Anna Rose Willoughby

EDUCATION

Doctor of Philosophy Student August 2018 - present
Odum School of Ecology, University of Georgia, Athens, GA

Bachelor of Science: Evolutionary Anthropology (*with distinction*) and Biology May 2015
Duke University, Durham, NC GPA: 3.5/4.0
Thesis: Trade-offs between health, reproduction, and activity in female wild chacma baboons (*Papio ursinus*)

Organization of Tropical Studies
African Ecology and Conservation; South Africa August - December 2013
Introduction to Tropical Studies; Costa Rica July 2013

RESEARCH EXPERIENCE

EcoHealth Alliance
Modeling & Analytics Research Assistant; New York, NY September 2015 - June 2018
- Perform statistical analyses, literature reviews, assemble and curate datasets for the USAID PREDICT project
- Assist in regular development of new analytical projects; participate in weekly science and project implementation meetings
- Assist in grant writing and submission of funding applications to Dept of Defense DTRA, NSF and NIH
- Coordinate and co-mentor Modeling interns, visiting fellows, and thesis students

Bass Connections: Shining Evolutionary Light on Global Health Issues, Duke University
Team Member; Durham, NC and Sambava, Madagascar January - July 2015
- Collected general health, dental, and sleep data in a subsistence-farming community in Madagascar
- Met weekly to develop five health projects advised by Dr. Charles Nunn and Dr. Daniel Schmitt
- Conducted a literature review and wrote final paper on how "evolutionary mismatch" explains a shift from infectious to chronic disease burden in developing countries

Pusey Lab, Duke University
Department of Evolutionary Anthropology Thesis Candidate; Durham, NC August 2014 - May 2015
- Designed and produced an original research project and written thesis advised by Dr. Steffen Foerster
- Presented results to panels of professors and peers
- Performed statistical analyses on and visualized data from NSF-funded Tokai Baboon Sociality Project

Research Assistant; Durham, NC January - May 2014
- Managed, inputted, and structured a large data set of wild primate behavioral data

Altizer Lab, University of Georgia
Odum School of Ecology Lab Volunteer; Athens, GA July 2014
- Maintained lab inventory, cleaned lab equipment, and assisted rearing of lab monarch butterfly population
- Performed microscopy work to identify protozoan spores from butterfly abdomen samples

PEER-REVIEWED PUBLICATIONS

Willoughby AR, Phelps KL, PREDICT Consortium, Olival KJ. (2017). "A comparative analysis of viral richness and viral sharing in cave-roosting bats". *Diversity*, 9(3), 35. doi: 10.3390/d9030035.

Olival KJ and **Willoughby AR**. (2017) "Prioritizing the Dormant Flaviviruses". *EcoHealth*. doi:10.1007/s10393-017-1220-6.

Vasquez D, **Willoughby A**, & Davis AK. (2015). "Fighting While Parasitized: Can Nematode Infections Affect the Outcome of Staged Combat in Beetles?" *PloS One*, 10(4), e0121614.

PRESENTATIONS

Willoughby AR, Hagan E, Kerwin J, Olival KJ.(2018) A systematic review of environmental survival across 25 viral families. *International Conference of Emerging Infectious Diseases*. 27 Sep. Atlanta, GA. (poster)

Willoughby AR, Ross N, Rosenthal C, Basaraba C, Zambrana-Torrelio C, Daszak P, Olival KJ (2018). The multilayer networks of the flavivirus community. *Networks in Disease Ecology Satellite Symposium, International School and Conference on Network Science*. 10 June. Paris, France.

Willoughby AR (2017). Using networks to study zoonotic pathogens. *International Association for Ecology and Health* Webinar. 18 Dec.

Willoughby AR, Phelps KL, PREDICT Consortium, Olival KJ (2017). A comparative analysis of viral richness and viral sharing in cave-roosting bats. *47th Annual Symposium of Bat Research*, North American Society for Bat Research. Knoxville, TN. 21 Oct.

Willoughby AR, Ross N, Zambrana-Torrelio C, Olival KJ. Viral Sharing in the Bat Metacommunity (2017). *AMNH Student Conference on Conservation Science*. 11 Oct. New York, NY. (poster)

Olival KJ, Ross N, Eskew EE, **Willoughby AR**, Zambrana-Torrelio C, Daszak P, PREDICT Consortium (2017). Estimating viral richness in bats: integrating previously-published and newly acquired field data. *2nd International Symposium on Infectious Diseases of Bats*. 30 June. Ft. Collins, CO.

Olival KJ, **Willoughby AR**, Rosenthal C, Weins K, Basaraba C, Zambrana-Torrelio C, Ross N, Daszak P (2016). Identifying the next Zika: an analysis of zoonotic potential in Flaviviridae. *International Meeting on Emerging Diseases and Surveillance*. Vienna, Austria. 5 Nov. (poster)

Sobel A, Ajayi T, Clarke R, Manus M, Samson D, Schmitt D, Trentadue T, **Willoughby A**, Yu J, Nunn C. (2015) Shining Evolutionary Light on Global Health Challenges: Assessing Human Health in Rural Madagascar. *Global Health Showcase*, Duke Global Health Institute. Durham, NC. 26 Oct. (poster)

Olival K, Apakupakul K, **Willoughby A**, Sintunawa C, Duengkae P, Wacharapluesadee S. (2015). Monitoring a Bat Population in Thailand Using Long-Term Guano Harvest Records. *45th Annual Symposium of Bat Research*, North American Society for Bat Research. Monterey, CA. 29 Oct. (poster)

AWARDS

Interdisciplinary Ecology Across Scales Graduate Fellowship, National Science Foundation, 2018 - 2020
Plotly in R, PlotCon. Supported by Women in Machine Learning & Data Science (WiMLDS). New York, NY, 18-19 Nov 2017.
Duke University Undergraduate Support Research Grant, Fall 2014

INTERNSHIP AND VOLUNTEER EXPERIENCE

Medical Intensive Care Unit, Duke University Medical Center
Pre-Health Volunteer; Durham, NC — September 2014 - April 2015

Duke Campus Farm, Duke University
Undergraduate Intern; Durham, NC — August 2011 - May 2013

Georgia Aquarium
Biologist Assistant; Atlanta, GA — August 2009 - May 2011

SKILLS

Computer: Intermediate R, including proficiency in tidyverse, plotly, sp, igraph
MS Office/Excel/Access, JMP, qGIS, Primer, Observer XT, Maya, MakerBot, EndNote,
Adobe Photoshop/Illustrator/InDesign/Lightroom
Languages: Proficient in Spanish
Certifications: Wilderness First Responder, CPR certified

PROFFESIONAL ORGANIZATIONS

Center for the Ecology of Infectious Diseases, 2018 - Present
Society for Young Network Scientists, 2018 - Present
North American Society for Bat Research, 2017 - 2018
500 Women Scientists, 2016 - Present
International Association for Ecology and Health, 2015 - Present