NENE K. UGBAH

Phone: (925) 895-8143
nenekumashe@gmail.com

7412 Las Palmas Way
Dublin, CA 94568

EDUCATION

MA **Columbia University | New York, NY** May 2017
Ecology, Evolution, and Environmental Biology
Thesis: "The Influence of Temperature on the Development, Mortality, and Spatial Behavior of Vernal Pool Odonate Larvae"
Advisor: the late Dr. Don J. Melnick
Committee Members: Dr. Jessica L. Ware & Dr. Maria Diuk-Wasser

BS **California Polytechnic State University | San Luis Obispo, CA** June 2014
Biological Sciences (Track: Ecology)
Thesis: "The Spatial Games: Investigating the Spatial Distribution of *Anax* and Select Prey as a Function of Predator-Prey Interactions."
Advisor: Dr. Shannon J. McCauley
Collaborator: Shane E. Johnson

SKILLS

Field: Macroinvertebrate identification and collection, dip netting, insect sweep netting, odonate egg collection, specimen preservation, larval rearing, Capture-Mark-Recapture, pitfall trapping, beating trays, bee bowls, Malaise traps, light trapping, quadrat surveys.

Laboratory: DNA extraction, DNA amplification/PCR, PCR reagent preparation, agarose gel electrophoresis, lab safety and waste disposal training.

Technology: Compound microscope, stereomicroscope, SEM (Scanning Electron Microscope), multiparameter water probe, action cameras, sterilization equipment (e.g., Ultraviolet (UV) technology, autoclave), incubators, centrifuges, thermal cycler.

Coding languages: R and Python.

Writing: Literature review, annotated bibliography, report writing, experimental design, data recording and analysis, interpreting statistics, preparing manuscripts for publication.

Software: Microsoft Office suite (Excel, PowerPoint, Word), Sequencher (nucleotide sequence assembly), ImageJ, Arc GIS, Google Earth Engine, MATLAB, Wolfram Mathematica.

RESEARCH EXPERIENCE

Rutgers University | Newark, NJ Aug 2017 – Aug 2019
Graduate Research Assistant

- Sequenced migratory dragonfly specimens to conduct comparative analyses on their genetic structures and to determine the degree of panmixia in each species.
- Tracked the embryonic development of dragonfly larvae using a stereomicroscope to compare the development of obligate migrants and non-migratory species.
- Observed egg chorion ultrastructure and larval dragonfly morphology using SEM microscopy.
- Developed and modified larval rearing protocols to successfully rear and track multiple cohorts of larval species.
- Arranged field sampling trips to several urban and remote sites to collect several species of dragonfly specimens.
- Supervised and trained undergraduate lab assistants.

Columbia University | New York, NY Sep 2015 – May 2017
Graduate Research Assistant

- Evaluated predatory and individual spatial behavior of vernal pool dragonfly larvae raised in controlled temperature regimes to simulate climate change.
- Collected and reared dragonfly larvae and prey items (e.g., damselfly larvae, daphnia, blackworms, etc.).
- Arranged field sampling trips in rural and remote areas to collect several species of dragonfly specimens.
- Modified larval rearing protocols and technologies associated with larval metamorphosis.
- Collected data about invertebrate specimens (e.g., genus, predatory strikes, mortality) during spatial and predatory trials using action cameras, and data from real and simulated waterbodies (dissolved oxygen, temperature, pH).
- Conducted analyses (e.g., Kruskal-Wallis tests, PERMANOVA, PCA) in R and Excel.

Columbia University | New York, NY Oct 2015 – May 2016
Graduate Research Assistant

- Measured forest loss on the mountain and greater area of Gorongosa National Park in Mozambique using remote sensing, Arc GIS, and Google Earth Engine.
- Created feature collections in Google Earth Engine and obtained images from Landsat satellite imagery.
- Wrote Normalized difference vegetation index (NDVI) functions to analyze vegetation change in the study area.

Columbia University | New York, NY Sep 2015 – May 2016
Graduate Research Assistant

- Entered and summarized data related to blue monkey behavior and intergroup encounters using Microsoft Excel as part of a long-term behavioral study.

California Polytechnic State University | San Luis Obispo, CA Jan 2011 – Jun 2012
Undergraduate Research Assistant

- Collected data to investigate the effects of predator chemical cues on damselfly behavior and the spatial distribution of dragonfly larvae.
- Assessed predator and prey behavioral data and evaluated how odonate predatory behavior correlated with spatial behavior by using t-tests to compare predator behavior with the different prey types, and prey behavior in the presence of *Anax* dragonflies. Performed ANOVA tests on trial number to determine whether there was a significant difference in variability between trials.
- Collected and reared dragonfly larvae, damselfly larvae, and prey species (e.g., mosquito larvae, daphnia, etc.).
- Conducted analyses using Microsoft Excel, Minitab, and SPSS.

RESEARCH EXPERIENCE (CONT.)

Koffler Scientific Reserve | Toronto, Canada Jun 2011 – Aug 2011
Undergraduate Research Assistant

- Collected data to investigate the spatial distributions of aquatic invertebrate and amphibian communities and across the Georgian Bay archipelago.
- Conducted correlation analyses to determine the relationship between habitat variables, habitat isolation, and amphibian diversity using Microsoft Excel, Minitab, and SPSS.
- Funded by the National Geographic Committee for Research and Exploration.

