

## **GREGORY S. PRYOR, Ph.D.**

Associate Professor of Biology  
Department of Biology, Francis Marion University  
P.O. Box 100547  
Florence, SC 29501-0547  
Phone: (843) 661-1403, Fax: (843) 661-4660  
E-mail: GPRYOR@fmarion.edu  
Web page: <http://people.fmarion.edu/gpryor>

October 13, 2010

### **EDUCATION**

Postdoctoral researcher. University of Florida, Gainesville, FL. 2003-2004  
Ph.D., University of Florida, Gainesville, FL. 2003  
M.Sc., University of Florida, Gainesville, FL. 1999  
B.A., State University of New York at Oswego, Oswego, NY. *Magna cum laude*. 1994

### **TEACHING EXPERIENCE**

2004-**present**. Francis Marion University.

*BIO 311: Microbiology* Lecture for Biology Majors (every Fall and Spring semester)  
*BIO 311L: Microbiology* Laboratories for Biology Majors (every Fall and Spring semester)  
*BIO 105: Introduction to Life Sciences* Lecture for Biology Majors (Summer and/or Fall)  
*BIO 105L: Introduction to Life Sciences* Laboratories for Biology Majors (Summer and/or Fall)  
*BIO 103: Environmental Sciences* Lecture for Non-majors (Fall 2004)  
*BIO 103L: Environmental Sciences* Laboratories for Non-majors (Fall 2004)  
*BIO 499: Senior seminar* for Biology Majors (Fall 2008)

2003-2004. Adjunct Assistant Professor, University of Florida.

*Biology in Popular Culture: Ecology, Evolution, and Behavior in Everyday Life*

1996-2003. Teaching Assistant, UF.

*Biological Sciences* Laboratory  
*Avian Biology*  
*Animal Physiology*

2001. Discussion Leader, UF.

*Integrated Principles of Biology*

2000. Lecturer, UF.

*Biology in Popular Culture: Ecology, Evolution, and Behavior in Everyday Life*  
*Ecology, Evolution, and Behavior*

2000. Co-lecturer (with J. Sailer), UF.

*Ecology, Evolution and Behavior*

1998-2003. Guest Lecturer, UF.

*Ecology, Evolution, and Behavior* (for Dr. J. O'Sullivan)  
*Cells, Genetics, and the Diversity of Life* (for Dr. J. Seminoff)  
*Animal Physiology* (for Dr. H. Lillywhite)  
*Avian Biology* (for Dr. D. Levey)

1992-1996. Instructor, Rice Creek Nature Center, Oswego, NY.

*Investigation of Life in Aquatic and Wetland Habitats.*

**RESEARCH INTERESTS**

Gastrointestinal microbiology; fermentative microbiology; fuel ethanol production

Much of my research to date has focused on the microbiological communities that live within the guts of herbivorous animals. I have studied the fermentative and enzymatic properties of these gut symbionts, as well as their nutritional contributions to their hosts. I have also investigated the conversion of locally grown crops into fuel ethanol. In this area of study, I attempt to optimize the fermentation, distillation, and dehydration of ethanol from non-traditional feedstocks, such as sugarcane and sorghum.

