

Mark C. Urban

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EDUCATION

2006	Ph.D.	Yale University
2001	M.E.Sc.	Yale University
1998	B.S.	Muhlenberg College

PROFESSIONAL EXPERIENCE

2008 – present Assistant Professor
University of Connecticut, Dept. of Ecology and Evolutionary Biology

2006 – 2008 Postdoctoral Fellow
National Center for Ecological Analysis and Synthesis

HONORS AND DISTINCTIONS

2008	American Society of Naturalists Young Investigator Award
2008	First author on most downloaded paper in <i>Trends in Ecology and Evolution</i>
2006-7	Two articles recommended by Faculty of 1000
2006	All distinguished recommendations for Ph.D. thesis
1998	Graduated <i>summa cum laude</i> with honors & highest honors (2 majors)
1998	John E. Trainer Award in Biology
1998	Undergraduate Merit Award
1997	Morris K. Udall Scholar

PUBLICATIONS

Urban, M. C., J. J. Tewksbury, and K. S. Sheldon. 2012. On a collision course: competition and dispersal differences create no-analogue communities and cause extinctions during climate change. *Proceedings of the Royal Society B*. DOI: 10.1098/rspb.2011.2367
- Featured in *Nature Research Highlights, Christian Science Monitor, Business Week, The Atlantic Wire, Hartford Courant,* and others

Urban, M. C. 2012. A crucial step toward realism: responses to climate change from an evolving metacommunity perspective. *Evolutionary Applications*. DOI: 10.1111/j.1752-4571.2011.00208.x

Urban, M. C. 2011. The evolution of species interactions across natural landscapes. *Ecology Letters*. 14: 723-732.

PUBLICATIONS

- Urban, M. C.**, Gilman, S. E., J. Tewksbury, and R. D. Holt. 2011. Heating up relations between cold fish : competition modifies responses to climate change. *Journal of Animal Ecology*. 80: 505-507.
- Bolnick, D. I., P. Amarasekare, M. S. Araujo, R. Burger, J. M. Levine, M. Novak, V. H. W. Rudolf, S. J. Schreiber, **M. C. Urban**, and D. A. Vasseur. 2011. Why intraspecific variation matters in community ecology. *Trends in Ecology & Evolution*. 26(4): 183-192
- Gilman, S. E., **M. C. Urban**, J. Tewksbury, G. W. Gilchrist, and R. D. Holt. 2010. A framework for community interactions under climate change. *Trends in Ecology & Evolution*. 25(6): 325-331.
- Buckley, L. B., **M. C. Urban**, M. J. Angilletta, L. Crozier, L. J. Rissler, & M. W. Sears. 2010. Contrasting correlative and mechanistic models of species ranges: putting concepts into practice. *Ecology Letters*. 13: 1041-1054.
- Urban, M.C.** 2010. Microgeographic adaptation of larval salamander morphologies across landscape gradients in two predation threats. *Oikos*. 119(4): 646-658.
- Urban, M.C.**, & L. De Meester. 2009. Community monopolization: local adaptation enhances priority effects in an evolving metacommunity. *Proceedings of the Royal Society B*. 276 : 4129-4138.
- Urban, M. C.**, et al. 2008. The evolutionary ecology of metacommunities. *Trends in Ecology and Evolution*. 23(6): 311-317.
- #1 hottest article in TREE (Apr. – Sept. 2008)
- Urban, M. C.**, B. L. Phillips, D. K. Skelly, and R. Shine. 2008. The toad more traveled: the heterogeneous invasion dynamics of cane toads in Australia. *American Naturalist*. 171(3): E134-E148.
- Urban, M. C.** 2008. The evolution of prey body size reaction norms in diverse communities. *Journal of Animal Ecology*. 77: 346-355.
- Urban, M. C.** 2008. Salamander evolution across a cline in gape-limited predation risk. *Oikos*. 117: 1037-1049.
- Urban, M. C.** 2008. Ecological Genetics. In: Encyclopedia of Life Sciences. John Wiley and Sons, Ltd, Chichester.
- Urban, M. C.** 2007. The growth-predation risk tradeoff under a growing gape-limited predation threat. *Ecology*. 88(10): 2587-2597.

