chase L. Nuñez

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Department for the Ecology of Animal Societies  
Centre for the Advanced Study of Collective Behaviour  
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## EDUCATION

- 2014 – 19      **Duke University**  
**Ph.D.** Ecology  
**Dissertation:** *Forecasted Afrotropical forest community responses to climate change diverge from Neotropical predictions with consequences for biodiversity conservation and carbon storage*  
**Supervisors:** Drs. J.S. Clark and J.R. Poulsen
- 2009 – 13      **University of California, Davis**  
**A.B.** Evolutionary Anthropology, *summa cum laude*  
**A.B.** Psychology, *cum laude*  
**Thesis:** *A Bayesian joint model of growth and survival for assessing the consequences of differential maternal investment in Macaca mulatta*  
**Supervisors:** Drs. K.Hinde and L.A. Isbell

## PROFESSIONAL POSITIONS

- 2020 →      **Postdoctoral Researcher**  
Konstanz, Germany      Max Planck Institute of Animal Behavior  
Department for the Ecology of Animal Societies  
Social and Environmental Decision-Making of Immigrating Papio anubis
- 2020 →      **Affiliated Research Scientist**  
Konstanz, Germany      Centre for the Advanced Study of Collective Behaviour  
University of Konstanz
- 2019 – 20      **Postdoctoral Researcher**  
Leipzig, Germany      University of Leipzig; German Centre for Integrative Biodiversity Research (iDiv)  
Department for the study of Macroecology and Society  
The Response of North American Breeding Bird Communities to Land-Use
- 2014 – 2019      **Graduate Research Fellow**  
North Carolina, USA      Duke University  
Nicholas School for the Environment  
University Program in Ecology  
Afrotropical Forest Community Responses to Climate Change (NSF GRF-1106401)
- 2013 – 14      **Field Manager**  
Kakamega, Kenya      Columbia University  
Department of Ecology, Evolution, and Environmental Biology (E3B)  
Life History and Ecology of *C. mitis stuhlmanni* (NSF BCS-1028471)
- 2011 – 13      **Staff Research Assistant**  
California, USA      University of California, Davis; Harvard University  
Maternal Effects on Offspring Outcomes (NSF BCS-0921978)  
Long-term Effects of Chronic Intranasal Oxytocin (NICHD 1R01HD071998-01A1)  
The Neurobiology of Social Bonding (NICHD 5R01HD053555-04)

## PUBLICATIONS

- 2021  
10.1038/s41467-020-20836-3  
*Clark JS, Andrus R, Aubry-Kientz M, Bergeron Y, Bogdziewicz M, Bragg DC, Brockway D, Cleavitt NL, Cohen S, Courbaud B, Daley R, Das AJ, Dietze M, Fahey TJ, Fer I, Franklin JF, Gehring CA, Gilbert GS, Greenberg CH, Guo Q, HilleRisLambers J, Ibanez I, Johnstone J, Kilner C, Knops J, Koenig WD, Kunstler G, LaMontagne JM, Legg KL, Luongo J, Lutz JA, Macias D, McIntire EJB, Messaoud Y, Moore CM, Moran E, Myers JA, Myers OB, **Nuñez CL**, Parmenter R, Pearse S, Pearson S, Poulton-Kamakura R, Ready E, Redmond M, Reid CD, Rodman KC, Scher CL, Schlesinger WH, Schwantes AM, Shanahan E, Sharma S, Steele MA, Stephenson NL, Sutton S, Swenson JJ, Swift M, Veblen TT, Whipple AV, Whitham TG, Wion AP, Zhu K, Zlotin R.;*  
Continent-wide tree fecundity driven by indirect climate effects;  
**Nature Communications**
- 2021  
10.1111/icad.12470  
*Whitworth A, Beirne C, Flatt E, Froese G, **Nuñez CL**, Forsyth A;*  
Recovery of dung beetle biodiversity and traits in a regenerating rainforest: a case study from Costa Rica's Osa Peninsula;  
**Insect Conservation and Diversity**
- 2020  
10.1111/geb.13150  
*Poulsen JR, Medjibe VP, White LJT, Miao Z, Banack-Ngok L, Beirne C, Clark CJ, Cuni-Sanchez A, Doucet JL, Jeffery KL, Lee ME, Lewis SL, Mahli Y, Massard E, Moore S, **Nuñez CL**, Reitsma J, Saatchi S;*  
Old growth Afrotropical forests critical for maintaining forest carbon;  
**Global Ecology and Biogeography**
- 2019  
10.1002/ecs2.2965  
***Nuñez CL**, \*†Froese G, Beirne C, \*Meier A, Ossman M, \*Dipenthal J, \*McCarthy J, \*Kim S, Poulsen J;*  
Stronger together: comparing and integrating camera trap, visual, and dung survey data for ecological inference in tropical forest mammal communities;  
**Ecosphere**
- 2019  
10.2981/wlb.00543  
*Beirne C, **Nuñez CL**, Baldino M, \*Kim S, Knorr J, Masseloux J, \*Minich T, Poulsen JR, Rundel C, Wright JP, Jin K, Xiao A, Mbamy W, Obiang GN, Nkoghe T;*  
Estimation Of Gut Passage Times Of Wild, Free Roaming Forest Elephants;  
**Wildlife Biology**
- 2019  
10.1002/eap.1987  
*Beirne C, Miao Z, **Nuñez CL**, Medjibe VP, Saatchi S, White L.J.T., and Poulsen J.R.;*  
Landscape-level validation of allometric relationships used to estimate carbon stock reveals marked spatial heterogeneity in model bias driven by soil type in Afrotropical forests;  
**Ecological Applications**
- 2019  
10.1002/ecm.1381  
*Clark JS, **Nuñez CL**, Tomasek B;*  
Food webs built on unreliable foundations: Masting and the movement, demographic storage, and diet breadth of consumers;  
**Ecological Monographs**
- 2018  
10.1093/aobpla/ply074  
***Nuñez CL**, Clark JS, Poulsen JR, Clark C;*  
Low-Intensity Logging and Hunting have Long-Term Effects on Seed Dispersal but not Fecundity in Afrotropical Forests;  
**Annals of Botany, Plants**
- 2018  
10.1111/cobi.13035  
*Poulsen JR, Rosin C, **Nuñez CL**, \*Meier A, Mills E, Koerner S, Blanchard E, Callejas J, Moore S, Sowers M.;*  
Food webs built on unreliable foundations: Masting and the movement, demographic storage, and diet breadth of consumers;  
**Conservation Biology**

