

MARINE AND ATMOSPHERIC SCIENCES

GRADUATE DIRECTOR: ANNE MCELROY

❖ Grants, Fellowships and Awards

Carroll, John M. (2009) Graduate student presentation award, 2nd Place, \$400. *Coastal and Estuarine Research Federation*, Portland, OR.

Jiang, Xiaodong. (2009) Density-dependent nutritional value of *Cochlodinium polykrikoides* for zooplankton: from beneficial to toxic, \$500. *Quebec-Labrador Foundation/Atlantic Center, The Sounds Conservancy Grants Program*, Ipswich, MA.

Jiang, Xiaodong. (2009) Fifth US HAB Symposium Travel Award, \$700. *National Oceanic and Atmospheric Administration*, Washington, D.C.

Perez, Kestrel. (2009) Turner Fellowship, \$10,000. *Research Foundation of Stony Brook University*, Stony Brook, NY.

Perino, Laurie. (2010) Charlotte Magnum Student Support Program, \$90. *Society for Integrative and Comparative Biology*, McLean, VA.

Grella, R., Padilla, D. and **Perino, Laurie** (2010) Toyota Tapestry Large Grant, \$10,000. *Toyota Tapestry Grants for Science Teachers*, Arlington, VA & Torrance, CA.

Perrigault, Mickael. (2010) Thesis Completion Award, \$4,765. *New York Sea Grant*, Stony Brook, NY.

Protopopescu, Nuria. (2009-2011) Turner Dissertation Fellowship Award (two years). *Stony Brook University*, Stony Brook, NY.

Sagarese, Skyler. (2009) NMFS-Sea Grant Joint Fellowship in Population Dynamics, \$38,500. *National Marine Fisheries Service and New York Sea Grant*, Stony Brook, NY.

Xia, Xiaoming. (2009) Understanding GCM predicted storm track changes under global warming, Excellent Poster Presentation, \$200. *American Meteorological Society*, Stowe, VT.

❖ Jointly Authored Publications/Research Reports/Reviews

Carroll, John M., B.J. Peterson, D. Bonal, A. Weinstock, C.F. Smith, S.T. Tettelbach. (2010) Comparative survival of bay scallops in eelgrass and the introduced alga, *Codium fragile*, in a New York Estuary. *Marine Biology* 157: 249-259.

Dahl, Soren F., Thiel, J. and Allam, B. (2010) Field performance and QPX disease progress in cultured and wild-type strains of hard clams in New York waters. *Journal of Shellfish Research* 29(1): 83-90.

Conover, D.O., **Duffy, T.A.** and Hice, Lyndie A. (2009) The covariance between genetic and environmental influence across ecological gradients: reassessing the evolutionary significance of countergradient and cogradient variation. *Annals of the New York Academy of Sciences, Year in Evolutionary Biology (2009)* 1168: 100-129.

Talmage, Stephanie and **Gobler, Christopher.** (2009) The effects of elevated carbon dioxide concentrations on the metamorphosis, size, and survival of larval hard clams (*Mercenaria mercenaria*), bay scallops (*Argopecten irradians*), and Eastern oysters (*Crassostrea virginica*). *Journal of Limnology and Oceanography* 54(6): 2072-2080.

Guo, Yanjuan, Chang, E.K.M., and Leroy S.S. (2009) How strong are the Southern Hemisphere storm tracks? *Geophys. Res. Lett.* 36: L22806. doi: 10.1029/2009GL040733.

