

Ronald M. Clouse

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Division of Invertebrate Zoology
American Museum of Natural History
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Education

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|-------------------------------------|------|-----------------------|----------------------------------------------------------------|
| Doctor of Philosophy (Ph.D.) | 2010 | Harvard University | <i>Giribet Laboratory, Organismic and Evolutionary Biology</i> |
| Master of Science (M.S.) | 1994 | University of Florida | <i>Brockmann Laboratory, Zoology</i> |
| Post-Baccalaureate | 1991 | NC State University | Biological Sciences |
| Bachelor of Arts (B.A.) | 1989 | Duke University | Comparative Areas |

Employment and Internship History

American Museum of Natural History, August 2010–present

- Postdoctoral researcher

Harvard University, September 2004–2010

- Postdoctoral researcher
- Teaching Fellow
- Teaching Consultant, Derek Bok Center for Teaching and Learning

Union Bank of Switzerland, Stamford, CT, January 2003–August 2004

- Database Designer and Manager
- Financial Contract (ISDA) Auditor

D. E. Shaw & Co., New York City, NY, December 1997–August 2003

- Investor Relations Associate
- Treasury Associate

Everglades National Park, June 1996–June 1997

- Research Technician (Robblee Laboratory, Florida Bay Ecology)
- Museum Assistant (Data entry and entomology curation)

Archbold Biological Station, January 1996–June 1996 & Summer 1993

- Research Intern (Invertebrate Laboratory, Dr. M. Deyrup)

College of Micronesia, Pohnpei, Federated States of Micronesia, 1995–1996

- General Science Instructor

Ponape Agriculture & Trade School, Pohnpei, Fed. States of Micronesia, 1994–1996

- Agriculture Department Chairman and Instructor

University of Florida, Gainesville, 1991–1994

- Teaching Assistant (Core Biology, Invertebrate Biology, Animal Behavior)
- Research Assistant (Horseshoe crab behavior, Dr. H. J. Brockmann)

North Raleigh Country Day School, North Carolina, Summer 1991

- Preschool Teacher

North Carolina State University, Raleigh, 1990

- Lab Assistant (Entomology)

Duke University, Durham, North Carolina, 1986–1989

- Play Therapy Assistant (Medical Center)
- Library Assistant (Math and Physics Library)

Grants and Fellowships Received

Putnam Expeditions Grant, 2009, Harvard University Museum of Comparative Zoology

- Collecting Harvestmen (Stylocellidae and Zalmoxidae, Opiliones) from Micronesia and Palawan Island, Philippines

Graduate Student Council Conference Travel Grant, 2007, Harvard U. Graduate School of Arts and Sciences

- 17th International Congress of Arachnology

Goelet Award, 2007, Harvard University Museum of Comparative Zoology

- "The Ants of Micronesia" publication

Genomics and Genetics Training Program Fellowship, 2005–06

- Molecular techniques

Goelet Award, 2005, Harvard University Museum of Comparative Zoology

- Surveying for Cyphophthalmi in western North Carolina

Putnam Expeditions Grant, 2005, Harvard University Museum of Comparative Zoology

- The Cyphophthalmi of Papua New Guinea

Sigma Xi, 1992

- Social Biology of a Florida paper wasp

Reviewed Publications

Clouse, R. M. & P. J. Schwendinger (2012) *Leptopsalis foveolata* sp. n., a new species of Stylocellidae from Thailand that displays a novel morphological feature in the suborder Cyphophthalmi (Arachnida, Opiliones). *Revue Suisse de Zoologie*. (scheduled December)

Clouse, R. M. & G. Giribet (2012) On the Cyphophthalmi (Arachnida, Opiliones) types from the Museo Civico di Storia Naturale "Giacomo Doria". *Bulletin of the Museum of Comparative Zoology*. (scheduled November)

Clouse, R. M. (2012) The lineages of Stylocellidae (Arachnida: Opiliones: Cyphophthalmi). *Zootaxa*. (scheduled November)

Clouse, R. M., B. L. de Bivort & G. Giribet (2012) A cladistic reconstruction of the ancestral mite harvestman (Arachnida, Opiliones, Cyphophthalmi): portrait of a Paleozoic detritivore. *Cladistics*. doi: 10.1111/j.1096-0031.2012.00407.x

Sharma, P. P., P. A. C. Buenavente, **R. M. Clouse**, A. Diesmos & G. Giribet (2012) Forgotten gods: Zalmoxidae of the Philippines and Borneo (Opiliones: Laniatores). *Zootaxa*. 3280: 29–55.

