

# Julie M. Ray

## Curriculum Vitae

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La MICA Biological Station  
El Copé, Coclé, Republic of Panama  
[julie.ray@lamica.org](mailto:julie.ray@lamica.org)

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### EDUCATION

- PhD Doctorate of Philosophy in Ecological Sciences – Old Dominion University** (December 2009)  
Dissertation: Ecology of a Neotropical arboreal snake assemblage and diet and defensive tactics of New World mollusk-eating snakes.
- MS Masters of Science in Biological Sciences – Northern Illinois University** (May 2004)  
Thesis: Temporal Variation in Color Pattern and Ecological Effects of the Exotic Round Goby on Lake Erie watersnakes, *Nerodia sipedon insularum*
- BS Bachelors of Science – University of Wisconsin – Stevens Point** (May 2000)  
Biology Major and Broad Field Science Minor

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### RELEVANT PROFESSIONAL EXPERIENCE

#### Research Associate / Adjunct Faculty

2012-Present Department of Biology, Towson University, Towson, Maryland

#### Founder & Director

2007-Present La MICA Biological Station, El Copé, Coclé, Republic of Panama (<http://www.lamica.org>)

#### Founder & Representative

2008-Present Fundación Centro de Investigación Biológica El Copé, S.A. (Panamanian foundation)

2009-2012 Amigos Support La MICA US Foundation

#### Lecturer

2006 Vertebrate Zoology. Biological Sciences course 209. Old Dominion University. Norfolk, VA.

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### RELEVANT RESEARCH AND FIELD STUDIES

#### Field Researcher

- 2011-Present Systematics of Panamanian squamates (in collaboration with Dr. Frank Burbrink and lab, CUNY)
- 2011-Present Endoparasites of Panamanian snakes (in collaboration with Gorgas Institute, Panama City, Panama)
- 2010-Present DNA Barcoding of Panamanian snakes and lizards (in collaboration with National Museum of Natural History; Washington DC)
- 2006-Present Status of amphibian & reptiles following Chytridiomycosis-induced amphibian declines
- 2006-Present Ecology and microhabitat preferences of a Neotropical (Central Panama) arboreal snake assemblage

#### Research Assistant

- 2008-2011 Effects of Chytridiomycosis on stream ecology in central Panama
- 2007 Reasons for Chytridiomycosis resistance in *Agalychnis calidryas* (Central Panama)
- 2007 Effects of peptide-induced resistance to Chytridiomycosis in some Panamanian frogs

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### ACADEMIC AWARDS AND ACHIEVEMENTS

#### Wisconsin Division of Vocational Rehabilitation

2007 Career Achievement Award

#### Joint Meeting of Ichthyologists and Herpetologist

2006 Seibert Award of Evolution

#### Southeastern Ecology and Evolution Conference

2006 Best Poster Presentation

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## ACADEMIC AWARDS AND ACHIEVEMENTS continued

### Old Dominion University

- 2009 Second Place; Biological Graduate Students Organization Art Contest  
2008 First Place Presentation; Biological Graduate Students Organization Spring Symposium  
2006 Best Biological Sciences Presentation; Biological Graduate Students Organization Spring Symposium  
2005-2006 University Fellowship

### Northern Illinois University

- 2004 Graduate Research Award; Phi Sigma  
2004 Graduate Research Presentation Second Place; Sigma Xi  
2004 Outstanding Women Student Award

### University of Wisconsin – Stevens Point

- 1996-2000 Dean's List  
1996-1997 Achievement Award; Burroughs Residence Hall  
1996-2000 Membership; Beta Beta Beta Biology Honor Society  
1996-2000 Membership; Phi Eta Sigma Collegiate Honor Society  
1996 United States Constitution Knowledge Scholarship; Wisconsin Elk's Club  
1996-1997 UW-SP CO-OP Scholarship  
1996-2000 Scholarship; Rutledge Foundation

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## GRANTS (Total received: \$35,447.50)

