



INTEGRATIVE BIOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN

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Douglas Schemske
Plant Biology Laboratories
612 Wilson Road, Room 166
East Lansing MI 48824-1312

Dear Dr. Schemske,

Thank you for considering my application for the Plant Biologist search in the Department of Plant Biology at Michigan State University. I am a plant ecological and evolutionary geneticist in pursuit of a tenure-track position where I will develop a cutting-edge independent research and teaching program. An alumnus of UC Berkeley, I received my Ph.D. in Genetics and Genomics from Duke University as a member of Dr. John Willis' lab. Currently, I am an independently funded postdoctoral fellow working with Dr. Thomas Juenger at the University of Texas at Austin.

My ecological and evolutionary genomic research program is centered on understanding how plant populations, genomes, and new species evolve morphological and physiological adaptations in response to the natural environment and how those adaptations contribute to the evolution of new species. I am particularly interested in understanding how differences in water availability between habitats drives adaptive divergence in plants. During my Ph.D. dissertation, I demonstrated that a chromosomal inversion plays a key role in the evolution of local adaptation and reproductive isolation between coastal perennial and inland annual ecotypes of the yellow monkeyflower (*Mimulus guttatus*). My current postdoctoral research is focused on integrating gene expression, physiology, and metabolomics to understand the evolution of gene networks involved in drought tolerance adaptations in *Panicum* grasses and *Arabidopsis thaliana*.

My future research will build upon several strengths of the Department of Plant Biology by adding interdisciplinary directions in ecology, evolution, genomics, plant physiology, and speciation biology. The breadth of my interests will allow me to provide broad training for graduate students and postdoctoral fellows, as well as enable me to teach a diverse range of

subjects to undergraduates. I am highly motivated to provide excellent coursework and mentorship to students, especially to minority and underrepresented groups. The future of biology will require a greater integration of disciplines and I plan to develop a rigorous program that will attract students from diverse backgrounds.

I believe that my successful track record of interdisciplinary research, my broad teaching interests, and my commitment to university service make me a strong candidate for this position. I have asked Dr. Thomas Juenger, Dr. John Willis, and Dr. Mohamed Noor to send letters of recommendation in support of my application upon request (see attached CV).

Thank you very much for your time and consideration.

Sincerely,

David Lowry