- Hattenrath, T.K.**, Anderson, D.M., Gobler, C.J. (2010) The influence of anthropogenic nitrogen loading and meteorological conditions on the dynamics and toxicity of *Alexandrium fundyense* blooms in a New York (USA) estuary. *Harmful Algae* 9: 402-412.
- Conover, D.O., Duffy, T.A. and **Hice, Lyndie A.** (2009) The covariance between genetic and environmental influence across ecological gradients: reassessing the evolutionary significance of countergradient and cogradient variation. *Annals of the New York Academy of Sciences, Year in Evolutionary Biology (2009)* 1168: 100-129.
- Jiang, Xiaodong**, Lonsdale, Darcy, Gobler, Chris. (In Press) Density-dependent nutritional value of the dinoflagellate *Cochlodinium polykrikoides* to the copepod *Acartia tonsa*. *Limnology and Oceanography*
- Jiang, Xiaodong**, Tang, Yingzhong, Lonsdale, Darcy, Gobler, Chris. (2009) Deleterious consequences of a red tide dinoflagellate *Cochlodinium polykrikoides* Margalef for the calanoid copepod *Acartia tonsa* Dana. *Marine Ecology Progress Series* 390: 105-116.
- Lonsdale, D.J., Cerrato, R.M., Holland, R., Mass, A., Holt, L., Schaffner, R.A., **Pan, J.**, Caron, D.A. (2009) Influence of suspension-feeding bivalves on the pelagic food webs of shallow, coastal embayments. *Aquatic Biology* 6: 263-279.
- Perez, Kestrel**, and Munch, Stephan. (In press) Extreme selection in the early life of marine fishes. *Evolution*. doi:10.1111/j.1558-5646.2010.00994.x
- Perrigault, Mickael**, Tanguy, A. and Allam, B. (2009) Molecular identification and expression of differentially regulated genes of the quahog clam, *Mercenaria mercenaria* during QPX (Quahog parasite Unknown) challenge. *BMC Genomics* 10: 377.
- Perrigault, Mickael** and Allam, B. (2009) Cytotoxicity of Quahog Parasite Unknown (QPX) toward hard clam (*Mercenaria mercenaria*) haemocytes and interactions between different pathogen isolates and host strains. *Parasitology* 136(11): 1281-1289.
- Pales Espinosa, E., **Perrigault, Mickael**, Ward, J.E., Shumway, S.C. and Allam, B. (2009) Lectins associated with the feeding organs of the oyster *Crassostrea virginica* can mediate particle selection. *Biological Bulletin* 217(2): 130-141.
- Pales Espinosa, E., **Perrigault, Mickael**, Ward, J.E., Shumway S.E. and Allam, B. (2010) Microalgal cell surface carbohydrates as recognition sites for particle sorting in suspension feeding bivalves. *Biological Bulletin* 218(1): 75-86.
- Perrigault, Mickael**, Buggé, D.M. and Allam, B. (In Press) Effects of environmental factors on survival and growth of Quahog Parasite Unknown (QPX) *in vitro*. *Journal of Invertebrate Pathology*.
- Pales Espinosa, E., **Perrigault, Mickael**, Allam, B. (In Press) Identification and localization of a secretory lectin (MeML) from *Mytilus edulis*. *Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology*.
- Perrigault, Mickael**, Dahl, S.F., Liu, Q., Collier, J.L., Barnes, D. and Allam, B. (2009) Effects of environmental factors on *Mercenaria mercenaria* immunity, QPX survival and host-pathogen interactions. *Journal of Shellfish Research* 28(3): 720.
- Pales Espinosa, E., **Perrigault, Mickael**, Ward, E., Shumway, S. and Allam, B. (2009) Microalgae cell surface carbohydrates as recognition sites for particle sorting in suspension feeding bivalves. *Journal of Shellfish Research* 28(3): 695.
- Allam, B., **Perrigault, Mickael** and Tanguy, A. (2009) Development of functional genomics tools for the investigation of hard clam-QPX interactions. *Journal of Shellfish Research* 28(3): 678.
- Perrigault, Mickael**, Allam, B. (2010) Investigations of environmental factors affecting QPX disease development and resulting mortalities in the hard clam, *Mercenaria mercenaria*. Final report, *New York Sea Grant*, 13 pages.

