
CURRICULUM VITAE

Michael J. Ghedotti

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EDUCATION

Ph.D., Biology (Systematics and Ecology), 1998
Dissertation: Systematics and taxonomy of the Superfamily Poecilioidea (Teleostei: Cyprinodontiformes), with Emphasis on the Family Anablepidae. Advisor: E. O. Wiley
University of Kansas, Lawrence

B.S., Biology, 1992
University of Michigan, Ann Arbor

PROFESSIONAL EXPERIENCE

Professor of Biology, 2010–present (*See below for courses taught.*)
Department of Biology Acting Chairperson, Spring & Fall 2010
Regis University, Denver

Associate Professor of Biology, 2004–2010
Department of Biology Chairperson, (rotating elected position) 2006–2009

Assistant Professor of Biology, 1998–2004

Graduate Teaching Assistant, 1992–1998
University of Kansas, Lawrence

Kansas Fish Identification Specialist, Summers 1995–1997
Kansas Dept. of Wildlife & Parks

Curatorial Assistant (Ichthyology), Summers 1993–1998
U. of Kansas Natural History Museum

Public Education Instructor, 1994–1998
U. of Kansas Natural History Museum, Lawrence
Half hour to week-long classes on fishes, vertebrates, invertebrates, and aquatic biology to day-care groups, school groups of all ages, home-schooled children, nursing-home residents, and the public.

ASSOCIATE APPOINTMENT

Museum Associate (Researcher). J. F. Bell Museum of Natural History, University of Minnesota.
(annually renewing non-salaried appointment), 2004-present

COURSES TAUGHT (above line = taught in the last five years)

Introductory & Non-Majors

General Biology I: Organismic w/
Honors & non-Honors Lab.*
Molecular & Cellular Biol. Lab*
Intro. to Enviro. Sci. with Lab.
Biological Anthropology with Lab.
Human Biology with Laboratory
Hist. and Diversity of Orgs. Lab.

* = Served as course
coordinator among
multiple lab sections
(setting curriculum)

Biology Major Upper-Division

Human & Comparative Anatomy
with Laboratory
Evolution
Marine Biology
Biology Research Colloquium
Seminar in Biol., Soc., and Ethics
Aquatic and Fisheries Ecology
Ichthyology with Laboratory
Systematic Biology
Developmental Bio. with Lab.

Graduate

Advanced Ecology Laboratory
Seminars in Biomedical Sciences I,
II, III, & IV
Environmental Biology Externship
Non-Science Integrative Courses
Science and Science Fiction (first-
semester writing seminar)
Immigration and America Seminar
(diversity-focused)
Honors Chaos & Order Seminar
(philosophy of science focus)

RESEARCH INTERESTS

Anatomy, evolution, and systematics of fishes.
Anatomy and evolution of bioluminescence and other deep-sea specializations in fishes.
Aquatic natural history.

PROFESSIONAL MEMBERSHIPS

Society for the Study of Evolution (SSE), 1994–2008, 2017–present
American Society of Ichthyologists and Herpetologists (ASIH), 1992–present

TECHNICAL SKILLS

- Histological preparation and evaluation of tissue samples.
- Clearing and double staining of vertebrates for skeletal study.
- DNA extraction, amplification, purification, and sequencing - Sanger.
- Collection and identification of fish and crayfish specimens.
- Identification of eastern Colorado and northeastern New Mexico plants.
- Natural history museum curation of alcohol-preserved, skeletal, and glycerol specimens.

PEER-REVIEWED PUBLICATIONS (* = indicates Regis University Undergraduate co-author)