PUBLICATIONS

- Urban, M. C.** 2007. Predator size and phenology shape prey survival in temporary ponds. *Oecologia*. 154: 571-580.
- Urban, M. C.** 2007. Risky prey behavior evolves in risky habitats. *Proceedings of the National Academy of Sciences of the USA*. 104(36): 14377-14382.
- Featured on Science Online News, National Geographic News, The New Scientist, AAAS radio show "Science Update," and others
- Urban, M. C., B. L. Phillips, D. K. Skelly, and R. Shine.** 2007. The cane toad's (*Chaunus [Bufo] marinus*) increasing ability to invade Australia is revealed by a dynamically updated range model. *Proceedings of the Royal Society B*. 274: 1413-1419.
- Featured on Nature Online News, BBC News, Today Show-Australia, Discovery Channel News, Yahoo News, and others
- Recommended by A. Hendry in the [Faculty of 1000](#)
- Urban, M. C.** 2006. Maladaptation and mass-effects in a metacommunity: consequences for species coexistence. *American Naturalist*. 168(1): 28-40.
- Urban, M. C. and D. K. Skelly.** 2006. Evolving metacommunities: Toward an evolutionary perspective on metacommunities. *Ecology*. 87(7): 1616-1626.
- Urban, M. C., D. K. Skelly, D. Burchsted, W. Price, S. Lowry.** 2006. Stream communities across a rural-urban landscape gradient. *Diversity and Distributions*. 12:337-350.
- Recommended by P. Kareiva in the [Faculty of 1000](#)
- Urban, M. C.** 2006. Road facilitation of trematode infections in snails of northern Alaska. *Conservation Biology*. 20(4): 1143-1149.
- Skelly, D. K., M. A. Halverson, L. K. Freidenburg, and **M. C. Urban.** 2005. Canopy closure and amphibian biodiversity in forested wetlands. *Wetlands Ecology & Management*. 13:261-268.
- Urban, M. C.** 2004. Disturbance heterogeneity determines freshwater metacommunity structure. *Ecology*. 85(11): 2971-2978.
- Bradt, P., **M. Urban**, N. Goodman, S. Bissell and I. Spiegel. 1999. Stability and resilience in benthic macroinvertebrate assemblages. *Hydrobiologia*. 403: 123-133.

**THESES AND
BOOK REVIEWS**

Urban, M. C. 2006. Conservation beyond community (Book Review).
Conservation Biology. 20: 1330.

Urban, M. C. 2006. Ecology and evolution of species interactions across multiple spatial scales. Ph.D. Dissertation. Yale University, New Haven, CT.

**RESEARCH
GRANTS
(LAST 5 YEARS)**

2012-2017 Principal Investigator

James F. McDonnell Foundation

“Does evolution affect the assembly dynamics of biological communities?”
\$449,851

2011-2014 Principal Investigator

National Science Foundation

“Evolutionary and ecological feedbacks: Do locally adapted salamanders shape food web dynamics across natural landscapes?”
\$500,000

2009 Principal Investigator

University of Connecticut Foundation

“Evolutionary feedbacks on species diversity”
\$24,000

2005 – 2008 Co-Principal Investigator

National Center for Ecological Analysis and Synthesis Working Group

“Evolutionary and ecological sorting in space” with M. Leibold
\$105,000

2006 – 2008 Postdoctoral Research Fellow

National Center for Ecological Analysis and Synthesis Fellowship

“Interaction traits and metacommunity gene flow”
\$86,000

TEACHING

Limnology (undergraduate/graduate)

Ecology (undergraduate)

Ecology writing intensive (undergraduate)

**SELECTED
PRESENTATIONS
(LAST 3 YEARS)**

2011 Microgeographic adaptation across a selection gradient. University of Quebec – Montreal, Canada

Microgeographic adaptation in the metacommunity. University of Leuven, Belgium.