Carraro, N., T. E. Tisdale-Orr, **R. M. Clouse**, A. S. Knöller & R. Spicer (2012) Diversification and expression of the PIN, AUX/LAX, and ABCB families of putative auxin transporters in *Populus*. *Frontiers in Plant Science*. 3: 17.

Giribet, G., P. Sharma, L. R. Benavides, S. L. Boyer, **R. Clouse**, B. L. de Bivort, D. Dimitrov, G. Y. Kawauchi, J. Murienne & P. J. Schwendinger. (2012) Evolutionary and biogeographic history of the harvestman

- suborder Cyphophthalmi (Arachnida, Opiliones)—an ancient and global group of arachnids. *Biological Journal of the Linnean Society*. 105(1): 92–130.
- Clouse, R. M.**, B. L. de Bivort & G. Giribet (2011) Phylogenetic signal in morphometric data. *Cladistics*. 27(4): 337–340.
- Clouse, R. M.**, D. M. General, A. C. Diesmos & G. Giribet (2011) An old lineage of Cyphophthalmi (Opiliones) discovered on Mindanao highlights the need for biogeographical research in the Philippines. *Journal of Arachnology*. 39: 147–153.
- de Bivort, B.L., **R. M. Clouse** & G. Giribet (2010) A morphometrics-based phylogeny of the temperate Gondwanan mite harvestmen (Opiliones, Cyphophthalmi, Pettalidae). *Journal of Zoological Systematics and Evolutionary Research*. 48(4):294–309.
- Clouse, R. M.** & G. Giribet (2010) When Thailand was an island—the phylogeny and biogeography of mite harvestmen (Opiliones, Cyphophthalmi, Stylocellidae) in Southeast Asia. *Journal of Biogeography*. 37(6): 1114–1130.
- Clouse, R. M.**, B. L. de Bivort & G. Giribet (2009) A phylogenetic analysis for the South-east Asian mite harvestman family Stylocellidae (Opiliones, Cyphophthalmi)—a combined analysis using morphometric and molecular data. *Invertebrate Systematics*. 23(6): 515–529.
- Clouse, R. M.** & G. Giribet (2007) Across Lydekker's Line—first report of mite harvestmen (Opiliones, Cyphophthalmi, Stylocellidae) from New Guinea. *Invertebrate Systematics*. 21: 207–227.
- Clouse, R. M.** (2007) The Ants (Hymenoptera: Formicidae) of Micronesia. *Micronesica*. 39(2): 171–296.
- Clouse, R. M.** (2007) New ants (Hymenoptera: Formicidae) from Micronesia. *Zootaxa* 1475: 1–19.
- Boyer, S. L., **R. M. Clouse**, L. R. Benavides, P. Sharma, P. J. Schwendinger, I. Karunarathna & G. Giribet (2007) Biogeography of the World: a case study from cyphophthalmid Opiliones, a globally distributed group of arachnids. *Journal of Biogeography*. 43(12): 2070–2085.
- Clouse, R. M.**, D. Janies & A. M. Kerr (2005) Resurrection of *Bohadschia bivittata* from *B. marmorata* (Holothuroidea: Holothuriidae) based on behavioral, morphological, and mitochondrial DNA evidence. *Zoology* 108(1): 27–39.
- Kerr, A. M., D. A. Janies, **R. M. Clouse**, Y. Samyn, J. Kuszak & J. Kim (2005) Molecular Phylogeny of Coral-Reef Sea Cucumbers (Holothuriidae: Aspidochirotida) Based on 16S Mitochondrial Ribosomal DNA Sequence. *Marine Biotechnology* 7(1): 53–60.
- Clouse, R.** (2001) Some Effects of Group Size on Output of Beginning Nests of the Florida Paper Wasp, *Mischocyttarus mexicanus* (Hymenoptera: Vespidae). *Florida Entomologist* 84(3): 418–425.
- Clouse, R.** (1999) Leaf-Litter Inhabitants of a Brazilian Pepper Stand in Everglades National Park. *Florida Entomologist* 82(3): 388–403.
- Clouse, R. M.** (1997) Are lone paper wasp foundresses mainly the result of sister mortality? *Florida Scientist* 60(4): 265–274.
- Clouse, R. M.**, B. Ferster & M. A. Deyrup (1997) Observations of insects associated with an infestation of sand pine (*Pinus clausa*) by the aphid *Cinara pinivora*. *Florida Scientist* 60(2): 89–93.
- Meshaka, W. E., Jr., **R. M. Clouse**, B. P. Butterfield & J. B. Hauge (1997) The Cuban green anole, *Anolis porcatius*: a new anole established in Florida. *Herpetological Review*. 28(2): 101–102.
- Meshaka, W. E., Jr., **R. M. Clouse** & L. McMahon (1997) Diet of the tokay gecko (*Gekko gekko*) in southern Florida. *Florida Field Naturalist* 25 (3): 105–107.
- Clouse, R.** (1997) Burying behavior in an Indo-Pacific sea cucumber, *Bohadschia marmorata*: a circadian, not circatidal rhythm. *Micronesica* 30(2): 245–257.

