Nicole C. Pittoors
PhD Student in Biological Sciences
Lehigh University
ncp220@lehigh.edu

Research Interests

Deep-sea benthic ecology, larval dispersal and connectivity, ecological physiology, metacommunities, and ecological genomics.

Education

In progress	Ph.D. Biology. Lehigh University, Bethlehem, PA
2013-2017	B.Sc. Ecology. Minor in Mathematics. Northern Michigan University, Marquette, MI

Awards

2021	National Science Foundation Graduate Research Fellowship
2021	Deep Sea Biology Society Cruise Bursaries Award
2016 and 2018	Charlotte Mangum Student Travel Award- SICB
2016	Northern Michigan University Graduate Education and Research Grant
2013-2017	Northern Michigan University Honors Award

Professional Experience

2018-2020	Development and Implementation of a Modular Automated Platform for Large-scale Experiments (MAPLE) robot for animal- handling and phenotyping. Induction of and correlation between PF-LC neuroanatomical asymmetry and behavior. **Laboratory Technician, Harvard University.** Principal Investigator: Benjamin de Bivort.
2017	Helical swimming as an exploratory behavior in competent larvae of the eastern oyster larvae. **Guest Student, Woods Hole Oceanographic Institution.** Advisors: Kirstin Meyer-Kaiser and Lauren Mullineaux.
2017	Mechanisms of succession in subtidal fouling communities. **Guest Student, Woods Hole Oceanographic Institution.** Advisors: Kirstin Meyer-Kaiser and Lauren Mullineaux.
2017	Diet breadth of native and non-native Lake Superior tributary salmonids. **Independent Study, Northern Michigan University.** Advisors: Jill Leonard and Alexis Rainey.
2016	Effects of near-future pH and temperatures on growth and survivorship of the Harpacticoid *Tisbe biminiensis*. **Independent study, Northern Michigan University.** Advisor: Jill Leonard.
2016	The role of *Diadema antillarum* on coral diversity and abundance. **Independent Study, U.S. Virgin Islands.** Advisor: Jill Leonard.
2015	Humpback whale (*Megaptera novaeangliae*) behavioral ecology field methods in Puerto Rico. **Study abroad, Puerto Rico**. Advisors: Jill Leonard and Mithriel MacKay.

2013 Assessment of Lake Trout populations in Lake Superior. **Volunteer Technician, Michigan Department of Natural Resources.** Advisors: Daniel Traynor and Shawn Sitar.

Presentations

2017 Multiple mechanisms of succession at work in subtidal fouling communities. **Oral Presentation.** Western Society of Naturalists. Pasadena, CA.

2017 Mechanisms in ecological succession in subtidal fouling communities. Summer Student Research Forum. **Poster.** Woods Hole Oceanographic Institution. Woods Hole, MA.

2017 Effects of pH and temperature on the Harpacticoid *Tisbe biminiensis* growth, survivorship, and morphology. **Oral Presentation.** Society of Integrative and Comparative Biology. New Orleans, LA.

2016 The role of *Diadema antillarum* on coral diversity and abundance. Northern Michigan University Research Celebration. **Oral Presentation**. Marquette, MI.

2015 Humpback whale (*Megaptera novaeangliae*) behavioral ecology field methods in Puerto Rico. **Oral Presentation.** Northern Michigan University Research Celebration. Marquette, MI.

Publications

Meyer, K.S., **Pittoors, N.C.**, Solow, A., Mullineaux, L.S. Priority effects in succession in a marine fouling community. *In prep*. Target journal: Ecology Letters.

Herrera, S., Chadwick, W. W., Jackson, M. G., Konter, J., McCartin, L., **Pittoors, N.**, Bushta, E., Merle, S. G. 2023. From basalt to biosphere: Early non-vent community succession on the erupting Vailulu'u deep seamount. *FMARS*. 10. DOI: 10.3389/fmars.2023.1110062

McDermort, J.M., Parnell-Turner, R., Barreyre, T., Herrera, S., Downing, C., **Pittoors, N.**, Pehr, K., Vohsen, S.A., Dowd, W.S., Wu, J., Marjanoic, M., Fornari, D. Discovery of active off-axis vents at 9° 54'N East Pacific Rise. *PNAS*. 119. DOI: 10.1073/pnas.2205602119