Evolution in the metacommunity: local versus regional adaptation of species interactions across natural landscapes. University of California – Davis.

**SELECTED
PRESENTATIONS
(LAST 3 YEARS)**

Evolution as a revolution in ecology: insights from temporary pond amphibians. Trinity College.

Eco-evolutionary dynamics in temporary ponds. University of Connecticut – Avery Point.

2010 Do species interactions matter? Realized responses to climate change. ESA. Ecological Society of America (ESA).

Evolution in metacommunities: eco-evolutionary dynamics in space. European Platform for Biodiversity Research Strategy E-Conference on Evolution and Biodiversity. (Invited keynote contributor)

The evolutionary ecology of species interactions across natural landscapes. University of Massachusetts – Amherst.

The great divide: the ecology and evolution of species interactions. Texas A&M.

2009 Evolving metacommunity concepts applied to climate change. DIVERSITAS/EU EVOLTREE workshop, Paris.

Integrating ecology and evolution to understand species interactions across heterogeneous environments. University of Toronto. (Keynote colloquium speaker)

Evolution of species interactions across heterogeneous landscapes. University of Texas-Austin. (graduate students' choice)

Microgeographic evolution of species interactions across heterogeneous landscape. University of California-Riverside.

Making the connection: The ecology and evolution of aquatic communities across space. UConn Environmental Engineering Dept.

**PROFESSIONAL
SERVICE**

Subject Editor, *Ecology* and *Ecological Monographs*, 2009 – present

CT State Museum of Natural History Public "Museum Walks," 2011

Invited presenter, Quebec Centre for Biodiversity Science workshop on community phylogenetics, Oct. 2011

ESA Frost Award Committee, July 2010

Invited contributor, European Platform for Biodiversity Research Strategy E-Conference on Evolution and Biodiversity, Mar. 2010

Invited presenter, DIVERSITAS/EU EVOLTREE workshop, Aug. 2009

**PROFESSIONAL
SERVICE**

Invited participant, NIMBioS working group on intraspecific niche variation,
2009-2011
Invited participant, NCEAS working group on Mechanistic Range Models,
2008-2010
Co-organizer, ESA symposium on evolution in metacommunities, 2008
Kids Do Ecology, NCEAS, 2008
Organizer, NCEAS Open House discussions, 2007-2008
Invited Panelist, ESA workshop on graduate student grant writing, 2007
Co-Principal Investigator, NCEAS working group on Evolving
Metacommunities, 2006-2008
Non-English author editor, ESA, 2005-present
Co-organizer, ESA oral session on evolving metacommunities, 2005
Oversight board member for the Yale-Myers Research Forest, 2004-2006

Peer reviewer for:

*American Naturalist, Amphibia-Reptilia, Animal Conservation, Annales de
Limnologie International Journal of Limnology, Biological Journal of the Linnean
Society, Current Biology, Diversity and Distributions, Ecography, Ecological
Applications, Ecological Applications, Ecology, Ecology Letters, Evolution,
Evolutionary Applications, Evolutionary Ecology, Functional Ecology,
Herpetological Notes, Hydrobiologia, Journal of Animal Ecology, Journal of Applied
Ecology, Journal of Evolutionary Biology, Journal of Experimental Zoology:
Ecological Genetics and Physiology, Herpetological Notes, Journal of Sustainable
Forestry, Limnology and Oceanography, Marine and Freshwater Research,
Oecologia, Oikos, PLoS ONE, Population Ecology, Proceedings of the Royal Society:
Biological Sciences, Science, Trends in Ecology & Evolution, Wildlife Research*

Island Press, Oxford University Press, Sinauer Associates, Yale University
Press, National Geographic Society, National Science Foundation,
University of Leuven Centres of Excellence