Clouse, R. M. (1997) End-plate spicules in *Bohadschia marmorata* (Jaeger) (Holothuroidea: Holothuriidae). *Micronesica* 30(1): 187–192.

Clouse, R. M. (1995) The importance of gall size for sea daisy gall midge parasitoids. *Journal of the Kansas Entomological Society*. 68: 184–188.

Clouse, R. M. (1995) Nest usurpation and intercolonial cannibalism in the paper wasp, *Mischocyttarus mexicanus* (Hymenoptera: Vespidae). *Journal of the Kansas Entomological Society*. 68: 67–73.

Scientific Presentations (presented by first author)

31st Annual Meeting of the Willi Hennig Society

Riverside, CA, USA, July 23–27, 2012

- Clouse, R. M. The phylogeography of *Metasiro americanus* (Arachnida, Opiliones), a widely distributed, poorly dispersing, ancient African mite harvestman in the Southeastern U.S. (Oral presentation)

30th Annual Meeting of the Willi Hennig Society

São José do Rio Preto, Brazil, July 27–August 3, 2011

- Clouse, R. M., P. Sharma, M. Harvey & G. Giribet. The Curious Case of Micronesian Schizomids (Arachnida, Schizomida) (Oral presentation)

Southeast Asian Gateway Evolution (SAGE)

London, September 14–17, 2009

- Clouse, R. M. Over 250 Million Years of Southeast Asian History Visible in the Phylogeny of a Harvestman Family (Arthropoda, Arachnida, Opiliones) (Oral presentation)

Society for Integrative and Comparative Biology (SICB)

Boston, January 3–7, 2009

- Clouse, R. M. & G. Giribet. Ancient signals of South East Asia's history found in mite harvestmen sequence and morphological data (Oral presentation)

27th Annual Meeting of the Willi Hennig Society

Tucumán, Argentina, October 28–31, 2008

- de Bivort, B., R. M. Clouse & G. Giribet. Phylogenies from Morphometrics I: Method principles, independence analysis, character collapse, alternative effective methods, Pettalidae (Arachnida, Opiliones, Cyphophthalmi) as proof of principle (Oral presentation)
- Clouse, R. M., B. de Bivort & G. Giribet. Phylogenies from Morphometrics II: Missing values, females, character selection and scaling, support, dependence optimization, Stylocellidae (Arachnida, Opiliones, Cyphophthalmi) as a challenging test (Oral presentation)

