

Lisa Michelle Milke

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EDUCATIONAL HISTORY

- Ph.D. Biology, Dalhousie University (2006)
 - Dissertation entitled “Algal diets and nutritional requirements during early life-history of the scallops, *Placopecten magellanicus* and *Argopecten irradians*.”
- M.Sc. Oceanography, University of Connecticut (2001)
 - Thesis entitled “The influence of diet on pre-ingestive particle handling in two species of bivalved molluscs: *Mytilus edulis* and *Crassostrea virginica*.”
- B.Sc. Honors, Biology, Summa Cum Laude, Salisbury State University (1997)
 - Thesis entitled “Predation by two species of mud crabs on oyster bar invertebrates in the Chesapeake Bay.”
- B.Sc. Environmental/Marine Science, University of Maryland Eastern Shore (1997)

PROFESSIONAL HISTORY

- November 2022-present: Director, Ecosystems and Aquaculture Division. NOAA Fisheries Service, Northeast Fisheries Science Center.
 - *Leads a group of ~70 scientists in five research branches distributed along the northeast coast between Sandy Hook, New Jersey, and Woods Hole, Massachusetts. She coordinates science, answering questions regarding aquaculture, climate change, habitat change, wind energy development impacts and their collective influences on natural resources.*
- October 2016-October 2022: Chief, Aquaculture Systems and Ecology Branch. NOAA Fisheries Service, Northeast Fisheries Science Center, Milford CT.
 - *Led a team of ~17 staff conducting research to improve our understanding of the ecology of estuarine, coastal and offshore waters, evaluating the interactions between these habitats and aquaculture practices, and enhancing sustainable aquaculture production.*

- January 2005- Sept 2016: Research Fishery Biologist; NOAA Fisheries Service, Northeast Fisheries Science Center, Milford CT.
 - *Served as a PI using scientific expertise in feeding physiology, nutrition and organismal response to environmental change. Conducted research focused on shellfish aquaculture and ocean acidification.*

AWARDS

- NOAA Bronze Medal Award, 2017 for participation in a collaborative project assessing the vulnerability of fisheries to climate change in the Northeast.
- National Marine Fisheries Service Team Member of the Year Award, Supervisor Category, 2016
- Biology Student of the Year, Salisbury State University, 1997-98.
- Presidential Scholarship from Salisbury State University, 1993-97. Award based on academic achievement and leadership ability.

PEER-REVIEWED PUBLICATIONS

- Padilla, D.K., **Milke, L.**, Akin-Fajiye, M., Rosa, M., Redman, D., Liguori, A., Rugila, A., Veilleux, D., Dixon, M., Charifson, D., Meseck, S.L. (2024). *Local differences in robustness to ocean acidification*. *Biology Open*, 13(8). <https://doi.org/10.1242/bio.060479>
- Gurr, S.j., McFarland, K., Bernatchez, G., Dixon, M.S., Guy, L., **Milke, L.M.**, Poach, M.E., Hart, D., Plough, L.V., Redman, D.H., Sennefelder, G., Stiles, S., Wikfors, G.H., Padilla, D.K., Meseck, S.L. (2024). *Effects of food supply on northern bay scallops *Argopecten irradians* reared under two pCO2 conditions*. *Marine Ecology Progress Series*, 740: 61-78. <https://doi.org/10.3354/meps14624>
- Mercaldo-Allen, R., Auster, P.J., Clark, P., Dixon, M.S., Estela, E., Liu, Y., **Milke, L.**, Phillips, G., Redman, D., Smith, B.C., Verkade, A., Rose, J.M. (2023). *Oyster aquaculture cages provide fish habitat similar to natural structure with minimal differences based on farm location*. *Frontiers in Marine Science*, 10. <https://doi.org/10.3389/fmars.2023.1058709>
- Fisher, J., Angel, D., Callier, M., Cheney, D., Filgueira, R., Hudson, B., McKindsey, C.W., **Milke, L.**, Moore, H., O’Biern, F., O’Carroll, J., Rabe, B., Telfer, T., Byron, C.J. (2023). *Ecological carrying capacity in mariculture: Consideration and application in geographic strategies and policy*. *Marine Policy*, 4(1). <https://doi.org/10.1016/j.marpol.2023.105516>
- Pousse, E., Poach, M.E., Redman, D.H., Sennefelder, G., Hubbard, W., Osborne, K., Munroe, D., Hart, D., Hennen, D., Dixon, M.S., Li, Y., **Milke, L.M.**, Wikfors, G.H., Meseck, S.L. (2023). *Juvenile*

Atlantic sea scallop, Placopecten magellanicus, energetic response to increased carbon dioxide and temperature changes. PLOS Climate, 2(2). <https://doi.org/10.1371/journal.pclm.0000142>