- Wakeham, S.G., Turich, C., Taylor, G.T., **Podlaska, A.**, Scranton, M.I., Li, X.N., Varela, R., Astor, Y. (2010) Mid-chain methoxylated fatty acids within the chemocline of the Cariaco Basin: a chemoautotrophic source? *Organic Geochemistry* 41: 498-512.
- Feldheim, K.A., Chapman, D.D., Simpfendorfer, C.A., Richards, V.P., Shivji, M.S., Wiley, T.R., Poulakis, G.R., Carlson, J.K., Eng, R., and **Sagarese, S.** (In Press) Genetic tools to support the conservation of the endangered smalltooth sawfish, *Pristis pectinata*. *Conservation Genetics Resources*.
- Petersen, C.W., **Salinas, S.**, Preston, R.L., and Kidder, G.W. (In Press) Spawning periodicity and reproductive behavior of *Fundulus heteroclitus* in a New England salt marsh. *Copeia*.
- Talmage, Stephanie** and Gobler, Christopher. (2009) The effects of elevated carbon dioxide concentrations on the metamorphosis, size, and survival of larval hard clams (*Mercuraria mercenaria*), bay scallops (*Argopecten irradians*), and Eastern oysters (*Crassostrea virginica*). *Journal of Limnology and Oceanography* 54(6): 2072-2080.
- ❖ **Abstracts, Conferences/Colloquiums, Presentations, Symposiums, Workshops**
- Carroll, John M.**, Tettelbach, S.T., Peterson, B.J. (2009) Can the introduced macroalgae *Codium fragile* serve as a suitable habitat for the native bay scallop *Argopecten irradians*? *Coastal and Estuarine Research Federation 20th Biennial Conference*. Portland, OR.
- Carroll, John M.**, Tettelbach, S.T., Peterson, B.J. (2010) Recruitment of bay scallops, *Argopecten irradians*, to artificial seagrass near a spawner sanctuary. *Benthic Ecology Meeting*. Wilmington, NC.
- Dahl, Soren.** (2010) Shellfish and the Environment: Local examples of Global Issues. Ammerman Campus Week of Awareness Series 2010; *Human Environmental Impact: From the end of the earth to our local ecosystem*. Suffolk Community College, Selden, NY.
- Guo, Yanjuan**, and Chang E.K.M. (2010) Have the Southern Hemisphere storm tracks been strengthening after 1979? *22nd Conference on Climate Variability and Change*. Atlanta, GA.
- Guo, Yanjuan**, Xia, X., and Chang, E.K.M. (2009) How strong are the Southern Hemisphere storm tracks? *15th Conference on Middle Atmosphere*. Stowe, VT.
- Hall, Carolyn**, Jordaan, A., Frisk, M.G., Cerrato, R.M. (2009) Dam construction on Maine river systems and the consequences for river herring: an historical ecology perspective. *Coastal and Estuarine Research Federation 20th Biennial Conference*. Portland, OR.
- Hall, Carolyn.** (2010) Damming of Maine Watersheds and the Consequences on Coastal Ecosystems with a focus on the Anadromous River Herring: A Four Century Analysis. *The North American Society for Oceanic History 2010 Annual Conference, "Maritime Environments."* Avery Point and Mystic Seaport, CT.
- Hattenrath, T.K.**, Anderson, D.M., Gobler, C.J. (2009) The influence of anthropogenic nitrogen loading and meteorological conditions on the dynamics and toxicity of *Alexandrium fundyense* blooms in a New York (USA) estuary. *Fifth Symposium on Harmful Algae in the U.S.* Ocean shores, WA.
- Hice, Lyndie A.**, Munch, S.B., and Conover, D.O. (2009) Latitudinal variation in Atlantic silverside vertebral number and the adaptive significance of Jordan's Rule. *Joint Meeting of Ichthyologists and Herpetologists*. Portland, OR.
- Jiang, Xiaodong.** (2009) Deleterious consequences and density-dependent nutritional quality of the red tide dinoflagellate *Cochlodinium polykrikoides* to the copepod *Acartia tonsa*. *Fifth Symposium on Harmful Algae in the US*. Seattle, WA
- Lee, Jungmin**, and Khairoutdinov, Marat. (2009) Cloud-resolving simulation of the diurnal cycle of precipitation : the role of the large-scale forcing. *American Geophysical Union (AGU) Conference*. San Francisco, CA.