WRITING/EDITING EXPERIENCE

Inksplash Media | Bernardsville, NJ Jan 2020 – Present
Freelance English Editor (Remote)

- Create unique science items (K-12 and college level) based on client manuscripts, assessment guidelines, and other resources.
- Adapt questions to meet Depth of Knowledge (DOK) requirements, and revise and edit writing with strong diligence, feedback from the project lead, and according to sensitivity training.
- Reliably met deadlines and deliver quality products, and revise any returned items according to feedback prior to completion of the contract.
- Work productively and independently in a virtual environment with reliance on video conferencing, email, and phone as primary forms of communication.

Academic Language Experts (ALE) | Jerusalem, Israel Nov 2019 – Present
Freelance English Editor (Remote)

- Edit English academic manuscripts of international scientists, and ensure that research papers adhere to publication guidelines and standards (e.g., document and caption formatting, citation format, grammar) while preserving the author's intended meaning.
- Provide feedback and ask for clarification where necessary.

Enago (Crimson Interactive Inc.) | New York, NY Nov 2019 – Present
Freelance English Editor (Remote)

- Edit English academic manuscripts of international scientists, and ensure that research papers adhere to publication guidelines and standards (e.g., document and caption formatting, citation format, grammar) while preserving the author's intended meaning.
- Provide feedback and ask for clarification where necessary.
- Have revised over 200 manuscripts with this organization.

ThinkSCIENCE, Inc. | Tokyo, Japan Jun 2017 – Feb 2018
Freelance English Editor (Remote)

- Edited the English academic manuscripts of Japanese scientists and ensured that research papers adhered to publication guidelines and standards (e.g., document and caption formatting, citation format).
- Ensured that the manuscript adhered to readability standards (e.g., correct word usage, grammar, sentence structure) while preserving the author's intended meaning.
- Provided feedback and asked for clarification where necessary.

COMMITTEE SERVICE

Rutgers University | Newark, NJ | 2018 - 2019
Member, Colloquium Committee for Department of Biological Sciences

PUBLICATIONS

Journal Publication

Hager, A. M., Larson, J., Ugbah, N. K., & Ramesh, V. (2017). Oil Extraction in the Ecuadorian Amazon: Incorporating Conflict Resolution Theory and Practice. *Conflict Resolution Quarterly*, 35(2), 243-267.

Adu, B.W., Ayobami, O.B, Azeezat, A., Fomekong-Lontchi, J., Kemabonta, K., Knapp, K., Ogbogu, S. S., Ojonugwa, E., Tchibozo, S., Ugbah, N.K., Campbell, G., Uche-Dike, R., Uyizeye, E., Ware, J.L., & Whyte, D. (2020). The Black Odonatologist's Working Group. Argia. *The News Journal of the Dragonfly Society of the Americas*, 32(3), 12-16.

PRESENTATIONS

"Becoming Mx. Worldwide: Observed Embryology and Development of the Migratory Dragonfly *Pantala flavescens*"

- Oral talk presented in the 2019 International Congress of Odonata Meeting in Austin, TX.

"The Influence of Temperature on the Activity and Spatial Behavior of Vernal Pool Odonate Larvae"

- Oral talk presented in the 2018 ESA, ESC and ESBC Joint Annual Meeting in Vancouver, BC, Canada.

"The Influence of Temperature on the Development, Mortality, and Spatial Behavior of Vernal Pool Odonate Larvae"

- Oral talk presented in the 2018 Eastern Branch Meeting of the Entomological Society of America in Annapolis, Maryland.

"The Influence of Temperature on the Development, Mortality, and Spatial Behavior of Vernal Pool Odonate Larvae"

- Poster presented in the 2017 Annual Evolution Meeting of the Society for the Study of Evolution (SSE), Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN) in Portland, Oregon.

"Conflict Assessment: Oil Extraction in the Ecuadorian Amazon"
Collaborators: Ann Marie Hager, James Larson, & Vijay Ramesh

- Poster presented in the 2016 Annual Conference of the International Association for Conflict Management in New York City, New York.

"Surprising Amphibian Diversity and Richness on the Islands of the Georgian Bay"
Collaborator: Shane E. Johnson

- Poster presented in the 2012 Annual COSAM Student Research Conference at California Polytechnic State University— San Luis Obispo, California.

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HONORS AND AWARDS

Minority Biomedical Research Support (MBRS) Graduate Assistant Fellowship — 2017 – 2019
Rutgers University—Newark ($60,573)

Marian P. and David M. Gates Graduate Student Endowment Fund Fellowship — 2016
University of Michigan Biological Station University ($3,300)

Advanced Consortium on Cooperation, Conflict, and Complexity (AC4) Fellowship — 2016
Columbia University ($1,000)

Summer Research Grant — 2016
Columbia University ($1,415)

Graduate School of Arts and Sciences and the Department of Ecology, Evolution, and Environmental Biology Fellowship — 2016
Columbia University ($6,000)

AFFILIATIONS

Black Odonatologist Working Group
World Dragonfly Organization
Dragonfly Society of the Americas
Entomological Society of America (SysEB)
International Association of Black Entomologists (IABE)