

MARK E. SIDDALL
CURATOR
DIVISION OF INVERTEBRATE ZOOLOGY
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HIGHEST DEGREE EARNED

Ph.D.

AREA OF SPECIALIZATION

Biology and phylogeny of leeches, protozoan parasitology

EDUCATION

Ph.D. in Zoology, University of Toronto, Toronto, Canada, 1994

M.Sc. in Zoology, University of Toronto, Toronto, Canada, 1991

B.Sc. in Microbiology, University of Toronto, Toronto, Canada, 1989

EXPERIENCE IN DOCTORAL EDUCATION

FACULTY APPOINTMENTS

Adjunct Faculty, Columbia University, 2001-present

Adjunct Faculty, City University of New York, 2000-present

Assistant Professor-Michigan Fellow, Museum of Zoology, University of Michigan, Ann Arbor, MI, 1996-1999

Adjunct Faculty, School of Marine Science, College of William and Mary, Gloucester Point, VA , 1994-1996

COURSES TAUGHT

Phylogenetics-Just Methods, College of LS&A, University of Michigan, Ann Arbor, MI, 1998-1999

Phylogenetic Systematics, College of LS&A, University of Michigan, Ann Arbor, MI, Fall 1996

Molecular Ecology of Marine Symbioses, Bermuda Biological Station for Research, Bermuda, 1995

Phylogeny and Macroevolution, School of Marine Science, College of William and Mary, 1995

Advanced Phylogenetic Systematics, Department of Zoology, University of Toronto, 1992-1993; 1993-1994

Parasitic Helminths and Arthropods, Department of Zoology, University of Toronto, 1994

GRADUATE COMMITTEES

Frank Fontanella, City University of New York, 2005-present

Julianne Williams, College of William and Mary, 2005

Indra Neil Sarkar, Columbia University, 2004

Vincent Roussett, Museum d'Histoire Naturelle, Paris, 2004

GRADUATE ADVISEES

Megan Cevasco, City University of New York, 2003-present
Louise Crowley, City University of New York, 2003-present
Elizabeth Borda, City University of New York, 2002-present
Julianne Williams, College of William and Mary, 2002-present
Kathleen Apakupakul, University of Michigan, 1997-1998
Brenda S. Flores, College of William and Mary, 1995-1996

RESEARCH GRANT SUPPORT

FEDERAL SOURCES

National Science Foundation, REU Site: Systematics and Evolutionary Biology: A Continuing Program of Undergraduate Research at the American Museum of Natural History, New York City, \$339,980, June 6, 2004-May 31, 2009.
National Institutes of Health, Genetic Transfer in the Evolution of Infectious Disease, co-PI, Robert DeSalle, \$936,149, February 1, 2002-January 31, 2006.
National Science Foundation, PEET: Monography of the Families of Hirudinea (Leeches) with Online Databasing and Development of Electronic Keys: A Program to Train the Hirudinologists of the Future, \$741,576, January 1, 2002-December 31, 2006.

NON-FEDERAL SOURCES

Richard Lounsberry Foundation, Evaluating DNA Barcoding, \$325,000, 2004-2006.

RECENT ARTICLES IN REFEREED JOURNALS

Hughes, J.L., and M.E. Siddall. 2007. A new species of leech from the New York Metropolitan Area. *American Museum Novitates* 10:10-10.
Rousset, V., F. Pleijel, G.W. Rouse, C. Erseus, and M.E. Siddall. 2007. A molecular phylogeny of annelids. *Cladistics* 23: 41-63.
Siddall, M.E., P.L. Worthen, M. Johnson, and J. Graf. 2007. Novel role for *Aeromonas jandaei* as digestive-tract symbiont of North American medicinal leeches. *Applied Environmental Microbiology* 73: 655-658.
Siddall, M.E., P. Trontelj, S.Y. Utevsky, M. Nkamany, and K.S. Macdonald. 2007. Diverse molecular data demonstrate that commercially available medicinal leeches are not *Hirudo medicinalis*. *Proceedings of the Royal Society of London, Series B, Biological Sciences* 27: 1481-7.
Siddall, M.E., A.E. Bely, and E. Borda*. 2006. Chapter 9: Reproductive Biology and Phylogeny of Annelida. In G. Rouse and F. Pleijel (editors), *Hirudinida*, 393-429. Enfield, NH: Science Publishers
Siddall, M. E., and M.T. Aguado. 2006. Molecular phylogenetic evidence of a haplosporidian parasite infecting the polychaete *Syllis nipponica* (Imajima, 1966). *Parasitology Research* 99: 309-12
Siddall, M.E., and J. Bowerman. 2006. A new species of leech, *Placobdella burresonae* n. sp. (Annelida: Hirudinida: Glossiphoniidae) from *Rana pretiosa* (Amphibia: Ranidae) in Oregon. *Journal of Parasitology* 92: 855.

