

MARIO E. MUSCARELLA

Department of Biology, Indiana University, Bloomington, Indiana 47405
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Education:

Indiana University	Biology, Ph.D. Evolution, Ecology, & Behavior Program	Aug 2012 – Present
Michigan State University*	Microbiology & Molecular Genetics / Ecology and Evolutionary Biology	June 2010 – Aug 2012
Armstrong Atlantic State	Biology, Summa Cum Laude, B.S.	Aug 2004 – May 2008

Experience:

Graduate Research Assistant, Ph.D. Candidate Michigan State University & Indiana University, <i>Lennon Lab. Aquatic Microbiology, Molecular and Ecological Strategies of Resource Utilization</i>	Nov 2010 – Present
Associate Instructor Associate Instructor, Indiana University <i>Courses: M465 Environmental Microbiology (Spring 2013); L113 Introductory Biology Lab (Fall 2013)</i>	Jan 2013 – Present
Graduate Teaching Assistant Michigan State University, <i>Courses: MMG820 Microbial Metagenomics (Summer 2011/2012); BS171 Cells and Molecules Lab (Fall 2011); MMG 302 Intro Microbiology Lab (Spring 2012)</i>	Jun 2011 – Aug 2012
Research Technician University of Georgia Marine Institute, <i>Booth Lab, Georgia Coastal Ecosystems LTER, & Sapelo Island Microbial Observatory</i>	Jun 2008 – Jun 2010
Undergraduate Research Assistant Armstrong Atlantic State University, Department of Biology, <i>Awong-Taylor Lab</i>	Sep 2005 – May 2008
Undergraduate Laboratory Technician Armstrong Atlantic State University, Department of Biology, <i>Introductory Microbiology Labs</i>	Sep 2005 – May 2008

Publications:

- Muscarella ME**, Bird KC, Larsen ML, Placella SA, Lennon JT (In Press). Phosphorus resource heterogeneity affects the structure and function of microbial food webs. *Aquatic Microbial Ecology*, doi: 10.3354/ame01722
- Lennon JT, Hamilton SK, **Muscarella ME**, AS Grandy, K Wickings, SE Jones (2013). A source of terrestrial organic carbon to investigate the browning of aquatic ecosystems. *PloS One*, 8(10), e75771
- J. Awong-Taylor, K. Craven, L. Griffiths, C. Bass and **M. Muscarella** (2007). Comparison of biochemical and molecular methods for the identification of bacterial isolates associated with failed loggerhead sea turtle eggs. *Journal of Applied Microbiology*. 104: 1244 – 1251
- Kathryn S. Craven, Judy Awong-Taylor, Laura Griffiths, Crystal Bass & **Mario Muscarella** (2007). Identification of Bacterial Isolates from Unhatched Loggerhead (*Caretta caretta*) Sea Turtle Eggs in Georgia, USA. *Marine Turtle Newsletter* 115:9-11

Grants:

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| 2014-2015 | Indiana Academy of Sciences (IAS), Co-PI, \$2,200
Metabolic Fate of Terrestrial Carbon Resources: Anabolic vs. Catabolic Processes |
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| 2012 – 2014 | Huron Mountain Wildlife Foundation (HMWF), Co-PI, Renewal \$3,299
Browning of freshwater ecosystems: will terrestrial carbon loading alter the diversity and function of aquatic microbial communities? |
| 2011 - 2012 | Huron Mountain Wildlife Foundation (HMWF), Co-PI, Renewal \$5,600
Browning of freshwater ecosystems: will terrestrial carbon loading alter the diversity and function of aquatic microbial communities? |

Honors and Awards:

Floyd Microbiology Summer Fellowship (\$2000). 2013 & 2014. Department of Biology, Indiana University, Bloomington, IN

Floyd Microbiology Travel Award (\$300). 2012. Department of Biology, Indiana University, Bloomington, IN

University Distinguished Fellowship. 2010. Graduate School, Michigan State University, East Lansing, MI.

Early Start Fellowship. 2010. College of Natural Sciences, Michigan State University, East Lansing, MI.

Les Davenport Award. 2008. Presented by the faculty of the Biology Department, Armstrong Atlantic State University. Savannah, GA

ASB Research Award in Microbiology. Presented at the 69th Annual ASB Conference for the best paper presentation in the area of Microbiology

Faculty Recognition Award. 2007. Presented by the faculty of the Biology Department, Armstrong Atlantic State University. Savannah, GA

Workshops:

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| 2013 | Software Carpentry Workshop, Bloomington IN |
| 2012 | DOM Fluorescence Workshop, INSTAAR, Boulder CO |
| 2010 | Mothur Software Workshop, Detroit MI |

Professional Affiliations:

Ecological Society of America

American Society of Limnology and Oceanography

Great Lakes Ecological Observatory Network

American Society for Microbiology

Indiana Academy of Sciences

Service:

