

CURRICULUM VITAE

Michael B. Rust, Ph.D., Senior Research Fellow

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Education:

BA	Biology. 1980.	University of Colorado, Boulder
MS	Animal Science. 1987.	University of California, Davis
MS	International Agricultural Development. 1987.	University of California, Davis
Ph D	Fisheries. 1995	University of Washington, Seattle

Past Work and Professional Experience (selected):

- Aquaculture Science Advisor, NOAA Office of Aquaculture, Silver Spring, MD (2011-2022)
- Aquaculture Research Program Leader (1996-2012), NOAA's NW Fisheries Science Center, Seattle, WA

Other Professional International Experience (selected):

- US-Japan Natural Resources Panel on Aquaculture –Member 2005 - 2022, Vice-chair 2006 - 2009, Chairman 2010 - 2022.
- Aquaculture Steering Group Chair, International Council for the Exploration of the Seas, 2017 - 2021

Selected Publications:

- Rub, M. W., C. Cosgrove, S. Theuerkauf, D. Wieczorek, J. Whaley, C. Ootshi, and M. Rust. 2024. Climate-Smart American Aquaculture: Strategies to Sustain and Grow U.S. Domestic Seafood Production in a Changing Future. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-195.
- ICES. 2023. Workshop on pathways to climate-aware advice (WKCLIMAD). ICES Scientific Reports. 5:25. 99 pp. <http://doi.org/10.17895/ices.pub.22196560>
- Theuerkauf, S.J. and M.B. Rust. 2023. Aquaculture Science Advice Handbook: Policies, Processes, Resources, and Opportunities. NOAA Tech. Memo. NMFS-F/SPO-235, 46 p.
- Rexroad C, Rust MB, Riche M, Wills P, Davis M. 2021. Opportunities for U.S. marine finfish aquaculture. *J World Aquac Soc.* 2021; 52: 501–508. <https://doi.org/10.1111/jwas.12791>
- ICES. 2021. Workshop on the Norwegian Sea Aquaculture Overview (WKNORAO). ICES Scientific Reports. 3:116. 87 pp. <https://doi.org/10.17895/ices.pub.9574>
- Natsuki Hasegawa, Brett R Dumbauld, Masakazu Hori, Satoshi Watanabe, Michael Rust, Zachary Forester 2021. Comparative study of the impact of environmental changes on oyster culture between USA and Japan, as collaborative research under UJNR. Bull. Jap. Fish. Res. Edu. Agen. No. 50, 115–121, 2021
- Redman, Dylan H., D. Nelson, J. Roy, R. Goldberg, T. Scott, M. B. Rust, and R. Mercaldo-Allen, 2019. A Pilot Study Using Graded Yellow Mealworm (*Tenebrio molitor*) Meal in Formulated Diets for Growth Performance of Black Sea Bass (*Centropristis striata*). NOAA technical memorandum NMFS NE ; 253 DOI : <https://doi.org/10.25923/4rsf-8q0>
- Stuart, K., M. Hawkyard, F. Barrows, M. Rust and M. Drawbridge 2018. Evaluation of dietary taurine concentrations in microparticulate diets provided to larval California yellowtail (*Seriola dorsalis*) post larvae. *Aquaculture Nutrition*. 24:1, p 3-13
- Gentry, R.R., H. E. Froehlich, D. Grimm, P. Kareiva, M. Parke, M. B. Rust, S. D. Gaines and B. S. Halpern. 2017. Mapping the global potential for marine aquaculture. *Nature Ecology & Evolution* vol 1, pages1317–1324, doi:10.1038/s41559-017-0257-9
- Froehlich H.E., Gentry R.R., Rust MB, Grimm D, Halpern BS. 2017. Public Perceptions of Aquaculture: Evaluating Spatiotemporal Patterns of Sentiment around the World. PLoS ONE 12(1): e0169281. <https://doi.org/10.1371/journal.pone.0169281>
- Johnson, R.B., Kroeger, E.L., Reichert, W.L, Carter, C.S. and M. B. Rust. 2017. Uptake and