- DeSalle, R. M.G. Egan, and M. Siddall. 2005. The unholy trinity: taxonomy, species delimitation and DNA barcoding. *Philosophical Transactions of the Royal Society, London - Biological Sciences*, 360: 1905 – 1916.
- Oceguera-Figueroa, A., V. León-Règagnon, and M.E. Siddall. 2005. Phylogeny and revision of Erpobdelliformes (Annelida, Arhynchobdellida) from Mexico based on nuclear and mitochondrial gene sequences. *Revista Mexicana de Biodiversidad* 76: 191-198.
- Phillips, A.J. and M.E. Siddall. 2005. Phylogeny of the New World medicinal leech family Macrobdellidae (Oligochaeta: Hirudinida: Arhynchobdellida). *Zoologica Scripta* 34: 559-564.
- Perkins, S. L., Budinoff, R. B., and Siddall, M. E. 2005. New gammaproteobacteria associated with bloodfeeding leeches and a broad phylogenetic analysis of leech endosymbionts. *Applied Environmental Microbiology*, 71: 5219-5224.
- Siddall, M.E, R.B. Budinoff, and E. Borda. 2005. Phylogenetic evaluation of systematics and biogeography of the leech family Glossphoniidae. *Invertebrate Systematics*, 19: 105-112.
- Siddall M.E. and R.B. Budinoff. 2005. DNA-barcoding evidence for widespread introductions of a leech from the South American *Helobdella triserialis* complex. *Conservation Genetics*. 6: 467-472.
- Siddall, M. E., A.E. Bely, and E. Borda. 2005. Hirudinida. Chapter 9: Reproductive Biology and Phylogeny of Annelida, Rouse, G and Pleijel, F (eds.) Enfield, New Hampshire. Pp. 393-429.
- Siddall, M. E. 2005. Bracing for another decade of deception: The Promise of Secondary BPA. *Cladistics*. 21: 90 – 99.
- Borda, E. and M. E. Siddall. 2004. Review of the evolution of life history strategies and phylogeny of the Hirudinida (Annelida: Oligochaeta). *Lauterbornia* 52: 5-25.
- Borda, E. and M. E. Siddall. 2004. Arhynchobdellida (Annelida: Oligochaeta: Hirudinida): Phylogenetic Relationships and Evolution. *Mol. Phylog. Evol.* 30: 213-225.
- Budinoff, R.B., A.M. Siddall, and M.E. Siddall. 2004. Twelve variable microsatellite loci for the North American medicinal leech, *Macrobdella decora*. *Mol Ecol Notes* 4: 491-493.
- Pol, D., M. A. Norell, and M. E. Siddall. 2004. Measures of stratigraphic fit to phylogeny and their sensitivity to tree size, tree shape, and scale. *Cladistics*, 20: 64-75.
- Reece, K. S., M. E. Siddall, N. A. Stokes, and E. M. Bureson. 2004. Molecular Phylogeny of the Phylum Haplosporida Based on Two Independent Gene Sequences. *Journal of Parasitology*, 90: 1111-1122.
- Rousset, V., G.W. Rouse, M.E. Siddall, A. Tillier, and F. Pleijel. 2004. The phylogenetic position of Siboglinidae (Polychaeta, Annelida), inferred from 18S rRNA, 28S rRNA, and morphological data. *Cladistics*, 20: 518 –533.
- Siddall, M.E. 2004. Fallacies of False Attribution as the Defense of BPA by Brooks Dowling, van Veller, and Hoberg. *Cladistics* 20: 376-377.
- Siddall, M. E. and E. Gaffney. 2004. Observations on the Leech *Placobdella ornata* Feeding from Bony Tissues of Turtles. *Journal of Parasitology*. 90: 1186-1188.
- Siddall, M. E. and E. Borda. 2004. Leech collections from Chile Including two new species of *Helobdella*. *American Museum Novitates*, 3457.