**PEER-REVIEWED RESEARCH PUBLICATIONS**

2008. Pryor, G.S. Anaerobic bacteria isolated from the gastrointestinal tracts of bullfrog tadpoles (*Rana catesbeiana*). *Herpetological Conservation and Biology* 3(2):176-181.
2008. Pryor, G.S. Using pop culture to teach introductory biology. *American Biology Teacher* 70(7):396-399.
2008. Pryor, G., and V. Bauer. Building a better biology lab? Testing tablet PC technology in a core laboratory course. *Journal of College Science Teaching* 38(2):44-48.
2006. Pryor, G.S., D.P. German, and K.A. Bjorndal. Gastrointestinal fermentation in greater sirens (*Siren lacertina*). *Journal of Herpetology* 40(1):112-117.
2005. Pryor, G.S. and K.A. Bjorndal. Effects of the nematode *Gyrinicola batrachiensis* on development, gut morphology, and fermentation in bullfrog tadpoles (*Rana catesbeiana*): A novel mutualism. *Journal of Experimental Zoology* 303A:704-712.
2005. Pryor, G.S. and K.A. Bjorndal. Gastrointestinal morphology, digesta passage, and symbiotic fermentation in bullfrog tadpoles (*Rana catesbeiana*). *Physiological and Biochemical Zoology* 78(2):201-215.
2004. Pryor, G.S. and E.C. Greiner. Expanded geographical range, new host accounts, and observations of the nematode *Gyrinicola batrachiensis* (Oxyuroidea: Pharygodonidae) in tadpoles. *Journal of Parasitology* 90(1):189-191.
2003. Pryor, G.S. and K.A. Bjorndal. Symbiotic nematodes accelerate metamorphosis in bullfrog tadpoles. *Integrative and Comparative Biology* 43(6):1000.
2003. Pryor, G.S. Growth rates and digestive abilities of bullfrog tadpoles (*Rana catesbeiana*) fed algal diets. *Journal of Herpetology* 37(3):560-566.
2003. Pryor, G.S. Comparative protein requirements of three species of parrots with distinct dietary specializations. *Zoo Biology* 22(2):163-177.
2003. Pryor, G. S., J. B. Royes, F. A. Chapman, and R. D. Miles. Mannan oligosaccharides in fish nutrition: Effects of dietary supplementation on growth and gastrointestinal villi structure in Gulf of Mexico sturgeon. *North American Journal of Aquaculture* 65(2):106-111.
2001. Pryor, G.S., D.J. Levey, and E.S. Dierenfeld. Protein requirements for maintenance of Pesquet's parrot (*Psittichas fulgidus*). *Auk* 118(4):1080-1088.
1999. Pryor, G.S. Comparative protein requirements and digestive strategies of three species of parrots with distinct dietary specializations. *American Zoologist* 39(5):93A.
1998. Pryor, G.S. Life history of the bog buckmoth (*Hemileuca* sp.) in New York State. *Journal of the Lepidopterists' Society* 52(2):125-138.
1996. Pryor, G.S. Observations of shorebird predation by snapping turtles in eastern Lake Ontario. *Wilson Bulletin* 108(1):190-192.
1996. Pryor, G.S. Bonaparte's gull captured by snapping turtle. *Kingbird* 46(3):208-209.

**BIOLOGY TEXTBOOK CONTRIBUTIONS AND PUBLICATIONS**

2009. Pryor, G.S. Chapter supplements for *Biology: Life on Earth* (9/e). Prentice Hall.
- 2008-2009. Pryor, G.S. and McCumber, L.J. *Microbiology Laboratory: Fundamental Skills and Experiments*. RLSimonson Studios.
2008. Pryor, G.S. Chapter openers in: *Concepts of Biology* (1/e). McGraw-Hill.
2008. Pryor, G.S. Chapter supplements for *Biology: Science for Life with Physiology* (3/e). Prentice Hall.
- 2007-2008. Pryor, G.S. Chapter supplements for *Life on Earth* (5/e). Prentice Hall.
2006. McCumber, L.J. and Pryor, G.S. *Microbiology: An Investigative Approach. Laboratory Manual for BIO 311*. Custom Publishing, Francis Marion University.
2006. Pryor, G.S. et al. *Biology 105L: Life Science Laboratory Manual* (4/e). McGraw-Hill.
2006. Barbeau, T.R. et al. *Human Biology Laboratory Manual (Biology 104L)* (5/e). McGraw-Hill.
2006. Pryor, G.S. Chapter supplements for *Biology: Life on Earth* (8/e). Prentice Hall.
2005. Pryor, G.S. Chapter supplements for *Biology: Science for Life* (2/e). Prentice Hall.
2004. Pryor, G.S. Chapter supplements for *Life on Earth* (4/e). Prentice Hall.
2003. Pryor, G.S. *Biology: The Unity and Diversity of Life. 10th Ed.* C. Starr and R. Taggart. Brooks/Cole Publishing, p.189.
2003. Pryor, G.S. *Biology in Popular Culture*. Article featured in: *Great Ideas in Teaching Biology*, Benjamin-Cummings Publishing.

