

Nguyen Tien Anh Quach

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EDUCATION

Ph.D. Student, **University of North Carolina at Chapel Hill**, Chapel Hill, North Carolina
Geography and Environment, expected May 2028
Advisor: Dr. Amanda G. DelVecchia

M.S. **Towson University**, Towson, Maryland
Biology, May 2023
Committee: Dr. Susan E. Gresens, Dr. Joel Moore, Dr. Kevin D. Brittingham
Thesis title: *Road Salt: A Likely Driver of Long-term Benthic Macroinvertebrate Decline in an Urbanizing Stream*

B.S. **Troy University**, Troy, Alabama
Environmental Science, May 2020 – *Summa Cum Laude*
Program Advisor: Dr. Kewei Yu
University of Skövde, Skövde, Sweden - Exchange Student – Spring 2018

HONORS/AWARDS

Society for Freshwater Science – Emerge Fellowship – 2024

UNC-Chapel Hill Inclusive Excellence Top-Up – 2023

Towson University Graduate Student Association
Research Grant – 2021
Professional Development Grant – 2022

Towson University Fisher College of Science & Mathematics Travel Grant – 2022

Troy University Chancellor's Award for Global Competitiveness – 2017

PUBLICATIONS

Peer-reviewed

Quach, N. T. A., Moore, J., Brittingham, K. B., Genito, D., Gresens, S. E., *In preparation to submit to Environmental Monitoring and Assessment*. A Comparison of Benthic Macroinvertebrate Communities and Water Quality in Red Run Watershed Over Two Decades of Urban Development and Salt Application. *Word count: 11,914*.

Miller, J. M., **Quach, N. T. A.**, Patel, M., Guillaumet, A., *In preparation to submit to Freshwater Science*. Environmental Factors and Individual Characteristics Influencing Mussel Survival During Extraordinary Drought Periods: A Dewatering Experiment.

Non-peer reviewed

Miller, J. M., Patel, M. K., **Quach, N. T. A.**, Guillaumet, A., 2021. Survivability of Mussels, Targeting Federally Listed Species, Over a 13-week Period During the Drawdown of Gantt Reservoir. A Report to Power South Energy Cooperative and U.S. Fish and Wildlife Service as part of the Gantt Reservoir Drawdown Project Agreement (USFWS Project No. 2016-F-0576).

INVITED TALK

Quach, N. T. A., 2023. Road Salt: A Likely Driver of Long-Term Benthic Macroinvertebrate Decline in an Urbanizing Stream. Oral presentation at the virtual Chesapeake Bay Seminar Series at the Maryland Department of the Environment, August 2nd.

PRESENTATIONS

Quach, N. T. A., 2023. You are what you eat – Investigating basal carbon sources and transformations in stream food webs. Oral presentation at the 1st Conference of the Southeast Chapter of the Society for Freshwater Science, November 9th. Columbus, GA.

Quach, N. T. A., Moore, J., Gresens, S. E., 2022. Consequences of Freshwater Salinization for Benthic Macroinvertebrate Communities and Water Chemistry. Poster presentation at the 28th Annual Maryland Water Monitoring Council Conference, December 15th. Linthicum, MD.

Quach, N. T. A., Gresens, S. E., 2022. A Comparison of Benthic Communities and Water Quality in Red Run Watershed Over Two Decades of Urban Development. Oral presentation at the Baltimore Ecosystem Study 24th Annual Meeting, October 13th – 14th. Baltimore, MD.

Quach, N. T. A., Gresens, S. E., 2022. Can a Maryland Piedmont Trout Stream Be Protected from Rapid Urban Development? The Long-Term View. Oral presentation at the virtual 2022 Joint Aquatic Sciences Meeting, May 14th – 20th. Grand Rapids, MI.

Quach, N. T. A., Miller, J. M., Guillaumet, A., Patel, M. K., 2020. Tracking Movement of a Federally Threatened Species of Mussel During the Drawdown of Gantt Reservoir. To be presented at the 81st Annual Meeting of Association of Southeastern Biologists, March 25th – 28th. Jacksonville, FL. *Cancelled due to COVID-19*.

Quach, N. T. A., Miller, J. M., Guillaumet, A., Patel, M. K., 2020. Tracking Movement of a Federally Threatened Species of Mussel During the Drawdown of Gantt Reservoir. Oral presentation at Alabama Mollusk & Crayfish Working Group Meeting, January 15th – 16th. Cullman, AL.

