

**Jessa L. Watters, M.S.**  
Sam Noble Museum  
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### **Education:**

- *M.S.* in Zoology, University of New Hampshire, Durham, NH (May 2006)
  - Advisor: Dr. James Taylor. Research interests include: herpetology, ecology, and animal behavior. Thesis research conducted at the American Museum of Natural History Southwestern Research Station on foraging behavior in two lizard species.
- *B.A.* in Biology, Earlham College, Richmond, IN (May 2001); graduated with college and departmental honors

### **Curatorial Experience**

Sam Noble Oklahoma Museum of Natural History, Norman, OK

- Collection Manager, Herpetology Collection (June 2009–present)
  - Oversee daily curation, databasing, and cataloging of 56,000+ specimens, maintain archives, supervise volunteers and students, manage budget, organize field expeditions
- Collection Manager, Recent Invertebrates Collection (November 2012–July 2013)
  - Assist in databasing and cataloging the growing invertebrate collection (250,000+ specimens)

Earlham College, Richmond, IN (August 2000–May 2001)

- Joseph Moore Museum assistant:
  - Curator/Designer of museum exhibit about life on the African savanna
  - Museum Tour Guide

### **Teaching Experience**

Project Dragonfly, Miami University, Miami, OH (August 2009–December 2012)

- Adjunct Faculty (Global Field Program; Advanced Inquiry Program) [Online program for adults to obtain a Masters in Teaching or Masters in Zoology part-time]
  - Online: Conservation Science and Community; Issues in Biodiversity; Issues in Evolution; Master's Capstone
  - On-site in Baja California, Mexico: Master's Field Methods

Earlham College, Richmond, IN (August 2008–May 2009)

- Visiting Assistant Professor of Biology: Ecological Biology (BIOL 111); Biodiversity (BIOL 226); Evolution (BIOL 451); Population and Community Ecology (BIOL 455); Senior Seminar (BIOL 480)

The Grier School, Tyrone, PA (August 2006–May 2008)

- High School Science Teacher: Advanced Placement (AP) Biology; Honors Biology; General Biology; Zoology; Ecology; Anatomy and Physiology

Center for Talented Youth (Johns Hopkins), Roger Williams University, Bristol, RI (June 2007–July 2007)

- Instructor: Zoology

University of New Hampshire, Durham, NH (August 2003–July 2006)

- Laboratory Instructor: Anatomy and Physiology
- Teaching Assistant: General Ecology; Animal Behavior; Anatomy and Physiology
- Study Session Leader and Coordinator: Principles of Biology I and II
- Private Tutor: Animal Science Anatomy and Physiology

McWilliams/Freedman Family, Durham, NH (January 2005–May 2006)

- Private Biology Teacher
  - Developed a curriculum for teaching a teenaged home-schooled student, including weekly reading and homework assignments, lab and/or discussion exercises, and tests. Topics covered: Human Biology; Ecology; Conservation Biology; Animal Behavior; Molecular Biology and Genetics

Earlham College, Richmond, IN (August 1998–May 2001)

- Teaching Assistant: Ecological Biology; Invertebrate Zoology

### **Conservation Experience**

Aquacheck Water Testing Laboratory, Perkins, VT (October 2002–August 2003)

- Lab Analyst: Examined drinking water and waste water quality, including Biochemical Oxygen Demand (BOD), nitrate/nitrites, ammonia, pH, iron, copper, hardness/alkalinity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), and fecal coliform testing

The SeaCrest Group, Louisville, CO (July 2001–July 2002)

- Environmental Lab Technician: Inspected water quality and toxicity levels in the water of industrial companies and municipalities in Colorado, and cultured the organism (the Fathead Minnow) used in these tests

Union Co. Cooperative Extension, Ohio State University, Marysville, OH (June 1997–August 1997)

- Program Assistant: Helped to design and implement educational programs for the public about a local conservation site, the Darby Creek Watershed

