

# CURRICULUM VITAE

## **Geneviève (Genny) Nessler**

Chesapeake Biological Laboratory  
University of Maryland Center for Environmental Science  
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## **Education**

- 2005 Ph.D. Michigan State University, East Lansing, MI, USA  
Degree: Fisheries & Wildlife
- 2000 M.S. SUNY College of Environmental Science and Forestry, Syracuse, NY, USA  
Degree: Wildlife Biology and Management
- 1997 B.S. Cornell University, Ithaca, NY, USA  
Degree: Biology. Hughes Undergraduate Research Fellow

## **Professional Background**

- 2022 – Pres. Associate Research Professor, Chesapeake Biological Laboratory,  
University of Maryland Center for Environmental Science, Solomons, MD
- 2016 – 2022 Assistant Research Professor, Chesapeake Biological Laboratory,  
University of Maryland Center for Environmental Science, Solomons, MD
- 2015 – 2016 Visiting Research Assistant Professor, Chesapeake Biological  
Laboratory, University of Maryland Center for Environmental Science,  
Solomons, MD
- 2007 – 2014 Senior Stock Assessment Scientist, Atlantic States Marine Fisheries  
Commission, Arlington, VA
- 2005 – 2006 Assistant Professor, Clarion University of Pennsylvania, Clarion, PA

## **Research**

### *Areas of Professional Expertise*

Stock assessment, population dynamics and modeling, quantitative fisheries science,  
fisheries management, fish and wildlife ecology

2025

Schiano, S., **G. Nesslerage**, J. Collie, N.L. Lengyel Costa, K. Drew, R.J. Latour, J. McNamee, A. Schueller, M.J. Wilberg. 2025. Trends in Atlantic Striped Bass growth in the Mid-Atlantic, U.S.A. Transactions of the American Fisheries Society. <https://doi.org/10.1093/tafafs/vnaf006> [UMCES Cont. No. 6406]

Jesse, J., G. Nesslerage, M. Matsche, H. Townsend, C. Shen, J.M. Testa, M.J. Wilberg. 2025. Quantifying trends in and potential drivers of mycobacteriosis in Atlantic Striped Bass in Maryland waters of the Chesapeake Bay. Transactions of the American Fisheries Society 154(1): 35–49. <https://doi.org/10.1093/tafafs/vnae003> [UMCES Cont. No. 6401]

2024

Pierson, J., G. Nesslerage, A. Fries, H. Kelsey, F. Chen, C. Davis, K. Rose. 2024. Recognizing JEDI efforts in the hiring, tenure, and promotion process. Oceanography. <https://doi.org/10.5670/oceanog.2024.307>

2023

Shertzer, K, Crosson, S., Williams, E., Cao, J., DeVictor, R., Dumas, C., **Nesslerage, G.** 2023. Fishery management strategies for Red Snapper (*Lutjanus campechanus*) in the southeast United States Atlantic: a spatial population model to compare approaches. North American Journal of Fisheries Management. <https://doi.org/10.1002/nafm.10966>

Schiano, S., **G. Nesslerage**, K. Drew, A. Schueller, R. Woodland, and M. Wilberg. 2023. Evaluation of Alternative Harvest Policies for Striped Bass and Their Prey, Atlantic Menhaden. Canadian Journal of Fisheries and Aquatic Sciences. <https://doi.org/10.1139/cjfas-2023-0089>.

2022

**Nesslerage, G.** and D. Pauly. 2022. Chapter 17 Estuarine fisheries and aquaculture. In B. Crump, J. Testa, & K. Dunton (Eds.), Estuarine Ecology, 3<sup>rd</sup> edition. Wiley.