- Mercado-Allen, R., Clark, P., Liu, Y., Phillips, G., Redman, D., Auster, P., Estela, E., **Milke, L.**, Verkade, A., Rose, J. (2021). *Exploring video and eDNA metabarcoding methods to assess oyster aquaculture cages as fish habitat.* Aquaculture and Environmental Interactions, 13: 277-294.
- Meseck, S., Mercado-Allen, R., Clark, P., Kuropat, C., Redman, D., Veilleux, D., **Milke, L.**, (2021). *Effects of ocean acidification on larval Atlantic surfclam (Spisula solidissima) from Long Island Sound in Connecticut.* Fishery Bulletin, 119: 66–76 (2021). doi: 10.7755/FB.119.1.8
- Mercado-Allen R, Clark P, Liu Y, Meseck S, **Milke L**, Redman D, Rose JM, Goldberg R. (2020). *Temperature-related changes in species composition of juvenile finfish on a rock reef in Long Island Sound.* Fishery Bulletin, 118(3): 275-283.
- Mercado-Allen, R., Clark, P., Liu, Y., Meseck, S., **Milke, L.**, Redman, D. (2020) *Macrofaunal assemblages on oyster aquaculture and rock reef habitat in Long Island Sound.* North American Journal of Aquaculture, 82: 92–100. doi: 10.1002/naaq.10127
- Liu, L., Wikfors, G.H., Rose, J.M., McBride, R.S., **Milke, L.M.**, Mercado-Allen, R. (2019). *Application of Environmental DNA Metabarcoding to Spatiotemporal Finfish Community Assessment in a Temperate Embayment.* Frontiers in Marine Science, 6: 674. doi: 10.3389/fmars.2019.00674.
- Hare, J.A., Morrison, W.E., Nelson, M.W., Stachura, M.M, Teeters, E.J., Griffis, R.B., Alexander, M.A., Scott, J.D., Alade, L., Bell, R.J., Chute, A.S., Curti, K.L., Curtis, T.H., Kircheis, D., Kocik, J.F., Lucey, S.M., McCandless, C.T., **Milke, L.M.**, Richardson, D.E., Robillard, E., Walsh, H.J., McManus, M.C., Marancik, K.E., Griswold, C.A. (2016). *A Vulnerability Assessment of Fish and Invertebrates to Climate Change on the Northeast U.S. Continental Shelf.* PLOS ONE 11(2): e0146756. doi: 10.1371/journal.pone.0146756
- Breitburg, D.L., Salisbury, J., Bernhard, J.M., Cai, W-J., Dupont, S., Doney, S.C., Kroeker, K.J., Levin, L.A., Long, W.C., **Milke, L.M.**, Miller, S.H., Phelan, B., Passow, U., Seibel, B.A., Todgham, A.E., Tarrant, A.M. (2015). *And on top of all that...Coping with ocean acidification in the midst of many stressors.* Oceanography, 28(2): 48-61. <https://doi.org/10.5670/oceanog.2015.31>
- King, A.L., Jenkins, B.D., Wallace, J.R., Liu, Y., Wikfors, G.H., **Milke, L.M.** and Meseck, S.L. (2015). *Effects of CO₂ on growth rate, C:N:P, and fatty acid composition of seven marine phytoplankton species.* Marine Ecology Progress Series, 537:59-69.
- **Milke, L.M.**, V.M. Bricelj, N.W. Ross (2012). *Changes in enzymatic activity during early development of bay scallops Argopecten irradians and sea scallops Placopecten magellanicus.* Aquatic Biology, 2: 207-216.

- Parrish, C.C., **L.M. Milke**, V.M. Bricelj (2011). *Characterisation of 4 α -methyl sterols in Pavlova spp. and postlarval sea scallops, Placopecten magellanicus*. Aquaculture, 311: 261-262.
- **Milke, L.M.**, V.M. Bricelj and C.C. Parrish (2008). *Three Pavlova spp. in unialgal and mixed diets with Chaetoceros muelleri for postlarval sea scallops, Placopecten magellanicus*. Aquaculture, 276: 130-142.
- **Milke, L.M.**, V.M. Bricelj and C.C. Parrish (2006). *Comparison of early life stages of the bay scallop, Argopecten irradians: effects of microalgal diets on scallop growth and biochemical composition*. Aquaculture, 260: 272-289.
- **Milke, L.M.**, V.M. Bricelj and C.C. Parrish (2004). *Growth of postlarval sea scallops, Placopecten magellanicus, on microalgal diets, with emphasis on the nutritional role of lipids and fatty acids*. Aquaculture, 234(1-4): 293-317.
- **Milke, L.M.** and J. E. Ward (2003). *Influence of diet on pre-ingestive particle processing in bivalves. II: Pallial cavity residence times and particle handling on the labial palps*. Journal of Experimental Marine Biology and Ecology, 293: 151-172.
- **Milke, L.M.** and V.S. Kennedy (2001). *Mud crabs (Xanthidae) in Chesapeake Bay: Claw characteristics and predation on epifaunal bivalves*. Invertebrate Biology. 120(1): 67-77.

PROFESSIONAL AFFILIATIONS/ACTIVITIES/SERVICE

- Organizer of the Annual Milford Aquaculture Seminar, 2009-present. Co-Organizer of the Northeast Aquaculture Conference and Expo, 2012-present.
- Member of the ICES Working Group on Ecological Carrying Capacity in Aquaculture, 2019-present.
- Secretary National Shellfisheries Association, 2014-2018. Member since 1998.
- Invited member of the Research Subcommittee for the Governor's Council for Agricultural Development for the State of Connecticut, 2012-2015.
- Reviewer for Aquatic Living Resources, Aquaculture, Aquaculture Nutrition, Biochemical Systematics and Ecology, Journal of Experimental Marine Biology and Ecology, Journal of Shellfish Research.