



MARK L. MANDICA

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PRESENT POSITIONS

Graduate Student, O'Reilly Vertebrate Functional Morphology and Comparative Physiology Laboratory, Biology Department, University of Miami (Coral Gables, FL)

President, Mandica Illustration & Design, Inc. Scientific and technical rendering for research articles, reviews, and texts. Illustration, Graphic and Web Design (Miami, FL)

Collections Council, Miami Museum of Science (Miami, FL)

EDUCATION

Bachelor of Science (B.S.) in Biology, with a concentration in Evolutionary Biology. Bachelor of Arts (B.A.) in Sociology. Minor in Psychology (Graduated May 1999) University of Massachusetts, Amherst

EXPERIENCE

RESEARCH EXPERIENCE

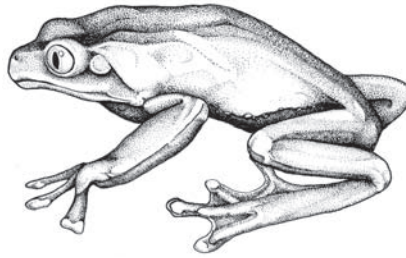
- 2003 - present Graduate Research Assistant. Department of Interior Critical Ecosystems Science Initiative, Amphibian Ecological Modeling in Everglades National Park. Comparison of Photoperiod Related Activity Patterns and Non-Visual Photoreception between Two South Florida Bufonids
- 1999 - 2002 Amphibian population study of vernal ponds in the Quabbin Watershed Management Area. Daily surveys, data collection and analysis. Reports submitted to the Metropolitan District Commission (Spring 2000, Fall 2001)
- 2001 Field Biologist, supervised research team on a metapopulation study of the Marbled Salamander (*Ambystoma opacum*). Natural Resources Conservation, University of Massachusetts (Amherst, MA)
- 2001 Spotted turtle (*Clemmys guttata*) survey of Lily Pond (Vernon, VT)
Report submitted to Vermont Fish and Wildlife Department (Waterbury, VT)
- 1998 Herpetological survey of Satan's Kingdom Wildlife Management Area (Northfield, MA)
Report submitted to Massachusetts Natural Heritage Program (Westboro, MA)
- Research techniques include: audio/visual diurnal and nocturnal surveys, terrestrial and aquatic transects, drift fencing with funnel and pitfall trap arrays, dipnet, trapping, and radio telemetry. Retrograde neuron labelling and Confocal Micrography.
Analytical and statistical analysis

CURATORIAL EXPERIENCE

- 2004 - present Collections Council, Miami Museum of Science, Miami, FL
- 2003 Curatorial Assistant, Department of Mammalogy, Division of Vertebrate Zoology, American Museum of Natural History (New York, NY)
- 1996 - 2002 Museum Assistant, Herpetological and Ichthyological Collections, Massachusetts Museum of Natural History, Bio. Department, University of Massachusetts (Amherst, MA)
- 1999 Collection and preparation of specimens for the Ichthyological Collection of the Massachusetts Museum of Natural History, Dauphin Island Sea Lab (Dauphin Island, AL)

TEACHING EXPERIENCE

- 1998 Undergraduate Teaching Assistant, Bio 540, Herpetology, University of Massachusetts
- 1996 - present Evolution, Biology, Anatomy, Physiology, Environmental Physiology, Neurobiology and Herpetology; elementary through college level, University of Massachusetts (Amherst), Amherst Middle School (Amherst, MA), Smith Campus School (Northampton, MA), Dean Technical School (Holyoke, MA), Granite House (Quincy, MA) University of Connecticut (Storrs, CT), Hitchcock Center (Amherst, MA), University of Miami (Coral Gables, FL)



PUBLICATIONS

ARTICLES

Mandica, ML. 2006. Comparison of Photoperiod Related Activity Patterns and Non-Visual Photoreception of Two South Florida Bufonids (Anura: Bufonidae). *in preparation*.

Mandica, ML. 2006. Proportion of Area Occupied Modeling of Amphibians within Everglades National Park, Florida. *in preparation*.

Mandica, ML and AM Richmond. 2000. *Scaphiopus holbrookii* (Eastern Spadefoot) Geographic Distribution. Herpetological Review. 31(2):110.

PUBLISHED ABSTRACTS

Mandica, ML. 2006. Comparison of Photoperiod Related Activity Patterns of Two South Florida Bufonids (Anura: Bufonidae). Society for Integrative and Comparative Biology, Orlando, FL.

Ganser, LR and **ML Mandica.** 2005. Sex Differences in the Brain of the Cane Toad, *Bufo marinus*. Society for Integrative and Comparative Biology, San Diego, CA.

PUBLISHED ILLUSTRATIONS

Huber, DR, CL Weggelaar, and PJ Motta. *In review*. Scaling of bite force in the blacktip shark *Carcharhinus limbatus*. *Zoology*.

Searcy, WA and S Nowicki. 2005. **The Evolution of Animal Communication, Reliability and Deception in Signaling Systems**. Princeton University Press, Princeton, NJ. *Cover illustration and others*.

Simmons, NB. 2005. Chiroptera *in The Rise of Placental Mammals : Origins and Relationships of the Major Extant Clades*. Rose, KD and JD Archibald. The Johns Hopkins University Press, Baltimore, MD.

Huber, DR, TG Eason, RE Hueter, and PJ Motta. 2005. Analysis of the bite force and mechanical design of the feeding mechanism of the durophagous horn shark *Heterodontus francisci*. *Journal of Experimental Biology*. 208: 3553-3571.