Department of Organismic and Evolutionary Biology G4 Symposium

Harvard University, April 29–May 1, 2008

- Clouse, R. M. Crustal Dynamics and Southeast Asian Mite Harvestmen Phylogenetics (Opiliones: Cyphophthalmi): Whence India? (Oral presentation)

Graduate Student Speaker Series, Dept. Molecular and Cell Biology

Harvard University, August 21, 2007

- Clouse, R. M. Evolutionary and Biogeographic Trends in the Stylocellidae, a Southeast Asian family of Cyphophthalmi (Opiliones) (Oral presentation)

17th International Congress of Arachnology

São Pedro, Brazil, August 5–10, 2007

- Giribet, G., S. L. Boyer, R. M. Clouse, L. R. Benavides & P. Sharma. Biogeography of the World: a case study from cyphophthalmid Opiliones, a globally distributed group of arachnids (Oral presentation)
- Clouse, R. M. & G. Giribet. Evolutionary and Biogeographic Trends in the Stylocellidae, a Southeast Asian family of Cyphophthalmi (Opiliones) (Oral presentation)

First International Pacific Invasive Ant Conference

Kona, Hawai'i, May 22–25, 2007

- Clouse, R. M. The Ants of Micronesia (Oral presentation)

Harvard Integrated Life Sciences (HILS) Fall Symposium

Harvard University, October 21, 2006

- Clouse, R. M. & G. Giribet. Crossing Lydekker's Line—first report of mite harvestmen (Opiliones: Cyphophthalmi) from New Guinea (Poster presentation)

Society for Integrative and Comparative Biology (SICB)

Orlando, January 4–8, 2006

- Clouse, R. M. & G. Giribet. The Systematics and Biogeography of the Stylocellidae, a Southeast Asian Family of Cyphophthalmi (Opiliones). (Abstract: *Integrative and Comparative Biology* 45(6): 978.) (Oral presentation)

11th International Echinoderm Conference

Munich, October 5–10, 2003

- Clouse, R. M., D. Janies & A. M. Kerr. Behavioural-Ecological, Morphological, and mtDNA Evidence to Resurrect *Bohadschia bivittata* from the *B. marmorata* Species Complex (Oral presentation)
- Kerr, A. M, D. Janies & R. M. Clouse. Evolutionary Radiations onto Coral Reefs by an Echinoderm Worm (Oral presentation)
- Kerr, A. M, D. Janies & R. M. Clouse. Phylogeny of Holothuroidea based on 16S, 18S and histone 3 DNA sequences (Oral presentation)

14th International Ethological Conference

Honolulu, August 10–18, 1995

- Clouse, R. M. Burying Behavior in an Indo-Pacific Sea Cucumber, *Bohadschia marmorata* (Oral presentation)

Professional Membership

The Willi Hennig Society

International Society of Arachnology

American Arachnological Society

Reviewer

Annales Zoologici

Invertebrate Systematics

Journal of Biogeography

Marine and Freshwater Research

Marine Biology

*National Science Foundation
(Systematics and Biodiversity
Science Cluster)*

Pan-Pacific Entomologist

Zookeys

Zootaxa

Invited Lectures and Courses

The City College of The City University of New York, Invited Seminar, Department of Biology, October 10, 2012

- The phylogeography of *Metasiro americanus*: a terrible disperser goes with the flow

Rockefeller University, *Invited Seminar, Kronauer Lab*, April 2, 2012

- Three Biogeographic Case Studies in the Indo-Pacific: Ants, Harvestmen, and Schizomids

Harvard University, *Invited Lecture, Biogeography Course*, March 7, 2012

- The Biogeography of Southeast Asia

College of Mount Saint Vincent, *Invited Lecture, Biology Department Seminar*, February 17, 2012

- Daddy-long-legs and the history of Southeast Asia

American Museum of Natural History, *Invited Lecture, Richard Gilder Graduate School*, Oct. 17, 2011

