

Curriculum Vitae

Michael W. McCoy

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Post Doc

January 2007-present

Topic: Metabolic constraints on ecological and evolutionary processes
With: James F. Gillooly Department of Zoology, University of Florida

Education

- 2006 Ph.D. Department of Zoology
University of Florida, Gainesville, Florida
Committee Chair: Craig Osenberg
- 2000 M.S. Department of Biological Sciences
Old Dominion University, Norfolk, Virginia
Committee Chair: Alan Savitzky
- 1996 B.S. Old Dominion University, Norfolk, Virginia
Major: Biology with an emphasis on ecology.
Minor: Chemistry.

Manuscripts in Review (* undergraduate coauthor)

Gillooly, J.F., **M.W. McCoy**, and A.P. Allen. (*In Review*)- Individual metabolism constrains protein evolution. **Biology Letters**.

McCoy, M.W., B. M. Bolker. (*In Review*) Trait-mediated interactions: integrating size and density. **Journal of Animal Ecology**

McCoy, M.W., Bolker, B.M., and Schuster*, K.L. (*In revision*). Threat of predation induces within-population phenotypic variation. **American Naturalist**.

Publications (* undergraduate coauthor, † popular publication)

McCoy, M. W., K. A. McCoy, and D. J. Levey. (2008). Teaching Biodiversity to Students in Inner City and Under-resourced Schools. *In Press - The American Biology Teacher*.

- McCoy, K.M., **McCoy, M.W.**, Amick*, A.M., Guillette, L.J.G., and St. Mary, C. (*In Press*). Phenotypic plasticity in gonad growth: a mechanism for phenotypic correlations between growth and reproduction. **Journal of Experimental Zoology: Part A Ecological Genetics and Physiology**.
- McCoy, M.W. (2007)**. Conspecific density determines the magnitude and character of predator induced phenotype. *In Press - Oecologia*
- McCoy, M.W.**, B.M. Bolker, C.W. Osenberg, B. Miner, and J.R Vonesh. (2006) Size correction: comparing morphological traits among populations and environments. **Oecologia** 148 (4): 547-554.
- Edwards, T., K. A. McCoy, T. Barbeau, **M.W. McCoy**, J. M. Thro*, and L. Guillette. (2006) Environmental context determines nitrate toxicity in Southern toad (*Bufo terrestris*) tadpoles. **Aquatic Toxicology** 78 (1): 50-58.
- Knight, T.M., **M. W. McCoy**, J. M. Chase, K. A. McCoy and R. D. Holt. 2005. Trophic cascades across Ecosystems. **Nature** 437: 880-883.
- †Levey, D. J., S. Brooks, K. A. McCoy, and **M. W. McCoy**. (2005). Adding Spice to Florida Classrooms. **Science Scope**: April issue (A publication of the National Science Teachers Association)
- McCoy, M. W.** and Alan H. Savitzky (2004). Feeding ecology of larval *Ambystoma mabeei*. **Southeastern Naturalist**. 3(3):409-416.
- McCoy, M. W. (2003)**. Predation on adult *Bufo terrestris* by *Lethocerus* sp. (Belostomatidae) Natural History Note. **Herpetological Review**.
- McCoy, M.W.**, Donald J. Schwab, and Alan H. Savitzky. (2000). Range extension of *Deirochelys reticularia reticularia*. Distribution Note. **Herpetological Review** 31:111.
- McCoy, M. W.** and Schwab, D.J. (2000). Survey of Amphibians and Reptiles on Naval Security Group Activity: Recommendations for long term Population Monitoring. Nongame and Endangered Wildlife. Virginia Department of Game and Inland Fisheries. **Technical Report** submitted to Atlantic Division, Naval Facilities Engineering Command. 69pp.
- Madaris, K; R. Greenlee, D. Schwab, and **Michael W. McCoy (1999)**. Virginia's frog and toad monitoring protocol. **Technical Report** Virginia Department of Game and Inland Fisheries, Richmond, Virginia.
- †**McCoy, M. W. (1999)**. The Global Decline of Amphibians. **Habitats**. Reprinted in Winter 1999 issue. A publication of The National Wildlife Federation.

