



Allen G. Collins

Zoologist, National Systematics Lab of NOAA's Fisheries Service
Curatorial Responsibilities for Medusae & Glass Sponges
Smithsonian Institution - MRC 163, Natural History Building
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Curriculum Vitae

(last update: March, 2007)

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EDUCATION

University of California at Berkeley

Department of Integrative Biology

Dissertation Title: The Early History of Animals

Major Professor: James W. Valentine

Degree and Date: PhD, 1999

Marine Biological Laboratory, Woods Hole

Molecular Evolution Workshop

Summer 1995

Amherst College

Majors: Mathematics and Economics

Degree and Date: BA, 1987

PEER-REVIEWED PAPERS

- Tabachnick KR & AG Collins. (in press) Glass sponges (Porifera, Hexactinellida) of the northern Mid-Atlantic Ridge. *Marine Biology Research*.
- Jankowski T, Collins AG & R Campbell. (in press) Global diversity of inland water cnidarians. In: *A Global Assessment of Animal Diversity in Freshwater*, special issue of *Hydrobiologia*.
- Lutz RA, Collins AG, Annis ER, Reed AJ, Bennett K, Halanych KM & RC Vrijenhoek. 2006. Stauromedusan populations inhabiting deep-sea hydrothermal vents along the southern East Pacific Rise. *Cahiers de Biologie Marine* 47: 409-413.
- Medina M, Collins AG, Takaoka TL, Kuehl JV & JL Boore. 2006. Naked Corals: Skeleton Loss in Scleractinia. *Proceedings of the National Academy of Sciences, USA* 103: 9096-9100.
- Van Iten H, De Moraes Leme J, Simoes MG, Marques AC & AG Collins. 2006. Reassessment of the phylogenetic position of conulariids (?Eldiacaran-Triassic) within the subphylum Medusozoa (phylum Cnidaria). *Journal of Systematic Palaeontology* 4: 109-118.
- Collins AG, Schuchert P, Marques AC, Jankowski T, Medina M & B Schierwater. 2006. Medusozoan phylogeny and character evolution clarified by new large and small subunit rDNA data and an assessment of the utility of phylogenetic mixture models. *Systematic Biology* 55: 97-115.
- Collins AG, Bentlage B, Matsumoto GI, Haddock SHD, Osborn K & B Schierwater. 2005. Solution to the phylogenetic enigma of *Tetraplatia*, a worm-shaped cnidarian. *Biology Letters* 2: 120-124.
- Collins AG, Cartwright P, McFadden CS & B Schierwater. 2005. Phylogenetic context and basal metazoan model systems. *Integrative and Comparative Biology* 45: 585-594.
- Tomassetti P, Voigt O, Collins AG, Porrello S, Pearse VB & B Schierwater. 2005. Placozoans (*Trichoplax adhaerens* Schulze, 1883) in the Mediterranean Sea. *Meiofauna Marina* 14: 5-7.
- Collins AG & M Daly. 2005. A new deepwater species of Stauromedusae, *Lucernaria janetae* (Cnidaria, Staurozoa, Lucernariidae), and a preliminary investigation of stauromedusan phylogeny based on nuclear and mitochondrial rDNA data. *Biological Bulletin* 208: 221-230.
- Collins AG, Winkelmann S, Hadrys H & B Schierwater. 2005. Phylogeny of Capitata (Cnidaria, Hydrozoa) and Corynidae in light of mitochondrial 16S rDNA data. *Zoologica Scripta* 34: 91-99.
- Voigt O, Collins AG, Pearse VB, Pearse JS, Hadrys H & B Schierwater. 2004. Placozoa – no longer a phylum of one. *Current Biology* 14: R944-R945.
- Silberman JD, Collins AG, Gershwin L, Johnson PJ & AJ Roger. 2004. The ellobiopsid *Thalassomyces* is an alveolate. *Journal of Eukaryotic Microbiology* 51: 246-252.
- Marques AC & AG Collins. 2004. Cladistic analysis of Medusozoa and cnidarian evolution. *Invertebrate Biology*. 123(1): 23-42.