**Nesslerage, G.**, A. Schueller, A. Rezek, and R. Mroch III. 2022. A performance evaluation of ageing error diagnostics for imprecision and bias in paired age comparisons. Fisheries Research. <https://doi.org/10.1016/j.fishres.2022.106255>

2021

**Nesslerage, G.**, V. Lyubchich, P. Nitschke, E. Williams, C. Grimes, and J. Wiedenmann. 2021. Environmental drivers of golden tilefish (*Lopholatilus chamaeleonticeps*) commercial landings and catch-per-unit-effort. Fisheries Oceanography. DOI: 10.1111/fog.12540.

Drew, K., Cieri, M., A. Schueller, A. Buchheister, D. Chagaris, **G. Nesslerage**, J. McNamee, and J. Uphoff. 2021. Balancing model complexity, data requirements, and management objectives in developing ecological reference points for Atlantic Menhaden. *Frontiers in Marine Science*. DOI: 10.3389/fmars.2021.608059.

Anstead, K. K Drew, D. Chagaris, M. Cieri, A. Schueller, J. McNamee, A. Buchheister, **G. Nesslerage**, J. Uphoff, M. Wilberg, A. Sharov, M. Dean, J. Brust, M. Celestino, S. Madsen, S. Murray, M. Appelman, J. Ballenger, J. Brito, E. Cosby, C. Craig, C. Flora, K. Gottschall, R. Latour, E. Leonard, R. Mroch, J. Newhard, D. Orner, C. Swanson, J. Tinsman, E. Houde, T. Miller, and H. Townsend. 2021. The path to an ecosystem approach for forage fish management: a case study of Atlantic Menhaden. *Frontiers in Marine Science*. DOI: 10.3389/fmars.2021.607657

## 2020

**Nesslerage**, G. R. Leaf, M. Wilberg, R. Mroch III, and A. Schueller. 2020. A simulation-based evaluation of commercial port sampling programs for the Gulf and Atlantic Menhaden fisheries. *North American Journal of Fisheries Management* 40(4), 995-1006.

Liang, D., **Nesslerage**, G., and M. Wilberg. 2020. A spatial simulation approach to hydroacoustic survey design: A case study for Atlantic menhaden. *Fisheries Research*. <https://doi.org/10.1016/j.fishres.2019.105402>.

Midway, S., A. Schueller, **G. Nesslerage**, and R. Mroch III. 2020. Macroscale drivers of Atlantic and Gulf Menhaden growth. *Fisheries Oceanography* 29: 252-264. <https://doi.org/10.1111/fog.12468>.

Weber, M., L. Wainger, N. Harms, and **G. Nesslerage**. 2020. The economic value of research in managing invasive hydrilla in Florida public lakes. *Lake and Reservoir Management* 37(1), 63-76.

Liang, D., **G. Nesslerage**, M. Wilberg, and T. Miller. 2020. Ranking ecosystem impacts on Chesapeake Bay blue crab (*Callinectes sapidus*) using empirical Gaussian Graphical Models. *Canadian Journal of Fisheries and Aquatic Sciences* 78(3), 245-254.

## 2019

**Nesslerage**, G., and M. Wilberg. 2019. A performance evaluation of surplus production models with time-varying intrinsic growth in dynamic ecosystems. *Canadian Journal of Fisheries and Aquatic Sciences*. DOI: 10.1139/cjfas-2018-0292.

Stratton, M., **G. Nesslerage**, and R. Latour. 2019. Multi-decadal climate and fishing predictors of abundance for U.S. South Atlantic coastal fishes and invertebrates. *Fisheries Oceanography* 28: 487-504.

## 2018

Schueller, A., R. Leaf, R. Mroch III, and **G. Nesslerage**. 2018. Response to Turner 2017 “Smaller size-at-age menhaden with coastal warming and fishing intensity”. *Geo: Geography and the Environment* 5(2) 1-2.

Wainger, L., N. Harms, C. Magen, D. Liang, **G. Nesslerage**, A. McMurray, and A. Cofrancesco. 2018. Evidence-based economic analysis demonstrates that ecosystem service benefits of water hyacinth management greatly exceed research and control costs. *PeerJ*. DOI 10.7717/peerj.4824.