2015  
10.1002/ajp.22426 *Nuñez CL, Grote MN, Wechsler MS, Allen-Blevins C, and Hinde KJ.*  
Food webs built on unreliable foundations: Masting and the movement, demographic storage, and diet breadth of consumers;  
**American Journal of Primatology**

#### Pre-Prints

2019  
10.1101/823203 *Nuñez CL, Clark JS, Poulsen JR, Clark C.*  
Disturbance Sensitivity Shapes Patterns of Tree Species Distribution in Afrotropical Lowland Rainforests More Than Climate or Soil;  
**BioRxiv**

2019  
10.1101/823724 *Nuñez CL, Clark JS, Poulsen JR, Clark C.*  
Afrotropical Tree Communities May Have Distinct Responses to Forecasted Climate Change;  
**BioRxiv**

\* *Indicates mentored students*

† *Indicates joint-first authorship*

### **SELECTED AWARDS, FELLOWSHIPS, AND GRANTS**

2019 **Marie Skłodowska-Curie Actions Seal of Excellence**

2017 - 19  
\$ 50,000 **Bass Connections in Energy and Environment**  
Mega-Gardeners of Tropical Forest: ModellingSeed Dispersal by Forest Elephants  
Awarded to J. Poulsen, in collaboration with A. Gelfand, J. Wright, et al.

2017 - 19  
WW-190ER-17;  
\$ 4,839 **Early Career Award**  
National Geographic Society  
Awarded to A. Meier, in collaboration with J. Okouyi, and S. Bourgeois

2014 - 19  
NSF GRF-1106401;  
\$ 96,000 + overhead **Graduate Research Fellowship**  
National Science Foundation

2014 - 18  
\$ 77,000 + overhead **Neil Williams Presidential Fellowship**  
Duke University

### **SELECTED CONTRIBUTED TALKS AND ABSTRACTS**

2020  
Virtual Presentation  
Published Abstract *Clark JS, Andrus R, Aubry-Kientz M, Bergeron Y, Bogdziewicz M, Bragg DC, Brockway D, Cleavitt NL, Cohen S, Courbaud B, Daley R, Das AJ, Dietze M, Fahey TJ, Fer I, Franklin JF, Gehring CA, Gilbert GS, Greenberg CH, Guo Q, HilleRisLambers J, Ibanez I, Johnstone J, Kilner C, Knops J, Koenig WD, Kunstler G, LaMontagne JM, Legg KL, Luongo J, Lutz JA, Macias D, McIntire EJB, Messaoud Y, Moore CM, Moran E, Myers JA, Myers OB, Nuñez CL, Parmenter R, Pearse S, Pearson S, Poulton-Kamakura R, Ready E, Redmond M, Reid CD, Rodman KC, Scher CL, Schlesinger WH, Schwantes AM, Shanahan E, Sharma S, Steele MA, Stephenson NL, Sutton S, Swenson JJ, Swift M, Veblen TT, Whipple AV, Whitham TG, Wion AP, Zhu K, Zlotin R.*  
Interactions that control the pace of forest change in North America;  
105th Annual Meeting of the Ecological Society of America

