

Jonathan A. Nations

NSF Postdoctoral Research Fellow
Department of the Geophysical Sciences
University of Chicago

✉ jonnnations@gmail.com 🔗 jonnnations 🌐 jonnnations.com | *Updated: Aug. 17, 2022*

EDUCATION

- 2015 - 2020** | **PhD**, Biological Sciences, Louisiana State University
Dissertation: FUNCTION, HISTORY, AND ECOLOGY IN THE EXCEPTIONAL DIVERSIFICATION OF MURINE RODENTS
- 2011 - 2014** | **BSc**, Biological Sciences, University of Alaska Fairbanks
Undergraduate Thesis: CLIMBING BEHAVIOR OF NORTHERN RED-BACKED VOLES AND SCANSORIALITY IN *Myodes*
- 2008 - 2011** | **ASc**, Science and Math, Seattle Central Community College

RECENT PROFESSIONAL EXPERIENCE

- 2020 - 2023** | **NSF Postdoctoral Research Fellowship in Biology**
Interdisciplinary Research Using Biological Collections.
- 2015 - 2018** | **Curatorial Assistantship**
Mammals Division, LSU Museum of Natural Science.
- 2014 - 2015** | **Assistant Collections Manager**
Mammals Division, University of Alaska Museum.
- 2014 - 2015** | **Intern, Student Conservation Association**
Denali National Park & University of Alaska Museum.
- 2011 - 2014** | **Curatorial Assistant**
Mammals Division, University of Alaska Museum.

GRANTS, SCHOLARSHIPS, AND AWARDS

- 2020** | **American Society of Mammalogists Fellowship** (\$20,000)
- 2020** | **LSU Museum of Natural Science Outstanding Graduate Student**
- 2019** | **Louisiana State University Prestigious Graduate Fellowship Award** (\$4,000)
- 2019** | **Research Triangle Nanotechnology Network Award** (\$2,000)
- 2020** | **American Society of Mammalogists Patton Award** (\$5,000)
- 2017** | **NSF East Asia Pacific Studies Institute Fellow** (\$8,000)
Sponsor: Dr. Kevin Rowe, Museums Victoria, Melbourne, Australia
- 2016** | **Society of Systematic Biologists Graduate Student Research Award** (\$1,200)

- 2016 | American Society of Mammalogists Grant in Aid (\$1,000)
- 2015 | National Science Foundation Graduate Research Fellowship
- 2014 | Outstanding Undergraduate Student in the Biological Sciences, UAF
- 2014 | Brina Kessel Medal for Excellence in Science, UAF (\$500)
- 2013 | Summer Undergraduate Research Award, UAF (\$5000)
- 2013 | American Society of Mammalogists Travel Award (\$300)
- 2012 | Summer Undergraduate Research Award, UAF (\$5000)

PUBLICATIONS

- 2022 | J.A. Nations, B.A. Kohli, H. Handika, A.S. Achmadi, M.J. Polito, K.C. Rowe, J.A. Esselstyn. Trait-specific patterns of community ecospace occupancy in an insular mammal radiation. *In Revision*. link to bioRxiv preprint
- 2022 | Wisniewski, A.L.*, J.A. Nations*, & G.J. Slater*. 2022. Bayesian prediction of multivariate ecology from phenotypic data yields novel insights into the diets of extant and extinct taxa. *In Revision*. link to bioRxiv preprint
*Equal contribution
- 2022 | Swanson, M.T., A.S. Achmadi, J.A. Nations, M.W. Henson, H. Handika, S. Anita, K.C. Rowe, H. Bennadji, M.J. Polito & J.A. Esselstyn. Bacterial families variably associated with diet along the gut in a trophically diverse community of wild rodents. *In Review*.
- 2021 | Marcondes, R.S.*, J.A. Nations*, Seeholzer, G.F., & Brumfield, R.T. 2021. Rethinking Gloger's rule: climate, light environments, and color in a diverse family of tropical birds. *The American Naturalist*. 197(5): 592-606.
*Joint first authorship
- 2021 | Nations, J.A., G.G. Mount, S.M. Morere*, A.S. Achmadi, K.C. Rowe, & J.A. Esselstyn. Locomotory mode transitions alter phenotypic evolution and lineage diversification in an ecologically rich clade of mammals. *Evolution*. 75(2): 376-393.
*Undergraduate author
- 2021 | Nations, J.A., A. Mursyid*, R. Darma Busta*, S.P. Adrian*, H. Handika, Apandi, A.S. Achmadi, J.A. Esselstyn. An albino rat from West Sumatra, Indonesia represents the first report of albinism in a Sundaland rodent. *Mammalia*. 85(2): 168-172. *Undergraduate author
- 2020 | Roycroft, E.J*, J.A. Nations*, & K.C. Rowe. Environment predicts repeated body size shifts in a recent radiation of Australian mammals. *Evolution*. 74(3): 671-680.
*Joint first authorship
- 2019 | Nations, J.A., L.R. Heaney, T.C. Demos, A.S. Achmadi, K.C. Rowe, & J.A. Esselstyn. A Simple Skeletal Measurement Effectively Predicts Climbing Behavior in Murine Rodents. *Biological Journal of the Linnean Society*. 128(2): 323-336.
Selected for BJLS Ecomorphology Collection Virtual Issue