†McCoy, M. W. (1998). The Global Decline of Amphibians. **Wild in the Woods**, an educator's newsletter supplement to "Virginia Wildlife" magazine, a publication of the Virginia Department of Game and Inland Fisheries.

†McCoy, M. W. (1998). Mole Salamanders. **Wild in the Woods**, an educator's newsletter supplement to "Virginia Wildlife" magazine, a publication of the Virginia Department of Game and Inland Fisheries.

Manuscripts in Preparation (* undergraduate coauthor)

McCoy, M.W. and R.D. Holt. Predation Shadows: complex life histories link the dynamics of aquatic and terrestrial communities. Target - **Ecology Letters**.

McCoy, M.W. and J.F. Gillooly. Body size and temperature predict natural rates of mortality. Target - **Ecology**

McCoy, M.W. and Bolker B.M. A two-dimensional network model of foodwebs. Target-**Ecology Letters**.

McCoy, M.W., M. Brooks, and B.M. Bolker. Evolution of size structured foodwebs. Target-**Biology Letters**

K. A. McCoy, M. W. McCoy and D. J. Levey. Who the heck are scientists? To be Submitted to Science Scope (a publication by the National Science Teachers Association).

Grants/Awards/Honors

2006 Gordon Research Conference: "Metabolic Basis of Ecology and Evolution"
2006 Travel Grant, UF Division of Sponsored Research. \$300.00
2006 Travel Grant, C.L.A.S., University of Florida. \$250.00
2006 Travel Grant, Department of Zoology, University of Florida. \$300.00
2006 Travel Grant, University of Florida Graduate Student Council \$250.00
2005 Teaching Award, Department of Zoology, University of Florida \$300.00
2004 Travel Grant, Department of Zoology, University of Florida. \$500.00
2003 NSF G-K12 Teaching Fellowship
Program Title: Science Partners in Inquiry Based Collaborative Education
2001 Jennings' Scholarship; University of Florida. \$1500
2001 Travel Grant, Department of Zoology, University of Florida. \$500.00
2000 Research Grant, Society for Integrative and Comparative Biology, GIAR. \$800.00
2000 Research Grant, Sigma XI Grants in Aid of Research. \$800.00.
1998 Research Grant, Virginia Museum of Natural History. \$500.00

Professional Positions

Post Doctoral

2007 Post doctoral Associate with James F. Gillooly. Department of Zoology, University of Florida

Research Assistantships

- 2006 Research Assistantship with J.F. Gillooly, *Department of Zoology, University of Florida*
- 2006 Assistant to the Editor of *Oecologia*.
- 2003 Assistant to the Editor of *Oecologia*.
- 2002 Research Assistantship with C.W. Osenberg, *Department of Zoology, University of Florida.*
- 2001 Research Assistant with F.W. King, *Florida Museum of Natural History, University of Florida.*
- 2000 Research Assistant with F.W. King, *Florida Museum of Natural History, University of Florida.*
- 1997-2000 Wildlife Biologist *Virginia Department of Game and Inland Fisheries, Wildlife Diversity Division, Nongame and Endangered Wildlife Program.*
- 1997 Naturalist *Sandy Bottom Nature Park Hampton, Virginia.*
- 1996 Natural Areas Biologist (1996- 1997) *Virginia Department of Conservation and Recreation, Division of Natural Heritage.*
- 1995-1996 Research Assistant with A. Savitzky, *Department of Biology, Old Dominion University.*

Volunteer Experience

- 1995-1996 Old Dominion University *Assisted with the weekly maintenance of a 900-gallon public aquarium.*
- 1994-1995 Old Dominion University *Tracked Canebrake rattlesnakes (*Crotalus horridus atricaudatus*) and Northern Copperhead snakes (*Agkistrodon contortrix*) using radio telemetry.*