- Waggoner BM & AG Collins. 2004. *Reductio ad absurdum*: Testing the evolutionary relationships of Ediacaran and Paleozoic problematic fossils using molecular divergence dates. *Journal of Paleontology* 78: 51-61.
- Medina M, Collins AG, Taylor J, Valentine JW, Lipps JH, Amaral-Zettler L & ML Sogin. 2003. Phylogeny of Opisthokonta and the evolution of multicellularity and complexity in Fungi and Metazoa. *International Journal of Astrobiology* 2: 203-211.
- Medina M & AG Collins. 2003. The role of molecules in understanding molluscan evolution. pp. 14-44. In: *Molecular Systematics and phylogeography of Mollusks*. Lydeard C & DR Lindberg, eds., Smithsonian Institution Press, Washington DC.
- Winkel KD, Hawdon G, Fenner P, Gershwin L, Collins AG & J Tibballs. 2003. Jellyfish antivenoms: past, present and future. *Journal of Toxicology—Toxin Reviews* 22: 115-127.
- Roy K, Collins AG, Becker BJ & E Begovic. 2003. Anthropogenic impacts and decline in body size of rocky intertidal gastropods in southern California. *Ecology Letters* 6: 205-211.
- Collins AG. 2002. Phylogeny of Medusozoa and the evolution of cnidarian life cycles. *Journal of Evolutionary Biology* 15: 418-432.
- Castilla JC, Collins AG, Meyer C, Guíñez PR & DR Lindberg. 2002. Recent Introduction of the ecologically dominant tunicate *Pyura praeputialis* (Urochordata, Pyuridae) to Antofagasta, northern Chile. *Molecular Ecology* 11: 1579-1584.
- Gershwin L & AG Collins. 2002. A preliminary phylogeny of Pelagiidae (Cnidaria, Scyphozoa), with new observations of *Chrysaora colorata* comb. nov. *Journal of Natural History* 36: 127-148.
- Collins AG & JW Valentine. 2001. Defining phyla: evolutionary pathways to metazoan body plans. *Evolution & Development* 3(6): 432-442.
- Medina M, Collins AG, Silberman JD & ML Sogin. 2001. Evaluating hypotheses of basal animal phylogeny using complete sequences of large and small subunit rRNA. *Proceedings of the National Academy of Sciences, USA* 98: 9707-9712.
- Hamilton H, Caballero S, Collins AG & RL Brownell, Jr. 2001. Evolution of river dolphins. *Proceedings of the Royal Society: Biological Sciences* 268: 549-556.
- Collins AG. 2000. Towards understanding the phylogenetic history of Hydrozoa: hypothesis testing with 18S gene sequence data. *Scientia Marina* 64 (Sup. 1): 5-22.
- Collins AG, Lipps JH & JW Valentine. 2000. Modern mucociliary gliding trails and the body plans of Neoproterozoic trace-makers. *Paleobiology* 26: 47-55.
- Valentine JW & AG Collins. 2000. The significance of moulting in ecdysozoan evolution. *Evolution & Development* 2(3): 152-156.
- Collins AG. 1999. Molecules and evolutionary history. In Springer D & J Scotchmoor (eds.) *Evolution: investigating the evidence. Paleontological Society Papers*, vol. 3.
- Collins AG. 1998. Evaluating multiple alternative hypotheses for the origin of Bilateria: An analysis of 18S rRNA molecular evidence. *Proceedings of the National Academy of Sciences, USA* 95: 15458-15463.
- Waggoner BM & AG Collins. 1995. A new chondrophorine (Cnidaria, Hydrozoa) from the Cadiz Formation (Middle Cambrian) of California. *Palaeontologische Zeitschrift*. 69: 7-17.
- Valentine JW, Collins AG & CP Meyer. 1994. Morphological complexity increase in metazoans. *Paleobiology* 20: 131-142.

OTHER PUBLICATIONS (Invited, Web Pages with Significant Content, etc.)