Quach, N. T. A., Moore, A. T., Davis, E. C., Temple, T. N., Miller, J. M., 2019. Preliminary Investigations of Refuges as a Method to Capture Riverine Crayfish. Poster presentation at the 80th Annual Meeting of Association of Southeastern Biologists, April 3rd – 6th. Memphis, TN.

RESEARCH EXPERIENCE

Graduate Student Researcher - Non-thesis Research in Benthic Taxonomy (*January 2021 – May 2021*) – Towson University – Supervisor: Mr. Dennis Genito

Undergraduate Research Assistant - Survivability of Mussels, Targeting Federally Listed Species, During the Drawdown of Gantt Lake Reservoir (*September 2019 – May 2020*) – Troy University –

Principal Investigator: Mr. Jonathan M. Miller

Undergraduate Student Researcher - Using bird vocalization as a tool for identification and taxonomy (*January 2020 – May 2020*) – Troy University – Principal Investigator: Dr. Alban Guillaumet

Undergraduate Student Researcher - NSF RAPID - Rapid response to drought in a biodiversity hotspot (*September 2018 – May 2020*) – Troy University – Principal Investigator: Dr. Brian Helms

Undergraduate Student Researcher - Preliminary investigations of refuges as a method to capture riverine crayfish (*September 2018 – May 2019*) – Troy University – Principal Investigator: Mr. Jonathan M. Miller

PROFESSIONAL EXPERIENCE

Field Scientist (*February 2023 – May 2023*) - Countywide Biological, WQ and Stream Geomorphological Monitoring and Assessment: Round 5/Year 1 And 23-Year Retrospective Analysis, Prince George's County, MD – [Clean Streams LLC](#) – Supervisor: Mr. Alexi Sanchez de Boado

Field Technician Intern (*May 2019 – December 2019*) - Sanders Lead Company, Inc. - Supervisor: Mr. Chris Rutherford & Mr. Matt Brown

Volunteer Zoological Museum Technician (*September 2018 – May 2020*) - Faculty supervisor: Mr. Jonathan M. Miller

TEACHING EXPERIENCE

Teaching Assistant – GEOG 541 – GIS in Public Health (*January 2024 - present*) – Instructor: Dr. Michael Emch

Teaching Assistant – GEOG 222 – Health and Medical Geography (*August 2023 – December 2023*) – Instructor: Dr. Michael Emch

Guest Lecture – BIOL207L – General Zoology (*March 2023*) – Towson University – Instructor: Dr. Will H. Ryan

Head Teaching Assistant – BIOL120L – Principles of Biology (*August 2021 – May 2023*) – Towson University –Lab Coordinator: Mrs. Pamela Healey

Teaching Assistant – BIOL120L – Principles of Biology (*August 2020 – May 2023*) – Towson University –Lab Coordinator: Mrs. Pamela Healey

NEWS COVERAGE

1. TROY researcher and students studying habitat changes on federally-listed species of mussel. *TROY Today* (2019). Available at: <https://today.troy.edu/faculty-staff/troy-researcher-and-students-studying-habitat-changes-on-federally-listed-species-of-mussel/>

PROFESSIONAL MEMBERSHIPS

Society for Freshwater Science – *2021-present*

Beta Beta Beta - National Biology Honor Society Mu Epsilon Chapter – *2019-2020*

Association of Southeastern Biologists – *2019-2020*

PROFESSIONAL SERVICES

INTRAMURAL

Graduate Association of Geography and Environment Students

Prospective Graduate Student Recruitment Coordinator – 2023

Biology Graduate Student Association – *Ecology Liaison* – 2022-2023

Judge, Student Research Symposium, Department of Biological Sciences – 2021

EXTRAMURAL

Judge, Science and Engineering Fair, North Carolina School of Science and Math, NCSEF Region 3B – 2024

SKILLS & ABILITIES

RStudio – Certified in Data [Visualization](#) and [Wrangling](#) by HarvardX

ArcGIS Desktop v10.8

PC-ORD v7.09

Benthic macroinvertebrate sampling ([certified](#) by the MBSS)

Taxonomy of freshwater benthic macroinvertebrate of Maryland Piedmont

Stream health and habitat assessments ([certified](#) by the MBSS)