## 2017

Simpson, C., H. Bi, D. Liang, M. J. Wilberg, A. Schueller, **G. Nesslerage**, and H. J. Walsh. 2017. Spawning locations and larval dispersal of Atlantic menhaden during 1977-2013. *ICES Journal of Marine Science* 74(6), 1574-1586.

Liang, D., **G. Nesslerage**, M. Wilberg, and T. Miller. 2017. Bayesian calibration of blue crab (*Callinectes sapidus*) abundance indices based on probability surveys. *Journal of Agricultural, Biological, and Environmental Statistics*. DOI: 10.1007/s13253-017-0295-4.

## 2016

**Nesslerage, G.**, L. Wainger, N. Harms, and A. Cofrancesco. 2016. Quantifying the population response of invasive water hyacinth, *Eichhornia crassipes*, to biological control and winter weather in Louisiana, USA. *Biological Invasions* 18(7): 2107-2115.

Simpson, C., M. J. Wilberg, H. Bi, A. Schueller, **G. Nesslerage**, and H. J. Walsh. 2016. Trends in relative abundance and early life survival of Atlantic menhaden during 1977-2013 from long-term ichthyoplankton programs. *Transactions of the American Fisheries Society* 145:1139-1151.

## 2001-2015

**Nesslerage, G.**, and M. Wilberg. 2012. Performance of surplus production models with time-varying parameters for assessing multispecies assemblages. *North American Journal of Fisheries Management* 32:1137-1145.

**Nesslerage, G.**, B. Maurer, and S. Gage. 2007. Gypsy moth response to landscape structure differs from neutral model predictions: implications for invasion monitoring. *Biological Invasions* 9(5): 585-595.

**Nesslerage, G.**, M. Wilberg, and S. Riley. 2006. Rates and spatial patterns of decline in historical cougar and wolf populations in Montana. *Intermountain Journal of Sciences* 12(3-4): 63-76.

Riley, S., **G. Nesslerage**, and B. Maurer. 2004. Dynamics of early wolf and cougar eradication efforts in Montana: implications for conservation. *Biological Conservation* 119(4): 575-579.

Nesslage, G., and W. Porter. 2001. A geostatistical analysis of deer harvest in the Adirondack Park, 1954–1997. *Wildlife Society Bulletin* 29(3): 787–794.

*Peer-Reviewed Stock Assessments* - <sup>1</sup>Lead analyst/author, <sup>2</sup>Co-lead analyst/author, <sup>3</sup>Contributor

<sup>1</sup>**SouthEast Data, Assessment, and Review. 2016. Stock assessment of golden tilefish off the Southeastern United States – update assessment. SEDAR, North Charleston, SC.**

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2015. American lobster stock assessment report for peer review. Arlington, VA. 493pp.

<sup>2</sup>SouthEast Data, Assessment, and Review (SEDAR). 2015. SEDAR 40 – Atlantic Menhaden Stock Assessment Report. SEDAR, North Charleston SC. 643 pp.

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2014. Multispecies Virtual Population Analysis Update Report. Arlington, VA. 68pp.

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2012. Atlantic menhaden stock assessment update. Arlington, VA. 232 pp

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2012. Update of the Multispecies Virtual Population Analysis. Arlington, VA. 39 pp.

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2012. American eel stock assessment report for peer review. Stock Assessment Report No. 12-01. Arlington, VA. 259 pp.

<sup>2</sup>Atlantic States Marine Fisheries Commission. 2010. Atlantic menhaden stock assessment report for peer review. Stock Assessment Report No. 10-02. Washington, DC. 325 pp.

<sup>1</sup>**Atlantic States Marine Fisheries Commission. 2009. American lobster stock assessment report for peer review. Stock Assessment Report No. 09-01. Washington, DC. 298pp.**

<sup>1</sup>**Atlantic States Marine Fisheries Commission. 2008. Update of the Multispecies Virtual Population Analysis. Washington, DC. 54 pp.**

<sup>3</sup>SouthEast Data, Assessment, and Review (SEDAR). 2007. SEDAR 13 – Small coastal shark stock assessment report. North Charleston, SC. 395 pp.

