

Marilyn J. Sigman

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Environmental/Science Education and Communication

Education

2015. MFA. Creative Writing and Literary Arts. University of Alaska Anchorage (UAA)

1977. M.S. Wildlife Management. University of Alaska Fairbanks (UAF). Thesis: *The Importance of the Cow-Calf Bond to Overwinter Moose Calf Survival*

1974. B.A. Human Biology. Stanford University.

Publications

2022. Series of articles on the four-decade history of the Center for Alaskan Coastal Studies. *Homer News*, Homer, AK.

2020. *Diving Deeper*. Exhibit Guide to *Entangled: Exploring Natural History Collections from Kachemak Bay*. Pratt Museum, Homer, AK.

2019. (Editor) Guidance on Culturally Responsive Outreach and Engagement of Indigenous Alaskan K-12 Students. Report of a statewide Working Group:

<https://www.arcus.org/resources/northern-communities>

2016. (Co-author) Rezabeck, C. M. Sigman, and B. Parsons. "Evaluate EE Programs for Systemic Change in Your Community." *Clearing*. July 19, 2018. <https://clearingmagazine.org/archives/13734>

2015. (Editor) *Community-Based Monitoring of Alaska's Coastal and Ocean Environment: Best Practices for Linking Alaska Citizens with Science*. SG-ED-78. Alaska Sea Grant, Fairbanks, AK.

<https://seagrant.uaf.edu/bookstore/pubs/SG-ED-78.html>

2013. (Co-author) Dublin, A. Anderson, M. Sigman, R. Barnhardt, and S. Topkok. "COSEE Alaska Ocean Science Fairs: A Science Fair Model that Grounds Student Projects in Both Western Science and Traditional Native Knowledge." *Journal of Geoscience Education* 62.2 (2013): 166-176.

2013. (Lead author) Sigman, M., R. Dublin, A. Anderson, J. Warburton, G.I. Matsumoto, D. Dugan, and J. Harcharek. "Using large marine ecosystems and cultural responsiveness as the context for professional development of teachers and scientists in ocean science." *Journal of Geosciences Education* 62.1 (2013): 25-40.

2008. (Lead Author) Community Involvement, Environmental Education, and Community Outreach in the EVOS Restoration Process. Includes "Handbook for Community Involvement in EVOS Restoration." Final Report on EVOS Project 08075. Exxon Valdez Oil Spill Trustee Council.

<http://www.evostc.state.ak.us/Files.cfm?doc=/Store/FinalReports/2008-080575-Final.pdf&>

2007. (Lead author) Sigman, M. and B. Murphy. "Kachemak Bay CoastWalk: Twenty-One Years of Observing changing shores." In *Community-based Coastal Observing in Alaska*. Reid Brewer, editor. AK-SG-07-03. Alaska Sea Grant, Fairbanks, AK.

2004. (Co-author) Trowbridge, E.; M. Sigman; B. Murphy; L. Villarreal, and K. Mangin. *Gulf of Alaska CoastWalk Curriculum*. Center for Alaskan Coastal Studies, Homer, Alaska.

1999. *Alaska Coastal Ecology Program Teacher Guide* (to Kachemak Bay). Center for Alaskan Coastal Studies, Homer, Alaska. *Who's Who in the Intertidal Zone? Atlas for Peterson Bay Field Station, Kachemak Bay*. Center for Alaskan Coastal Studies, Homer, Alaska.
1997. "Case Study: the Tillamook Bay National Estuary Project." *In The Rain Forests of Home: An Exploration of People and Place*. Island Press.
- 1988-92. Author, co-author, and/or editor of five multi-media Alaska Wildlife Week/Alaska Wildlife Curriculum K-12 Teacher Activity Guides and multi-media packets distributed statewide. Alaska Department of Fish and Game. Juneau, AK.

