

Megan Stachura

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EXPERIENCE

Environmental Scientist – Four Peaks Environmental Science and Data Solutions 2018 - Present

Statistical Data Analyst – ECS Federal (NOAA Fisheries contractor) 2015 - 2018

- Collaborated with stakeholders to develop a simulation model of regional recreational fisheries, including processing and summarizing data from many sources and analyzing and predicting fish catch using zero-inflated negative binomial regression and probability distribution analysis
- Wrote scripts to compile, analyze, and summarize data and generate text and tables for a national report summarizing fishing industry economic performance
- Analyzed commercial fishery behavior, integrating and summarizing many data sources

Marine Policy Fellow – NOAA Fisheries 2014 - 2015

- Developed scripts to automatically analyze data and produce visualizations and summary fact sheets for reports. Proactively identifying projects that could benefit from these analyses
- Coordinated a team to investigate effective strategies for managing recreational fisheries including planning project scope and strategy, researching policies and analyzing indicators of their success, collaborating with stakeholders, and communicating actionable recommendations
- Wrote and edited profiles of U.S. seafood species for the FishWatch website (www.fishwatch.gov)

Research Scientist, Graduate Fellow, Research Assistant – University of Washington 2010 - 2014

- Applied Bayesian hierarchical models, linear mixed models, and multivariate analyses (e.g. principal component analysis, dynamic factor analysis) to understand and predict environmental influences on North Pacific fish species, thoroughly researching and compiling relevant covariates
- Communicated findings and actionable recommendations through five publications and over a dozen presentations

Database Development Intern – National Park Service Summer 2010

- Compiled and quality checked 16 years of historical oceanographic data from Glacier Bay estuary into a publicly accessible database that has been used in ecosystem monitoring and research

Marine Ecology and Stock Assessment Intern – NOAA Fisheries Summer 2009

- Utilized a logistic regression model to understand factors influencing the survival of discarded fish and estimate impacts of fishing techniques on the population. Published and presented findings

EDUCATION

Master of Science in Aquatic and Fishery Sciences – University of Washington

- Completed courses in R programming, data visualization, linear and non-linear regression, multivariate statistics, and Bayesian statistics

Bachelor of Science in Marine Science and Biology – University of Miami

- Magna cum laude; general and departmental honors; minors in Mathematics and Chemistry

TECHNICAL SKILLS

- Expert at using the R programming language for statistical data analysis and visualization
- Experience with Excel, R Markdown, SQL, Tableau, Matlab, and HTML
- Experience conducting GIS analyses using R, Google Earth, and ArcGIS software

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SELECT PUBLICATIONS & PRESENTATIONS

- Lowerre-Barbieri, S., G. DeCelles, P. Pepin, I. A. Catalan, B. Muhling, B. Erisman, S. X. Cadrin, J. Alós, A. Ospina- Alvarez, **M. M. Stachura**, M. D. Tringali, S. W. Burnsed, and C. B. Paris. 2017. Reproductive resilience: a paradigm shift in understanding spawner-recruit systems in exploited marine fish. *Fish and Fisheries*. doi: 10.1111/faf.12180
- Hare, J. A., W. E. Morrison, M. W. Nelson, **M. M. Stachura**, E. J. Teeters, R. B. Griffis, M. A. Alexander, J. D. Scott, L. Alade, R. J. Bell, A. S. Chute, K. L. Curti, T. H. Curtis, D. Kircheis, J. F. Kocik, S. M. Lucey, C. T. McCandless, L. M. Milke, D. E. Richardson, E. Robillard, H. J. Walsh, M. C. McManus, K. E. Marancik, and C. A. Griswold. 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.
- Cope, J. M., D. Sampson, A. Stephens, M. Key, P. P. Mirick, **M. M. Stachura**, T.-S. Tsou, P. Weyland, A. Berger, T. Buell, E. Councill, E. J. Dick, K. H. Fenske, M. Monk, and B. T. Rodomsky. 2015. Assessments of black rockfish (*Sebastes melanops*) stocks in California, Oregon, and Washington coastal waters. Pacific Fishery Management Council, Portland, OR.
- **Stachura, M. M.** (presenter). 2015. Presented data analysis results to stakeholders and decision makers. Black Rockfish Stock Assessment Review Meeting, Newport, OR.
- Beaugrand, G., A. Conversi, S. Chiba, M. Edwards, S. Fonda-Umani, C. Greene, N. J. Mantua, S. A. Otto, P. C. Reid, **M. M. Stachura**, L. Stemmann, and H. Sugisaki. 2015. Synchronous marine pelagic regime shifts in the Northern Hemisphere. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 370(1659). doi: 10.1098/rstb.2013.0272.
- **Stachura, M. M.**, T. E. Essington, N. J. Mantua, A. B. Hollowed, M. A. Haltuch, P. D. Spencer, T. A. Branch, and M. J. Doyle. 2014. Linking Northeast Pacific recruitment synchrony to environmental variability. *Fisheries Oceanography*. 23(5): 389-408. doi: 10.1111/fog.12066.
- **Stachura, M. M.**, N. J. Mantua, and M. D. Scheuerell. 2014. Oceanographic influences on patterns in North Pacific salmon abundance. *Canadian Journal of Fisheries and Aquatic Sciences*, 71(2): 226-235. doi: 10.1139/cjfas-2013-0367.
- Nye, J. A., M. R. Baker, R. Bell, A. Kenny, K. H. Kilbourne, K. D. Friedland, E. Martino, **M. M. Stachura**, K. S. Van Houtan, and R. Wood. 2014. Ecosystem effects of the Atlantic Multidecadal Oscillation. *Journal of Marine Systems*, 133: 103-116. doi: 10.1016/j.jmarsys.2013.02.006.
- **Stachura, M. M.** (presenter), T. E. Essington, N. J. Mantua, A. B. Hollowed, M. A. Haltuch, P. D. Spencer, T. A. Branch, and M. J. Doyle. 2013. Linking Northeast Pacific recruitment synchrony to environmental variability. PICES North Pacific Marine Science Organization Annual Meeting, Nanaimo, Canada. **Best Presentation Award**.
- **Stachura, M. M.**, C. R. Lunsford, C. J. Rodgveller and J. Heifetz. 2012. Estimation of discard mortality of sablefish (*Anoplopoma fimbria*) in Alaska longline fisheries. *Fishery Bulletin*, 110: 271-279.
- Johnson, W. F. and **M. M. Stachura**. 2011. Creation of Glacier Bay oceanographic information products defined in protocol OC-2010.1 using legacy data covering 1993 through 2008: methods, quality levels, and exceptions. Natural Resource Data Series NPS/SEAN/NRDS—2011/130. National Park Service, Fort Collins, Colorado.
- **Stachura, M. M.** (presenter), C. R. Lunsford, C. J. Rodgveller and J. Heifetz. 2010. Mortality of Incidentally Caught and Released Sablefish (*Anoplopoma fimbria*) on Longline Gear in Alaska. Western Groundfish Conference, Juneau, AK. **Best Presentation Award**.