#### *Technical Reports*

**Nesslage, G. 2024 Enhancing sustainable development of the winter bait fishery for Atlantic menhaden through the use of industry acoustics. Report submitted to NOAA Saltonstall-Kennedy Competitive Grants Program.**

**Nesslage, G.** and R. Leaf. 2019. An evaluation of sampling adequacy for Atlantic Menhaden fisheries. Report submitted to Science Center for Marine Fisheries. [UMCES Technical Report Series # TS-725-19]

**Nesslage, G.** and D. Liang. 2018. Design of a cooperative winter survey for Atlantic menhaden. Report submitted to Science Center for Marine Fisheries [UMCES Technical Report Series #TS-708-18]

**Nesslage, G.** and M. Wilberg. 2017. An evaluation of commercial fishing operations within and adjacent to Assateague Island National Seashore. Report submitted to National Park Service. [UMCES Technical Report Series #TS-697-17]

**Nesslage, G.** and C. Dumas. 2017. A biological and economic evaluation of imperiled marine fish stocks and the stock assessment process in North Carolina. Report submitted to NC Sound Economy. [UMCES Technical Report Series #TS-703-17]

**Nesslage, G.** 2016. Stock assessment of golden tilefish off the Southeastern United States – Update assessment. SEDAR, North Charleston, SC. Report submitted to NOAA Southeast Fisheries Science Center [UMCES Technical Report Series #TS-686-16].

## **Funding**

**Nesslage, G.** and A. Schueller. Evaluating time-varying size-at-age assumptions in the Atlantic menhaden stock assessment. National Science Foundation Science Center for Marine Fisheries I/UCRC. 2024-2025. (Lead Principal Investigator)

**Nesslage, G.,** and S. Lyubchich. Using time series analysis of linked rare events to quantify impacts of climate change on fish and shellfish in Chesapeake Bay. NOAA Chesapeake Bay Office. 2023-2025. \$227,990. (Lead Principal Investigator)

**Nesslage, G.,** M. Wilberg, B. Shank, J. Kipp. Development of comprehensive, time-varying growth transition matrices for American lobster. National Sea Grant American Lobster Initiative. 2023-2025. \$180,534. (Lead Principal Investigator)

Wilberg, M., **G. Nesslage,** J. Gartland, R. Latour, J. Didden, P. Rago, J. Manderson. Development and testing of a length-based assessment model for U.S. east coast longfin and shortfin squid. CINAR. 2023-2025. \$199,999.

Wilberg, M., **G. Nesslage, G.** Testing and application of a length-based assessment model for the U.S. East Coast shortfin squid. Mid-Atlantic Fishery Management Council. Initiative. 2023-2024. \$30,154.

**Nesslage, G.** Development of a comprehensive growth modeling tool for American Lobster. CINAR Fellowship in Quantitative Fisheries and Ecosystem Science. 2021-2022. \$116,754. (Lead Principal Investigator)

**Nesslage, G.**, J. Gartland, R. Latour, D. Liang, C. Gurshin, M. Jech, R. Mroch, J. Brust, S. Axelsson, and W. Reichle. Enhancing sustainable development of the winter bait fishery for Atlantic menhaden through the use of industry acoustics. Saltonstall-Kennedy. 2020-2021. \$297,064. (Lead Principal Investigator)

**Nesslage, G.** M. Wilberg, K. Drew, and A. Schueller. Evaluating consequences of alternative harvest policies for Atlantic menhaden and the impacts on their predator Atlantic striped bass. Maryland Sea Grant. 2020-2022. \$128,880. (Lead Principal Investigator)

**Nesslage, G.**, R. Leaf, A. Schueller. Evaluating the impact of plus group definition on the Atlantic and Gulf Menhaden stock assessments. National Science Foundation Science Center for Marine Fisheries I/UCRC. 2020-2021. \$42,499. (Lead Principal Investigator)

**Nesslage, G.** Effect of sample size on diagnosis of error in paired age comparisons. NOAA Fisheries. 2019-2020. \$29,205. (Lead Principal Investigator).

