Permit 2007-009

Field Name	Field Value
Name	Lisa Park
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Web_Address	http://www.uakron.edu/colleges/artsci/depts/geology/lep.php
Renewal	No
Permit_Number	
Activity	Research
Project	
Dates	April - October 2007
Group_Size	3
Research_Area	Yes -- Garden Pond
Sensitive_Area	Yes -- Bath Pond
Other_Areas	No
Building	Yes
Prep_Work	I will need lab space that would include a sink where I can wet sieve samples and a table where I can lay the core out and split it.
Sampling_Collecting	Yes
Sampling_Methods	My two major goals in this research project are: 1. To collect and document the ostracode faunas living in Garden Pond and Bath Pond and to do initial geochemistry on the waters of those ponds. To do this, water and sediment samples will be collected from each. Sediment samples will be done in replicated transects from the shoreline to the depocenter. No permanent disturbance will be made. 2. Livinstone piston cores will be taken in both Bath and Garden Ponds in order to determine the history of these two lakes. This will require a small boat or pontoon as a coring platform that is anchored and driving 4\" PVC tubing into the bottom of the lake. No permanent disturbance will be made.
Description	1. Proposed Activities--A) My 2 students and I will do a complete, season study of the ostracode faunas from both Bath and Garden Ponds. This will include the taxonomy, ecology and geochemical parameters of each species. B) We will then take 2-3 cores from each of the lakes and analyze the sediment and organic material as well as sample it for ostracodes. While the survey of the ostracodes

	will be done on a monthly basis starting in April and ending in October, we will only have to core once. 2) Goals--The goals of this research project are twofold--A)create a taxonomic atlas of the ostracodes from Bath Nature Preserve and compare them to local and regional faunas, as well as establish their geochemical distributions and B) obtain, for the first time, a long-term record of environmental change from the BNP; by extracting and examining cores from these two ponds, I will be able to document large and small scale changes in the lakes\' watershed. This would allow us to look at changes from early settlement and farming practices. 3) The impacts of this research on the BNP are both specific and broad. First, by making a complete inventory of ostracodes on the property, another important moniker in biodiversity will be assessed. Ostracodes are important proxies for environmental change and they can be used to assess the overall health of the water in which they live. By analyzing these shelled microcrustaceans, I will be able to better understand how Bath and Garden Ponds compare with other lakes. On a larger scale, the cores extracted from these two sites will give us some of the first evidence of what sorts of environmental changes the property went through in the past, particularly with respect to farming and clearing of the land. This will provide an important framework in which other natural history questions can be framed.
Agreement	Accept