- 2015** | **Nations, J.A.** & L.E. Olson. 2015. Climbing behavior of northern red-backed voles (*Myodes rutilus*) and scansoriality in *Myodes* (Rodentia, Cricetidae). *Journal of Mammalogy* 96(5): 957–963.

INVITED & DEPARTMENTAL SEMINARS

- 2022** | Departmental Seminar, Canadian Natural History Museum, Ottawa, ON
Modern take on the classics: Using probabilistic methods to investigate ecogeographical theories in understudied vertebrate groups
- 2021** | EvMorph Seminar, University of Chicago, Chicago, IL
Function, history, and ecology in two exceptional (and exceptionally different) mammal radiations
- 2021** | Departmental Seminar, Sienna College, Loudonville, NY
Function, history, and ecology in the exceptional diversification of murine rodents
- 2019** | LSU Museum of Natural Science Seminar, Baton Rouge, LA
Travelogue: Gunung Murud Expedition, Sarawak, Malaysia, July – August 2019
- 2019** | LSU Museum of Natural Science Seminar, Baton Rouge, LA
Travelogue: “The Giant Rat of Sumatra:” Gunung Singgalang, West Sumatra, Indonesia
- 2018** | Biology Seminar, Andalas University, Padang, West Sumatra, Indonesia
The importance of museum specimens in the study of natural history
- 2017** | LSU Museum of Natural Science Seminar, Baton Rouge, LA
Travelogue: “Field Work in Borneo: Mt. Mulu, Sarawak, Malaysia
- 2015** | LSU Museum of Natural Science Seminar, Baton Rouge, LA
Travelogue: “Small Mammals in Ouachita National Forest, Arkansas

CONFERENCE PRESENTATIONS

- 2022** | American Society of Mammalogists Annual Meeting, Tucson, AZ
Bayesian prediction of multivariate ecology from phenotypic data yields novel insights into the diets of extant and extinct taxa
- 2021** | - American Society of Mammalogists Annual Meeting - Plenary Session, Virtual Meeting
Niche packing, niche expansion, and the evolution of the exceptional rodent fauna of Sulawesi, Indonesia
- 2019** | American Society of Mammalogists Annual Meeting, Washington D.C.
Bergmann’s Rule in a recent radiation of Australian mammals
- 2019** | Evolution, Providence, RI
Environment predicts repeated body size shifts in a recent radiation of Australian mammals
- 2019** | LSU BioGrads Symposium, Baton Rouge, LA *poster
The locomotion and biogeography of Indo-Australian Archipelago rodents
Winner - Best Poster

- 2018** | Evolution, Montpellier, France *poster
The biogeography of murine locomotion across the Indo-Australian Archipelago
- 2018** | American Society of Mammalogists Annual Meeting, Manhattan, KS
The role of locomotor mode in lineage turnover and persistence among Indo-Australian rats and mice
- 2017** | 12th International Mammalogical Congress, Perth, Australia
The role of in-situ speciation in the generation of biodiversity across the Indo-Australian Archipelago
- 2016** | American Society of Mammalogists Annual Meeting, Minneapolis, MN
How do voles adapt? Ecomorphology of small-bodied North American rodents
- 2016** | Evolution, Austin, TX
Ecomorphological variation in the limbs of small-bodied "generalists:" a test case with voles
- 2014** | American Society of Mammalogists Annual Meeting, Oklahoma City, OK
Is climbing behavior reflected in the morphology of scansorial voles?
- 2013** | American Society of Mammalogists Annual Meeting, Philadelphia, PA
*Climbing in the Northern Red-backed Vole (*Myodes rutilus*)*
- 2013** | UAF Undergraduate Research Day, Fairbanks, AK
*Climbing in the Northern Red-backed Vole (*Myodes rutilus*)*
Winner: Best Oral Presentation
- 2011** | American Society of Mammalogists Annual Meeting, Portland, OR *poster
The effects of habitat size on small mammal diversity in Seattle City Parks
- 2010** | Mary Gates Undergrad Research Symposium; University of Washington *poster
Small mammal diversity in Seattle City Parks