**Nesslage, G.** and S. Lyubchich. Evaluating the effect of environmental factors on golden tilefish catch per unit effort and assessment accuracy. NOAA Fisheries And The Environment. 2018-2019. \$87,319. (Lead Principal Investigator)

**Nesslage, G.** and R. Leaf. Evaluation of sampling adequacy for Atlantic menhaden fisheries. National Science Foundation Science Center for Marine Fisheries I/UCRC. 2017-2018. \$24,999. (Lead Principal Investigator)

Miller, T., D. Liang, M. Wilberg, and **G. Nesslage**. Evaluation of environmental factors influencing blue crab populations. Chesapeake Bay Trust. 2017. \$49,589 (Co-Principal Investigator)

**Nesslage, G.** and D. Liang. Design of a cooperative winter pelagic survey for Atlantic menhaden in the Mid-Atlantic. National Science Foundation Science Center for Marine Fisheries I/UCRC. 2017-2018. \$37,311. (Lead Principal Investigator)

**Nesslage, G.** and M. Wilberg. Development of a Bayesian approach for estimating ecosystem-based reference points for Atlantic menhaden. Maryland Sea Grant. 2016-2018. \$86,418. (Lead Principal Investigator)

**Nesslage, G.** An evaluation of imperiled marine fish stocks and the stock assessment process in North Carolina. NC Sound Economy. 2016-2017. \$55,988. (Lead Principal Investigator)

**Nesslage, G.** and M. Wilberg. An evaluation of commercial fishing operations within and adjacent to Assateague Island National Seashore. National Park Service. 2016-2017. \$25,000. (Lead Principal Investigator)

**Nesslage, G.**, and T. Miller. Support for updating stock assessments in the Southeastern US. NOAA/Cooperative Institute for the North Atlantic Region. 2015-2016. \$87,319. (Lead Principal Investigator)

Bi, H., M. J. Wilberg, A. Schueller, **G. Nesslage**, and H. Walsh. Estimating early mortality and implications for reference points for the Atlantic menhaden stock. NOAA Fisheries and the Environment. 2013-2015. \$151,093. (Co-Principal Investigator)

## Teaching

### *University of Maryland Center for Environmental Science*

- Fisheries Science and Management MEES 682 – graduate course (3 credits)
- Scaling Fisheries: an early history of fisheries science MEES 608T – graduate seminar (1 credit)

### *Michigan State University*

- Natural History and Conservation in Michigan – undergrad non-majors course
- Tropical Ecology and Management – undergrad study abroad course
- Applied Multivariate Statistical Methods Lab –lab section of graduate course

### *Clarion University*

- Seminar in Biogeography – graduate course
- Wildlife Ecology & Management – senior undergrad and graduate course
- General Zoology – upper level undergraduate course for Biology majors
- Principles of Ecology – undergraduate course for Biology majors
- Principles of Biology Lab, General Coordinator of 8 sections and Instructor – undergraduate course for Biology majors

### *Stock assessment workshops taught*

- Instructed “Length-based stock assessment techniques”. 2022. CINAR/NEFSC
- Co-instructed “Introduction to stock assessment for fisheries scientists”. 2012. ASMFC Stock Assessment Training Program taught as both an in-person and a distance-learning course produced using Camtasia and distributed on DVD
- Co-instructed “Introduction to stock assessment for fisheries managers”. 2011. ASMFC Commissioner stock assessment training workshop
- Instructed “Length-based stock assessment models”. 2009. ASMFC Commissioner stock assessment training workshop
- Co-instructed “An introduction to stock assessment” for ASMFC and South Atlantic Fisheries Management Council staff. 2008
- Instructed “An introduction to forward and backward projection stock assessment models”. 2007. ASMFC Commissioner stock assessment training workshop



