

Field Name	Field Value
Name	Mitch Bern
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Web_Address	
Renewal	No
Permit_Number	2010-003
Activity	Research
Project	The evolution of complex courtship displays in wolf spiders
Dates	3/28/10 - 8/1/2010
Group_Size	3
Research_Area	Yes
Grandview_Alley	Yes
Sensitive_Area	No
Other_Areas	No
Building	No
Prep_Work	
Sampling_Collecting	No
Sampling_Methods	The spiders I will be collecting are so numerous and densely distributed that the small number of individuals I will remove from the population will have no effect on the populations overall health and will not negatively effect the rest of the biotic and abiotic environment.
Description	All animal interactions, either within or between species utilize signals as their basal components. While many displays throughout the animal kingdom simultaneously utilize multiple signals, often in multiple modalities, the function and significance of these complex displays are not well understood. In an attempt to better understand the evolution of complex animal signaling displays Dr. Todd Blackledge (University of Akron), Dr. Eileen Hebets (University of Nebraska) and I are conducting a study on two species of co-occurring wolf spiders, <i>Schizocosa bilineata</i> and <i>Schizocosa crassipalata</i> . The Bathe Nature Preserve contains the only known population of <i>Schizocosa crassipalata</i> and one of only three known populations of <i>Schizocosa bilineata</i> . There are undoubtedly other populations elsewhere, but these two are co-occurring and easily accessible, making the Bathe Nature Preserve an ideal collection site. Both of these species have courtship displays in which males court females using both a leg waving motion (a dance) and substrate borne vibratory signal (a song). The degree to which the song and dance is utilized in the

	<p>total display varies between these two species. In order to determine the relative function and importance of each of these signals for male courtship success I will collect spiders from the Bathe Nature Preserve and then will independently manipulate male condition, the visual signal and the vibratory signal. By comparing male courtship success across the different combinations of these three treatments I will be able to elucidate the function of each signal type and its relative importance in the overall display.</p>
Agreement	Accept