Teaching Positions

Teaching Assistantships

- 2005 (Fall) **General Ecology** *Department of Zoology, University of Florida*
- 2005 (Summ) **Introductory Biology lab**, *University of Florida.*
- 2004 (Fall) **Integrative Principals I** (Graduate class), *University of Florida.*
- 2003 (Fall) **General Ecology** *Department of Zoology, University of Florida*
- 2002 (Spring) **Introductory Biology lab**, *University of Florida.*
- 2001 (Fall) **Introductory Biology lab**, *University of Florida.*

Other

2005 (Spring) **Instructor: Integrative Principals II** (Graduate class), *Department of Zoology, University of Florida*

2003-2004 NSF G-K12 Teaching Fellowship (2003-2004)

Symposia and Invited Presentations

McCoy, Michael W. Unforeseen connections: Fish facilitate plant reproduction.
Symposium Title: Reproduction in Context: Environmental influences on the reproductive process.
University of Florida Mar 2006

McCoy, Michael W. and Benjamin M. Bolker. Influence of prey density and predators on induced defenses in pine woods treefrogs (*Hyla femoralis*)
Symposium Title: Ecological Implications of Phenotypic Plasticity
Ecological Society of America, Portland Or. Aug 2004.

Presentations

McCoy, M. W. J.F. Gillooly, and A.P. Allen. The Energetic Basis of Protein Evolution.
Society for Integrative and Comparative Biology. Phoenix, AZ Jan. 2007

McCoy, M. W. Predator Induced phenotypic plasticity: size structure, density, and among-individual variation.
Dissertation Defense, Department of Zoology, University of Florida. Dec. 2006

McCoy, M. W. J.F. Gillooly, and A.P. Allen. The Metabolic Basis of Phenotypic Evolution.
Gordon Research Conference: “The Metabolic Basis of Ecology” Sep. 2006

McCoy, M.W. and R. D. Holt. Predation shadows: complex life histories link the dynamics of aquatic and terrestrial communities.
Ecological Society of America. Memphis, Tn. Aug 2006

McCoy, M. W., B. Bolker, and C. W. Osenberg. Predator Induced Phenotypic Plasticity: influence of prey size, density and experience.
Society for Integrative and Comparative Biology, Orlando Florida Jan 2006

McCoy, K.A., **M.W. McCoy**, and A. Amick. Metamorphosis and reproductive growth and development.
Society for Integrative and Comparative Biology, Orlando Florida Jan 2006

McCoy, M. W., B. Bolker, and C. W. Osenberg. Tradeoffs in phenotypic plasticity: consequences of induced defenses, prey size and predator constraints.

- Ecological Society of America. Montreal, Canada. Aug 2005
- McCoy, M. W.** and Benjamin M. Bolker. Quantifying the effect of prey density on induced defenses in pine woods treefrogs.
American Society of Ichthyologists and Herpetologists. Jun 2005
- McCoy, M. W.**, Knight, T., J. M. Chase, K. A. McCoy and R. D. Holt. Trophic cascades across ecosystem boundaries: Fish facilitate plant reproduction.
Southeastern Ecology and Evolution Conference, Atlanta, GA Mar 2005
- McCoy, Krista A., **M. W. McCoy**, and Douglas J. Levey. An inquiry-based educational outreach program about ecosystem health—Poster.
Ecological Society of America. Portland, Or. Aug 2004
- McCoy, M. W.**, C. W. Osenberg, B. Bolker, B. Miner, J. Vonesh. Quantifying Morphological Plasticity in ecological experiments.
Department of Zoology, University of Florida Sep 2003.
- McCoy, M. W.**, C. W. Osenberg, B. Bolker, B. Miner, J. Vonesh. Quantifying Morphological Plasticity in ecological experiments.
Ecological Society of America. Savannah. GA Aug 2003
- McCoy, M. W.**, C. W. Osenberg, B. Bolker, B. Miner, J. Vonesh. Quantifying Morphological Plasticity in ecological experiments.
American Society of Ichthyologists and Herpetologists. Manaus, Brazil. Jun 2003
- McCoy, M. W.** Life History and Ecology of two Ambystomatid Salamanders.
All Florida Herpetology Conference. Gainesville, Florida. 2001
- McCoy, M. W.** Ecology and Conservation of *Ambystoma mabeei*.
Florida Chapter of The Wildlife Society., Gainesville, Florida 2001
- McCoy, M. W.** Life History and Ecology of Mabee's Salamander in Southeastern Virginia. Department of Biological Sciences, Old Dominion University 2000.
- McCoy, M. W.** Life History and Ecology of Mabee's Salamander in Southeastern Virginia. 80th
American Society of Ichthyologists and Herpetologists, LaPaz, Mexico` June 2000

