

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Arts, Sciences, and Letters
Department of Natural Sciences

Anne Danielson-François, assistant professor of biology, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of biology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees:

Ph.D.	2002	University of Arizona, Tucson, AZ (Ecology and Evolutionary Biology)
M.A.	1999	University of Arizona, Tucson, AZ (Ecology and Evolutionary Biology)
B.A.	1990	Biology, Swarthmore College, Swarthmore, PA

Professional Record:

2007 – Present	Assistant Professor of Biology, Department of Natural Sciences, University of Michigan-Dearborn, Dearborn, MI
2004 – 2007	Huxley Faculty Fellow, Department of Ecology and Evolutionary Biology, Rice University, Houston, TX
2002 – 2004	Post-doctoral Fellow, Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS

Summary of Evaluation:

Teaching: Professor Danielson-François's teaching is rated excellent. Since her arrival in 2007, she has been a major participant in *Introduction to Organismal and Environmental Biology*, a foundational class for majors in the biological sciences for which she extensively revised the laboratory manual adding several new experiments and a special section on statistics. She has also developed three new upper-level courses, *Behavioral Biology*, *Biology of Spiders*, and *Evolution of Behavior*, all of which take special advantage of her research expertise. She is a strong proponent of active and cooperative learning methods and has made good use of such strategies in both her introductory and upper-level classes. Professor Danielson-François has also made wide-spread use of writing assignments in her courses, ranging from on-line assignments, to 1-minute in-class essays, to term papers formatted in the style of major professional journals. Over 90% of her students in all courses rate her teaching as excellent or above average. She is also the co-author of a chapter on behavioral genetics in a new textbook that is in press. Professor Danielson-François is a committed practitioner of the teacher-scholar model, having mentored more than 40 undergraduate students in independent study activities based in her laboratory, and two Master of Science in environmental science students. Several of her students have received prestigious scholarship awards from the Animal Behavior Society and the Society for the Study of Organic Evolution.

Research: Professor Danielson-François's research is rated excellent. Her research focuses on ecology and evolutionary biology, invertebrate biology, and animal behavior, particularly the mating habits of spiders. Since joining UM-Dearborn in 2007, Professor Danielson-François has had three articles published with another currently in press. Two additional papers are under review. With colleagues in the College of Engineering and Computer Science, she has also created and published an important video analysis program, entitled *Biovision* that stands to have a significant impact on the manner in which animal behavior data is analyzed. Professor Danielson-François has given nearly 25 professional presentations at national conferences, the majority of which have included her students as co-authors, and, since 2007, has received more than \$220k in grants to support her work

and that of her students. Professor Danielson-François also received a research fellowship from Tunghai University in Taiwan to conduct spider field work there.

Recent and Significant Publications:

Danielson-François, A., Hou, C., Cole*, N., and I-M. Tso. 2012. Scramble competition for molting females as a driving force for extreme male dwarfism in spiders. *Animal Behaviour* 84: 937-945.

Bleakley, B.H. and A. Danielson-François. Behavioral Genetics: Beyond Nature and Nurture, in *Animal Behavior: Volume I Causation and Development*, K. Yasukawa ed. Westport, Praeger Publishers, *in press* (2012).

Carrillo, J., Danielson-François, A., Siemann, E., and L. Meffert. 2011. Male-biased sex ratio increases female egg laying and fitness in the housefly, *Musca domestica*. *J. of Ethology* 30:247-254.

Danielson-François, A., Zhou, Y., A., and M. D. Greenfield. 2009. Indirect genetic effects and the lek paradox: inter-genotypic competition may strengthen genotype x environment interactions and conserve genetic variance. *Genetica*. 136: 27-36.

*undergraduate students

Service: Professor Danielson-François's service is rated excellent. Her contributions to her department, to the campus, and to her profession in this area have been exemplary. She has served on the departmental Environmental Programs Committee since 2008, and from 2008 through 2010, she was a member of the Natural Sciences' Colloquium Committee, chairing the group in 2010. During the 2010-11 academic year, Professor Danielson-François was elected to serve as the programs representative to the department Executive Committee, and, for the past four years, she has chaired the BIOL 130 Curriculum Review Committee. She currently serves as the department's representative to the Faculty Senate. Her collegiality and insightful contributions have been highly valued in each of these roles. She has provided careful advisement to more than 200 biological sciences majors since her hiring in 2007. Professor Danielson-François serves her profession as a peer-reviewer for professional journals, including the *Proceedings of the Royal Society*, *Evolution*, *Behaviour*, the *Journal of Arachnology*, and *Genetica*. She has been an invited session chair at several national professional meetings, as well as a panel reviewer in the area of evolutionary biology for the National Science Foundation since 2007.

External Reviewers:

Reviewer A: "Dr. Danielson-François' studies represent an elegant use of a relatively simple (but labour intensive) rearing technique paired with classic quantitative genetics experimental design to focus on questions of broad importance in evolutionary biology. These three papers ... have, in my opinion, established Dr. Danielson-François as an expert in mating behaviour of Tetragnathidae and in the biology of sperm use in spiders."

Reviewer B: "She has asked reasonable questions and obtained interesting results... and I expect that the greatest impact from her spider work is yet to come. I think it is important to mention her outstanding enthusiasm, which clearly has an inspiring impact on the research activities of students (as is obvious from the groups of enthusiastic students with her at meetings where I have seen her)."

Reviewer C: "I believe this article will be regarded as an important contribution to the vexing question in the evolution of size dimorphism... Many papers on sexual size dimorphism lack the combination of extensive field work with measures of paternity. Thus, I think that this is an excellent contribution that will be well-cited. I am very impressed that at a recent meeting ... Prof. Danielson-

François' group presented five papers, including eight undergraduate co-authors! It is clear that Prof. Danielson-François is engaging students in meaningful research and is a deeply caring mentor."


Reviewer D: "Dr. Danielson-François is a thoughtful and insightful evolutionary behaviorist, an excellent arachnologist, and a dedicated researcher and mentor, and I would like to express my highest regard for her work. As in much of Dr. Danielson-François's work, she questions paradigms and explores alternative explanations for why organisms are the way they are, often leading to substantial scientific insights. This is one reason why Dr. Danielson-François is highly respected by her colleagues..."


Reviewer E: "With respect to her scholarship. Dr. Danielson-François has done exemplary and pioneering work particularly in the areas of sperm competition and cryptic female mate choice...The logistical and methodological difficulties of doing this type of research are great and fairly well known in our discipline. Anne has managed to solve these problems and has been extremely generous with her techniques – so much so that she has greatly stimulated advances in this area."

Reviewer F: "One common thread in her research is that she is able to integrate research concepts and techniques across fields – molecular biology, population genetics, quantitative analyses, environmental toxicology and behavior – and bring them to bear in answering important research questions. Given the time since finishing her Ph.D. and her robust teaching activity ..., she has a highly respectable publication rate for a pre-tenure faculty member. Taken together, these activities are strong indicators of a healthy research program and a candidate for promotion with great potential for future contributions."

Summary of Recommendation:

Professor Danielson-François has demonstrated excellence in her teaching and research, and has rendered valuable service to her department, to the campus, and to her profession. We are very pleased to recommend, with the strong support of the Executive Committee of the College of Arts, Sciences, and Letters, Anne Danielson-François for promotion to associate professor of biology, with tenure, in the Department of Natural Sciences, College of Arts, Sciences, and Letters.


Jerold L. Hale
Dean
College of Arts, Sciences, and Letters


Daniel Little
Chancellor
University of Michigan-Dearborn

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