**OTHER PUBLICATIONS**

2004. Barbeau, T.R., and Pryor, G.S. Academic Job Search Diary. *The Chronicle of Higher Education*.
2003. Pryor, G.S. Artwork featured in: *Weekly Reader*.
1999. Pryor, G.S. Featured artist in: *Wildlife Art*. Edited by A. Singer, Northlight Books.
- 1996-1998. Pryor, G.S. Nature articles in *The Independent Florida Alligator*.
- 1996-1998. Pryor, G.S. Nature articles in *The Gainesville Sun*.
1996. Pryor, G.S. Featured photography in *Birding* 28(2):111.
- 1994-1996. Pryor, G.S. Nature articles in *The Palladium Times*.

**PRESENTATIONS, INVITED TALKS, AND CONFERENCES ATTENDED**

2009. *The Relationship Between Gyrinicola batrachiensis Nematodes and Rana catesbeiana Tadpoles*. First place award, general science category. FMU Science Poster Fair, Florence, SC. (Collaborative work presented with student H. Taylor)
2009. *Synthesis and Characterization of New Coordination Polymers with Carboxylate Ligands*. Southeast Regional Meeting of the American Chemical Society, Puerto Rico. (Collaborative work presented with Drs. L. Peterson and J. Kelley)
2008. *The Biology of Fermentation: From Guts to Gas Tanks*. FMU Biology Department Colloquium.
2008. *Feasibility Study of Fuel Ethanol Production from Sugar Cane Grown in South Carolina*. South Carolina BioEnergy Summit, Pee Dee Research and Education Center, Florence, SC. (Collaborative work presented with student K. Hiortdahl)
2008. *Quantitative Determination of Ethanol in Aqueous Solutions*. FMU Chemistry Department Summer Research Presentations (Collaborative work presented by students S. Lyde and C. Garner).
2007. 9th Annual Partner Dialogue Workshop, Coastal Plains Soil, Water and Plant Research Center, Florence, SC.
2007. R.A.I.N. Conference III, Pee Dee Research and Education Center, Florence, SC.
2006. *Biology of Fuel Ethanol Production*. Invited speaker, Dr. B. O'Brien's business class. FMU.
2006. *Building a Better Biology Lab: Testing Tablet PC Technology in a Core Laboratory Course*. HP Technology for Teaching Worldwide Higher Education Conference, Monterey, CA. (Collaborative work presented by Dr. T. Shannon)
2006. *Gut Fermentations in Amphibia: Consequences for Life History Patterns*. Comparative Nutrition Society Symposium, Keystone, CO. (Collaborative work presented by Dr. K. Bjorndal)