Professional Service

To the field of Ecology

Journals Reviewed for

American Naturalist	Herpetological Review
Copeia	Journal of Herpetology
Ecology	Journal of Animal Ecology
Ecology Letters	Oecologia

Symposia, Workshops, Committee Memberships and Related Services

Symposium Ecological Implications of Phenotypic Plasticity Co-organizers: Benjamin Miner, James Vonesh and Michael W. McCoy Ecological Society of America, Portland, Oregon.	Aug 2004
Organized Oral Session: Ecological Implications of Phenotypic Plasticity Co-organizers: Michael W. McCoy , James Vonesh and Benjamin Miner Ecological Society of America, Portland, Oregon.	Aug 2004
Student awards committee American Society of Ichthyologists and Herpetologists	2003-2004
Partners in Amphibian and Reptile Conservation conference	1999-2000
<i>Plethodon shenandoah</i> : Federal Endangered Species management meeting	1998
Advanced planning and management committee Grafton Ponds Natural Area Preserve	1996-1997

To the Department of Zoology, University of Florida

Zoology Graduates Student Association: Computer Committee	2003-2004
Brian Reiwald/John Paul Olowo Memorial Award Review Committee	2005
Webpage development committee	2004
Student Representative for Community Ecologist Faculty Search	2003-2004
Graduate student research and teaching awards committee	2003-2004
Graduate program committee	2003-2004
Ecolunch seminar series committee	2002-2003

Professional Societies

Ecological Society of America (*Aquatic and Statistical Ecology sections*)
 American Society of Naturalist
 Sigma XI Associate Member
 Chelonian Research Foundation
 American Society of Ichthyologists and Herpetologists
 Society for Integrative and Comparative Biology

Mentoring and Outreach

Undergraduate

2006	Honors Thesis: <i>Phenotypic plasticity: predator induced variation in growth and behavior among individuals: Katya Schuster</i>
2006	Independent research Michelle Rehrer, Judit Ungari-Martin
2005	Independent research Katya Schuster, Amanda Amick, Alison Amick
2004	Independent research Casey Cassidy
2004	Mentor for “Strategies for Ecology, Education, Development and Sustainability” (SEEDS) ESA.
2003	Independent research Casey Cassidy
2002	Independent research Amy Gray, Cimaron Nelson

High school and Middle School

- 2004 Involved middle school student in research activities 8hr/wk Fernando Senate
- 2004 Mentored 2 high school in UF's "Student Scientists Training Program". 35hr/week.
- 2003-2004 Mentored students from an under-resourced Middle School in science, math and reading.

Outreach

- 1997-2000 Conducted numerous educational programs and two summer camps on wildlife and biology as part of my duties as a Wildlife Biologist for the VA Dept of Game and Inland Fisheries.
- 1999 Venomous and Introduced Snakes. National Military Fish and Wildlife Agents Wildlife Law Enforcement Training.
- 1997 Approaches for teaching about Amphibians and Reptiles. City of Hampton, VA Science Education Training Conference for Elementary and Middle School Teachers
- 1996-1997 Naturalists and Wildlife Interpreter, Sandy Bottom Nature Park, Hampton VA 23666

References

Craig W. Osenberg

Professor & Graduate Coordinator
Ph.D. Michigan State University
(Kellogg Biological Station), 1988

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Benjamin M. Bolker

Associate Professor
Ph.D. Cambridge University, 1993

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Robert D. Holt

Professor, &
Arthur R. Marshall Jr. Chair in Ecology
Ph.D. Harvard University

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James F. Gillooly

Assistant Professor
PhD, Univ. of Wisconsin-Madison, 2001

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