Field Name	Field Value	
Name	Miriam Jenkins	
Organization	Biology, University of Akron	
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Web_Address		
Renewal	No	
Permit_Number	2013-006	
Activity	Research	
Project	Density Effects on Competition for Pollination between two Wetland Plant Species	
Dates	June 20-Aug 20, 2013	
Group_Size	4	
Research_Area	Yes	
Eighteen_Acres	Yes	
Sensitive_Area	No	
Other_Areas	Yes	
Panzner_Wetlands	Yes	
Building	No	
Prep_Work		
Sampling_Collecting	Yes	
Sampling_Methods	Some pollinating insects may be collected with aerial nets for reference and species verification. Approximately 150 fruits of Mimulus and Verbena will also be collected.	
Description	I propose to conduct an experimental and observational study of the pollination systems of Mimulus ringens and Verbena hastata with the go of determining the role that density of each plant population plays in competition for pollination services. Previous studies have found a wide range of effects of plant species on each other in plant communities, but there is little known about how the density of the population could affect the reproductive success of a population. The experimental portion of m study will involve placing arrays of potted V. hastata of various densitie into natural populations of M.ringens. I will collect data on 1. pollinating visitors to both plant species 2. stigmas of each species to determine heterospecific pollen transfer and 3. seed set from fruits. I will determine whether changes in density of V.hastata has a significant effect on the pollination of M.ringens. For the observational portion, I will be collecting the same data measurements as the experimental study but in areas when the two species naturally co-exist, and will not set up arrays.	

Agreement	Accept	
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