



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349

November 3, 2023

Angel Drobica. Chair
North Pacific Fishery Management Council
1007 W. 3rd Avenue
Anchorage, AK 99501

Dear Ms. Drobica,


I am pleased to nominate Dr. Lukas DeFilippo for the BSAI Groundfish Plan Team. Lukas has exceptionally strong quantitative skills and knowledge of stock assessments and survey design. The breadth of his experience from hands-on survey participation and past stock assessment work ensures that he will be a valuable asset to the Plan Team.

Dr. DeFilippo is a Research Fish Biologist in the Auke Bay Laboratories, Ecosystem Monitoring and Assessment Program (EMA) at Alaska Fisheries Science Center. Lukas joined EMA in May 2023 after having spent two years within the Groundfish Assessment Program (GAP). His prior experience within GAP focused broadly on redesigning the eastern Bering Sea (EBS) bottom trawl surveys and developing model-based survey data products for use in stock assessment. Dr. DeFilippo is now working on understanding prohibited species catch dynamics in the Bering Sea groundfish fishery, as well as describing the impact of climate variability on western Alaska Chinook and chum salmon population dynamics. In addition, Dr. DeFilippo was recently asked by the NPFMC to develop quantitative tools to assist with management of chum salmon bycatch in groundfish fishery.

During his tenure with GAP, Dr. DeFilippo became familiar with fishery-independent bottom trawl surveys designs, data products, and their utility for stock assessments and management advice. He has practical experience as well, having served on several legs of the EBS bottom trawl surveys as a biologist and deck lead. Dr. DeFilippo has published peer-reviewed articles evaluating the effects of survey design changes on data quality and stock assessment outcomes, and on combining US and Russian survey data to examine the spatiotemporal dynamics of Bering sea groundfish at a shelf-wide scale. Dr. DeFilippo also recently participated in and presented at an international ICES working group on unavoidable survey effort reduction.

We appreciate the opportunity to provide scientists in support of the NPFMC plan teams.

Sincerely,


Dr. Robert Foy
Alaska Fisheries Science Center Director



Lukas DeFilippo

National Oceanic and Atmospheric Administration
Alaska Fisheries Science Center

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EDUCATION

UNIVERSITY OF WASHINGTON **SEATTLE, WA**
2015-2020 Ph.D. in Aquatic and Fishery Sciences

BOSTON UNIVERSITY **BOSTON, MA**
2010-2014 B.A. in Marine Science with honors, minor in Biology, *magna cum laude*

PROFESSIONAL EXPERIENCE

NOAA ALASKA FISHERIES SCIENCE CENTER (AFSC) **SEATTLE, WA**
04/2023-present Research Fish Biologist, Ecosystem Monitoring and Assessment Program

NOAA ALASKA FISHERIES SCIENCE CENTER (AFSC) **SEATTLE, WA**
05/2021-04/2023 Research Fish Biologist, Groundfish Assessment Program

UNIVERSITY OF WASHINGTON SCHOOL OF AQUATIC AND FISHERY SCIENCES **SEATTLE, WA**
10/2020-05/2021 Postdoctoral Scholar

UNIVERSITY OF WASHINGTON SCHOOL OF AQUATIC AND FISHERY SCIENCES **SEATTLE, WA**
09/2015-09/2020 Graduate Research Fellow

GRANTS AND FELLOWSHIPS

- 2022 DeFilippo, L. B., Kotwicki, S., Barnett, L. K., Litzow, M. *Combining the eastern Bering Sea shelf and slope surveys*. North Pacific Research Board.
- 2019 DeFilippo, L. B., Schindler, D. E., Zimmerman, M. *Improving preseason forecasts for U.S. coho salmon management units by accounting for spatially structured temporal variation in age-at-maturity*. Pacific Salmon Commission Southern Endowment Fund.
- 2018 DeFilippo, L. B., *Evaluating alternative strategies for managing increased rates of precocious maturation in Kodiak sockeye salmon*. North Pacific Research Board Graduate Student Research Award.
- 2015 School of Aquatic and Fishery Sciences Fellowship, University of Washington.
- 2015 Achievement Rewards for College Scientists (ARCS) Foundation Fellowship, Seattle Chapter.

PEER-REVIEWED PUBLICATIONS

- DeFilippo, L.B.**, Kotwicki, S., Barnett, L., Richar, J., Litzow, M. A., Stockhausen, W. T., & Palof, K. (2023). Evaluating the impacts of reduced sampling density in a systematic fisheries-independent survey design. *Frontiers in Marine Science*, 10, 1219283.
- DeFilippo, L. B.**, Thorson, J. T., O'Leary, C. A., Kotwicki, S., Hoff, J., Ianelli, J. N., Kulik, V. V., & Punt, A. E. (2023). Characterizing dominant patterns of spatiotemporal variation for a transboundary groundfish assemblage. *Fisheries Oceanography*, 32(6), 541–558.