- Perez, Kestrel.** (2010) Bigger is better, but only for a little while. *School of Marine and Atmospheric Sciences Annual Research Symposium*. Stony Brook University, Stony Brook, NY.
- Perez, Kestrel.** (2010) Evolution of size in marine fish. *Undergraduate Biology Colloquium*. Adelphi University, Garden City, NY.
- Perino, Laurie, Munch, S.B. and Padilla, D.K.** (2010) Predicting the impacts of fluctuating bivalve densities on phytoplankton communities. *Society for Integrative and Comparative Biology Annual Meeting*. Seattle, WA.
- Pales Espinosa, E., **Perrigault, Mickael**, Ward, J.E., Shumway, S. and Allam, B. (2010) Unravelling the fine mechanisms of particle sorting in suspension feeding bivalves. *National Shellfisheries Association, 102th Annual Meeting*. San Diego, CA.
- Wakeham, S., Turich, C., **Podlaska, A.**, Li, X., Astor, Y., Varela, R., Taylor, G.T., Scranton, M.I. (2009) Stable isotope probing of sulfur-oxidizing chemoautotrophic bacteria in the Cariaco Basin. *Gordon Research Conference on Chemical Oceanography*. Tilton School, Tilton, NH.
- Taylor, G.T., **Podlaska, A.**, Lopez-Gasca, M., Li, X.N., Scranton, M.I. (2009). Quest for the chemoautotrophs dominating the Cariaco redoxcline: a multi-faceted campaign. *Gordon Research Conference on Applied and Environmental Microbiology*. Mt. Holyoke, MA.
- Taylor, G.T., Lopez-Gasca, M., **Podlaska, A.**, Li, X.N., Lorenzoni, L., Rueda, D., Muller-Karger, F., Thunell, R., Fanning, K., Varela, R., Astor, Y., Scranton, M.I. (2010) Temporal variations in the biogeochemistry of the permanently anoxic Cariaco Basin. *Ocean Sciences Mtg.* Portland, OR.
- Podlaska, A.**, Wakeham, S., Fanning, K., Taylor, G.T. (2010) Microbial community structure and chemoautotrophic activity in the oxygen minimum of the eastern tropical North Pacific. *Ocean Sciences Mtg.* Portland, OR.
- Daly, K.L., Byrne, R.H., Cass, C., DiTullio, G.R., Elliott, M.M., Fanning, K., Flagg, C.N., Mass, A., Olson, B., **Podlaska, A.**, Remsen, A.W., Seibel, B., Taylor, G.T., Wakeham, S.G., Wishner, K.F. (2010). Do OMZs alter the biological pump? *Ocean Sciences Mtg.* Portland, OR.
- Olson, B., Daly, K.L., **Podlaska, A.**, Taylor, G.T. (2010) Microzooplankton dynamics across oxygen gradients in the eastern tropical North Pacific. *Ocean Sciences Mtg.* Portland, OR.
- Protopopescu, Nuria.** (2009) NSF Student Scholarship. *13th Annual Green Chemistry and Engineering Conference*. Green Chemistry Institute, American Chemical Society, Washington, D.C.
- Rodgers, Brooke S.** (2009) Impacts of groundwater flow on eelgrass, *Zostera marina*, in New York estuaries. *38th Annual Benthic Ecology Meeting*. Corpus Christi, TX.
- Rodgers, Brooke S.** (2009) Groundwater Effects On Seagrass. *New York Seagrass Taskforce*, Stony Brook, NY. (Invited speaker)
- Sagarese, Skyler.** (2010) Assessing Spiny Dogfish Migration and Population Dynamics in the Northwest Atlantic. *2010 NMFS/Sea Grant Fellows meeting*. Alaska Fisheries Science Center & Northwest Fisheries Science Center, Seattle, WA.
- Salinas, S.** and Munch, S.B. (2010) Effects of power plants on fish populations: analysis of a long-term Hudson River dataset. *SCERP Environmental Symposium*. Southampton, NY.
- Salinas, S.,** Velasquez-Tibata, J., and Munch, S.B. (2009) Metabolism, temperature and the life histories of the future. *New York Marine Sciences Consortium Annual Conference*. Bronx, New York.
- Slattery, Michael,** Bokuniewicz, H., Gayes, P.T. (2009/2010) Incipient rip-current statistics on an open coast. *ASPBA annual conference "Integrating Coastal Science & Policy"*. St. Petersburg Beach, FL. *1st International Rip Current Symposium*. Miami, FL.
- Slattery, Michael.** (2009) Reading the Beach. *Long Island Geologists Field Trip*. Fire Island National Seashore, NY.

Stubler, Amber. (2010) The Impacts of Anthropogenic Sedimentation of Sponge Diversity and Abundance on the North Shore of Jamaica. *Benthic Ecology Meeting 2010*. Wilmington, NC.

Sugeno, Masatoshi, Munch, S.B. (2009) A semiparametric Bayesian approach to detecting density dependence. *94th Ecological Society of America Annual Meeting*. Albuquerque, NM.

Talmage, Stephanie. (2010) Effects of past, present, and future ocean carbon dioxide concentrations on the growth and survival of larval shellfish. *Stony Brook Southampton Coastal and Estuarine Research Program*. Southampton, NY.

Wall, Charles C. (2010) The growth of estuarine resources along a eutrophication gradient. *Benthic Ecology Meeting*. University of North Carolina-Wilmington, Wilmington, NC. *Stony Brook-Southampton Coastal and Estuarine Research Program*. Stony Brook-Southampton Campus, Southampton, NY.

Xia, Xiaoming, Chang, E. (2009) Understanding GCM predicted storm track changes under global warming. *17th Conference on Atmospheric and Oceanic Fluid Dynamics of American Meteorological Society*. Stowe, VT.

❖ **Post Doctorates Obtained and Professional Appointments**

Hice, Lyndie A. (2010) Substitute lecturer. School of Earth and Environmental Sciences, *Queens College*, Flushing, NY.

❖ **Internship Appointments**

Stubler, Amber (2009-2010) Seafood Intern. *Blue Ocean Institute*, Stony Brook, NY.

Stubler, Amber (2009) Research Assistant. *Blue Ocean Institute in conjunction with Discovery Bay Marine Lab*, Discovery Bay, Jamaica, West Indies.