- Collins JA & AG Collins. 2005. Systematics as a hypothesis-based science and its fundamental role in understanding oceans. *Oceans 2005 MTS/IEEE Proceedings* 2: 1395-1402.
- Collins AG & L-a Gershwin. 2005. Mayor's work on medusae: Still the best! pp. 37-38 In: Shinn EA & WC Jaap, *Field Guide to the Major Organisms and Processes Building Reefs and Islands of the Dry Tortugas: The Carnegie Dry Tortugas Laboratory Centennial Celebration (1905-2005)*.
- Collins AG. 2002. Review: *Introduction to the Invertebrates* by J. Moore. *EcoScience* 9: 416-7.
- Collins AG & J Johnson. 2000. Phylogeny in a Nutshell. (<http://paleobio.org/Ed/nutshell/nutshell.html>)
- Collins AG. 1999. Sponges and sponge-like organisms. In R. Singer (ed.), *Encyclopedia of Paleontology*. Fitzroy Dearborn Publishers, Chicago and London.
- Collins AG. 1999. Evolutionary trends. In R. Singer (ed.), *Encyclopedia of Paleontology*. Fitzroy Dearborn Publishers, Chicago and London.

- Lipps JH, Collins AG & MA Fedonkin. 1998. Evolution of biological complexity: Evidence from geology, paleontology, and molecular biology. In R. B. Hoover (ed.) *Instruments, Methods, and Missions for Astrobiology, Proceedings of SPIE*, Vol. 3441.
- Collins AG & K Roy. 2002. Conservation and Biodiversity of the Rocky Intertidal of Southern California. (www.biology.ucsd.edu/labs/roy/CBRISC/).
- Collins AG & Others. 1994-2000. University of California Museum of Paleontology (www.ucmp.berkeley.edu), numerous pages, including:
 Metazoa (</phyla/phyla.html>) (with Waggoner BM & B Speer),
 Porifera (</porifera/porifera.html>),
 Ctenophora (</cnidaria/ctenophora.html>) (with Waggoner BM & L Gershwin),
 Cnidaria (</cnidaria/cnidaria.html>) (with Waggoner BM),
 Placozoa (</phyla/placozoa/placozoa.html>),
 Brachiopoda (</brachiopoda/brachiopoda.html>),
 Phoronida (</brachiopoda/phoronida.html>),
 Vendian animals (</vendian/critters.html>) (with Waggoner BM & B Speer),
 Phylogenetic Systematics (</clad/clad4.html>) (with Guralnick RP & B Speer),
 the Cambrian Period (</cambrian/camb.html>) (with Waggoner BM),
 the Vendian Period (</vendian/vendian.html>) (with Waggoner BM).

POSITIONS HELD

- Invertebrate Zoologist** (NOAA, National Marine Fisheries Service)
 National Systematics Lab 2004 to present
 Systematics of sponges and cnidarians
- Adjunct Scientist** (Smithsonian's National Museum of Natural History)
 Invertebrate Zoology 2004 to present
- Adjunct Professor** (University of Maryland at College Park)
 Behavior, Evolution, Ecology and Systematics Program 2005 to present
- Adjunct Scientist** (University of Kansas Center for Research)
 Kansas University Museum of Natural History 2005 to present
- Research Scientist and Instructor** (TiHo Hannover)
 ITZ-Ecology and Evolution 2002 to 2004
 Phylogenetics, Evolution of Development, and Genomics of Early Diverging Animal Groups
- Post-doctoral Researcher** (University of California, San Diego)
 Section of Ecology, Behavior & Evolution 2001 to 2002
 Conservation and Biodiversity of the Rocky Intertidal of Southern California
- Post-doctoral Researcher** (UC Berkeley)
 Department of Integrative Biology 1999 to 2001
 Applying Knowledge of Extant Animals to Questions of Early Animal Evolution
- Instructor of K-12 Teacher Workshops**
 "Teaching Evolution Using Antibiotics, Avian Flu & More" November, 2006
 "Kujira - Identifying Mystery Meat with DNA Data" November, 2006
 "Teaching Evolution – the Nature of Science and VIST" November, 2005
 "What Did *T. rex* Taste Like? – Basics of Phylogenetics" November, 2005
 "Explorations Through Time – On-Line Lessons" February 2002
 "Using Phylogenies to Test Biological Hypotheses" February 2002
 "Phylogenies and Hypotheses" March 2000
- Instructor for Graduate Seminar** (Universidade de São Paulo, Brazil)
 "Phylogenetic Analysis with Molecular Data" August 2000
- Systems Administrator** (UC Berkeley)
 Museum of Paleontology 1998 - 1999, 1994
 Maintenance and Development of Sun Microsystems Servers
- Graduate Student Instructor** (UC Berkeley)
 Department of Integrative Biology
 Principles of Biodiversity Fall 1997
 Invertebrate Zoology Spring 1995

