

Chase L Núñez

Max Planck Institute of Animal Behavior

Department for the Ecology of Animal Societies

Centre for the Advanced Study of Collective Behaviour

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EDUCATION

2014 – 2019

Duke University

PhD Ecology

Dissertation: *Forecasted Afrotropical community responses to climate change diverge from Neotropical predictions with consequences for biodiversity conservation and carbon storage*

Supervisors: Drs JS Clark and JR Poulsen

2009 – 2013

University of California, Davis

AB Evolutionary Anthropology, summa cum laude

AB 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 LA Isbell

PROFESSIONAL POSITIONS

2020 →

Konstanz, Germany
Laikipia, Kenya
Gamboa, Panama

Postdoctoral Research Scientist

Max Planck Institute of Animal Behavior
Department for the Ecology of Animal Societies
Landscape-Scale Dispersal Ecology

2020 →

Konstanz, Germany

Affiliated Research Scientist

Centre for the Advanced Study of Collective Behaviour
University of Konstanz

2019 – 2020

Leipzig, Germany

Postdoctoral Research Scientist

German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig
Department for the Study of Macroecology and Society
Community Responses to Landscape Diversity and Change

2014 – 2019

North Carolina, USA

Graduate Research Fellow

Duke University
Nicholas School for the Environment
University Program in Ecology
Afrotropical Forest Community Responses to Climate Change (NSF GRF-1106401)

2013 – 2014

Kakamega, Kenya

Field Manager

Columbia University in the City of New York
Department of Ecology, Evolution, and Environmental Biology (E3B)
Life History and Ecology of *C. mitis stuhlmanni* (NSF BCS-1028471)

2011 – 2013

California, USA

Staff Research Assistant

Harvard University; University of California, Davis
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

- 2022
10.3389/fevo.2021.742626
Distinct Community-Wide Responses to Forecasted Climate Change in Afrotropical Forests;
Núñez CL, Poulsen JR, White LJT, Medjibe V, Clark JS;
Frontiers in Ecology and Evolution
Pre-print filed at BioRxiv: 10.1101/823724
- 2022
10.7554/eLife.73695
Ecological and social pressures interfere with homeostatic sleep regulation in the wild;
JC Loftus, R Harel, Núñez CL, MC Crofoot;
eLife
Pre-print filed at BioRxiv: 10.1101/2021.09.26.461870
- 2022
10.3389/fevo.2022.801850
Life in 2.5D: animal movement in the trees;
Harel R, Alavi S, Ashbury A, Aurisano J, Berger-Wolf T, Davis G, Hirsch BT, Kalbitzer U, Kays R, Mclean K, Núñez CL, Vining A, Worsøe Havmøller R, Walton Z, Crofoot, MC;
Frontiers in Ecology and Evolution
- 2021
10.1073/pnas.2106130118
Is there tree senescence? The fecundity evidence;
Qiu T, Aavena Acuna M, Andrus R, Ascoli D, Bergeron Y, Beretti R, Bogdziewicz M, Boivin T, Bonal R, Caigned T, Calama R, Camarero JJ, Clark C, Courbaud B, Delzon S, Donoso Calderon S, Farfan-Rios W, Gehring CA, Gilbert GS, Greenberg CH, Guo Q, Hille Ris Lambers J, Hoshizaki K, Ibanez I, Journé V, Kilner C, Kobe R, Koenig WD, Kunstler G, LaMontagne JM, Ledwon M, Lutz JA, Motta R, Myers JA, Nagel TA, Núñez CL, Pearse IS, Piechnik , Poulson J, Poulton-Kamakura R, Redmond MD, Reid CD, Rodman KC, Scher CL, Van Marle HS, Seget B, Sharma1 S, Silman M, Swenson JJ, Swift M, Uriarte M, Vacchiano G, Veblen TT, Whipple AV, Whitham TG, Wion AP, Wright J, Zhu K, Zimmerman JK, Zywiec M, Clark JS;
Proceedings of the National Academy of Sciences (PNAS)
- 2021
10.1038/s41559-021-01486-0
Ecological factors influence balancing selection on leaf chemical profiles of a wildflower;
Carley LN, Mojica JP, Chen C, Lin Y, Prasad KVSK, Chan E, Hsu C, Keith R, Núñez CL, Olson-Manning CF, Rushworth CA, Wagner MR, Wang J, Yeh P, Reichelt M, Ghattas K, Gershenson J, Lee C, Mitchell-Olds T;
Nature Ecology & Evolution
- 2021
10.1038/s41467-020-20836-3
Continent-wide tree fecundity driven by indirect climate effects;
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, Núñez 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.;
Nature Communications
- 2021
10.1111/icad.12470
Recovery of dung beetle biodiversity and traits in a regenerating rainforest: a case study from Costa Rica's Osa Peninsula;
Whitworth A, Beirne C, Flatt E, Froese G, Núñez CL, Forsyth A;
Insect Conservation and Diversity
- 2021
10.3389/fevo.2021.789264
Long distance seed dispersal by forest elephants;
Poulsen JR, Beirne C, Rundel C, Baldino M, Kim S, Knorr J, Minich T, Jin L, Núñez CL, Xiao S, Mbamy W, Obiang GN, Masseloux J, Nkoghe T, Ebanega MO, Clark CJ, Fay MJ, Morkel P, Okouyi J, White LJT, Wright JP;
Frontiers Ecology And Evolution