- Cashner, R.C., Schaefer, J., Warren Jr., M. L., Echelle, A. A., Galvez, F., and **Ghedotti, M. J.** (in press 2020). Fundulidae: Topminnows. In Warren, M., & Burr, B., (Eds.), *The Freshwater Fishes of North America, Volume II: Osmeridae to Poeciliidae*. (pp. 549–608). Baltimore, MD: Johns Hopkins University Press.
- Ghedotti, M.J.**, Davis, M. P., & Echelle, A. A. (in press 2020). Poeciliidae, The Livebearers. In Warren, M., & Burr, B., (Eds.), *The Freshwater Fishes of North America, Volume II: Osmeridae to Poeciliidae*. (pp. 674–737). Baltimore, MD: Johns Hopkins University Press.
- Ghedotti, M. J.**, Smith, W. L., & Davis, M. P. 2019. The first evidence of intrinsic epidermal bioluminescence within ray-finned fishes in the linebelly swallower *Pseudoscopelus sagamianus* (Chiasmodontidae). *Journal of Fish Biology* 95(6): 1540–1543.
- Ghedotti, M. J.**, J. P. Gruber*, R.W. Barton*, M. P. Davis, and W.L. Smith. 2018. Morphology and evolution of bioluminescent organs in the glowbellies (Percomorpha: Acropomatidae) with comments on the taxonomy and phylogeny of Acropomatiformes. *Journal of Morphology* 279:1640-1653. DOI:10.1002/jmor.20894.
- Ghedotti, M. J.** and M. P. Davis. 2017. The taxonomic placement of three fossil *Fundulus* species and the timing of divergence within the North American topminnows (Teleostei: Fundulidae). *Zootaxa* 4250(6):577-586. DOI: 10.11646/zootaxa.4250.6.5.
- Ghedotti, M.J.**, R.W. Barton*, A.M. Simons, and M.P. Davis. 2015. The first report of luminescent liver tissue in fishes: Evolution and structure of bioluminescent organs in the deep-sea naked barracudinas (Aulopiformes: Lestidiidae). *Journal of Morphology* 276(3):310-318. DOI: 10.1002/jmor.20341.
- Ghedotti, M.J.** and M.P. Davis. 2013. The phylogeny, classification, and evolution of salinity tolerance of the North American topminnows and killifishes, Family Fundulidae (Teleostei: Cyprinodontiformes). *Fieldiana, Life and Earth Sciences* 7(1564):1-64. DOI: 10.3158/2158-5520-12.7.1
- Lucinda, P.H.F., **M.J. Ghedotti**, and J.G. Weferson. 2006. *Jenynsia diphyes* (Teleostei, Cyprinodontiformes) a new species of anablepid fish from southern Brazil and its phylogenetic position. *Copeia* 2006: 613-622. DOI: 10.1643/0045-8511(2006)6[613:ANJSTC]2.0.CO;2
- Ghedotti, M.J.**, A.M. Simons, & M.P. Davis*. 2004. Morphology and phylogeny of the studfish clade, subgenus *Xenisma* (Teleostei: Cyprinodontiformes). *Copeia* 2004(1): 53-61.
- Ghedotti, M.J.**, C. Fielitz, & D.J. Leonard*. 2004. Using independent research projects to foster learning in the comparative vertebrate anatomy laboratory. *Bioscene, Journal of College Biology Teaching*. 30(1): 19-24.
- Ghedotti, M. J.** 2003. Family Anablepidae (Four-eyed fishes, onesided livebearers and the white eye). Section In R. E. Reis, S. O. Kullander, & C. J. Ferraris, Jr. (Eds.) *Check List of the Freshwater Fishes of South and Central America*. Porto Alegre, Brazil, Edipucrs. Pp. 582-585.
- Ghedotti, M.J.** & E.O. Wiley. 2002. Anablepidae, Poeciliidae, Rivulidae. Three separate family accounts in: K.E. Carpenter (Ed.) *United Nations FAO Species Identification Guide for Fisheries Purposes, The living marine resources of the Western Central Atlantic. Volume 2. Bony fishes part 1 (Acipenseridae to Grammatidae)*. FAO of the UN, the European Commission, and the American Society of Ichthyologists and Herpetologists (Special Pub. 5).

Wiley, E.O. & **M.J. Ghedotti**. 2002. Cyprinodontidae, Fundulidae. Two separate family accounts in: K.E. Carpenter (Ed.) *United Nations FAO Species Identification Guide for Fisheries Purposes, The living marine resources of the Western Central Atlantic. Volume 2. Bony fishes part 1 (Acipenseridae to Grammatidae)*. FAO of the UN, the European Commission, and the American Society of Ichthyologists and Herpetologists (Special Pub. 5).

Ghedotti, M.J., A.D. Meisner, & P.H.F. Lucinda. 2001. A new species of *Jenynsia* (Teleostei: Cyprinodontiformes) from southern Brazil and its phylogenetic relationships. *Copeia* 2001(3): 726-736.

Dimmick, W.W., **M.J. Ghedotti**, M.J. Grose, A.M. Maglia, D. Meinhardt, and D. Pennock. 2001. The evolutionarily significant unit and adaptive criteria: a response to Young. *Conservation Biology* 15(3): 788-790.

Ghedotti, M.J. 2000. Phylogenetic analysis and taxonomy of the poecilioid fishes (Cyprinodontiformes: Teleostei). *Zoological Journal of the Linnean Society* 130: 1-53.