2006. South Carolina Muscadine Initiative Conference and Field Day, Florence, SC.
2006. *Research Opportunities for Undergraduates*. Invited speaker, *Beta Beta Beta* (Tri-Beta). FMU.
2004. *Symbiotic Gastrointestinal Nematodes Accelerate Metamorphosis in Bullfrog Tadpoles*. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA.
2004. *Careers in Biology*. Invited speaker, *Beta Beta Beta* (Tri-Beta). FMU.
2003. *Biology in Popular Culture*. Hume Honors Residency College, University of Florida, FL.
2003. *Protein Requirements of Parrots*. Hernando Exotic Bird Club, Brooksville, FL.
2003. *The Role of Gastrointestinal Symbionts in the Digestive Physiology of Bullfrog Tadpoles*. Gainesville Herpetological Society, Gainesville, FL.
2002. *Reversible Shrinkage and Compensatory Growth in Bullfrog Tadpoles*. The Herpetology Conference, Gainesville, FL.
2001. *Comparative Protein Requirements and Digestive Strategies of Three Species of Parrots with Distinct Dietary Specializations*. Nutrition Advisory Group 4th Annual Meeting, Orlando, FL.
2001. *Nutritional Ecology and Digestive Physiology of Tadpoles in North Central Florida*. Gainesville Herpetological Society, Gainesville, FL.
2000. *Comparative Protein Requirements and Digestive Strategies of Three Species of Parrots with Distinct Dietary Specializations*. Society for Integrative and Comparative Biology Annual Meeting, Atlanta, GA.
1999. Graduate Student Symposium, Department of Zoology, University of Florida.
- 1996-98. Department of Zoology Seminars, University of Florida.
- Protein Requirements of an Obligate Frugivore, Pesquet's Parrot.*
- A Field Course in Costa Rican Tropical Ecology.*
- Life History of the Bog Buckmoth in New York State.*
1994. *Life History of the Bog Buckmoth in New York State*. Annual New York State Natural History Conference, Albany, NY.

## REVIEWER

### Biology Textbooks:

2009. *Life: The Science of Biology* (9/e). Sinauer.
2009. *Active Learning Activities in Biology*. McGraw-Hill.
2009. *Environmental Science: A Study of Interrelationships* (13/e). McGraw-Hill.
2008. *Biology* (2/e). McGraw-Hill.
2007. *Environmental Science* (2/e). McGraw-Hill.
2007. *Biology* (1/e). McGraw-Hill.
2006. *Biology: Life on Earth* (8/e). Prentice Hall.
2005. *Foundations in Microbiology* (6/e). McGraw-Hill.
2005. *Microbiology: A Systems Approach* (2/e). McGraw-Hill.
2005. *Ecology on Campus laboratory manual*. Benjamin-Cummings.
2005. *Environmental Science: A Study of Interrelationships* (10/e). McGraw-Hill.
2005. *Principles of Environmental Science: Inquiry and Applications* (3/e). McGraw-Hill.
2005. *Environmental Science laboratory manual*. Benjamin-Cummings.
2004. *Understanding Biology: Evolution, Diversity, and Sustainability*. Prentice Hall.
2004. *Environmental Science and Policy: An Ecosystems Approach*. Pearson Education.
- 2004-2005. *Biology: Science for Life* (2/e). Prentice Hall.
2004. *Life on Earth* (4/e). Prentice Hall.
- 2001-2003. *Biology: Science for Life* (1/e). Prentice Hall.

### Biological Peer-Reviewed Journals:

- 2008-**present**. *Journal of College Science Teaching* (frequent reviewer)
2007. *Herpetological Review*
2006. *Bioscience*
2006. *Herpetological Conservation & Biology*

2005-**present**. *American Biology Teacher* (frequent reviewer)  
 2005. *Australian Journal of Zoology*  
 2005-**present**. *Emu* (frequent reviewer)  
 2005-**present**. *Physiological and Biochemical Zoology* (frequent reviewer)  
 2005. *Veterinari Medicina (International Journal for Veterinary and Biomedical Sciences)*  
 2004-**present**. *Auk* (frequent reviewer)  
 2004. *Ostrich*  
 2004. *Journal of the World Aquaculture Society*  
 2003. *Ibis*  
 2002-**present**. *Journal of Herpetology* (frequent reviewer)  
 2001. *Animal Behaviour*

