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EDUCATION AND WORK EXPERIENCE

Assistant Professor, Horn Point Laboratory, UMCES (2018-present)

Postdoctoral Scientist, University of Washington Biological Oceanography (2013- 2017)
Supervisor: Dr. Gabrielle Rocap
Research Scientist, University of Washington Chemical Oceanography (2011-2012)
Supervisor: Dr. Allan H. Devol
Ph.D. Chemical Oceanography, University of Washington (Summer 2010)
Thesis: *Microbial ecology and nitrogen isotope biogeochemistry of the Black Sea*
Advisor: Dr. James W. Murray Co-advisor: Dr. James T. Staley.
Certificate in Astrobiology, University of Washington (Summer 2010)
M.S. Chemical Oceanography, University of Washington (Fall 2004)
Advisor: Dr. James W. Murray

Research Assistant, Biochemistry Lab, Oberlin College (Summer 2001- Summer 2002)
B.A. Biochemistry with High Honors, Swarthmore College (2001)
Thesis: *A Risk Assessment for Metal Toxicity in Crum Creek Sediment*
Advisor: Dr. Arthur McGarity

FIELD EXPERIENCE

Black Sea expeditions (6 total)
UNOLS vessels (USA): R/V Knorr, 2003; R/V Endeavor, 2005.
Russian vessels in collaboration with the P.P. Shirshov Institute of Oceanology, RU:
Summer 2005, Spring 2007, Fall 2007, Summer 2008.

Ocean Oxygen Minimum Zone Expeditions (4 total)
Eastern Tropical North Pacific: R/V Thomas G. Thompson, 2012,
Eastern Tropical South Pacific: R/V Palmer, 2013
Chief Scientist Training Cruise: R/V Thomas G. Thompson, 2016
Eastern Tropical North Pacific: R/V Sikuliaq, 2017: co-Chief Scientist leg 1

PUBLICATIONS

Ahlgren, N.A., **Fuchsman, C.A.,** Rocap, G., Fuhrman, J.A. (in review) Discovery of several novel, widespread, and ecologically distinct marine *Thaumarchaeota* viruses that encode nitrifying genes. *ISME*

Kirkpatrick, J.B.,* **Fuchsman, C.A.,*** Yakushev, E.V., Egorov, A.V., Staley, J.T., Murray, J.W. (in review) Dark Nitrogen Fixation: Expression in the Redoxcline of the Black Sea. *Aquatic Microbial Ecology*

Widner, B.,* **Fuchsman, C.A.,*** Chang B.X., Rocap, G., Mullholland, M.R. (in review) Utilization of cyanate and urea in waters overlying and within the Eastern Tropical North Pacific Oxygen Deficient Zone. *FEMS Microbial Ecology*

Peters B., Horak R., Devol, A.H., **Fuchsman, C.A.,** Forbes, M., Mordy, C., Casciotti K. L. (accepted) Estimated fixed nitrogen loss and associated isotope effects using concentrations and isotopic measurements of NO_3^-, NO_2^-, and N_2 from the Eastern Tropical South Pacific oxygen deficient zone. *Deep Sea Research II*

Fuchsman, C.A., Devol, A.H., Casciotti, K.L., Buchwald, C., Chang, B.X., Horak, R.E.A (in press) A N isotopic mass balance of the Eastern Tropical North Pacific Oxygen Minimum Zone. *Deep Sea Research II*. doi.org/10.1016/j.dsr2.2017.12.013

Fuchsman, C.A., Devol, A.H., Saunders, J.K., McKay, C. Rocap, G. (2017) Niche partitioning in the N cycling community of an offshore Oxygen Deficient Zone. *Frontiers in Microbiology* 8:2384.

Fuchsman, C.A., Collins, R.E., Rocap G., Brazelton, W.J. (2017) The effect of the environment on horizontal gene transfer. *Peer J* **5**: e3865**.**

Peng, X., **Fuchsman, C.A.**, Jayakumar A., Warner, M.J., Devol, A.H., Ward, B.B. (2016) Revisiting Nitrification in the Eastern Tropical South Pacific: A focus on its controls. *Journal of Geophysical Research—Oceans* 121: 1667-1684.

Peng, X., **Fuchsman, C.A.**, Martens-Habbena, W., Jayakumar A., Devol, A.H., Ward, B.B. (2015) Ammonia and nitrite oxidation in the Eastern Tropical North Pacific Oxygen Minimum Zone. *Global Biogeochemical Cycles:* GB005278.

Fuchsman, C.A., Devol, A.H., Chase, Z., Reimers, C.E., Hales B. (2015) Benthic fluxes on the Oregon shelf. *Estuarine, Coastal and Shelf Science* 163: 156-166.

Kirkpatrick J.B., **Fuchsman, C.A.**, Yakushev, E.V., Staley, J.T., and Murray, J.W. (2012) Activity of Anammox and Denitrifying Bacteria in the Black Sea. *Frontiers in Microbiology* 3: 255.

Fuchsman, C.A., Murray, J.W., and Staley, J.T. (2012) Stimulation of autotrophic denitrification by intrusions of the Bosporus Plume into the anoxic Black Sea. *Frontiers in Microbiology* 3: 257.

Fuchsman, C.A., Staley, J.T., Oakley, B.O., Kirkpatrick J.B. and Murray, J.W. (2012) Free-living and aggregate associated Planctomycetes in the Black Sea. *FEMS Microbiology Ecology* 80: 402-416.

Fuchsman, C.A., Kirkpatrick, J.B., Brazelton, W.J., Murray, J.W., and Staley, J.T. (2011) Metabolic strategies of free-living and aggregate associated bacterial communities inferred from biological and chemical profiles in the Black Sea suboxic zone. *FEMS Microbiology Ecology* **78**: 586-603.

Fuchsman, C.A., Murray, J.W., and Konovalov, S.K. (2008) Concentration and natural stable isotope profiles of nitrogen species in the Black Sea. *Marine Chemistry* **111**: 90-105.

Konovalov, S.K., **Fuchsman, C.A.**, Belokopitov, V., Murray, J.W. (2008) Modeling the distribution of N species and isotopes in the water column of the Black Sea. *Marine Chemistry* **111**: 106-124.

Oakley, B.B., Francis, C.A., Roberts, K.J., **Fuchsman, C.A.**, Srinivasan, S., and Staley, J.T. (2007) Analysis of nitrite reductase (nirK and nirS) genes and cultivation reveal depauperate community of denitrifying bacteria in the Black Sea suboxic zone. *Environmental Microbiology* **9**: 118-130.

Fuchsman, C.A., and Rocap, G. (2006) Whole-genome reciprocal BLAST analysis reveals that Planctomycetes do not share an unusually large number of genes with Eukarya and Archaea. *Applied and Environmental Microbiology* **72**: 6841-6844.

Kirkpatrick J., Oakley, B., **Fuchsman, C.**, Srinivasan, S., Staley, J.T., and Murray, J.W. (2006) Diversity and distribution of Planctomycetes and related bacteria in the suboxic zone of the Black Sea. *Applied and Environmental Microbiology* **72**: 3079-3083.

*co-first author