Journal Reviewer: *Science, Biogeochemistry, ISME, PNAS*

Software Beta Tester: *Mothur v2.0*

Committee Member: *MSU MMG Grad Committee*

Professional Society Leadership: *Graduate Student Liaison for Microbial Ecology Section, ESA*

Conference Co-Organizer: *2015 Midwest Ecology and Evolution Conference*

Contributed Presentations:

Muscarella, M.E., Locey K.J., Nevo E., Raz S., Lennon J.T. (2014) Microbial community assembly at Evolution Canyon: Does dormancy dilute the effects of dispersal and filtering? Ecological Society of America 99th Annual Meeting, Sacramento CA.

Muscarella M.E., Bird K.C., Larsen M.L., Placella S.A., Lennon J.T. (2014) Phosphorus resource heterogeneity affects the structure and function of microbial food webs. American Society of Limnology and Oceanography, Portland OR.

- Muscarella M.E.**, Bird K.C., Larsen M.L., Placella S.A., Lennon J.T. (2014) Phosphorus resource heterogeneity affects the structure and function of microbial food webs. Midwest Ecology and Evolution Conference, Dayton OH.
- Muscarella, ME**, Jones SE, Lennon JT (2013) Species Sorting Along a Subsidy Gradient Affects Community Stability. Ecological Society of America 98th Annual Meeting, Minneapolis MN.
- Muscarella, ME**, Jones SE, Lennon JT (2013) Life in brown waters: Aquatic bacteria respond to increased terrestrial carbon loading. Midwest Ecology and Evolution Conference, South Bend, IN.
- Lennon JT, **Muscarella ME**, Jones SE (2013) Bacteria and browning: implications of terrestrial carbon subsidies for aquatic ecosystems. American Society of Limnology and Oceanography, New Orleans, LA.
- Muscarella ME**, Jones SE, Lennon JT (2013) Life in brown waters: Aquatic bacterial responses to increased terrestrial carbon loading. American Society of Limnology and Oceanography, New Orleans, LA
- Muscarella ME**, Jones SE, Lennon JT (2012) Life in brown waters: Aquatic bacteria respond to increased terrestrial carbon loading. LTER All Scientists Meeting, Estes Park, CO.
- Booth MG, Gifford S, Doherty M, **Muscarella M**, and Moran MA (2010) Expression of two carbon metabolism genes identified thorough transcriptomic analysis of estuarine bacterial communities of Sapelo Island, GA, U.S.A. International Society of Microbial Ecology Conference, Seattle, WA.
- Doherty M, Poretsky R, **Muscarella ME**, Moran MA, Booth MG (2009) Tracking Metabolism of an Important Terrestrial Carbon Source by Marine Bacterioplankton. Coastal and Estuarine Research Federation 20th Biennial Conference. Portland, OR.
- Muscarella M**, Awong-Taylor J, Zettler J (2009) The Inability of Pathogenic and Nonpathogenic Strains of *Escherichia coli* to Survive in Coastal Beach Sand. 2009 Annual Conference of the Southeastern Branch American Society for Microbiology. Savannah, GA.
- Muscarella M**, Awong-Taylor J (2008) Role of Curli Fibers in the Adhesion of *Escherichia coli* O157:H7 to Bean Sprouts. American Society for Microbiology 108th Annual Meeting. Boston, MA.
- Muscarella M**, Awong-Taylor J, Zettler J (2008) The Potential for Pathogenic and non-pathogenic *Escherichia coli* to Survive in Beach Sand from Tybee Island, GA. Association of Southeastern Biologists 69th Annual Meeting. Spartanburg, SC.
- Muscarella M**, Awong-Taylor J (2008) Why is There *E. coli* on My Bean Sprouts? : The Role of Curli Fibers in the Adhesion of *Escherichia coli* O157:H7 to Bean Sprout Roots. Armstrong Atlantic State University Honors Presentation.
- Muscarella M**, Awong-Taylor J (2008) A Method to Compare the Effectiveness of Different Washes on Removal Rates of *E. coli* from Plant Roots. Southern Regional Honors Council 36th Annual Conference. Birmingham, AL.
- Griffiths L, Bass C, **Muscarella M**, Awong-Taylor J, Craven K (2006) Using Traditional and Molecular Techniques to Determine if Microbial Contamination Plays a Role in Embryonic Death of Loggerhead Sea Turtle Eggs. Florida Academy of Sciences 70th Annual Meeting. Melbourne, FL

Academic Advisors:

Jay T. Lennon, Indiana University (Ph.D.)

Judy Awong-Taylor, Armstrong Atlantic State University (B.S.)

Mentees:

Undergraduates:

Xia Meng Howey (2012-2014)

High School Students:

Nick Nelson (2012)