Maciejewski, M.F., Meyer, K.S., Wheeler, J.D., Anderson, E.J., **Pittoors, N.C.**, Mullineaux, L.S. Helical swimming as an exploratory behavior in competent larvae of the eastern oyster larvae (*Crassostrea virginica*). *J Exp Mar Biol Ecol*. 510: 86-94. DOI: 10.1016/j.jembe.2018.10.007

Teaching Experience

2020 Graduate Teaching Assistant. Genetics Laboratory. Lehigh University.

2017 Teaching Assistant. Advanced Applied Statistics. Northern Michigan University.

2016-2017 Campus Tutor. Ecology and Biological Statistics. Northern Michigan University.

2015 Teaching Assistant. Freshman Biology Seminar. Northern Michigan University.

Relevant Coursework

Deep-Sea Biology (Harvard Graduate School of Arts and Sciences), Genomics, Molecular Ecology, Marine Geochemistry, Marine Biology, Oceanography, Ecology, Ecology Theory and Methods, Ecological Animal Physiology, Invertebrate Zoology, Conservation Biology, Ichthyology, Cellular and Molecular Biology, Evolution, Advanced Field Marine Biology, Calculus I-III, Differential Equations, Biostatistics, Advanced Applied Statistics, Organic Chemistry, Calculus-based Physics

Other Professional Activities

Since 2020	Deep-Sea Biological Society Student Member
Since 2018	Society for Women in Marine Science Student Member
2017	Sigma Xi Associate Member
2015-2019	SICB Student Member
2016-2018	WSN Student Member
2014	PADI Open water SCUBA certified

Diversity in STEM and Anti-Racist Training

2020 *What is an Anti-Racist Classroom? What Actions Can I Take to Create One?*
Workshop on concreate actions that will help create an anti-racist classroom, including remote or blended courses [at Lehigh University]

2019 *Creating Space: Allyship Workshop*
Understanding social justice beyond a U.S. context and how to make social justice efforts more inclusive and accessible [at Harvard]

2019 *Optimizing the Intern Experience: A Woods Hole NSF Workshop*
A series of seminars and workshops aimed to strengthen undergraduate programs that seek to increase diversity in the geosciences workforce [at WHOI]

Science Communication Training and Outreach

2020 *Letters to a Pre-Scientist Volunteer*
Pen pal program that pairs fifth to tenth grade "pre-scientists" in US low-income communities with STEM professional volunteers during science class.

2016 *Story Art for Science Communication, Interactive Workshop*
How to outline your scientific stories using techniques that Pixar Animation Studios uses to construct and translate stories into visual form [at WSN Meeting]

2016 *Communicating the Value of Natural History Through Exploration and Discovery Symposium*
How to use natural history and observation as a tool to motivate a wide audience to care about and conserve the natural world [at WSN meeting]

2017 *Demystifying Public Perceptions of Science Workshop*
Tools to bridge psychological research with science communication [at WSN Meeting]

Technical Skills

Languages and Platforms: R, ArcGIS, Python, MATLAB, Thin Plate Spline for Morphometric Analysis, SPSS Statistical Software, Windows, Linux, macOS, Autodesk Fusion 360, Adobe Creative Cloud
Hardware: Soldering, Circuits, Laser Cutting, and 3D Printing
Molecular and Microscopy Techniques: Polymerase Chain Reaction, Protein Electrophoresis, DNA extraction, RAD-Seq, Next Generation Sequencing Technology, Understanding and Usage of Biostatistics and Bioinformatics algorithms, Immunohistochemistry, Immunofluorescence, and Confocal Microscopy

Research Expeditions

2023	*R/V Atlantis. HOV Alvin.* AT50-07. Lava watch 2023. East Pacific Rise 9° 50'N, Pacific Ocean. 29 days. Starboard observer on *HOV Alvin* dive AL5147.
2021	*R/V Point Sur. ROV Global Explorer.* ConnectivitY of CoraL Ecosystems (CYCLE). U.S. Gulf of Mexico. 13 Days.
2021	*R/V Roger Revelle*. *ROV Jason. AUV Sentry.* RR2102*:* Hydrothermal vent fluid chemistry, functional diversity, and biofilms. East Pacific Rise 9° 50'N, Pacific Ocean. 39 days.