

## James Christian Stegen

Doctoral Candidate (Expected Graduation, Spring 2009)  
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### Education

2004-Present. University of Arizona, Ecology and Evolutionary Biology (PhD.)  
Committee: Brian Enquist, Regis Ferriere, Brian McGill, and Scott Saleska.  
2001-2004. Eastern Washington University, Biology (M.S.) Title: Predator-prey ecology  
of water mites. Committee: A. Ross Black and Flash Gibson.  
1996-2000. Central Washington University, Biology (B.A.) *Cum Laude* Advisors: Lixing  
Sun and Kristina Ernest.

### Academic Appointments

2007-. Research Associate (NSF-FIBR): University of Arizona (P.I., Regis Ferriere)  
2004-2007. Teaching Associate: University of Arizona  
2001-2004. Teaching Assistant: Eastern Washington University

### Honors and Awards

- 5 Graduate research or travel grants from the University of Arizona (2005-2007)
- 2 Graduate research grants from Eastern Washington University (2002-2003)
- Graduated *Cum Laude* from Central Washington University (2000)
- Undergraduate research grant from Central Washington University (1999)
- Undergraduate science scholarship from Central Washington University (1999)
- Best Presentation at the Central WA Univ. undergraduate research symposium (2000)

### Selected Manuscripts and Publications

- Stegen, J.C., B.J. Enquist, and R. Ferriere. Advancing the metabolic theory of diversity.  
*Ecology Letters* (*in review as an invited "Ideas and Perspectives"*).
- Stegen, J.C. and N.G. Swenson. 2009. Functional trait assembly through ecological and  
evolutionary time. *Theoretical Ecology* *in press*.
- Stegen, J.C., N.G. Swenson, and B.J. Enquist. 2009 Above-ground forest biomass is not  
consistently related to wood density or basal area in tropical forests. *Global  
Ecology and Biogeography* *in press*.
- Stegen, J.C. and E.P. White. 2008. On the relationship between mass and diameter  
distributions in tree communities. *Ecology Letters* 11: 1287-93.
- Stegen, J.C., C.M. Gienger & L. Sun. 2004. The control of color change in the Pacific  
tree frog *Hyla regilla* (Baird and Girard, 1852). *Canadian Journal of Zoology* 82:  
889-896.
- Stegen, J.C. Mechanisms underlying non-linear dynamics of predator-prey interaction  
strength and non-additive predator interactions, with emphasis on aquatic mites.  
Thesis (M.S.), Eastern Washington University.
- Connor, J., J. McLellan, C. Butler, B. Crossley, J. Arterburn, A. Hammond, A. Black, J.  
Smith, J.C. Stegen, D. O'Connor. (2002) Resident fish stock status above Chief  
Joseph and Grand Coulee dams. Project No. 1997-00400, 358 electronic pages,  
(BPA Report DOE/BP-00004619-3).
- Swenson, N.G., J.C. Stegen, C.M. Hulshof, J. Thompson, and J.K. Zimmerman.  
Stochastic and deterministic temporal turnover of the tree composition in a  
tropical rain forest: The role of phylogeny and species function. *in revision*.
- Swenson, N.G., B.J. Enquist, J. Pither, A.J. Kerkhoff, B. Boyle, J.J. Elser, W.F. Fagen,

A.T. Moles, O.L. Phillips, C.A. Price, P.B. Reich, J.C. Stegen, M.D. Weiser, I.J. Wright, S. Andelman, S. Flynn, C.M. Hulshof, P.M. Jorgensen, T.E. Lacher Jr., A. Monteagudo, M.P. Nunez Vargas, and R. Vasquez. The diversity of woody plant function across the New World. (*in revision*).

Stegen, J.C. Community assembly: The emergence of a stochastic-deterministic continuum (*in prep. for American Naturalist, mid 2009*).

### **Synergistic Activities**

- Member: Ecological Society of America
- Reviewer: Journal of Animal Ecology, PLoS1, Ecology, Functional Ecology, and Marine Ecology Progress Series.
- Academic Editor: PLoS1
- Content specialist for Tucson elementary schools FOSS science program (2007)
- Service learning outreach scientist for Central Washington University (1996-1997)
- Guest Lecturer: Ichthyology, Univ. of AZ; General Biology, Eastern Wash. University
- Teaching Assistant: Mammalogy, Marine Biology, Marine Discovery, Ichthyology, Aquatic Ecology, Ichthyology, Plant Physiology, Botany, Microbiology

### **First Author Research Presentations**

- Merging metabolic theory with ecology to link the kinetic effects of temperature to species richness gradients (*Ecological Society of America, August 2008*)
- Advancing the metabolic theory of diversity by unifying ecology and evolution (*Gordon Research Conference: The Metabolic Basis of Ecology, July 2008*)
- Advancing the metabolic theory of diversity by unifying ecology and evolution (*Gordon Research Seminar: The Metabolic Basis of Ecology, July 2008*)
- Community assembly: The eco-evolutionary emergence of a stochastic-deterministic continuum (*Invited presentation: Washington University, June 2008*)
- Mechanic explanations of global biodiversity-temperature gradients (*Departmental Seminar, University of Arizona, May 2008*)
- Evolution of tissue stoichiometry in a food web context (*Departmental Seminar, University of Arizona, November 2007*)
- Stoichiometry and body size evolution in model food webs (*Ecological Society of America, August 2007*)
- Variation in above-ground forest biomass across broad climatic gradients (*Gordon Research Conference, June 2006*)
- Latitudinal gradients in the frequency of mutualisms in woody plant communities (*Ecological Society of America, August 2005*)
- Predicting the strength of trophic interactions from predator-prey body size relationships (*Departmental Seminar, University of Arizona, December 2004*)
- Latitudinal patterns of mutualisms (*Departmental Seminar, University of Arizona, October 2004*)
- The predator-prey relationship between water mites (*Piona* sp.) and the zooplankton of small ponds (*Ecological Society of America, August 2003*)
- The predator-prey relationship between water mites (*Piona* sp.) and the zooplankton of small ponds (*American Society of Limnology and Oceanography, February 2003*)
- The control of color change in the Pacific tree frog *Hyla regilla* (Baird and Girard, 1852) (*Pacific Ecology Conference, February, 2002*)
- The control of color change in the Pacific tree frog *Hyla regilla* (Baird and Girard, 1852) (*Central WA Univ. undergraduate research symposium, Spring 2000*)