Invertebrate Paleontology	Fall 1992, 1993
Curatorial Assistant (UC Berkeley)	
Museum of Paleontology	Summer 1997
Organization of Oversized Vertebrate Collections	
Website Creator (UC Berkeley)	
Museum of Paleontology	January 1997
Interactive Collections Availability List (ICAL)	
Web Page Designer (UC Berkeley)	
Museum of Paleontology	1994, 1996 – 1997
Creation of Educational Content	
Visiting Researcher (Marine Biological Laboratory, Woods Hole MA)	
Molecular Phylogenetics with Dr. Mitch Sogin	1995 - 1996
Database Developer (UC Berkeley)	
Museum of Paleontology	Spring 1993
Survey and Database Pacific Rim Biodiversity Collections	
Research Economist (National Economic Research Associates, Inc.)	
Support for Expert Witness Testimony	1987 – 1992

PROFESSIONAL SERVICES & SOCIETIES

Editorial Board Member of *Systematic Biology*

Referee for manuscripts submitted to *Science*, *Proceedings of the National Academy of Sciences*, *Current Biology*, *Invertebrate Biology*, *Systematic Biology*, *Evolution*, *Biological Bulletin*, *Molecular Phylogenetics & Evolution*, *Journal of Evolutionary Biology*, *Invertebrate Zoology*, etc.

Member of the Society for Integrative and Comparative Biology, the Paleontological Society, the Society of Systematic Biologists, the Hydrozoan Society (www.ucmp.berkeley.edu/agc/HS/)

AWARDS

NSF Grant, co-PI with P. Cartwright, D. Fautin and others: Collaborative Research: Assembling the tree of life-An integrative approach to investigating cnidarian phylogeny, through NSF's Tree of Life Program, 2005-2009

Fellowship for scientists visiting the Bocas del Toro Station, Smithsonian Tropical Research Institute, Panama, 2004

Fellowship for speaker invited to participate in the symposium "Model Systems for the Basal Metazoa", Annual Meeting of the Society of Integrative and Comparative Biology, New Orleans LA, 2004

Deutsche Forschungsgemeinschaft (German Science Foundation) grant to support participation in the 7th International Conference on Coelenterate Biology, Lawrence KS, 2003

Fellowship for speaker invited to participate in the symposium "Life, the Universe, and Everything", 6th International Congress of Evolutionary and Systematic Biology, Patras, Greece, 2002

Fellowship for speaker invited to participate in the symposium "The Cambrian explosion: Putting the pieces together", Annual Meeting of the Society of Integrative and Comparative Biology, Anaheim CA, 2002

NSF Grant EAR-9814845, co-authored with JW Valentine and JH Lipps, 1999-2001

Mary Otis Clark Award from the UC Berkeley Museum of Paleontology, 1999

Best Student Poster, Integrative Biology and the Future Meeting at UCMP, 1998

Paleontological Society Student Award, grant-in-aid of Paleontological Research, 1998

Numerous small grants and awards to support travel and research from the UC Berkeley Department of Integrative Biology and the UC Berkeley Museum of Paleontology, 1992-1999