### **Education and Outreach Development**

Sam Noble Oklahoma Museum of Natural History, Norman, OK

- Developed a new citizen science program: Oklahoma Infectious Disease Citizen Science Project [<http://cameronsiler.com/citizen-science/>] (February 2016–present)
- Designed and conducted new museum outreach program: Save the Frogs Day (April 2011–May 2015)
- Created new secondary school program offering: In Deep Water (Spring 2012)
- Science Mentor in education programs: Math–Science Partnership (June 2014); SciencEscape (March 2010, 2013, 2014); Science Institute (June 2011–2013; July 2015–2016); Career Quest (November 2009)
- Regular participant in museum outreach events: Science in Action (February 2010–2013; September 2014–2016) and Member’s Night (October 2009–2011)

University of Oklahoma, Norman, OK

- Field Sampling Techniques (METR/PBIO 4970/5970): Guest Lecturer; twice per summer session (May 2017)
- Concepts in Biology (BIOL 1005): Guest Lecturer; twice per semester (April and November 2011–present)

Liberia Teacher Training Program (LTTP), funded by USAID (June 2008)

- Curriculum Consultant Subcontractor: Plant Classification; Simple Experiments: Developed lesson plans and associated materials for science instructors in Liberia to educate other teachers.

## **Student Mentoring and Training**

Sam Noble Oklahoma Museum of Natural History, Norman, OK

- Supervised and trained 2–14 undergraduate curatorial volunteers per semester (May 2009–present)
- Supervised a total of 16 undergraduate researchers; publications and presentations with undergraduates are indicated below by an \* (September 2013–present)

## **Professional Service**

Sam Noble Oklahoma Museum of Natural History, Norman, OK (June 2009–present)

- Committee member: Collection Management Policy; May Day Emergency Preparedness; Save the Frogs Day (co–chair); Science in Action Day; Ad-hoc Position Search Committees
- Council member: OU Informational Staff Association
- Oklahoma Biodiversity Network member

Earlham College, Richmond, IN (August 2008–May 2009)

- Committee member: Invertebrate Biologist Tenure Track search; Physiologist Tenure Track search

The Grier School, Tyrone, PA

- Acting Department Chair (January 2008–May 2008): Mentored other science teachers, managed departmental budget

## **Research Skills and Training**

Field Experience

- Oklahoma (statewide), USA (May 2009–present)
- Allen’s Cays, Exumas Islands, Bahamas (March 2000; May 2016)
- Deland, Florida, USA (August 2008)
- Southwestern Research Station (SWRS), Arizona, USA (May–July 2004–2005)
- Galapagos Islands, Ecuador (May–June 2001)
- Mountain Lake Biological Station (MLBS), Virginia, USA (June–August 2000)
- Sand Hills, Nebraska, USA (May–July 1999)

Editorial Experience

- Associate Editor for Journal for North American Herpetology (January 2013–present)
- Periodic anonymous reviewer for: Herpetological Review, Journal of Ethology, Journal of Zoology, Southwestern Naturalist (September 2009–present)

Curatorial skills

- Extensive knowledge of curatorial and archival practices for a fluid–based life sciences collection
- Experience with taxonomy and systematics of worldwide reptiles and amphibians
- Strengths in informal education curriculum design and outreach planning
- Proficiency in a variety of software programs: FileMaker Pro; Microsoft Office; SYSTAT; Adobe Acrobat Creative Suite

Training

- Herpetological Communication Workshop entitled “Distilling your message: Putting yourself into your science” – Society for the Study of Amphibians and Reptiles, Annual Meeting (Aug. 2015).
- Wet Collections Digitization Workshop, Lawrence, KS – Institute for Digital Information and Scientific Communication (iDigBio) (March 2013)
- Foundations in Management – Employee Relations and Development, University of Oklahoma, Norman, OK (February 2013)

- Grant Writing Workshop: Life Sciences – Center for Research and Program Development & Enrichment, University of Oklahoma, Norman, OK (September–October 2012)
- Northern Conservation Center online courses
  - MS214 Collection Management Databases (September 2012)
  - MS209 Collection Management Policies for Museums and Related Institutions (September 2011)
- EVO101 “Teaching Evolution in the Classroom” – Evolution 2011 Conference, Norman, OK (June 2011)
- Georeferencing Workshop – Society for the Preservation of Natural History Collections, Ottawa, Canada (June 2010)

