

## CURRICULUM VITAE

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### Education

PhD: University of Georgia, May 2008. Ecology.

**Dissertation:** Invasion by the non-native earthworm *Amyntas agrestis* (Oligochaeta: Megascolecidae): dynamics, impacts, and competition with millipedes (Diplopoda).  
Dr. Paul F. Hendrix, advisor.

MS: University of Wisconsin - Green Bay, May 2004. Environmental Science and Policy.

**Thesis:** Development of a Sampling Protocol for Millipedes (Diplopoda).  
Dr. Michael L. Draney, advisor.

BS: University of Wisconsin - Green Bay, May 2002.

Major in Environmental Science, Emphasis in Ecology and Biological Resources Management;  
Major in Biology, Emphasis in Field Biology and Ecology  
Minor in Chemistry

### Appointments

2009 - present. Instructor. Division of Biology, Kansas State University.

2009 - present. Program Coordinator, Research Experience for Undergraduate Site: Ecology, Evolution, and Genomics of Grassland Organisms. Division of Biology, Kansas State University and Konza Prairie Biological Station LTER.

### Refereed Publications

Richardson, DR, **Snyder, BA**, and PF Hendrix. 2009. Soil moisture and temperature: tolerances and optima for a non-native earthworm species, *Amyntas agrestis* (Oligochaeta: Opisthoptera: Megascolecidae). *Southeastern Naturalist* 8: 325-334.

**Snyder, BA**, Boots, B, and PF Hendrix. 2009. Competition between invasive earthworms (*Amyntas corticis*, Megascolecidae) and native North American millipedes (*Pseudopolydesmus erasus*, Polydesmidae): Effects on carbon cycling and soil structure. *Soil Biology & Biochemistry* 41: 1442-1449.

**Snyder, BA** and ML Draney. 2008. Additional records of spiders, harvestmen, millipedes, and isopods of Toft Point Natural Area, Door County, Wisconsin. *The Great Lakes Entomologist* 41: 80-85.

**Snyder, BA** and PF Hendrix. 2008. Current and potential roles of soil macroinvertebrates (earthworms, millipedes, and isopods) in ecological restoration. *Restoration Ecology* 16: 629-636.

Hendrix, PF, Callaham Jr, MA, Drake, J, Huang, C-Y, James, SW, **Snyder, BA**, and W Zhang. 2008. Pandora's box contained bait: the global problem of introduced earthworms. *Annual Reviews of Ecology, Evolution, and Systematics* 39: 593-613.

**Snyder, BA.** 2008. A preliminary checklist of the millipedes (Diplopoda) of the Great Smoky Mountains National Park, USA. *Zootaxa* 1856: 16-32.

**Snyder, BA,** Draney, ML, and P Sierwald. 2006. Development of a Sampling Protocol for Millipedes (Diplopoda). *Journal of Insect Conservation* 10: 277-288.

**Snyder, BA,** Draney, ML, Kaspar, JL, and J Whitehouse. 2004. Preliminary survey of the terrestrial isopods (Isopoda), millipedes (Diplopoda), harvestmen (Opiliones), and spiders (Araneae) of Toft Point Natural Area, Door County, Wisconsin. *The Great Lakes Entomologist* 37: 105-115.

#### **Publications - In Press**

**Snyder, BA,** and C Seewagen. 2010. First record of the millipede *Cleidogona nantahala* Shear, 1972 (Chordeumatida: Cleidogonidae) for New York State, USA. *Entomological News*, in press.

Zhang, W, Hendrix, PF, **Snyder, BA,** Molina, M, Li, J, Rao, X, Siemann, E, and S Fu. 2010. Dietary Flexibility Aids Asian Earthworm Invasion. *Ecology*, in press.

#### **Publications - In Review**

**Snyder, BA,** Callaham Jr, MA, and PF Hendrix. Dynamics and effects of non-native earthworm invasion in the Great Smoky Mountains National Park, USA. *Biological Invasions*, in revision.

#### **Publications - In Preparation**

**Snyder, BA,** Callaham Jr, MA, Lowe, CN, Rostkowski, SC, Seader, K, and PF Hendrix. Competition between non-native earthworms (*Amyntas* spp., Megascolecidae) and native millipedes (*Sigmoria ainsliei*, Polydesmida: Xystodesmidae). To be submitted to *Pedobiologia*.

Boots, B, **Snyder, BA,** and PF Hendrix. Invasive earthworms affect soil C and <sup>13</sup>C turnover from two different litter types, a microcosm study. To be submitted to *Pedobiologia*.

Blackmon IV, JH, **Snyder, BA,** Callaham Jr, MA, and Nichols, B, PF Hendrix. Temperature as an environmental cue for *Amyntas agrestis* hatchling emergence. To be submitted to *Southeastern Naturalist*.

Bartels, PJ, Zank, B, and **BA Snyder.** The ecology of soil-dwelling tardigrades in the Great Smoky Mountains National Park. To be submitted to *Southeastern Naturalist*.