- selective partitioning of dietary lipids to ovarian and muscle tissue of maturing female coho salmon, *Oncorhynchus kisutch*, during secondary oocyte growth. *Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology*, Volumes 208–209, 2017, pp 7-18, ISSN 1096-4959. <https://doi.org/10.1016/j.cbpb.2017.03.005>.
- Busch, D. S., R. Griffis, J. Link, K. Abrams, J. Baker, R. E. Brainard, M. Ford, J. Hare, A. Himes-Cornell, A. Hollowed, N. J. Mantua, S. McClatchie, M. McClure, M. Nelson, K. Osgood, J. O. Peterson, M. Rust, V. Saba, M. Sigler, S. Sykora-Bodie, C. Toole, E. Thunberg, R. Waples, R. Merrick. 2016. Climate science strategy of the US National Marine Fisheries Service. *Marine Policy* (2.621)
- Kim, S.K., Kim, K.G., Kim, K.D., Kim, K.W., Son, M.H., Rust, M. and R. Johnson. 2015. Effect of dietary taurine levels on the conjugated bile acid composition and growth of juvenile Korean rockfish *Sebastes schlegeli* (Hilgendorf). *Aquaculture Research*, 46(11), pp.2768-2775.
- Johnson, R.B., Kroeger, E.L., Reichert, W.L., Deavila, D.M. and Rust, M.B., 2014. Abundance and origins of plasma lipids in sexually maturing female coho salmon *Oncorhynchus kisutch* (Walbaum) in culture. *Aquaculture Research*, 45(11), pp.1771-1781.
- Rust, M. B., K. H. Amos, A. L. Bagwill, W. W. Dickhoff, L. M. Juarez, C. S. Price, J. A. Morris Jr, and M. C. Rubino. 2014. Environmental performance of marine net-pen aquaculture in the United States. *Fisheries* 39, no. 11: 508-524.
- Howard, J., E. Babij, R. Griffis, B. Helmuth, A. Himes-Cornell, P. Niemier, M. Orbach, L. Petes, S. Allen, G. Auad, R. Beard, M. Boatman, N. Bond, T. Boyer, D. Brown, P. Clay, K. Crane, S. Cross, M. Dalton, J. Diamond, R. Diaz, E. Duffy, D. Fauquier, W. Fisher, M. Graham, B. Halpern, L. Hansen, B. Hayum, S. Herrick, A. Hollowed, D. Hutchins, E. Jewett, D. Jin, N. Knowlton, D. Kotowicz, T. Kristiansen, P. Little, C. Lopez, P. Loring, R. Lumpkin, A. Mace, K. Mengerink, J. R. Morrison, J. Murray, K. C. Norman, J. O'Donnell, J. Overland, R. Parsons, N. Pettigrew, L. Pfeiffer, E. Pidgeon, M. Plummer, J. Polovina, J. Quintrell, T. Rowles, J. Runge, M. B. Rust, E. Sanford, U. Send, M. Singer, C. Speir, D. Stanitski, C. Thornber, C. Wilson, Y. Xue. 2013. Oceans and Marine Resources in a Changing Climate. *Oceanography and Marine Biology: An Annual Review*. 51: 71-192.
- Rust, M. B., F. T. Barrows, R. W. Hardy, A. Lazur, K. Naughten, and J. Silverstein. 2011. The Future of Aquafeeds: Report to the NOAA/USDA Alternative Feeds Initiative. NOAA Technical Memorandum NMFS F/SPO-124, 103 pp.
- Holt, G. J., K. Webb and M. B. Rust. 2011. Microparticulate Diets: Testing and Evaluating Success. In; G. J. Holt (ed) *Larval Fish Nutrition*, Blackwell Scientific Publishing, 38 pages.
- Johnson, R., E Kroeger, C. Carter, W. Reichert, and M. Rust. 2011. The effects of transitioning coho salmon (*Oncorhynchus kisutch*) broodstock to a diet rich in docosahexaenoic acid (DHA) during vitellogenesis on egg composition, and embryo and fry quality. *North American Journal of Aquaculture*. 73: 4. pp 409-417.
- Lee, J. S., B. A. Berejikian, M. B. Rust, K. C. Massee, T. Wright, K. Brakensiek, S. Steltzner, H. L. Blankenship. 2011. Movements Of Hatchery-Reared Lingcod on rocky reefs In Puget Sound. *Environmental Biology of Fishes* 92: 437. doi:10.1007/s10641-011-9859-2
- Colt, J., Kroeger, E., and M.B. Rust. 2010. Characteristics of Oxygen Flow Through Fine Bubble

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