- 2020  
Virtual Presentation  
Published Abstract
- Swenson JJ, Qui T, Schwantes AM, Kilner C, **Nuñez CL**, Scher CL, Sharma S, Clark JS;*  
Community Reorganization Response to Climate Change: Species Interactions, State-Space Modeling and Food Webs;  
International Geoscience and Remote Sensing Symposium
- 2019  
Podium
- Nuñez CL***  
Forecasted Afrotropical forest responses to climate change diverge from Neotropical predictions with consequences for biodiversity conservation and carbon storage  
Duke University Program in Ecology Seminar Series 2019
- 2018  
Podium  
Published Abstract
- Nuñez CL**, Poulsen JR, Clark CJ, and Clark JS*  
Effects of Hunting and Logging on Tree Fecundity and Seed Dispersal in Afrotropical Forests  
103rd Annual Meeting of the Ecological Society of America
- 2018  
Podium  
Published Abstract
- Clark JS, **Nuñez CL**, and Tomasek BJ*  
Spatio-temporal forecasting pulsed-resource masting and its implications for wildlife  
103rd Annual Meeting of the Ecological Society of America
- 2018  
Podium  
Published Abstract
- Tomasek BJ, Porté AJ, He F, Zimmermann NE, **Nuñez CL**, Domec JC, and Clark JS*  
Trait generality in two temperate forest regions: Do community weighted trait responses to environment translate between continents?  
103rd Annual Meeting of the Ecological Society of America
- 2017  
Podium  
Published Abstract
- Clark JS, Dunn R, Becheleot B, Gelfand A, Kays R, **Nunez CL**, Schliep E, Taylor D, Tomasek B*  
Sensitivity and Velocity of Community Reorganization Across NEON: Plants to Insects to Mammals Responding Jointly to Climate Change  
102nd Annual Meeting of the Ecological Society of America
- 2015  
Poster  
Published Abstract
- Nunez CL***  
Offspring of Primiparous Mothers Do Not Experience Higher Mortality or Poorer Growth: Revisiting the Conventional Wisdom with Archival Records of Rhesus Macaques (*Macaca mulatta*)  
84th Annual Meeting of the American Association of Physical Anthropologists
- 2014  
Podium  
Published Abstract
- Nunez CL**, Grote MN, Wechsler MS, and Hinde KJ*  
Sex and Birth Order Predict Juvenile Growth and Survival in Captive Rhesus Macaques (*Macaca mulatta*)  
37th Meeting of the American Society of Primatologists

## TEACHING AND MENTORING

### Teaching

ENV **Applied Data Analysis for**  
710 **Environmental Science**

*Required master's level statistics course. Weekly lecture and R coding labs.*  
(Duke University)

ANT **Life History Evolution**  
50

*Required undergraduate course. Guest Lecture and weekly office hours.*  
(University of California, Davis)

### Mentoring

2017-19 J. Miklaucic  
HS NC School of Science and Math Internship Program

2017-19 A. Xiao  
MEM Bass Connections Seed Dispersal Group

2017 - 19 K. Jin  
MEM Bass Connections Seed Dispersal Group

2017 - 19 M. Baldino  
MEM Bass Connections Seed Dispersal Group

2017 - 19 J. Knorr  
MEM Bass Connections Seed Dispersal Group

2016 - 19 T. Minich, NASA Adv. Information Systems Technol-  
MEM/MF ogy Program

2016 - 19 C. Kilner  
PhD NASA Adv. Information Systems Technology Program

2016 - 19 C.L. Scher  
PhD NASA Adv. Information Systems Technology Program

2016 - 18 M. Ossman  
MEM Community Wildlife Working Group

2016 - 18 J. Dipenthal  
MEM Elephant Working Group

2016 - 18 J. McCarthy  
MEM Community Wildlife Working Group

**SELECTED COMMUNITY OUTREACH AND ACADEMIC SERVICE**

Community Outreach

Academic Service

2018	Panel on Mentorship	2014 - 19	<b>PhD Chair</b> University Program in Ecology Executive Council Duke University
2018	Environmental Law Panel on Climate Policy		
2018	Discussion Forum with Bronwyn Llewellyn, USAID Environment Officer	2015 - 19	<b>PhD Chair</b> Duke Conservation Society Duke University
2018	Discussion Forum with Greg Andeck of Audubon	2017 - 18	<b>Recruitment Chair</b> University Program in Ecology Duke University
2017	Oosting Endowed Event on Ecological Implications of Disease	2017 - 18	<b>Co-Director</b> Ecological Perspectives on Disease and Health University Program in Ecology / Triangle Center for Evolutionary Medicine Duke University
2016	Discussion Forum with Andy Read from Vaquitas		
2016	Virunga and panel discussion	2017 - 18	<b>PhD Chair</b> Henry J. Oosting Endowed Lecture University Program in Ecology Duke University
2016	Discussion Forum with Elizabeth Kalies of The Nature Conservancy		
2016	Central Regional Science and Engineering Fair – Ask a scientist	2016 - 17	<b>Elected Representative</b> Graduate and Professional Student Council University Program in Ecology Duke University
2015	International Landscapes and Conservation		
2015	Social Innovation in Conservation	2015	<b>Elected Representative</b> National Association of Graduate and Professional Students 29th Annual National Congress University of Southern California