Meisner, A.D., J.R. Burns, & **M.J. Ghedotti**. 2000. Mode of embryonic nutrition in four species of *Jenynsia* (Teleostei: Atherinomorpha: Anablepidae). In B. Norberg, O.S. Kjesbu, G.L. Taranger, E. Anderson, & S.O. Stefansson. (Eds.) *Proceedings of the 6th International Symposium on the Reproductive Physiology of Fish*. Bergen, Norway, University of Bergen Press. Pp. 178.

Dimmick, W.W., **M.J. Ghedotti**, M.J. Grose, A.M. Maglia, D. Meinhardt, and D. Pennock. 1999. The importance of systematic biology in defining units of conservation. *Conservation Biology* 13(3):1-9.

Ghedotti, M.J. 1998. Phylogeny and classification of the Anablepidae (Cyprinodontiformes: Teleostei). Chapter In L.R. Malabarba, R.E. Reis, R.P. Vari, Z.M.S. Lucena, & C.A.S. Lucena. (Eds.) *Phylogeny and Classification of Neotropical Fishes*. Porto Alegre, Brazil, Edipucrs. Pp. 561-582.

Ghedotti, M.J. 1998. An annotated list of the crayfishes of Kansas with first records of *Orconectes macrus* and *Procambarus acutus* in Kansas. *Transactions of the Kansas Academy of Sciences* 101(1-2):54-57.

Ghedotti, M.J. and M.J. Grose. 1997. Phylogenetic relationships of the *Fundulus notti* species group (Fundulidae, Cyprinodontiformes) as inferred the cytochrome-*b* gene. *Copeia* 1997(4):858-862.

Ghedotti, M.J. and S.H. Weitzman. 1996. A new species of *Jenynsia* (Cyprinodontiformes: Anablepidae) from Brazil with comments on the composition and taxonomy of the genus. *Occasional Papers of the University of Kansas Natural History Museum* 179:1-25.

Ghedotti, M.J. and S.H. Weitzman. 1995. Two new species of *Jenynsia* (Cyprinodontiformes, Anablepidae) from southeastern Brazil. *Copeia* 1995(4): 939-946.

Ghedotti, M.J., J.C. Smihula, and G. R. Smith. 1995. Zebra mussel predation by round gobies in the laboratory. *Journal of Great Lakes Research* 21(4): 665-669.

NEXT MANUSCRIPT PLANNED

Ghedotti, M.J., H. DeKay*, J.P. Egan, M.P. Davis, and W.L. Smith. **In preparation.** Evolution and structure of bioluminescent organs in the roughies *Aultotrachichthys* and *Paratrachichthys*: (Percomorpha: Trachichthyidae). To be submitted to *Journal of Morphology*.

RESEARCH GRANTS

URSC Faculty Research and Scholarship Grant, Regis University, Anatomy and Evolution of bioluminescence in deep-sea fishes, luminous slimeheads and barbeled dragonfishes, \$4,996. 2018.

URSC Faculty Research Grant, Regis University, PI: Michael Ghedotti, Evolution of bioluminescence in a group of deep-sea fishes, the glow bellies and sweepers, \$2500, 2015.

Faculty Development Committee Summer Research Grant, Regis University, PI: Michael Ghedotti, Evolution of bioluminescence in a group of deep-sea fishes, \$3000 for Summer research, 2015.

NSF RUI DEB-0415633, PI: Michael Ghedotti, The evolution of placentas in the poeciliid fishes: An empirical study of the evolution of complexity, \$166,000 over five years, extended to six, 2004-2010.

(Collaborative.) [NSF REU Supplement DEB-0620242 to RUI DEB-0415633, PI: Michael Ghedotti. \$6,000 for one student for Summer 2006.]

SPARC Research Grant, Regis University, SPARC, PI: Michael Ghedotti, The phylogenetic relationships of the fossil North American fishes in the genus *Fundulus*, \$2310 for Summer research, 2000.

Ernst Mayr Grant, Museum of Comparative Zoology, Harvard University, PI: Michael Ghedotti, Systematics and phylogenetic relationships of the family Anablepidae, \$800, 1996.

Panorama Society Grant, University of Kansas Natural History Museum, PI: Michael Ghedotti, Systematics and phylogenetic relationships of the family Anablepidae, \$500, 1997. mtDNA sequencing and molecular systematics of the *Fundulus nottii* species group, \$400, 1993.

PRESENTATIONS AT PROFESSIONAL MEETINGS (Last 5 Years) (*Regis U. undergrad. co-author; o = oral presentation)

DeKay*, H., Davis, M. P., Smith, W. L., & **Ghedotti, M. J.** (2019). Morphology and evolution of the luminous roughly bioluminescent organ (Teleostei: Trachichthyidae). American Society of Ichthyologists and Herpetologists (ASIH) – Salt Lake City, UT – July 24-29, 2019.