Kelly, D. 2004. The Penis Plan. *Science*. 1 March 2004.

The Journal of East African Natural History. 2004. Vol 93. *Cover Illustration*.

Dean, MN and PJ Motta. 2004. Feeding Behavior and Kinematics of the Lesser Electric Ray, *Narcine brasiliensis* (Elasmobranchii, Batoidea). *Zoology*. 107: 171-189.

Fenolio, DB, ME Walvoord, F Andreone, JF Stout, JE Randrianirina. 2004. A new *Platypelis* (Amphibia: Anura: Microhylidae) frog living in treeholes of low-altitude rainforests of the Masoala Peninsula, NE Madagascar. *Proceedings of the Biological Society of Washington*.

Meyers, JJ, JC O'Reilly, JM Monroy, and KC Nishikawa 2004. Mechanism of tongue protrusion in Microhylid frogs. *J. Exp. Biol* 207, 21-31.

Landberg, T, J Mailhot, and EL Brainerd. 2003. Lung ventilation during treadmill locomotion in a terrestrial turtle *Terrapene carolina*. *Journal of Experimental Biology* 206: 3391-3304.

Azizi, M and T Landberg. 2002. Effects of Metamorphosis on the Aquatic Escape response of the Two-Lined Salamander, *Eurycea bislineata*, *Journal of Experimental Biology* 205: 841-849.

McCormick, SD. 2001. Endocrine Control of Osmoregulation in Teleost Fish. *American Zoologist* 41:781-794.

Druziski, KA and EL Brainerd. 2001. Buccal oscillation and lung ventilation in a semi-aquatic turtle, *Platysternon megacephalum*. *Zoology* 104: 143-153.

Tentaculata, a newsletter for caecilian researchers, (4) 1999.

OTHER PERTINENT EXPERIENCE

- | | |
|-------------|---|
| 2002 | Primary care provider of the Dendrobatid breeding collection of Black Jungle (Turner's Falls, MA) |
| 1996 - 2002 | Primary care provider of the living herpetological teaching collection, Massachusetts Museum of Natural History, Biology Department, University of Massachusetts
A strong familiarity with the amphibian and reptile species native to New England |

MARK MANDICA



PRESENTATIONS AT PROFESSIONAL MEETINGS

Mandica, ML. 2006. Comparison of Photoperiod Related Activity Patterns of Two South Florida Bufonids (Anura: Bufonidae). Society for Integrative and Comparative Biology, Orlando, FL.

Ganser, LR and **ML Mandica.** 2005. Sex Differences in the Brain of the Cane Toad, *Bufo marinus*. Society for Integrative and Comparative Biology, San Diego, CA.

Mandica, ML and K McGarigal. 2001. Efficiency and Efficacy of Vernal Pond Amphibian Survey Techniques, presented to the Metropolitan District Commission (Natural Resources Conservation) University of Massachusetts (Amherst, MA).

ILLUSTRATIONS IN POSTER PRESENTATIONS

Ganser LR and GE Gartner. 2003. Histological Analysis of the Harderian Gland of the African Egg-Eating snake, *Dasypeltis*. The International Congress of Vertebrate Morphologists (FAU, Boca Raton, FL).

Brainerd EL and T Landberg. 2001. Ventilatory Mechanisms of an Elongate Aquatic Salamander, *Amphiuma tridactylum*. University of Massachusetts (Amherst, MA) The Society for Integrative and Comparative Biology (Chicago, IL).

O'Reilly JC, Kley NJ, Richmond AM, Brainerd EL 2001. Prey Capture Kinematics in *Chelus fimbriatus* (Testudines: Pleurodira) University of Massachusetts (Amherst, MA) The Society for Integrative and Comparative Biology (Chicago, IL).

ILLUSTRATIONS FOR PRESENTATIONS AT PROFESSIONAL MEETINGS

Kley NJ, JC O'Reilly, AM Richmond, EL Brainerd 1999. Morphological Specializations of the Feeding Apparatus in the Matamata (*Chelus fimbriatus*). The Society for Integrative and Comparative Biology, Division of Vertebrate Morphology, Northeast regional meeting (Providence, RI).

GRANTS AND AWARDS

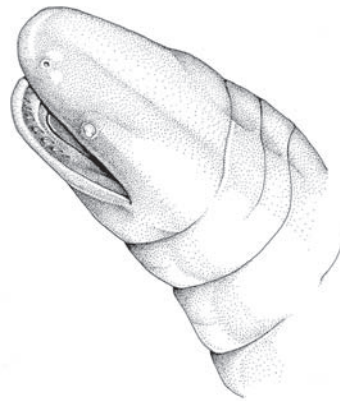
2003 - present	Full Research Assistant. Department of Interior Critical Ecosystems Science Initiative project, Computer Simulation Modeling of Intermediate Trophic Levels for Across Trophic Level System Simulations of the Everglade/Big Cypress Region.
2005 - 2006	Provost's Scholarship, University of Miami, Coral Gables, FL
2005 - 2006	Kriloff Scholarship, University of Miami, Coral Gables, FL
2005 - 2006	Departmental Travel Scholarship, University of Miami, Coral Gables, FL

RESEARCH SOCIETIES

The Society for Integrative and Comparative Biology
The International Congress of Vertebrate Morphology
American Society of Ichthyologists and Herpetologists
The Society for the Study of Amphibians and Reptiles
Tentaculata, Caecilian Research

REFERENCES

Furnished upon request



For more information, or to see my abilities as an illustrator, graphic, and web designer please see my website: <http://www.mandica.com/>