Professional Honors and Awards

2021. Lifetime Achievement Award in Conservation. Alaska Conservation Foundation.
2019. Alaska Ocean Leadership Award in Marine Science Outreach. Alaska SeaLife Center.
2012. Partners in Conservation Award to members of the Alaska Environmental Literacy Plan Working Group. U.S. Department of Interior.
2008. Jerry S. Dixon Award for Excellence in Environmental Education. Alaska Conservation Foundation.
2005. First Place, National Association of Government Communicators and Silver Award for "Life on the Beach" video and teacher guide. Association of Communication Excellence.
1995. Oregon Governor's Organizational Leadership Award for the Tillamook Bay National Estuary Project.
1992. National Outstanding Contribution Award for "Wetlands and Wildlife" curriculum. Director of U.S. Fish and Wildlife Service.
- National Certificate of Merit for "Wetlands and Wildlife" curriculum. Secretary of the Interior.
1986. Outstanding Contribution Award. Habitat Division, Alaska Department of Fish and Game.

Appointments

- 2018-2019 Review Committee, Alaska State Science Standards revision
- 2008-13 *Exxon Valdez* Trustee Council Science and Restoration Panel
- 2005-10 Cook Inlet Regional Citizens Advisory Board Environmental Monitoring Committee
- 1993-95 Alaska Science Standards Committee (Appointed by the Commissioner of the Alaska Department of Education)

Professional Experience

- 2020-22. Volunteer Naturalist-in-Residence, Pratt Museum, Homer, Alaska. Co-curator of the exhibit *Entangled: Exploring Natural History Collections from Kachemak Bay*, July-September, 2020; and curator of the exhibits *Our Changing Seas* with a focus on the archaeological evidence of changes in Sugpiaq/ Alutiiq subsistence patterns through time; and *A Moveable Feast* exhibit with a focus on bird feeding strategies in conjunction with the 2022 Shorebird Festival, May, 2022. Appointed to the Collections Committee, October 2021.
- 2019-2021. Affiliate Faculty. University of Alaska Fairbanks College of Fisheries and Ocean Sciences, Fairbanks, Alaska.
2019. Interim Executive Director, Pratt Museum, Homer, Alaska.
- 2014-19. Associate Professor in Marine Education. University of Alaska Fairbanks College of Fisheries and Ocean Sciences/Alaska Sea Grant. Anchorage and Homer, AK.
- 2009-2014. Assistant Professor in Marine Education. University of Alaska Fairbanks College of Fisheries and Ocean Sciences/Alaska Sea Grant. Anchorage, Alaska.
- 1998-2009. Executive Director. Center for Alaskan Coastal Studies, Homer, AK.

- 1996-1998. Executive Director. Montana Natural History Center, Missoula, MT.
- 1993-1995. Assistant Professor, Oregon State University Department of Wildlife and Fisheries and Executive Director, Tillamook Bay National Estuary Program. Tillamook, OR.
- 1975-1993. Biologist for the Alaska Department of Fish and Game (ADFG) and the U.S. Fish and Wildlife Service (USFWS):
- 1990-93. ADFG Nongame Biologist, Southeast Region Watchable Wildlife Program Coordinator, Juneau, AK.
 - 1988-93. ADFG Nongame Biologist, Alaska Wildlife Curriculum Program Coordinator, Juneau, AK.
 - 1982-87. ADFG Habitat Biologist, Southeast Alaska Region, Juneau, AK.
 - 1979-82. ADFG and USFWS Habitat Biologist, Gas Pipeline Project, Fairbanks, AK.
 - 1975-79. Seasonal work as a wildlife technician or biologist on various fish and wildlife research projects

Courses Taught

2023. From Climate Despair to Climate Hope. Olé program, Opportunities for Lifelong Learning, Anchorage, AK. Via Zoom. April.
2021. Critical Thinking undergraduate course, University of Alaska Anchorage Dept. of English. (Adjunct faculty member)
2019. Sharing Science with Diverse Audiences, undergraduate course, University of Alaska Fairbanks Dept. of Education.
- 2017-18. Place-Based Curriculum Units Aligned with the Next Generation Science Standards, University of Alaska Fairbanks Dept. of Education professional development course for K-12 educators. Juneau and Utqiagvik, AK.
- 2014-17. Teaching about Alaska Seas and Rivers, University of Alaska Fairbanks Dept. of Education professional development course for K-12 educators taught in several Alaskan communities each year.
- 2011-14. Communicating Science graduate student course, University of Alaska Fairbanks School of Natural Resources, Fairbanks, AK.
- 2010-15. Non-credit Communicating Science and Communicating about Climate Change workshops for scientists and science outreach specialists taught in association with science conferences in Alaska.
- 2001-06. University of Alaska Anchorage: teacher professional development courses related to environmental education and alignment with state science education standards
1997. Natural History of Missoula. University of Montana Environmental Studies Department. (Adjunct faculty member)
- 1988-2008. Instructor or facilitator, numerous naturalist and informal educator professional development workshops throughout Alaska.