### Research Publications:

- Siler, C.D., D.R. Davis, **J.L. Watters**, E.S. Freitas, O.W. Griffith, J.W. Binaday, A.H.T. Lobos, A.K. Amara, and R.M. Brown. (2017). The first record of the *Pseudogeckko brevipes* Complex from the northern Philippines, with description of a new species. *Herpetologica* 73: 162–175.
- Marhanka, E.C.\*, **J.L. Watters**, N.A. Huron, S.L. McMillin\*, C.C. Winfrey\*, D.J. Curtis, D.R. Davis, J.K. Farkas, J.L. Kerby, and C.D. Siler. (2017). Detection of high prevalence of *Batrachochytrium dendrobatidis* in amphibians from southern Oklahoma, USA. *Herpetological Review* 48: 70–74.
- **Watters, J.L.**, R.L. Flanagan\*, D.R. Davis, J.K. Farkas, J.L. Kerby, M.J. Labonte\*, M.L. Penrod\*, and C.D. Siler. 2016. Screening natural history collections for historical presence of *Batrachochytrium dendrobatidis* from anurans in Oklahoma, USA. *Herpetological Review* 42: 214–220.
- Davis, D.R., A.D. Geheber, **J.L. Watters**, M.L. Penrod\*, K.D. Feller\*, A. Ashford\*, J. Kouri\*, D. Nguyen\*, K. Shauberger\*, K. Sheatsley\*, C. Winfrey\*, R. Wong\*, M.B. Sanguila, R.M. Brown and C.D. Siler. 2016. Additions to Philippine slender skinks of the *Brachymeles bonitae* complex (Reptilia: Squamata: Scincidae) III: a new species from Tablas Island. *Zootaxa* 4132: 30–43. Doi: <http://www.mapress.com/j/zt/article/view/zootaxa.4132.1.3/6606>
- Siler, C.D., D.R. Davis, E.S. Freitas, N.A. Huron, A.D. Geheber, **J.L. Watters**, M.L. Penrod\*, M. Papes, A. Amrein\*, A. Anwar\*, D. Cooper\*, T. Hein\*, A. Manning\*, N. Patel\*, L. Pinaroc\*, A.C. Diesmos, M.L. Diesmos, C.H. Oliveros and R.M. Brown. 2016. Additions to Philippine slender skinks of the *Brachymeles bonitae* complex (Reptilia: Squamata: Scincidae) II: a new species from the northern Philippines. *Zootaxa* 4132: 15–29. Doi: <http://www.mapress.com/j/zt/article/view/zootaxa.4132.1.2/6607>
- Geheber, A.D., D.R. Davis, **J.L. Watters**, M.L. Penrod\*, K.D. Feller\*, C.S. Davey\*, E.D. Ellsworth\*, R.L. Flanagan\*, B.D. Heitz\*, T. Moore\*, M.D.C. Nguyen\*, A. Roberts\*, J. Sutton\*, M.B. Sanguila, C.W. Linkem, R.M. Brown and C.D. Siler. 2016. Additions to Philippine slender skinks of the *Brachymeles bonitae* complex (Reptilia: Squamata: Scincidae) I: a new species from Lubang Island. *Zootaxa* 4132: 1–14. Doi: <http://www.mapress.com/j/zt/article/view/zootaxa.4132.1.1/6605>
- **Watters, J.L.**, S.T. Cummings\*, R.L. Flanagan\*, and C.D. Siler. 2016. Review of morphometric measurements used in anuran species descriptions and recommendations for a standardized approach. *Zootaxa* 4072: 477–495. Doi: <http://doi.org/10.11646/zootaxa.4072.4.6>
- Diesmos, A.C., **J.L. Watters**, N.A. Huron, D.R. Davis, A.C. Alcala, R.I. Crombie, L.E. Afuang, G. Gee-Das, R.V. Sison, M.B. Sanguila, M.L. Penrod\*, M.J. Labonte\*, C.S. Davey\*,

E. A. Leone\*, M.L. Diesmos, E.Y. Sy, L.J. Welton, R.M. Brown, and C.D. Siler. 2015. Amphibians of the Philippines, Part I: Checklist of the Species. Proceedings of the California Academy of Sciences, Series 4, 62 (3:20): 457–539.