## **Relevant Employment**

Lab Helper - Tom Maddox, Analytical Chemistry Laboratory, University of Georgia (January 2009): Processing of samples for isotopic analyses.

Arthropod Technician - Chad Seewagen, Wildlife Conservation Society/Bronx Zoo (September - October 2008): Invertebrate sampling and determination.

Research Assistant - Dr. Paul Hendrix, University of Georgia (August 2004 - May 2008): Millipede and native and non-native earthworm biology, ecology, and taxonomy.

Research Assistant - Dr. Mike Draney, UW-Green Bay (March 2002 - May 2004): Litter sample and pitfall trap processing; determination and curation of arthropods.

Collections Assistant - Dr. Petra Sierwald, Field Museum of Natural History (Summer 2002): Determination and curation of millipedes; Microsoft Access database entry.

Arboretum Ranger - Dr. Bob Howe, Cofrin Arboretum Center for Biodiversity (April 2001 - November 2001): Policy enforcement, plant control, and trail maintenance.

Research Assistant - Dr. Jeff Nekola, UW-Green Bay (September 2000 - May 2001). Processing litter samples for terrestrial snails.

## **Teaching Experience**

Guest Lab Instructor (Fall 2008) - Soil Ecology graduate course, University of Georgia.

Undergraduate mentoring (2004-2008) - Research Experience for Undergraduates students R. Richardson, S. Rostkowski, and C. Hansen.

Adjunct Faculty (Summer 2007 and 2008) - Smoky Mountains Science Teacher Institute, Great Smoky Mountains Institute at Tremont: Taught courses on millipede biology, ecology, and identification.

Instructor (Summer 2007) - Georgia Agricultural Education Program: Developed taxonomy curriculum and co-taught course on earthworm biology, ecology, and biogeography for high school educators.

Guest Lab Instructor (Fall 2006) - Soil Ecology graduate course, University of Georgia.

Adjunct Instructor (Spring 2005) - Gainesville College: Environmental Science Lecture and Lab.

Adjunct Instructor (Spring 2004) - Department of Natural and Applied Sciences, UW-Green Bay: General Chemistry.

Teaching Assistant: Department of Natural and Applied Sciences, UW-Green Bay (August 2002 - May 2004): General and Introductory Chemistry.

## **Research Support**

Research Experiences for Undergraduates (REU) Site: Ecology, Evolution, and Genomics of Grassland Organisms - National Science Foundation - Biological Infrastructure (DBI) (2009-2011). PI: BA Snyder, Co-PI: BK Sandercock, \$210,719.

Collaborative research: Survey of the earthworms and other soil macroinvertebrates of unglaciated eastern North America. PI's: Paul Hendrix (University of Georgia), Mac Callaham (US Forest Service), Sam James (Kansas University Natural History Museum). Submitted to National Science Foundation - Biotic Inventory Program, January 2009, \$1,231,233. [Declined]

Backlogged specimen set processing: Millipedes. - Discover Life in America (2008). \$7,200

Rediscovering the little known earthworms and millipedes of eastern Louisiana and southern Mississippi. - Field Museum of Natural History (2006-2007). Reimbursement of expenses, ~\$2,300

Development of a Sampling Protocol for Millipedes (Diplopoda). - Milwaukee Zoological Society (2003). \$1,000

Nutrient Determination of Surface Waters within the Cofrin Arboretum - Cofrin Arboretum Center for Biodiversity Grant Program (Summer 2002). Coinvestigator: Derek Behmke. Faculty Advisors: Dr. Mike Zorn and Dr. Tara Reed. \$500

A Survey of the Terrestrial Non-Insect Arthropods of Toft Point Natural Area - Cofrin Arboretum Center for Biodiversity Grant Program (Summer 2001). Faculty Advisor: Dr. Mike Draney. \$1,000

## **Invited Presentations**

**Snyder, BA.** Invasion of southern Appalachian forest soils by nonnative earthworms: should we be concerned? Oral presentation, Coweeta Hydrologic Laboratory, February 2009.

**Snyder, BA.** Right under our feet: how invasive earthworms impact the southern Appalachians. Oral presentation, North Carolina State Museum, November 2008.

**Snyder, BA.** Effects of the non-native invasive earthworm *Amyntas agrestis* in the Great Smoky Mountains National Park (NC/TN, USA). Seminar, University of Wisconsin - Green Bay, November 2007.

**Snyder, BA.** An introduction to earthworms. Guest lecture to Soil Ecology graduate course, University of Georgia, October 2006.

**Snyder, BA.** Millipede basics: biology, ecology, and diversity. Guest lecture to Soil Ecology graduate course, University of Georgia, October 2006.

