

William G Ryerson
Department of Ecology and Evolutionary Biology
University of Connecticut Unit 3043
75 N. Eagleville Rd
Storrs, CT 06269-3043
e-mail: william.ryerson@uconn.edu

Curriculum Vitae

Current Position:

Ph.D. Student, University of Connecticut, Ecology and Evolutionary Biology
Major Advisor: Dr. Kurt Schwenk
Dissertation Title: *Biomechanics of Tongue Flicking in Snakes*

Education:

University of South Florida, M.S., Biology, December 2008
Advisor: Dr. Stephen Deban
Thesis Title: *The Role of Abiotic And Biotic Factors In Suspension Feeding Mechanics Of Xenopus Tadpoles*
University of Maine, B.S., Marine Science with High Honors, May 2006
Advisor: Dr. Kevin Eckelbarger

Honors:

University of Maine:
Magna cum laude
Graduated with High Honors
Thesis Title: *Friend or Foe: The biology and ecology of a zoanthid (Cnidaria: Anthozoa) associated with Paragorgia sp. at the New England Seamounts*
Phi Beta Kappa Member
Golden Key Society Member
National Collegiate Scholar Member

Awards:

Presidential Scholar, University of Maine 2002-2006 (\$40,000)
EEB Summer Research Fellowship, University of Connecticut, 2010 (\$1,000)
EEB Summer Research Fellowship, University of Connecticut, 2011 (\$500)
EEB Vertebrate Research Award, University of Connecticut, 2010 (\$400)
EEB Vertebrate Research Award, University of Connecticut, 2011 (\$300)

Teaching:

Graduate Teaching Assistant, University of Connecticut, 2009-present:
Principles of Biology II Lab, Comparative Vertebrate Anatomy Lab and Guest Lecturer
Graduate Teaching Assistant, University of South Florida, 2006-2008:
Biology I Lab, Biology II Lab, General Physiology Lab and Lecture

Service:

Journal Referee:
Journal of Experimental Zoology Part A
Journal of Morphology
Journal of Comparative Psychology
Graduate Student Senator
2010-Present, University of Connecticut
EEB Graduate Student Association
President, 2010-Present

Invited Speaker/Seminars:

1. Snakes, and what is a snake scientist? E. Granby High School, East Granby, CT.
April 8, 2010

Peer-Reviewed Publications

1. Ryerson, W.G. and S.M. Deban. 2010. Buccal pumping mechanics of *Xenopus laevis* tadpoles: effects of biotic and abiotic factors. *J. Exp. Biol.* 213, 2444-2452.
2. Ryerson, W.G. and K. Schwenk. 2012. A simple, inexpensive system for digital image particle image velocimetry (DPIV) in biomechanics. *J. Exp Zool.* 317, 127-140 (with cover).
3. Ryerson, W.G. Mechanics of jumping in the salamander *Desmognathus ocoee*. *Copeia* (in review).
4. Ryerson, W.G., S. Horwitz, and K. Schwenk. Sidewinding in the green anaconda, *Eunectes marinus*.
5. Ryerson, W., and K. Schwenk. Kinematics of chemosensory tongue-flicking in garter snakes (*Thamnophis sirtalis*) (in prep).
6. Schwenk, K., and W. Ryerson. Biomechanics of tongue movement during chemosensory tongue-flicking in garter snakes (*Thamnophis sirtalis*) (in prep).
7. Ryerson, W., and K. Schwenk. Kinematics of terrestrial versus aquatic chemosensory tongue-flicking in water snakes (*Nerodia sipedon*) (in prep).
8. Ryerson, W., and K. Schwenk. Why snakes flick their tongues: the fluid dynamics of chemical sampling in snakes (in prep)
9. Schwenk, K., and W. Ryerson. A fluid-dynamic theory of chemical sampling during tongue-flicking in snakes. (in prep).

Posters and Presentations:

1. Ryerson, W.G. and Schwenk, K. Why snakes flick their tongues: a fluid dynamics approach. Society of Integrative and Comparative Biology Annual Meeting, 2012.
2. Ryerson, W.G. and Schwenk, K. Kinematics of tongue flicking in the garter snake, *Thamnophis sirtalis*. Society of Integrative and Comparative Biology Annual Meeting, 2011.
3. Ryerson, W.G. Jumping in the salamander *Desmognathus ocoee*. Society of Integrative and Comparative Biology Annual Meeting, 2010.
4. Ryerson, W.G. and Deban, S.M. Scaling of suspension feeding in tadpoles. Society of Integrative and Comparative Biology Annual Meeting, 2009.
5. Ryerson, W.G. and Deban, S.M. The effects of viscosity on the buccal pumping mechanism of *Xenopus laevis* tadpoles. Society of Integrative and Comparative Biology Annual Meeting, 2008.
6. Ryerson, W.G. Modulation of prey capture behavior in two species of salamander: *Desmognathus quadramaculatus* and *Plethodon jordani*. University of South Florida Graduate Research Symposium, 2007.