Project Consultation and Coordination

- 2019-2022. Advisor, Polar Literacy Project. National Science Foundation Advancing Informal Science Education Literacy grant.
2020. Education Consultant to the Center for Alaskan Coastal Studies. Homer, AK.
2019. Education Consultant to the Beaufort Lagoons Long-Term Ecological Research Project. University of Texas at El Paso. National Science Foundation grant.
- 2017-19. Co-Principal Investigator, AlaskaCoastWatch for Action Project, Gulf of Mexico Research Program Community Capacity/Community Resilience Grant.

2017-19. Education Coordinator, K-12 Schoolyard Program for the Northern Gulf of Alaska Long-Term Ecological Research Project. National Science Foundation grant.

2010-19. Educational Consultant in science/STEM curriculum development for the *Maqpuq* Project to align instruction with Next Generations Science Standards and an Inupiaq Learning Framework. North Slope Borough School District.

2016. Educational Consultant to provide professional development and support for the Beluga Traditional Ecological Knowledge and Youth Engagement Project. Native Village of Buckland Tribe.

2013-16. Outreach and Education Coordinator. EVOS Gulf Watch Alaska Project.

2013-15. Coordinator of a workshop to develop best practices for community-based monitoring in Alaska coastal environments (PI on National Science Foundation grant)

2009-15. Program Manager for the Alaska Center for Ocean Sciences Education Excellence.

2007-2009. Science content advisor and writer for Alaska Sea Grant *Alaska Seas and Rivers* curriculum development project.

Additional Professional Service

2012-18. Member, Steering Committee and Abstract Review Committees; Chair of committees for student awards and planning an annual Communicating Ocean Sciences Workshop, Alaska Marine Science Symposium, Anchorage, Alaska

2012. Co-Director, annual conference of the National Marine Educators Association in Anchorage, Alaska

2002-09. Coordinator, Kachemak Bay Science Conference in 2002, 2006, 2009

Service on Nonprofit Boards

Member and Treasurer, SeeStories' Board of Directors, 2023-present

Member and President, Friends of Alaska National Wildlife Refuges' Board of Directors, 2022-present

President and Treasurer, Alaska Natural Resources and Outdoor Education Board of Directors, 2016-2019; founding member 1984-93, member 1998-2019

Chair, Alaska Conservation Foundation Board of Trustees, 2016-2018; Board member since 2011

Alaska Chapter Director, Northwest Aquatic and Marine Education Association Board of Directors, 2014-2017

Competitive Grants Received: Principal Investigator or program/project coordinator on numerous grants received for science communication/outreach and environmental education projects from: Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanographic and Atmospheric Agency (NOAA), National Science Foundation, Environmental Protection Agency, *Exxon Valdez* Oil Spill Trustee Council, North Pacific Research Board, Pacific Salmon Commission, World Wildlife Fund, Rasmuson Foundation, other private foundations

Invited Presentations

Statewide Conferences: Alaska Teachers of Science and Math, Alaska Forum on the Environment, Alaska Marine Science Symposium, AAAS Arctic Science Conference

Regional and National Conferences: National Science Teachers Association, Northwest Aquatic and Marine Educators, National Marine Educators Association, North American Association of Environmental Educators, American Fisheries Society, American Association for the Advancement of Science, American Geophysical Union

International Conferences: International Ocean Sciences Meetings in Honolulu, HI, and Salt Lake City, UT; International Polar Year Science and Education Conference in Oslo, Norway; International Bioethics Forum in Madison, WI