- 2020
10.1111/geb.13150
Old growth Afro-tropical forests critical for maintaining forest carbon;
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, Núñez CL, Reitsma J, Saatchi S;
Global Ecology and Biogeography
- 2019
10.1002/ecs2.2965
Stronger together: comparing and integrating camera trap, visual, and dung survey data for ecological inference in tropical forest mammal communities;
*Núñez CL, *Froese G, Beirne C, *Meier A, Ossman M, *Dipenthal J, *McCarthy J, *Kim S, Poulsen J;*
Ecosphere
- 2019
10.2981/wlb.00543
Estimation Of Gut Passage Times Of Wild, Free Roaming Forest Elephants;
*Beirne C, Núñez 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;*
Wildlife Biology
- 2019
10.1002/eap.1987
Landscape-level validation of allometric relationships for carbon stock estimation reveals bias driven by soil type;
Beirne C, Miao Z, Núñez CL, Medjibe VP, Saatchi S, White L.J.T., and Poulsen J.R.;
Ecological Applications
- 2019
10.1002/ecm.1381
Food webs built on unreliable foundations: Masting and the movement, demographic storage, and diet breadth of consumers;
Clark JS, Núñez CL, Tomasek B;
Ecological Monographs
- 2018
10.1093/aobpla/pby074
Low-Intensity Logging and Hunting have Long-Term Effects on Seed Dispersal but not Fecundity in Afro-tropical Forests;
Núñez CL, Clark JS, Poulsen JR, Clark C;
Annals of Botany, Plants
- 2018
10.1111/cobi.13035
Ecological consequences of forest elephant declines for Afro-tropical forests;
*Poulsen JR, Rosin C, Núñez CL, *Meier A, Mills E, Koerner S, Blanchard E, Callejas J, Moore S, Sowers M.;*
Conservation Biology
- 2015
10.1002/ajp.22426
Offspring of primiparous mothers do not experience greater mortality or poorer growth: Revisiting the conventional wisdom with archival records of Rhesus Macaques;
Núñez CL, Grote MN, Wechsler MS, Allen-Blevins C, and Hinde KJ.;
American Journal of Primatology

Pre - Prints

- 10.1101/823203
Disturbance Sensitivity Shapes Patterns of Tree Species Distribution in Afro-tropical Lowland Rainforests More Than Climate or Soil;
Núñez CL, Clark JS, Poulsen JR, Clark C;
BioRxiv

Datasets

10.5061/
dryad.p5hbzkqf
Ecological and social pressures interfere with homeostatic sleep regulation in the wild;
Loftus JC, Harel R, Núñez CL, Crofoot MC;
DRYAD

10.5061/
dryad.7h44j0zsr
Ecological factors influence balancing selection on leaf chemical profiles of a wildflower;
Carley LN, ..., Núñez CL, et al.;
DRYAD

Accession:
PRJNA659863
ID: 659863
Boechera stricta raw sequence reads of CFR;
Carley LN, ..., Núñez CL, et al.;
NCBI

Accession:
PRJNA609209
ID: 609209
Boechera stricta long-read genome assembly;
Carley LN, ..., Núñez CL, et al.;
NCBI

* *Indicates advised or mentored students*
Indicates equal contribution

SELECTED AWARDS, FELLOWSHIPS, AND GRANTS

2022
CO-SLEEP;
€ 2 900 000
ERC Consolidator Grant
'Collective Dynamics of Sleep in the Wild'
as collaborator with M. Crofoot and R. Harel, et al.