- \$1000** Respect the Snake. Impacts of chytridiomycosis on the snake community of Omar Torrijos National Park. May 2011.
- \$400** North Carolina Herpetology Society. Changes in upper trophic levels as a result of chytridiomycosis-induced amphibian declines. November 2010.
- \$887.50** Sophie Danforth Conservation Biology Fund. A conservation-oriented effort to understand a chytridiomycosis-induced trophic cascade. September 2007.
- \$500** Grants-in-Herpetology; Society for the Study of Amphibians and Reptiles. Three-dimensional study of a mid-elevation Neotropical snake community. July 2007.
- \$2380** Wisconsin Division of Vocational Rehabilitation. Survey of mollusk-eating snakes of central Panama. May 2006.
- \$15,000** (with Dr. Alan Savitzky) National Science Foundation Disability Accommodation Grant. May 2006.
- \$600** Sigma Xi. Effects of amphibian decline on the tropic ecology of mollusk-eating snakes. April 2006.
- \$500** American Society of Ichthyologists and Herpetologists Gaige Award. Physiological and Behavioral Ecology of a Predator Feeding on a Chemically Defended Invasive Species in Central California. March 2006.
- \$480** Chicago Herpetological Society. Effects of amphibian decline on the tropic ecology of mollusk-eating snakes. February 2006.
- Hotel** Society of Intergrated and Comparative Biology Student Travel Award. January 2006.
- \$500** North Carolina Herpetological Society: Geographic variation and intergradation in the Redbelly Snake, *Storeria occipitomaculata*. January 2006.
- \$200** American Society of Ichthyologists and Herpetologists Graduate Student Travel Award. July 2005.
- \$9000** (with Dr. Alan Savitzky) National Science Foundation Disability Accommodation Grant. April 2005.
- \$500** University of Wisconsin–Stevens Point Student Research Fund: Survey of Schmeckle Reserve (Portage County) to determine reptile and amphibian composition while noting population statuses. February 2000.

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## PUBLICATIONS – PROFESSIONAL

- Lewis, T.R., R.K. Griffin, P.B.C. Grant, A. Fiueroa, **J.M. Ray**, K.E. Graham, and G. David. Morphology and ecology of *Sibon* snakes from two Neotropical forests in Mesoamerica. *In Review* (Phylomedusa).
- Ray, J.M.** *Micrurus nigrocinctus* (Central American Coralsnake) Diet. *In Review* (Herpetological Review).
- Vecchiet, J., **J.M. Ray**, J.L. Knight, and J. Wedow. *Dipsas articulata* (Red Striped Thirst Snake) Geographic Distribution. *In Review* (Herpetological Review).
- Ray, J.M.** *Ungaliophis panamensis* (Southern Bromeliad Boa) Geographic Distribution. *In Review* (Herpetological Review).
- Ray, J.M.** *Sibon argus* (Blotched Snaleater) Geographic Distribution. *In Review*. (Herpetological Review).
- Knight, J.L., **J.M. Ray**, and J.A. Wedow. *Masticophis mentovarius* (Dumeril, Bibron, and Dumeril, 1854) (Squamata: Serpentes: Colubridae): Range Extension and New Province Record from Panama. *In press* (Checklist).
- Myers, E.A., S. Ruane, K. Knight, J.L. Knight, and **J.M. Ray**. Notes on Geographic Distribution; *Tantilla alticola* in Coclé Province, Republic of Panama. Distribution Record of *Tantilla alticola* Boulenger, 1903 (Squamata: Colubridae) in Coclé Province, Republic of Panama. *In press* (Checklist).
- Ray, J.M.**, C.E. Montgomery, H.K. Mahon, A.H. Savitzky & K.R. Lips. 2012. Goo-Eaters: Diets of the Neotropical snakes *Dipsas* and *Sibon* in central Panama. *Copeia* 2012(2):197-202.
- Ray, J.M.** and P. Santana. 2012. *Erythrolamprus mimus* (Stripe-Bellied False Coral). Diet. *Herpetological Review* 43(2):345.
- Ray, J.M.** 2012. Bridging the Gap: Interspecific differences in the cantilevering ability in a Neotropical arboreal snake assemblage. *South American Journal of Herpetology* 7(1):35-40.
- Ray, J.M.**, J.L. Knight, and P. Santana. 2012. *Micrurus nigrocinctus* (Central American Coralsnake) Diet. *Herpetological Review* 43(1):148
- Knight, J.L., **J.M. Ray**, and K. Baumgartner. 2012. *Tantilla armillata* (Black-Necked Crown Snake) Reproduction. *Herpetological Review* 43(1):152-153.
- Ray, J.M.** 2011. *Leptophis nebulosus* (Yellow-Lipped Parrotsnake) Geographic Distribution. *Herpetological Review* 42(4):573.
- Baumgartner, K. A. and **J. M. Ray**. 2011. *Bothrops asper* (Terciopelo). Arboreal Behavior. *Herpetological Review* 42(4):611.
- Ray, J.M.**, D. Küng, and P. Santana. 2011. *Erythrolamprus bizona* (Black Ringed False Coral Snake) Arboreality. *Herpetological Review* 42(4):613-614.
- Ray, J.M.**, A. Hein, A. González, S. Goetz & M. Miller. 2011. *Imantodes cenchoa* (Brown Blunt-Nosed Vine Snake) Maximum Size. *Herpetological Review* 42(4):614-615.
- Ray, J.M.** 2011. *Atropoides mexicanus* (Central America Jumping Pitviper) Geographic Distribution. *Herpetological Review* 42(3):392.
- Montgomery, C.E., K.R. Lips, & **J.M. Ray**. 2011. Ontogenetic shift in sleeping perch height in Cope's vine snake, *Oxybelis brevirostris*. *The Southwestern Naturalist* 56(3):358-362.
- Ray, J.M.** B. Wilson, E.J. Griffith Rodriguez & H.L. Ross. 2011. *Sibon argus* (Blotched Snail Sucker) Diet. *Herpetological Review* 42(1):102-103.
- Ray, J.M.**, A. Hein, A. González, S. Goetz & M. Miller. 2011. *Imantodes cenchoa* (Brown Blunt-Nosed Vine Snake) Diet. *Herpetological Review* 42(1):100.
- Jadin, R.C., S.A. Orlofske & **J.M. Ray**. 2010. *Hemidactylus frenatus* (Common House Gecko). Geographic Distribution. *Herpetological Review* 41(4):512.
- Ray, J.M.** 2009. Ecology of a Neotropical arboreal snake assemblage and diet and defensive tactics of New World mollusk-eating snakes. Unpublished doctoral dissertation. Old Dominion University. Norfolk, VA.
- Montgomery, C.E., **J.M. Ray**, A.H. Savitzky, E.R. Griffith-Rodriguez, H.L. Ross & K.R. Lips. 2007. *Sibon longifrenis* (Drab Mollusk-Eater) Diet. *Herpetological Review* 38(3):343.

