

PROMOTION RECOMMENDATION  
The University of Michigan  
College of Literature, Science, and the Arts

Meghan A. Duffy, associate professor of ecology and evolutionary biology, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of ecology and evolutionary biology, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

2006	Ph.D.	Michigan State University
2000	B.S.	Cornell University

Professional Record:

2014 – present	Associate Professor, Department of Ecology and Evolutionary Biology, University of Michigan
2012 – 2014	Assistant Professor, Department of Ecology and Evolutionary Biology, University of Michigan
2012 – 2013	Adjunct Faculty, School of Biology, Georgia Institute of Technology
2008 – 2012	Assistant Professor, School of Biology, Georgia Institute of Technology
2006 – 2007	Post-doctoral Fellow, University of Wisconsin at Madison

Summary of Evaluation:

Teaching – Professor Duffy has a strong teaching record, with a majority of her classes focused on undergraduate courses. She plays an integral role in the undergraduate biology curriculum. She has helped redesign and teach a 100-level introductory biology course, which enrolls more than 500 students each semester. To revitalize this course, Professor Duffy's emphasis is on engaging students with active teaching methodologies and real-world examples of biological principles in class activities and discussion. She team teaches two sections of this course annually and student E&E scores are typical of those received by other faculty who successfully teach comparably large introductory courses. She has also developed a new 100-level freshman seminar course with an enrollment of 20, where she also receives excellent E&E scores from her students. Professor Duffy has mentored more than 20 undergraduate students in research since 2012. At the graduate level, she teaches a new 800-level seminar entitled "Theory of Ecological Communities." She is currently supervising four doctoral students and has supervised two master's students who completed their degrees at Michigan. Her graduate students have received important research awards, including National Science Foundation (NSF) Graduate Research Fellowships and Rackham Merit Fellowships. They have also continued on in successful careers in science. To date, one holds a faculty position, one is progressing toward completion of a Ph.D., and a third holds a U.S. government position.

Research – Professor Duffy is widely recognized as one of the most talented researchers in evolutionary ecology. Her research is making fundamental contributions to our understanding of host pathogen interactions in nature. She has developed a highly versatile field and laboratory system using the fresh water planktonic crustacean *Daphnia* as her study system for this important and under-explored scientific frontier. Her research is solidly grounded in theory, with most of her papers presenting tests of general principles in addition to making new discoveries

about the biology of an important system. Professor Duffy's scholarly excellence has been recognized through sustained publication in leading journals, continuous National Science Foundation funding, and prodigious winning of prestigious awards, including an NSF CAREER award, a Presidential Early Career Award for Scientists and Engineers (PECASE), the Ecological Society of America's Mercer Award for an outstanding ecology paper by a scientist under 40, and separate Early Career Fellowships from the Ecological Society of America and the Association for the Sciences of Limnology and Oceanography (ASLO). The external letter writers make clear that she has earned an excellent scientific reputation, both nationally and internationally.

Recent and Significant Publications:

"Healthy herds or predator spreaders? Insights from the plankton into how predators suppress and spread disease," with D. E. Cáceres and S. R. Hall in Wildlife Disease Ecology: Linking Theory to Data and Application, K. Wilson, et al., Cambridge University Press, in press.

"Population density, not host competence, drives patterns of disease in an invaded community," with C. L. Searle, et al., *American Naturalist*, 188(5), 2016, pp. 554-566.

"Habitat structure and ecological drivers of disease," with R. M. Penczykowski, et al., *Limnology and Oceanography*, 59(2), 2014, pp. 340-348.

"Ecological context influences epidemic size and parasite-mediated selection," with J. Housley Ochs, et al., *Science*, 335, 2012, pp. 1636-1638 (cover article).

Service – Professor Duffy's contributions to service and outreach have been stellar. She has maintained consistently high levels of the typical service activities expected by the department, university, and profession. Most notably, Professor Duffy has engaged in novel and important contributions both in science communication to the public, and in outreach beyond university students, to broaden participation in science. Her outstanding contributions have been recognized by her recent selection as an AAAS Leshner Public Engagement Fellow for 2017-2018, and as one of two inaugural winners of the UM President's Award for Public Impact.

External Reviews:

Reviewer (A)

"...I consider Dr. Duffy to be an exemplary member of the academic community – a leader influencing how her peers do science, a productive researcher generating influential peer-reviewed articles and training students and postdocs, and a colleague with serious devotion to teaching and service. This is one of the easiest...promotion letters I have ever written!"

Reviewer (B)

"Dr. Duffy is achieving wide recognition due to the strength of her scholarly contributions to aquatic science as well as her exemplary contributions in science communication and education."

Reviewer (C)

"Overall, I find the research program of Dr. Meghan A. Duffy to be coherent, conceptually rich, and of international importance. You are fortunate to have her on your faculty. She has my strong unequivocal endorsement for promotion to the rank of Full Professor."

Reviewer (D)

“Meghan has received a shower of awards that reflect her ability and standing in the field. For an ecologist to land a career award from NSF is really exceptional and something she, and you, should be very proud of. The Mercer award for an outstanding paper in Ecology is really a sign of her excellence and respect from the community.”

Reviewer (E)

“It is a rare and wonderful thing to encounter a scientist [in her cohort] who has the maturity and perspective to build a research program as interesting and focused as Meg’s.”

Reviewer (F)

“...I find her work very inspiring. The questions she address[es] have a strong conceptual foundation. She has excellent skill in finding the right experimental design and tenacity to get sufficient high-quality data. This is exactly where many other research groups have failed. The papers included in her file speak for this conclusion with their high quality, diversity of topics and level of innovation.”

Reviewer (G)

“...her work is one of the few examples that have placed host-parasite evolutionary dynamics in the mechanistic context of the food webs in which these species are embedded.”

Reviewer (H)

“I would characterize Dr. Duffy’s contributions as unusually integrative, conceptually based, and aimed at issues at the forefront of disease ecology and evolution. Her facility in incorporating comparative, experimental, and modeling approaches is outstanding.”

Summary of Recommendation:

Professor Duffy is a leading scholar whose research occupies one of the more dynamic frontiers of her field. Her work has broad theoretical and great practical timeliness and importance. Her teaching and mentoring are excellent at all levels, and she has provided valuable service to her department and to the wider scientific community. The Executive Committee and the College of Literature, Science, and the Arts and I recommend that Associate Professor Meghan A. Duffy be promoted to the rank of professor of ecology and evolutionary biology, with tenure, College of Literature, Science, and the Arts.



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Andrew D. Martin, Dean  
Professor of Political Science and Statistics  
College of Literature, Science, and the Arts

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