### GRANTS RECEIVED

2010-2011. Faculty Professional Development Award (\$2091.28). FMU.  
 2009-2010. Faculty Professional Development Award (\$2000.00). FMU.  
 2008-2009. Faculty Professional Development Award (\$2095.58). FMU.  
 2008. Summer Research Stipend (\$4000). Principle Investigator. FMU.  
 2007-2008. Faculty Professional Development Awards (\$2197.24). FMU.  
 2007. IT Grant (\$1086). Principle Investigator. FMU.  
 2006-2007. Faculty Professional Development Award (\$2099.43). FMU.  
 2005-2006. Faculty Professional Development Award (\$1951.04). FMU.  
 2005. HP Technology for Teaching Grant (\$73,500). Principle Investigator.  
 2005. IT Grant (\$10,000). Co-investigator. FMU.  
 2004-2005. Faculty Professional Development Awards (\$1696.72). FMU.  
 2000. Gainesville Herpetological Society. Funded doctoral research.  
 1999-2004. Department of Zoology, UF. Funded graduate research and travel expenses.  
 1999. Graduate Student Council, UF. Funded travel expenses to a scientific conference (SICB).  
 1998. Department of Animal Sciences, UF. Funded Master's degree research.  
 1997. Wildlife Conservation Society. Funded Master's degree research and travel.

### GRANT PROPOSALS SUBMITTED

2008. SC Renewable Energy Grant Program. \$400,000. Principle Investigator.  
 2008. IT Grant. \$8799. FMU. Co-investigator.  
 2007. Merck/AAAS. Undergraduate research support. \$60,000. Contributor and faculty mentor.  
 2006. Microsoft. Tablet PC Technology in Higher Education. \$140,000. Principle Investigator.  
 2006. Merck/AAAS. Undergraduate research support. \$60,000. Contributor and prospective mentor.  
 2006. FMU. Summer research stipend. \$4000. Principle Investigator.  
 2005. FMU. Summer research stipend. \$4000. Principle Investigator.

### AWARDS

2003-2004. Faculty of the Year award. College of Liberal Arts and Sciences, UF.  
 2003. Graduate Student Teaching Assistant of the Year award. Department of Zoology, UF.  
 2003. *The Chronicle of Higher Education* essay competition winner.  
 2003. *New Scientist* Wellcome Trust science essay competition winner.  
 1993. Outstanding Zoology Student Award, State University of New York at Oswego.  
 1994. Outstanding Zoology Student Award, State University of New York at Oswego.

### SOCIETY MEMBERSHIPS

2007-**present**. National Science Teachers Association.  
 2007-2009. National Association of Biology Teachers.  
 1999-2000; 2003-2004. Society for Integrative and Comparative Biology

1996-1997. Wilson Ornithological Society  
 1996-1997. Cooper Ornithological Society  
 1996-1997. American Ornithological Society

#### **ACADEMIC AND COMMUNITY SERVICE**

2008-**present**. Review Panel member. National Science Teachers Association.  
 2008-**present**. Mentor. Merck/AAAS. Undergraduate research program. FMU.  
 2009. Volunteer. New student move-in. FMU.  
 2009. Faculty mentor for Dr. John Ludlam (Department of Biology). FMU.  
 2008. Volunteer. New student move-in. FMU.  
 2007. Department of Biology faculty search committee. FMU.  
 2007. Prospective faculty host, Postdoctoral Teacher Training Program, South Carolina EPSCoR / IDeA.  
 2006-**present**. General Education Assessment Committee (Biology). FMU.  
 2006-**present**. Burroughs and Chapin Environmental Data Analysis Laboratory Policy committee. FMU.  
 2006-2007. Faculty mentor for Mr. Patrick Holladay (Department of Biology). FMU.  
 2006-**present**. Microbiologist/consultant for science fair projects, Florence, SC.  
 2006. Department of Biology faculty search committee. FMU.  
 2006. Science Fair Judge. Sand Hills Region IV Science Fair, Florence, SC.  
 2005-**present**. Co-Coordinator and Co-Founder: Program for Undergraduate Research Experience. FMU.  
 2005-2009. Biological Sciences (BIOL 105L) Laboratory Co-Coordinator. FMU.  
 2005-**present**. Department of Biology 'webmaster.' FMU.  
 2005. Faculty mentor for Dr. Barbara Westphal (Department of Nursing). FMU.  
 2005. Flash animation workshop organizer. FMU.  
 2005. Science Fair Judge. Wallace Gregg Elementary, Florence, SC.  
 2005. FMU Science Colloquium speaker recruitment: Dr. Kent Vliet.  
 2004-**present**. Institutional Animal Care and Use Committee (IACUC). FMU.  
 2004-**present**. Biological Sciences (BIOL 105/106) Content Committee. FMU.  
 2004. Volunteer. New student move-in. FMU.  
 2003. Mentor. Undergraduate Scholars Program. UF.  
 2002-2003. Undergraduate Committee Representative. Department of Zoology, UF.  
 2000-2001. Undergraduate Research Assistance Program Coordinator. Department of Zoology, UF.  
 1997-1998. President. Zoology Graduate Students' Association. UF.