MENTORSHIP

Undergraduates |

Shelby Oliveaux (2019-20 - LSU - Collecting and processing geometric morphometric data), **Collin Cooper** (2019-20 - LSU - Processing microCT scan data for 3D morphometrics), **Finaz Wan Azman, Syam Zurain** (2019 - University of Malaysia, Sarawak - Collection and preparation of museum specimens and associated tissue samples) **Ahmad Mursyid, Ryski Darma Busta, Taufiq Afdhal, Andri Saputra, Tengku Lidra, Sah Putra Adrian** (2018 - Andalas University, Padang, Indonesia - Collection and preparation of museum specimens and associated tissue samples), **Derra Leonard** (2016-2019 - Curatorial Assistant), **Sara Morere** (2016 - Research on locomotor modes of murine rodents (manuscript co-author)), **Rajvi Jariwala, Shay Cook** (2015-2016 - LSU - Curatorial methods and molecular lab work), **Chris Reglan** (2015-2016 - LSU - Curatorial methods), **Sarah Swanson** (2014-2015 - University of Alaska Museum - Identification, preparation and curation of museum specimens from Denali National Park)

High School Students |

Stefania Kremer, Briana Kremer (2014-2015 - University of Alaska Museum - Identifica-

tion, preparation and curation of museum specimens from Denali National Park)

TEACHING & TRAINING

- 2021 | GitHub & version control in RStudio:** Mini-workshop at the Department of the Geophysical Sciences, U Chicago
- 2019 | Ecology & Management of Louisiana Wildlife:** Invited Instructor, LSU
Trained a team of students in small mammal surveying, handling, and identification
- 2018 | Ecology & Management of Louisiana Wildlife:** Invited Instructor, LSU
- 2017 | Mammalogy:** Teaching Assistant, LSU
- 2017 | Ecology & Management of Louisiana Wildlife:** Invited Instructor, LSU
- 2016 | Museum Experience for Undergraduates:** Co-founder, LSU
"Our mission is to train the next generation of museum researchers and advocates by exposing undergraduate students to the study of natural history, both locally and globally."
- 2015 | Mammalogy:** Invited Instructor, LSU
Lead 12 undergraduate Mammalogy students on a field survey. Kisatchie National Forests, LA

OUTREACH

- 2022 | U Chicago Southside Science Festival:** Public science festival. *Upcoming*
- 2021 | "Squirrel Expert":** Kindergarten Class, The Philadelphia School
- 2020 | LSU Museum Special Saturdays:** *Bust A Move - Mammal Locomotion.* Presentation and activities on mammal locomotion for ages 5-12
- 2019 | LSU Night at the Museum - Mammals:** Museum specimen preparation demonstration, behind the scenes tours, and public engagement on the value of museum specimens
- 2019 | LSU Museum Special Saturdays:** *Life in the Mountains*
- 2017 | LSU Fall Fest:** Engaging with undergraduate students on the behalf of the LSU Museum of Natural Science
- 2017 | LSU Night at the Museum - Mammals**
- 2017 | LSU Museum Special Saturdays:** *Risky Rodents*
- 2016 | LSU Fall Fest**
- 2016 | LSU Museum 6th Grade Day:** Hosting local 6th grade students from around the Parish
- 2016 | Bio-Blitz - East Baton Rouge Parish:** Surveying small mammals in EBR Parish parks
- 2016 | LSU Fall Fest**

2015 | LSU Fall Fest

PROFESSIONAL SERVICE

2019 - present | Nomenclature Committee, American Society of Mammalogists

2019 - present | Biodiversity Committee, American Society of Mammalogists
Member of Muroidea taxonomic working group

2022 - present | Grants in Aid Committee, American Society of Mammalogists

Journal Peer Review | The American Naturalist, Systematic Biology, Evolution, Journal of Mammalogy, Theria, Zoological Research, Journal of Mammalian Evolution, Mammalian Species, Royal Society Open Science, PeerJ

Grant Review | NSF CAREER Program (*Ad hoc reviewer*), American Society of Mammalogists
Grants in Aid (*upcoming*)

FIELDWORK: MUSEUM COLLECTION EXPEDITIONS

- Mt. Murud, Sarawak, Malaysia, 2019
- Mt. Singgalang, West Sumatra, Indonesia, 2018
- Mt. Talamau, West Sumatra, Indonesia, 2018
- Mt. Mulu, Sarawak, Malaysia, 2017
- Louisiana, various, 2015 - 2018
- Ouachita National Forest, Arkansas, 2015
- Denali National Park, Alaska, 2015
- Tongass National Forest, Juneau, Alaska, 2014
- Chugach National Forest, Valdez, Alaska, 2014
- Toolik Field Station, North Slope, Alaska, 2013
- White Mountain Recreational Area, Alaska, various 2012 - 2015
- Fairbanks Area, Alaska, various, 2011 - 2015