### **Presentations at Professional Meetings**

**Snyder, BA**, Callaham Jr., MA (presenter), Lowe, CN, Rostkowski, SC, and PF Hendrix.

Interactions between the invasive earthworm *Amyntas agrestis* (Megascolecidae) and the North American millipede *Sigmoria ainsliei* (Xystodesmidae). Oral presentation, XV International Colloquium on Soil Zoology. August 2008.

**Snyder, BA**, Callaham Jr., MA, Huang, C-Y, and PF Hendrix. Effects of Native and Exotic Earthworms on Soil Properties in North American Forests. Oral presentation, North American Forest Soils Conference. June 2008.

**Snyder, BA**, Blackmon, JH, and PF Hendrix. The status of knowledge on earthworms and millipedes in GSMNP: How far has *Amyntas agrestis* invaded? Oral presentation, All-Taxa Biodiversity Inventory Conference. December 2007.

**Snyder, BA**. Interactions of earthworms and millipedes in the Great Smoky Mountains National Park: a beginning in diplopodology. Oral presentation, A Lifetime of Contributions to Myriapodology and the Natural History of Virginia: A Symposium in honor of Richard L. Hoffman's 80<sup>th</sup> Birthday. September 2007.

Rostkowski Jr., SC, Callaham Jr., MA, **Snyder, BA**, Gardiner, ES, and JA Stanturf. Effects of differing restoration methods on bottomland hardwood litter arthropods. Poster presentation, Ecological Society of America Annual Meeting. August 2007.

**Snyder, BA** and PF Hendrix. Earthworms, millipedes, isopods, and...restoration? Oral presentation, Soils and Restoration Ecology Conference. December 2006.

**Snyder, BA** and PF Hendrix. Status of an exotic earthworm invasion and a review of earthworm and millipede diversity. Oral presentation, All-Taxa Biodiversity Inventory Conference. December 2006.

**Snyder, BA**, Hendrix, PF, and MA Callaham Jr. Effects of the invasive exotic earthworm *Amyntas agrestis* on native taxa: are species invasions a threat to biodiversity? Oral presentation, International Symposium on Earthworm Ecology. September 2006.

Callaham Jr., MA, **Snyder, BA**, James, SW, and PF Hendrix. Biogeography of the genus *Diplocardia* with reference to the calciferous gland. Poster presentation, International Symposium on Earthworm Ecology. September 2006.

**Snyder, BA**, Hendrix, PF, and MA Callaham Jr. An upstart in iconic territory: Effects of the invasive exotic earthworm *Amyntas agrestis* (Annelida:Megascolecidae) on native taxa. Oral presentation, Ecological Society of America. August 2006.

Hendrix, PF, Huang, C-Y, and **BA Snyder**. Exotic earthworm invasions: extent, mechanisms, impacts and mitigation. Keynote address, Latin-American Meeting on Oligochaeta Ecology and Taxonomy (ELAETEO). November 2005.

**Snyder, BA** and ML Draney. A Survey of the terrestrial non-insect macroarthropods of Toft Point Natural Area, Wisconsin. Poster presentation, American Arachnological Society. June 2002.

### **Honors and Awards**

The National Scholars Honor Society. 2008.

The Honor Society of Phi Kappa Phi. 2008.

Who's Who in America, 2009 edition.

Dean's List (Semester Honors), UW-Green Bay: Fall 2000, Spring 2001, Spring 2002.

Eagle Scout. 1997.

### **Professional Activities**

Development of online identification guide to the earthworms of North America.

<http://www.discoverlife.org/mp/20q?guide=Earthworms>

Contributor to Mitchell, JC, Walls, SC, and W Gibbons. 2010. Salamanders of the Southeast. University of Georgia Press. In press.

Research Associate: Field Museum of Natural History, Chicago, IL, 2009 - present.

Student Research Associate: Field Museum of Natural History, Chicago, IL, 2004 - 2009.

Reviewer: Soil Biology & Biochemistry.  
The Great Lakes Entomologist.  
Australian Journal of Entomology.  
Diversity.  
Applied and Environmental Soil Science.  
European Journal of Entomology.  
Forest Ecology and Management.  
Pedosphere.  
European Journal of Soil Biology.  
Acta Oecologica.  
Memoirs of the Virginia Museum of Natural History.

Volunteer: USDA Forest Service, with Dr. Mac Callaham. 2005 - 2009.  
Dunwoody Nature Center. Environmental Science Merit Badge Workshop. 2008.  
Discover Life In America / All-Taxa Biodiversity Inventory Conference. 2008.

Member: Centre International de Myriapodologie. 2007 - present.  
Great Smoky Mountains Association. 2008 - present.  
The Nature Conservancy. 2005 - present.  
Sierra Club. 2004 - present.

Outreach/Citizen Science/Extension:

“Millipede March” citizen science project, Great Smoky Mountains Institute at Tremont.

Instruction in earthworm taxonomy.

Ongoing determinations of millipedes, isopods, and earthworms.

Determined millipedes and terrestrial isopods for Boston Harbor Islands ATBI.

Contributed to Bioblitz at Yellowstone National Park.