#### **NON-ACADEMIC EMPLOYMENT**

1994-1996. Naturalist and researcher. The Nature Conservancy, NY.  
 1994-1996. Fruit Valley Veterinary Clinic, Oswego, NY.  
 1992-1994. Naturalist and instructor. Rice Creek Field Station, NY.

#### **INDEPENDENT RESEARCHER / CONSULTANT**

2007-**present**. Advisory board member, for Carolina Bio-Fuels/Ethanol Production Plant.  
 2006. Microbiological research for new product development and patent application, for L. Drinnen.

#### **UNDERGRADUATE RESEARCH SUPERVISOR**

2009-**present**. Harrison Taylor (2 semesters, FMU), *Incidence and Prevalence of Gyrinicola batrachiensis Nematodes in Bullfrog Tadpoles; Gastrointestinal Microbiology of Amphibians*.  
 2009. Marlaina Wilkerson (2 semesters, FMU), *Development of Differential Media for Detection of Microbial Ethanol Production*.  
 2009. Rebecca Brown (1 semester, FMU), *Health-Care-Associated Fomites and Nosocomial Infections*.  
 2008. Shaquan Lyde (1 semester, FMU), *Quantitative Determination of Ethanol in Aqueous Solutions*.  
 2008. Cherub Garner (1 semester, FMU), *Quantitative Determination of Ethanol in Aqueous Solutions*.  
 2007. Nicholas Koch (1 semester, FMU), *Antibiotic Resistance in Bacteria Isolated from Human Skin*.

2007. Kirsten Hiortdahl (1 semester, FMU), *Women and Minorities in Science Grant*.  
2006-2007. Kirsten Hiortdahl (2 semesters, FMU), *Fermentation and Distillation of Fuel Ethanol*.  
2006. Katie Riley (1 semester, FMU), *Monitoring Herpetological Diversity in a Disturbed Habitat*.  
2006. Jody Rhoderick (1 semester, FMU), *Monitoring Herpetological Diversity in a Disturbed Habitat*.  
2005. Everard Armstrong (1 semester, FMU), *Anaerobic Microbiology*.  
2001-2003. Carolyn Lubner (4 semesters UF), *Prey Detoxification Behavior in Loggerhead Shrikes*.  
2001. Lynda Dirk (1 semester, UF), *Gastrointestinal Fermentation in Tadpoles*.  
2001. Jeannie Moody (1 semester, UF), *Gastrointestinal Fermentation in Tadpoles*.  
2001. Sara Pancoast (1 semester, UF), *Gastrointestinal Fermentation in Tadpoles*.

**STUDENT LAB ASSISTANT SUPERVISOR**

- 2009-2010. Mark Steadman (FMU). Microbiology laboratory preparation.  
2009-2010. Brittany Mathis (FMU). Microbiology laboratory preparation.  
2007-2009. Jennifer Smith (FMU). Microbiology laboratory preparation.