## Service (2015-Present)

### *Federal*

- 2016 – **Present.** Member, South Atlantic Fishery Management Council Scientific and Statistical Committee. **Chair (2020-2022)**
- 2018 – **Present.** Member, NOAA Marine Mammal Atlantic Scientific Review Group. **Chair (2019-2021)**
- 2021 – **Present.** Member, NOAA Fisheries Integrated Modeling System Council
- 2023 – **Present.** Member, ASMFC Ecological Reference Points Working Group

### *Interjurisdictional*

- 2015 – 2019. Data analysis and modeling service for the Atlantic States Marine Fisheries Commission's Atlantic Menhaden Technical Committee and Ecological Reference Points Workgroup

### *State of Maryland*

- 2017 – 2020. Scientific advice and data analysis for the Maryland Department of Natural Resources Fish Health Program

### *UMCES and CBL*

- 2023-**Present.** **UMCES** Appointment, Promotion, and Tenure Review Committee
- 2021-2024. CBL Diversity, Equity, and Inclusion Committee. Chair, 2021-2022.
- 2018-2021 CBL Graduate Education Committee
- 2016-2021 Faculty Advisor for the Chesapeake Biological Laboratory  
Chapter of the American Association of University Women
- 2021 CBL Science for Communities presenter
- 2020 Maryland Sea Grant REU selection committee
- 2019 CBL Science Infrastructure Committee
- 2019 CBL Faculty Search Committee
- 2018 Maryland Sea Grant REU selection committee
- 2018 Institutional diversity subcommittee for the UMCES Strategic Plan
- 2018 Ad hoc CBL committee on diversity enhancement
- 2017 Fall CBL Distinguished Seminar Series Co-Coordinator
- 2017 Maryland Sea Grant REU selection committee
- 2017 CBL Open House Planning Committee
- 2017 CBL Science for Citizens presenter
- 2017-2018 UMCES Junior Faculty Retreat Planning Committee

### *Peer-review*

#### Workshop panelist:

- North Atlantic Right Whale Decision Support Tool Review, January 2023, NOAA Fisheries
- Gulf of Maine Humpback Whale Stock Assessment, March 2022, NOAA Fisheries

- Northwest Fisheries Science Center Stock Assessment Program Review, June 2014, NOAA Fisheries
- Stock Assessment for Gulf of Mexico Blue Crab. Gulf Data, Assessment, and Review (GDAR) 01. June 2013. Gulf States Marine Fisheries Commission Report #215

Stock assessment desk reviews:

- Stock assessment of southern flounder in the North Carolina waters. Peer review report to NCDEQ Division of Marine Fisheries. November, 2014
- Stock assessment of Atlantic striped bass stocks in the Neuse and Tar/Pamlico Rivers of North Carolina. Peer review report to NCDEQ Division of Marine Fisheries. August, 2010

Journals and book chapter reviews: Biological Invasions, British Ecological Society, Canadian Journal of Fisheries and Aquatic Sciences, Ecology Letters, Ecological Applications, Endangered Species Research, Evolutionary Ecology Research, Fisheries Oceanography, Fisheries Research, Journal of Biogeography, Journal of Wildlife Management, Marine and Coastal Fisheries, North American Journal of Fisheries Management, Transactions of the American Fisheries Society

Research proposal reviews: NASA Research Opportunities in Space and Earth Science (ROSES), National Marine Fisheries Service Marine Fisheries Initiative (MARFIN), NOAA Fisheries And The Environment (FATE) Research Grant Program, NOAA Saltonstall-Kennedy Grant Program, National Sea Grant American Lobster Research Program, North Pacific Research Board, Maine Sea Grant Program, MIT Sea Grant, North Carolina Sea Grant Program, Saltonstall-Kennedy Competitive Research Program, New York Sea Grant Program