- Davis, D.R., **J.L. Watters**, G. Köhler, C. Whittsett, N.A. Huron, R.M. Brown, A.C. Diesmos, and C.D. Siler. 2015. Redescription of the rare Philippine false gecko *Pseudogekko brevipes* (Reptilia: Squamata: Gekkonidae) and description of a new species. Zootaxa 4020: 357–374. Doi: <http://dx.doi.org/10.11646/zootaxa.4020.2.7>
- **Watters, J.L.** and C.D. Siler. 2014. Preliminary quantifications of curator success in life science natural history collections. CLS Journal for Museum Studies 8(1): 21–33.
- Siler, C.D., L.J. Welton, **J.L. Watters**, D.R. Davis, C.S. Davey\*, A.C. Diesmos, and R. M. Brown. 2014. Taxonomic revisions of the *Pseudogekko compressicarpus* complex (Reptilia: Squamata: Gekkonidae), with descriptions of three new species. Herpetological Monographs 28: 110–139.
- Siler, C.D., C.W. Linkem, K. Cobb, **J.L. Watters**, S. T. Cummings\*, A.C. Diesmos, and R. M. Brown. 2014. Taxonomic revision of the semi-aquatic skink *Parvosцинus leucospilos* (Reptilia: Squamata: Scincidae), with description of three new species. Zootaxa 3847(3): 388–412. Doi: <http://dx.doi.org/10.11646/zootaxa.3847.3.4>
- **Watters, J.L.** 2010. A test of optimal foraging and the effects of predator experience in the lizards *Sceloporus jarrovi* and *Sceloporus virgatus*. Behaviour 147: 933–951.
- **Watters, J.L.** 2009. Daily activity budgets for neonate and adult *Sceloporus jarrovi* and adult *Sceloporus virgatus* in southeastern Arizona. Journal of Herpetology 43: 665–675.
- **Watters, J.L.** 2008. Comparison of two diet collection methods in the lizards, *Sceloporus jarrovi* and *Sceloporus virgatus*. Herpetological Review 39: 307–310.
- **Watters, J.L.** 2006. Foraging Behavior in Two Lizard Species: *Sceloporus virgatus* and *Sceloporus jarrovi*. — Unpubl. master's thesis. University of New Hampshire, Durham, NH.

### Natural History and Geographic Distribution Publications

- Davis, D.R., M.B. Sanguila, J.C. Brown, R.M. Brown, K.A. Cobb, P. Bergmann, G. Morinaga, N.A. Huron, **J.L. Watters**, and C.D. Siler. 2015. Natural History Notes: *Pseudogekko ditoy* (Leyte Diminutive False Gecko). Morphology. Herpetological Review 46: 634–635.
- Sanguila, M.B., N.D.C. Realubit, M.L. Diesmos, A. Lorenzo II, A. De Layola, J.C. Brown, K.A. Cobb, P. Bergmann, G. Morinaga, E.S. Freitas, N.A. Huron, and **J.L. Watters**. 2015. Geographic Distribution: *Pelophryne lighti* (Mindanao Flathead Toad). Herpetological Review 46: 380.
- Iverson, J.B., D. Hearne, **J. Watters**, D. Croshaw, and J. Larson. 2000. *Cheylidra serpentina*. Density and biomass. Herpetological Review 31: 238.

### Research Presentations:

- **Watters, J.L.**, C.D. Siler, T. Yuri, and L. Souza. Detecting Native Aquatics Network (DNANet)—A novel biodiversity freshwater monitoring program for native aquatic and semi-aquatic species using Environmental DNA. Southwestern Association of Naturalists, Lawton, OK (April 13–16, 2017). [poster]
- Ellsworth, E.D. **J.L. Watters**, D.R. Davis, J.K. Farkas, and C.D. Siler. Ranavirus Detection in Southeastern Oklahoma. Southwestern Association of Naturalists, Lawton, OK (April 13–16, 2017). [poster]
- **Watters, J.L.** and C.D. Siler. Oklahoma Amphibian Infectious Disease Sampling: Preliminary Results and Future Recommendations. Oklahoma Natural Resources Conference, Tulsa, OK (February 22–24, 2017). [oral]