Ghedotti, M. J., & Davis, M. P. (2019). Anatomy and Evolution of the Greeneye Bioluminescent Organ (Teleostei: Chlorophthalmidae). ASIH – Salt Lake City, UT – July 24-29, 2019.

Hovey*, T., Davis, M. P., Smith, W. L., & **Ghedotti, M. J.** (2019). Histology of the Opercular Bioluminescent Organ of *Astronesthes* Snaggletooth Fishes (Teleostei: Stomiidae). ASIH – Salt Lake City, UT – July 24-29, 2019.

M.J. Ghedotti, H. DeKay, J.N. Gruber*, W.L. Smith, & M.P. Davis. 2018. Morphology of the luminous roughly (*Aulotrachichthys prosthemi*) bioluminescent organ (Teleostei: Trachichthyidae). American Society of Ichthyologists and Herpetologists, Rochester, NY, July, 2018.

M.J. Ghedotti, J.N. Gruber*, R.W. Barton*, W.L. Smith, & M.P. Davis. 2017. Morphology of the glowbelly (*Acropoma*) bioluminescent organ (Teleostei: Acropomatidae). American Society of Ichthyologists and Herpetologists, Austin, TX, July, 2017.

M.J. Ghedotti & M.P. Davis. 2016. Phylogenetic relationships of three fossil *Fundulus* species and the timing of divergence within the North American topminnows. American Society of Ichthyologists and Herpetologists, New Orleans, LA, July 6-10, 2016.

M.J. Ghedotti, R.W. Barton*, J.N. Gruber*, J. Muñoz*, & M.P. Davis. 2016. Morphology of the glowbelly (*Acropoma*) bioluminescent organ (Teleostei: Acropomatidae). Asian Society of Ichthyologists. Asian Society of Ichthyologists, Taipei, Taiwan, May 18-21, 2016.

Barton, R.W.*, M.P. Davis, W.L. Smith, J. Munoz*, & M.J. Ghedotti. 2015. Morphology and evolution of bioluminescent organs in the glow bellies and sweepers (Acropomatidae and Pempheridae). American Society of Ichthyologists and Herpetologists, Reno, NV, July 15-19, 2015.

Ghedotti, M.J., R. W. Barton*, & M.P. Davis. Morphology of the ventral luminescent organ of the Japanese barracudina (*Lestrolepis japonicus*), with comments on the evolution of bioluminescence within the barracudinas (Teleostei: Aulopiformes). (Poster) American Society of Ichthyologists and Herpetologists, Annual Meeting. Chattanooga, TN, 2014.

INVITED PRESENTATIONS

Ghedotti, M.J. So many ways to glow: Anatomy and evolution of bioluminescence in deep sea fishes. Department of Biology Seminar Series, Regis College, Denver, CO. 14 September 2015.

Ghedotti, M.J. From the Shoreline to the Deep Sea: Fish Evolution in “Extreme” Environments. Department of Biology Seminar Series, Regis College, Denver, CO. 9 September 2012.

Ghedotti, M.J. Narratives of Evolution: The Evolution of Placentas and Other Fish Tales. Faculty Lecturer of the Year, Regis College, Denver, CO (Talk) 2 March 2007.

Ghedotti, M.J. Shifting Paradigms and the Evolution of Livebearing in Fishes. Annual Nancy Pence Groseclose Lecture, Emory & Henry College, Emory, VA (Talk) 14 March 2002.

AWARDS

- Dean's Award for Outstanding Service to the College — Regis College, 2008.
- Faculty Lecturer of the Year, in recognition of "creative achievement in teaching and/or publication in the academic areas of the College" — Regis College, \$1500, 2007.
- Charter Faculty Membership, for distinguished teaching and service — Alpha Epsilon Delta Pre-Medical Honor Society, Gamma Chapter, Regis University, 2004.
- Honorary Faculty Membership, for distinguished teaching and service—Alpha Sigma Nu Jesuit Honor Society, Regis University, 2002.
- Stoye Award for Best Student Presentation in Ichthyology—American Society of Ichthyologists and Herpetologists (Guelph, Ontario meetings), \$200, 1998.
- Carlin Graduate Teaching Assistant Award—Chancellor, University of Kansas, \$1000, 1997.
- Kenneth B. Armitage Award for Excellence in Teaching—Division of Biology, University of Kansas, \$200, 1995.