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## INVITED SEMINARS

- Ray, J.M.** January 2013. Conservation in the Midst of Ecological Disaster. University of Wisconsin-Eau Claire Department of Biology Departmental Seminar. Eau Claire, WI.
- Ray, J.M.** September 2011. Conservation in the Midst of Ecological Disaster. Savanna River Ecology Laboratory Seminar Series. Aiken, SC.
- Ray, J.M.** September 2011. Conservation in the Midst of Ecological Disaster. Winthrop College Department of Biology Departmental Seminar. Rock Hill, SC.
- Ray, J.M.** January 2011. Conservation in the Midst of Ecological Disaster. South Carolina Association of Naturalists Annual Meeting. Columbia, SC.
- Ray, J.M.** 2009. La MICA Biological Station: Conservation Can Work. Biological Sciences Departmental Seminar. Old Dominion University. Norfolk, VA.
- Ray, J.M.** December 2008. Conservation can work: La MICA Biological Station. Old Dominion University Beta Beta Beta Biological Honor Society. Norfolk, VA.
- Ray, J.M.** April 2007. Fate of the Frogs. Biological Sciences Departmental Seminar. Old Dominion University. Norfolk, VA.

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## RELEVANT PRESENTATIONS - TALKS

- Ray, J.M. & R.B. King.** July 2006. The temporal and spatial scale of microevolution: Fine-scale color pattern variation in the Lake Erie watersnake, *Nerodia sipedon insularum*. Joint Meetings (ASIH, SSAR, HL, AES). New Orleans, LA.  
\*Seibert Award of Evolution Recipient
- Ray, J.M., A.H. Savitzky, & A.R. Mahon.** 08 April 2006. Defensive Tactics of New World Mollusk-Eating Snakes. BGSO, PGSO, BSSO Spring Research Symposium. Old Dominion University. Norfolk, VA.  
\* Best Biological Sciences Presentation Recipient

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## RELEVANT PRESENTATIONS – POSTERS

- Baumgartner, K. and **J.M. Ray.** 26 March 2011. Surveying amphibians and reptiles at a newly-established field research station in central Panama. Midwestern Ecology and Evolution Conference.
- Ray, J.M.** April 2008. La MICA Biological Station. Old Dominion University and Norfolk State University Research Day. Norfolk, VA.
- Ray, J.M., A.H. Savitzky, & A.R. Mahon.** March 2006. Defensive behaviors of Neotropical mollusk-eating snakes. Southeastern Ecology and Evolution Conference. Tuscaloosa, AL.  
\*Best Poster Presentation Recipient
- Ray, J.M. & D.A. Pike.** January 2006. Defensive behaviors in Neotropical Snakes: An interspecific comparison. Society of Intergrated and Comparative Biology. Orlando, FL.
- Ray, J.M. & D.A. Pike.** July 2005. Defensive behaviors in Neotropical Snakes: An interspecific comparison. Joint Meetings (ASIH, SSAR, HL, AES). Tampa, FL.
- Ray, J.M. & D.A. Pike.** 06 April 2005. Defensive tactics in tropical snakes. Old Dominion University and Norfolk State University Research Day. Norfolk, VA.

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## SKILLS

- Computer Skills:** Proficient in Microsoft Word, Excel, PowerPoint, SPSS, MiniTab, SigmaPlot, EndNote, TreeView, Front Page, Yahoo! SiteBuilder, Adobe Audition  
Working knowledge of SAS, GIS, MacClade
- Language Skills:** Fluent in reading, writing, and speaking Spanish