- **Watters, J.L.** and C.D. Siler. Citizen Science Involvement in Oklahoma Amphibian Infectious Disease Screening. Oklahoma Biodiversity Network Forum, Edmond, OK (February 4, 2017). [poster]
- **Watters, J.L.** 2016. Amphibian infectious disease in Oklahoma. Oklahoma Biodiversity Network Forum, Norman, OK (March 5, 2016). [oral]
- **Watters, J.L.**, S. Sekscienski, and C.D. Siler. 2015. Development of new collaborative and citizen science projects for infectious disease sampling in Oklahoma. Society for the Study of Amphibians and Reptiles, Annual Meeting, Lawrence, KS (July 30–Aug. 3, 2015). [poster]
- Flanagan, R.L.\*, **J.L. Watters**, and C.D. Siler. 2015. Preliminary screening of natural history collections for historical presence of amphibian infectious disease in Oklahoma. Society for the Study of Amphibians and Reptiles, Annual Meeting, Lawrence, KS (July 30–Aug. 3, 2015). [poster]
- **Watters, J.L.** and C.D. Siler. 2014. Quantifying curator success in life science natural history collections. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN (July 30–Aug. 3, 2014). [poster]
- **Watters, J.L.** 2006. Optimal foraging behavior and diet overlap in two ambush predators in southeastern Arizona: *Sceloporus jarrovi* and *Sceloporus virgatus*. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA (July 12–17, 2006). [oral]
- **Watters, J.L.** 2006. Investigations into optimal prey profitability and prey choice in two Sceloporine lizards in southeastern Arizona. Southwestern Association of Naturalists annual conference, Colima, Mexico (April 13–15, 2006). [oral]

#### **Honors, Awards and Grants:**

- University of Oklahoma – Staff Development Fund – \$400 (June 2017)
- Sam Noble Museum – Head Curator Fund – \$400 (June 2017)
- Co-PI: Detecting Native Aquatics Network (DNANet)—A novel biodiversity freshwater monitoring program for native aquatic and semi-aquatic species using Environmental DNA – \$134,235 (October 2016–December 2019).
- Co-PI: Oklahoma Department of Wildlife Conservation (ODWC) – Tracking the emergence of infectious disease among amphibian species of greatest conservation need—Amphibian surveys of Wildlife Management Areas in Oklahoma to determine current distribution, status, and health of native communities – \$89,560 (January 2015–December 2017)
- Co-PI: Oklahoma City Zoo, Conservation Action Now (CAN) – Seasonal variation in *Batrachochytrium dendrobatidis* (*Bd*) and Ranavirus detection in amphibians in central Oklahoma – \$2500 (January 2015–December 2015)
- University of Oklahoma – Staff Development Fund – \$400 (July 2015)
- University of Oklahoma – Staff Development Fund – \$400 (July 2014)
- Sam Noble Museum – Head Curator Fund – \$600 (July 2014)
- University of Oklahoma – Staff Development Fund – \$160 (April 2014)
- Sam Noble Museum – Head Curator Fund – \$400 (August 2012)
- Sam Noble Museum – Head Curator Fund – \$400 (August 2011)
- Sam Noble Museum – Head Curator Fund – \$600 (May 2010)
- University of New Hampshire – Graduate School Travel Award – \$200 (April 2006)
- University of New Hampshire – Zoology Department Travel Award – \$150 (April 2006)
- American Museum of Natural History – SWRS Student Support Fund – \$564 (May 2005)
- American Society of Ichthyologists and Herpetologists – Gaige Fund Award – \$500 (April 2005)
- University of New Hampshire Graduate School – Summer Teaching Fellowship – \$3000

(July 2004)

- Graduated with College and Departmental Honors from Earlham College (May 2001)
- Earlham College – Millard S. Markle Award – \$100 (April 2001)

**Professional Memberships**

- American Society of Ichthyologists and Herpetologists (ASIH)
- Society for the Study of Reptiles and Amphibians (SSAR)
- Society for the Preservation of Natural History Collections (SPNHC)
- Southwestern Association of Naturalists (SWAN)