

JOHN NGUYEN

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EDUCATION

Columbia University (Columbia College), New York, NY

May 2023

Bachelor of Arts - Environmental Biology, GPA: 3.90 (Dean's List x6)

Relevant Coursework: Herpetology, Statistics for Ecology and Evolutionary Biology, Intro to GIS, Genomics in the Wild, Life Systems, Environmental Biology, Climate Systems, Ecology and Conservation of African Landscapes

RESEARCH EXPERIENCE

University of North Carolina at Asheville, Dept of Biology

Asheville, NC

Herpetology Field Technician

July 2023 – Present

Advisor: Dr. Becca Hale

- Conduct bi-weekly coverboard field surveys independently at Sandy Bottom Wetland Preserve, a critically threatened montane floodplain slough forest in western North Carolina with a unique herpetofauna assemblage. Document temporal changes in herpetofauna community composition to inform local conservation management and policies. Develop off-road navigation and herpetological photography skills.

California Academy of Sciences, Dept of Herpetology

San Francisco, CA

Undergraduate Student Researcher

June 2022 – Present

Advisor: Dr. Rayna Bell

- Determined the historical prevalence of the panzootic chytrid fungus (*Batrachochytrium dendrobatidis*) in amphibian populations in West Africa by swabbing 3,300 specimens to provide a greater context for disease dynamics in Africa. Developed a species distribution model of chytrid in Africa using Maxent, R, and QGIS. Cultivated skills in writing research grants and research proposals.

NSF-REU Intern - Summer Systematics Institute

June 2021 – August 2021

- Assessed the diversity and distribution of reed frogs on Bioko Island in the Gulf of Guinea archipelago to gain an understanding of species and genetic composition. Investigated how population divergence from continental Africa is shaping the diversification of this genus of frogs on the island. Revised incorrect species identifications for fluid specimens spanning several decades of field studies. Performed bioinformatics analysis of DNA sequences using BLAST and Geneious.

Mpala Research Centre

Nanyuki, Kenya

Tropical Biology Field Semester Abroad Student

January 2022 – April 2022

Advisors: Drs. Dustin Rubenstein, Kevin Uno, Julien Ayroles, and Robert Pringle

- Collaborated with fellow students and scientists on 10 independent research projects on savanna ecology, paleoecology, biology, and conservation. Conducted field data collection in remote and hazardous conditions that required adaptability, teamwork, and quick problem-solving skills; specific locations include Laikipia County, Turkana Basin, Tsavo West, Amboseli, Chyulu Hills, and Mt. Kenya.

Cary Institute of Ecosystem Studies

Millbrook, NY

Undergraduate Student Researcher

September 2020 – Present

Advisors: Drs. Sarah Batterman, Michelle Wong, Will Barker, and Wenguang Tang

- Quantified leaf herbivory and nutrient concentration across nutrient treatment to understand how plant-nutrient responses influence carbon sequestration in tropical carbon sinks. Analyzed more than 2,700 unstructured raster data files using ImageJ. Performed data management, visualization, and analysis in R.

NSF-REU Intern – Translational Ecology

May 2020 – August 2020

- Analyzed the effects of nutrient treatment on leaf functional traits across forest succession in a 30-year chronosequence in Agua Salud, Panama to understand how trees in tropical carbon sinks respond to environmental and climate change. Authored a blog on diversity and representation in nature-oriented STEM fields.

Columbia University Irving Medical Center, Dept of Microbiology

New York, NY

- Identified mutations in *P. falciparum*-infected mice treated with novel antimalarial compounds to provide a basis for antimalarial drug development. Practiced aseptic technique while handling clinical samples used to model antimalarial resistance *in vivo*.

SKILLS

Computer: R, QGIS, BLAST, Geneious, JMP, Maxent, HTML, CSS, ImageJ, PopART (Population Analysis with Reticulate Trees), Microsoft Office Suite (Word, Excel, PowerPoint), Google Suite

Lab & Field: DNA extraction, PCR, qPCR, gel electrophoresis, microbial culture, microscopy, antimicrobial assays, agar plate preparation, Sanger and Illumina sequencing, steam sterilization, transect and quadrat sampling

Language: Vietnamese (native), Italian (conversational)

HONORS AND AWARDS

Columbia University Department of Ecology, Evolution, and Environmental Biology: Dobzhansky Prize	2023
Society for Integrative and Comparative Biology: Professional Development Award	2022
Jonathan Throne Kopit Prize in Logic and Rhetoric: Finalist	2021

PROFESSIONAL AFFILIATIONS

Society for Integrative and Comparative Biology	2022 - Present
American Society of Ichthyologists and Herpetologists	2022 - Present
American Junior Academy of Science	2020

PUBLICATIONS

Nguyen, J., Barker, W., Wong, M., Tang, W., Batterman, S. Ecosystem herbivory changes across tropical forest secondary succession but not soil fertility. (*In preparation*)

Nguyen, J., Becker, G., Bell, R. Historical prevalence of the chytrid fungus (*Batrachochytrium dendrobatidis*) in amphibian populations in West Africa. (*In preparation*)

Nguyen, J., McLaughlin, P., Irian, C., Scheinberg, L., Bell, R. Diversity and distribution of reed frogs (*Hyperolius spp.*) on Bioko Island, Equatorial Guinea. (*In preparation*)

PRESENTATIONS

Nguyen, J., Bell, R. Diversity and distribution of reed frogs (*Hyperolius spp.*) on Bioko Island, Equatorial Guinea. Poster presentation at Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. January 2023.

Nguyen, J., Bell, R. Diversity and distribution of reed frogs (*Hyperolius spp.*) on Bioko Island, Equatorial Guinea. Oral presentation at California Academy of Sciences Summer Systematic Institute Symposium. San Francisco, CA. July 2021.

Nguyen, J., Batterman, S., Wong, M., Tang, W. Nutrient effects on leaf biomass allocation and herbivory across tropical forest succession. Oral presentation at Cary Institute of Ecosystem Studies Symposium. Online. July 2020.

Nguyen, J., Rideout, N. Antifungal properties of cutaneous bacteria isolated from the endangered green salamander (*Aneides aeneus*). Poster presentation at American Association for the Advancement of Science Annual Meeting. Seattle, WA. February 2020.

REFERENCES

Rayna Bell, PhD

Curator of Herpetology
California Academy of Sciences
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Michelle Wong, PhD

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Sarah Batterman, PhD

Tropical Forest Ecologist

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