- Colton, M. A., McManus, L. C., Schindler, D. E., Mumby, P. J., Palumbi, S. R., Webster, M. M., Essington, T. E., Fox, H. E., Forrest, D. L., Schill, S. R., Pollock, F. J., **DeFilippo, L. B.**, Tekwa, E. W., Walsworth, T. E. & Pinsky, M. L. (2022). Coral conservation in a warming world must harness evolutionary adaptation. *Nature Ecology & Evolution*, 1-3.
- DeFilippo, L. B.**, McManus, L. C., Schindler, D. E., Pinsky, M. L., Colton, M. A., Fox, H. E., ... & Webster, M. M. (2022). Assessing the potential for demographic restoration and assisted evolution to build climate resilience in coral reefs. *Ecological Applications*, e2650.
- O'Leary, C. A., **DeFilippo, L. B.**, Thorson, J. T., Kotwicki, S., Hoff, G. R., Kulik, V. V., ... & Punt, A. E. (2022). Understanding transboundary stocks' availability by combining multiple fisheries-independent surveys and oceanographic conditions in spatiotemporal models. *ICES Journal of Marine Science*, 79(4), 1063-1074.
- DeFilippo, L. B.**, & Ohlberger, J. (2021). Stochastic recruitment alters the frequencies of alternative life histories in age-structured populations. *Fish and Fisheries*, 22(6), 1307-1320.
- DeFilippo, L. B.**, Buehrens, T. W., Scheuerell, M., Kendall, N. W., & Schindler, D. E. (2021). Improving short-term recruitment forecasts for coho salmon using a spatiotemporal integrated population model. *Fisheries Research*, 242, 106014.
- DeFilippo, L. B.**, Schindler, D. E., Shedd, K., & Schaberg, K. L. (2020). A Bayesian hierarchical approach to integrating historical and in-season genetic data for real-time assessment of a mixed stock fishery. *Canadian Journal of Fisheries and Aquatic Sciences*, 77(10), 1721-1732.
- DeFilippo, L. B.**, Schindler, D. E., Ohlberger, J., Schaberg, K. L., Foster, M. B., Ruhl, D., & Punt, A. E. (2019). Recruitment variation disrupts the stability of alternative life histories in an exploited salmon population. *Evolutionary applications*, 12(2), 214-229.
- DeFilippo, L. B.**, Schindler, D. E., Carter, J. L., Walsworth, T. E., Cline, T. J., Larson, W. A., & Buehrens, T. (2018). Associations of stream geomorphic conditions and prevalence of alternative reproductive tactics among sockeye salmon populations. *Journal of evolutionary biology*, 31(2), 239-253.
- DeFilippo, L. B.**, Burmester, E. M., Kaufman, L., & Rotjan, R. D. (2016). Patterns of surface lesion recovery in the Northern Star Coral, *Astrangia poculata*. *Journal of Experimental Marine Biology and Ecology*, 481, 15-24.
- Stefanik, D. J., Lubinski, T. J., Granger, B. R., Byrd, A. L., Reitzel, A. M., **DeFilippo, L. B.**, ... & Finnerty, J. R. (2014). Production of a reference transcriptome and transcriptomic database (EdwardsiellaBase) for the lined sea anemone, *Edwardsiella lineata*, a parasitic cnidarian. *BMC genomics*, 15(1), 71.

SELECTED PRESENTATIONS

- 2022 ICES Workshop on Unavoidable Survey Effort Reduction II (WKUSER II), Galway, Ireland. *Evaluating the effects of survey effort reduction for the NOAA eastern Bering Sea bottom trawl survey.*
- 2022 North Pacific Fishery Management Council Crab Plan Team Meeting, remote. *Effects of removing the St. Matthew and Pribilof Island corner stations from the EBS survey grid II: Compositional data products and stock assessment outcomes.*
- 2022 Alaska Marine Science Symposium, remote. *Characterizing dominant patterns of spatiotemporal variation for a transboundary groundfish assemblage.*
- 2022 North Pacific Fishery Management Council Crab Plan Team Meeting, remote. *Effects of removing the St. Matthew and Pribilof Island corner stations from the EBS survey grid.*
- 2021 North Pacific Fishery Management Council Groundfish Plan Team Meeting, remote. *Effects of removing the St. Matthew and Pribilof Island corner stations from the EBS survey grid.*
- 2021 OneNOAA Science Seminar Series, remote. *Coral reef eco-evolutionary dynamics: Adaptation and connectivity in MPA networks under future climate change.*
- 2021 Alaska Marine Science Symposium, remote. *Recruitment variation disrupts the stability of alternative life histories in an exploited salmon population.*

- 2020 Presentation to The Nature Conservancy, remote. *The potential for restoration and assisted evolution to build climate resilience on coral reefs.*
- 2020 Presentation to the Washington state salmon fishery co-managers and Pacific Salmon Commission Coho Technical Committee, remote. *Improving short-term recruitment forecasts for coho salmon using a spatiotemporal integrated population model.*
- 2019 University of Washington Alaska Salmon Program Symposium, Seattle, WA. *Using in-season genetic data to inform real-time management of the Chignik sockeye salmon fishery.*
- 2019 University of Washington School of Aquatic and Fishery Sciences Quantitative Seminar Series, Seattle, WA. *Recruitment variation disrupts the stability of alternative life histories in an exploited salmon population.*
- 2018 University of Washington Alaska Salmon Program Symposium, Seattle, WA. *Assessing the value of genetic information for in-season management of a mixed stock fishery*
- 2018 University of Washington Alaska Salmon Program Symposium, Seattle, WA. *Demographic stochasticity disrupts the evolutionary stability of alternative life histories in an exploited salmon population.*
- 2017 University of Washington Alaska Salmon Program Symposium, Seattle, WA. *Spawning habitat influences the prevalence of alternative reproductive phenotypes in Alaskan sockeye salmon.*