- Case studies in terrestrial invertebrate biogeography

University of Guam, *Invited Lecture*, September 27, 2010

- Signatures of vicariance and dispersal in the Indo-Pacific opiliofauna (co-speaker, Prashant Sharma)

Palawan State University, Puerto Princesa, Philippines, *Invited Lecture*, August 20, 2010

- Molecular and morphometric phylogenetics and biogeography of a Southeast Asian arachnid family (Opiliones, Cyphophthalmi, Stylocellidae)

The Field Museum, Chicago, IL, *Invited Lecture, Research Seminar Series*, June 9, 2010

- Molecular and morphometric phylogenetics and biogeography of a Southeast Asian arachnid family (Opiliones, Cyphophthalmi, Stylocellidae)

Addis Ababa University, Ethiopia, *Bioinformatics Course*, April 26–30, 2010

- Sequence assembly and finishing methods
- Phenotypic data and metadata
- Sequence alignment, homology, gaps
- Optimality criteria and tree searching *vs.* distance methods
- Evaluating trees: length and likelihood, rooting, and resampling
- Biogeographic analysis
- Using GIS and genomics
- Whole genome assembly

Harvard University, *Invited Lecture, Biogeography Course*, April 5, 2010

- The Biogeography of Southeast Asia

George Washington University, *Invited Lecture*, February 25, 2010

- Time, Place and Pattern: Invertebrate Evolution and Biogeography in the Indo-Pacific

Simmons College, Boston, MA, *Invited Lecture, Invertebrate Biology Course*, April 14, 2009

- Paper Wasps: Excellent Models for Studying Social Behavior

Teaching Experience

American Museum of Natural History, Fall 2012–Spring 2013

- Course design
 - **Evolution of Viruses**, After School Course (high school level)
- Instructor & course design
 - **Comparative Genomics**, Science Research Mentoring Program (high school level)

Harvard University, Fall 2005–Spring 2010

- Teaching Fellow
 - **Genetics, Genomics & Evolution**, Spring 2007, Spring 2010
 - **Foundations of Biological Diversity**, Fall 2010
 - **Ecology**, Spring 2009
 - *Derek C. Bok Award for Excellence in Graduate Student Teaching of Undergraduates*

- **Systematics**, Fall 2008
 - *Derek C. Bok Award for Excellence in Graduate Student Teaching of Undergraduates*
- **Integrative Biology of Organisms**, Fall 2005
- Teaching Consultant, Derek Bok Center for Teaching and Learning
 - **Practice-Teaching Facilitator**, January 2006–present
 - **Workshop Design and Facilitation**
 - *Effective Science Teaching*, 2006–2010
 - *Discussing Scientific Papers in Class*, 2010
 - *Techniques and Tips for 10-Minute Talks*, 2007, 2008
 - *English Language Program*, 2006–2008

College of Micronesia, Fall 1995

- Course designer and instructor
 - **Survey of Science**: remedial review of physical, earth, and life science

Ponape Agriculture & Trade School, Fall 1994–1996

- Course designer and instructor
 - **Physical Science** (introductory chemistry, physics)
 - Senior **Plant Science** (entomology, plant pathology)
 - Junior **Plant Science** (Micronesian crops)
 - Freshman and Sophomore **Animal Science** (domestication, physiology)

University of Florida, 1991–1994

- Laboratory instructor
 - **Invertebrate Zoology**
 - **Animal Behavior**
 - **Applied Biology** (for non-majors)
 - **Biological Sciences II** (genetics, evolution, ecology, behavior)
 - **Biological Sciences I** (diversity, basic processes)
 - discussion leader, 1993