2021
M21-38;
€ 47 270
CASCB Medium Money Grant
'Collective Responses to Forecasted Landscape-Scale Resource Variation'
as PI

2021
S21-12;
€ 3 800
CASCB Small Project Grant
'FIELD: Facilitating Inclusion, Equity, & Latitudinal Diversity'
as Co-PI with T. Montgomery & E. Strauss

2017 - 19
\$ 50 000
Bass Connections in Energy and Environment
'Mega-Gardeners of Tropical Forest: Modelling Seed Dispersal by Forest Elephants'
as collaborator with J. Poulsen, A. Gelfand, J. Wright, et al.

2017 - 19
WW-190ER-17;
\$ 4 839
Early Career Grant
National Geographic Society
as collaborator with A. Meier, J. Okouyi, and S. Bourgeois

2014 - 18
\$ 77 000 + overhead
Neil Williams Presidential Fellowship
Duke University
as PI

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

SELECTED COMMUNITY OUTREACH AND ACADEMIC SERVICE

Community Outreach

2021 Surviving the Apocalypse with Open Data Science
University of Konstanz

2021 STEAM center expansion proposal
Kidzone Museum

2020 Rhine Clean-Up
CASACB

2019 Graduate Panel on Mentorship
Duke University Biology

2018 Environmental Law Panel on Climate Policy
Duke Conservation Society

2018 Discussion Forum with Bronwyn Llewellyn, USAID Environment Officer
Duke Conservation Society

2018 Discussion Forum with Greg Andeck of Audubon
Duke Conservation Society

2017 Oosting Endowed Event on Ecological Implications of Disease
Duke University Program in Ecology

2016 Discussion Forum with Andy Read from Vaquitas
Duke University Program in Ecology

2016 Virunga and panel discussion
Duke Conservation Society

2016 Discussion Forum with Elizabeth Kalies of The Nature Conservancy
Duke Conservation Society

2016 Ask a scientist exhibit
NC. Central Regional Science and Engineering Fair

2015 Social Innovation in Conservation
Duke Conservation Society

Academic Service

2022 **Co-Creator**
fieldperspectives.org
Facilitating Inclusion, Equity, & Latitudinal Diversity

2021 **Elected Representative**
Max Planck Society
Max Planck Institute of Animal Behavior

2021 **Organizer**
Open Data Science Series
Max Planck Institute of Animal Behavior

2014 - 19 **PhD Chair**
University Program in Ecology Executive Council
Duke University

2015 - 19 **PhD Chair**
Duke Conservation Society
Duke University

2017 - 18 **Recruitment Chair**
University Program in Ecology
Duke University

2017 - 18 **Co-Director**
Ecological Perspectives on Disease and Health
University Program in Ecology / Triangle Center for Evolutionary Medicine
Duke University

2017 - 18 **Henry J. Oosting Endowed Lecture PhD Chair**
University Program in Ecology
Duke University

2016 - 17 **Elected Representative**
Graduate and Professional Student Council
University Program in Ecology
Duke University

TEACHING AND MENTORING

Teaching

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

BIO 362 **Evolutionary Ecology**

ANT 50 **Life History Evolution**

Formal Mentoring

2017-19
HS

J. Miklaucic

2017-19
MEM

A. Xiao

2017-19
MEM

K. Jin

2017-19
MEM

M. Baldino

Thesis Supervision

2021 → **A. Govaerts**

PhD University of Konstanz /
Max Planck Institute

2017-19
MEM

J. Knorr

2021 → **C. Monteza**

PhD University of California Davis /
Max Planck Institute

2016-19
MEM

T. Minich

2021 → **N. Stockmayer**

BS University of Konstanz /
Max Planck Institute

2016-18
MEM

M. Ossman

2016-18
MEM

J. Dipenthal

2016-18
MEM

J. McCarthy