- Westergren, S. and M. E. Siddall. 2004. Two new Species of Salifid Leeches (Arhynchobdellida: Erpobdelliformes: Salifidae) from South Africa and Madagascar. *American Museum Novitates*, 3457.
- Siddall, M. E. and S. L. Perkins. 2003. Brooks Parsimony Analysis: A valiant failure. *Cladistics* 19: 554-564.
- Siddall, M. E., S. L. Perkins, and S. S. Desser. 2003. Leech mycetome endosymbionts are a new lineage of alphaproteobacteria related to the Rhizobiaceae. *Mol. Phylog. Evol.* 30: 178-186.
- Siddall, M. E. and K. Jensen. 2003. Incorrect evaluation of the information content of multistate characters. *Cladistics*, 19: 269-272.
- Sarkar I. N., P. J. Planet, T. E. Bael, S. E. Stanley, M. Siddall, R. DeSalle, and D. H. Figurski. 2002. Characteristic attributes in cancer microarrays, *Journal of Biomedical Informatics*, 35: 111-122.
- Siddall, M. E. 2002. Resolution and Independence. *Journal of Parasitology*, 88: 1055-1058.
- Siddall, M. E. and E. Borda. 2002. Phylogeny of the leech genus *Helobdella* (Glossiphoniidae) based on mitochondrial gene sequences and morphological data and a special consideration of the triserialis complex. *Zool. Scripta* 32: 23-33.
- Siddall, M. E. 2002. Phylogeny and revision of the leech family Erpobdellidae (Hirudinida: Oligochaeta). *Invertebrate Taxonomy*, 16: 1-6.
- Barta, J. R., D S. Martin, R A. Carreno, M E. Siddall, H. Profous-Juchelka, M. Hozza, M. A. Powles, and C. Sundermann. 2001. Molecular phylogeny of the other tissue coccidia: *Lankesterella* and *Caryospora*. *Journal of Parasitology*. 87: 121-127.
- Gelder, S. R. and M. E. Siddall. 2001. Phylogenetic assessment of the Branchiobdellidae (Annelida: Clitellata) using 18S rDNA and mitochondrial cytochrome c oxidase subunit I characters. *Zool. Scripta*, 30:215-222. **Error! Hyperlink reference not valid.**
- Kent, M. L., K. P. Andree, J. P. Bartholomew, M. El-Matbouli, S. S. Desser, R. H. Devlin, R. P. Hedrick, R.W. Hoffmann, J. W. Khattra, S. L. Hallett, R. J. G. Lester, O. Palenzeula, M. E Siddall, and C. Xiao. 2001. Recent advances in our knowledge of the Myxozoa. *Journal of Eukaryotic Microbiology*, 48: 395-413. [pub/Myxozoa.pdf](#)
- Planet, P. J., R. DeSalle, M. E. Siddall, T. Bael, I. N. Sarkar, and S. E. Stanley. 2001. Systematic analysis of DNA microarray data: ordering and interpreting patterns of gene expression. *Genome Research*, 11: 1149-1155.
- Pol, D., and M. E. Siddall. 2001. Biases in maximum likelihood and parsimony: a simulation approach to a ten-taxon case. *Cladistics*. 17:266-281.
- Siddall, M.E., K. Apakupakul, E. M. Burreson, K. A. Coates, C. Erséus, S. R. Gelder, M. Källersjö, and H. Trapido-Rosenthal. 2001. Validating Livanow: Molecular Data Agree that Leeches, Branchiobdellidans and *Acanthobdella peledina* form a Monophyletic Group of Oligochaetes. *Molecular Phylogenetics and Evolution*, 21: 346-351.
- Siddall, M. E. 2001. Philosophy and phylogenetic inference: A comparison of likelihood and parsimony methods in the context of Karl Popper's writings on corroboration. *Cladistics*, 17, 395-399.
- Siddall, M. E. 2001. On the cladistic use of riboprinting. *Cladistics*, 17:290-297.

- Siddall, M. E. and S. S. Desser. 2001. Developmental stages of *Haemogregarina delagei* in the leech *Oxytonostoma typica*. *Can. J. Zool.* 79: 1897-1900.
- Siddall, M. E. and S. S. Desser. 2001. Transmission of *Haemogregarina balli* from painted turtles to snapping turtles through the leech *Placobdella ornata*. *J. Parasitol.* 87: 1217-1218.
- Siddall, M. E. 2001. Hirudinea from the Apolobamba in the Bolivian Andes, including new species of *Helobdella* (Clitellata: Hirudinea). *American Museum Novitates*, 3341: 14 pp.
- Siddall, M. E. 2001. Computer intensive randomization in systematics. *Cladistics*, 17, S35-S52
- Siddall, M. E., K. S. Reece, T. A. Nerad and E. M. Bureson. 2001. Molecular phylogenetic determination of the phylogenetic position of the genus *Colpodella* (= *Spiromonas*). *American Museum Novitates*, 3314. 10 pp.
- Siddall, M. E. 2001. Leeches of Laguna Volcán including a new species of *Helobdella*. *American Museum Novitates*. 3313: 11 pp.

SPECIAL RECOGNITION/AWARDS

Henry Baldwin Ward Medal, American Society of Parasitologists, 2002

Sokol Award for post-doctoral research, University of Michigan, 1998

Fellow of the Michigan Society, University of Michigan, 1996

Clark P. Read New Investigator Award, American Society of Parasitologists, 1995