North Raleigh Country Day School, Summer 1991

- Teacher
 - **Ages 4–5 and 8–12**

Student Mentoring

Molecular techniques and sequence analysis with *Opiliones*

- **American Museum of Natural History**
 - Danielle Grace (2012, Bachelor of Science in Biology, Molloy College)
 - Phylogenetics of sand flies and associated intestinal leishmaniasis in Ethiopia
 - Rebecca Gibson (2012, undergraduate, Columbia University)
 - Describing a new species of carpenter ant in Micronesia
 - Anupam Kumar (2012, New Explorations into Science, Technology and Math H. S. (NEST+m))
 - Computational investigations into carpenter ant hybridization
 - Sameer Sabharwal (2012, The Bronx High School of Science)
 - Computational investigations into carpenter ant hybridization
 - Michael Schizas (2011, Master of Science, New York University)
 - Computation improvements to bootstrapping
 - Jessie Stuart (2011, undergraduate, Stanford University)
 - DNA sequencing of the harvestman *Metasiro americanus*

- **Harvard University**

- HaWook Song (2009–2010, undergraduate, Harvard University)
 - Developing primers for the harvestman *Metasiro americanus*
- Alex Kim (2009–2012, undergraduate, Harvard University)
 - Freshwater crustacean phylogeography and phylogenetics

Public Education

Brain Tweetup

American Museum of Natural History, New York City, January 12, 2011

A behind-the-scenes tour of the Division of Invertebrate Zoology with a discussion invertebrate behavior, posted real-time on Twitter

Bugs, Past and Present

Harvard Museum of Natural History, Cambridge, MA, March 14, 2009

An exploration of arthropod evolution at the museum's annual BugFest

Beehives, Anthills and Other Metaphors for Organizations

Organizational Development Network Conference, Austin, TX, October 20, 2008

A workshop conducted with two OD professionals that allowed participants to experience various cooperative algorithms commonly found in nature

E. O. Wilson and the World of Ants

Harvard Museum of Natural History, Cambridge, MA, January 20, 2008

An introduction to formicid biology for all ages, in coordination with a screening of the biographical film, *The Naturalist*

The Ants of Micronesia on AntWeb

www.antweb.org/micronesia.jsp, Fall 2007–present

A remote curatorship of information and specimen images with colleagues Alan Olsen and Jesse Czekanski-Moir of the Belau National Museum

Classification and Systematics

Public School Teacher's Professional Development Workshop on Biodiversity

Harvard Museum of Natural History, Cambridge, MA, March 7, 2007

An intensive training session on homology, character states, and taxonomy

Dinosaurs and Sea Creatures

The Maritime Aquarium, South Norwalk, CT, February 4, 2000–January 1, 2001

A children's exhibit about mosasaurs, plesiosaurs, early sharks, and other ancient marine vertebrates

Fossil Explainer

American Museum of Natural History, New York City, 1997–2004

A volunteer position helping visitors understand the Hall of Vertebrate Origins

Expeditions

Australia, April–May 2011 — Queensland, Northern Territory

Target species: Zalmoxidae and Cyphophthalmi (Opiliones) and ants

Philippines, Micronesia, Sept.–October 2010 — Palawan, Luzon, Guam, Palau, Yap, Chuuk, Pohnpei

Target species: Cyphophthalmi and Zalmoxidae (Opiliones) and ants

Southeastern USA, March 2010 — Florida, South Carolina

Target species: Cyphophthalmi (Opiliones)

Indonesia, June–July 2006 — Java, Sulawesi

Target species: Cyphophthalmi (Opiliones)

Papua New Guinea, March–April 2006 — Port Moresby, Garoka, Madang

Target species: Cyphophthalmi (Opiliones)

Florida, March 2005 — Torreya State Park

Target species: Cyphophthalmi (Opiliones)

Northwestern USA, June–July 2005 — Idaho, Washington, Oregon, California

Target species: Cyphophthalmi (Opiliones)

Australia, Papua New Guinea, Micronesia, November–December 2002

Target species: Holothuroidea and ants

Micronesia, March 2000 — Pohnpei

Target species: ants

Other Training

Public Speaking, 2008

Dale DeLetis, Dept. Organismic and Evolutionary Biology, Harvard University

Dive Certification, 2006

Jais Aben, Madang, Papua New Guinea