SERVICE TO UNIVERSITY (Last 5 Years)

- Regis University 3+3+3 President's Board of Trustees-Administration-Faculty-discussion group (*appointed*). 2019-present.
- Regis University Higher Learning Commission Accreditation Task Force Criterion 5 Co-Chair (*appointed*). 2015-2018.
- Regis University Task Force on Affiliate/Adjunct Faculty Member Engagement (*appointed*). 2017-2019.
- Regis University Compensation/Total Rewards and Employee Engagement Committee (*appointed*). Fall 2015-2017
- Regis University Regis College Academic Dean Search Chair (*appointed*). 2014-2015.
- Regis University Academic Affairs Committee of the Board of Trustees (*appointed*). 2014-2016.
- Regis University Budget Committee (*appointed*). 2012-2015.
- Regis College, Committee on Rank and Tenure (*elected*). 2005-11 (Chairperson 2007-09), and 2014-2017, 2019-present.
- Regis College Faculty Handbook Committee (elected). 2016-present (Chairperson 2016-present)
- Regis College, Biology Department Faculty Search Chair – Ecologist. 2017-2018.
- Regis College, Biology Department Faculty Search Chair – Microbiologist. 2016.
- Regis College, Biology Department Faculty Search Chair – Quantitative Ecologist. 2015.
- Regis College, Global Environmental Awareness Curriculum Coordinator (*appointed*). 2012-2015.
- Regis College, Environmental Studies Program Advisory Committee (*ad hoc*). 2000-2015.

SERVICE TO SCIENTIFIC/ACADEMIC COMMUNITY

- American Society of Ichthyologists and Herpetologists, *Copeia* (Journal) Editorial Board; 2018-2019.
- Scientific Peer-Reviewer in the Past Year –*Copeia*, *Journal of Fish Biology*, *PLOS One*, *Systematics and Biodiversity*, *Zookeys*, *Zootaxa*
- Scientific Reviewer – *Anatomical Sciences Education*, *Biological Journal of the Linnean Society*, *BMC Evolutionary Biology*, *Copeia*, *Diseases of Aquatic Organisms*, *Freshwater Crayfish*, *Ichthyological Exploration of Freshwaters*, *Hydrobiologia*, *Journal of Cognitive Affective Learning* (Scholarship of Learning Journal), *Journal of Fish Biology*, *Molecular Phylogenetics and Evolution*, *Neotropical Ichthyology*, *Palaeontology*, *Phylogeny and Classification of Neotropical Fishes* (Edited Volume), *PLOS One*, *Proceedings of the Biological Society of Washington*, *Royal Society Open Science*, *Systematics and Biodiversity*, *Tropical Zoology*, *ZooKeys*, *Zoological Journal of the Linnean Society*, *Zootaxa*.
- Biology Textbook Reviewer –Pearson (Introductory College Biology Four Chapters on Macroevolution and Diversity) 2014; Academic Press (The Dissection of Vertebrates; three chapters on fish

anatomy) 2010; Sinauer (Introductory College Biology Chapters on Biogeography, Diversity, and Systematics) 2003; Saunder's Publishing (Introductory College Biology Chapter on Diversity and Systematics) 1998.

Competitive Grant Reviewer – Agencie Nationale de la Recherche, France– DEFSOC1 (Efficient resource management and adaptation to climate change section) / CE02 – English pre-proposal and full proposal review and Panel review in Paris (Jan. and June 2016, 2017, 2018); National Science Foundation, DEB Systematics and Biodiversity Panel Review, Doctoral Dissertation Improvement Grants, December 2014; George Maier Grant Fund Reviewer, American Killifish Association, Grant Review Committee, Online Panel Review 2015-present; Colorado Native Plant Society, Online Panel Review 2004-2005; Department of Education FIPSE Grants 2002-Expert Reviewer, Environmental Science, 2000; KU Natural History Museum Panorama Society Grants, 1997–1998; Michigan Sea Grant Program, 1997)

Member of the American Society of Ichthyologists and Herpetologists Editorial Policy Committee; 2006-2010.

Co-Chairperson of American Society of Ichthyologists and Herpetologists Stoye and Storer Awards Judging Committee; Tampa, Florida, July 6-12, 2005.

Judge and Subcommittee Chairperson for the American Society of Ichthyologists and Herpetologists Stoye Award for best graduate student oral presentation in the area of **Ichthyology**; Tampa, Florida, July 6-12, 2005.

Judge for the American Society of Ichthyologists and Herpetologists Stoye Award for best graduate student oral presentation in the area of Conservation Biology; Norman, Oklahoma, May 27-31, 2004

American Society of Ichthyologists and Herpetologists, Genetics, Development, & Morphology Editorial Review Board, 2003-2005.

References available upon request.