Permit 2007-015

Field Name	Field Value
Name	Dr. Randall J. Mitchell
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Renewal	Yes
Permit_Number	Not numbered -summer 2004 approval
Activity	Research
Project	Plant-pollinator interactions at the Bath Nature Preserve (RENEWAL)
Dates	2007-2010
Group_Size	1
Research_Area	Yes -- Beefy's Woods, Big Top, Grandview Alley, Oak Forest, Wetland
Sensitive_Area	Yes -- Bath Pond, Garden Bowl, North Fork, Tamarack Bog
Other_Areas	Yes -- Public Areas, Steiners Woods
Building	Yes
Prep_Work	none
Sampling_Collecting	Yes
Sampling_Methods	I will mostly just observe and record visitors, occasionally collecting voucher specimens. In some cases I will use pin flags to denote study plants for a week or so, and in a few cases I will keep flags up for a month or more to allow me to return to collect fruits tagged with small jeweler's tags (paper and string). I do not plan any manipulative experiments – only observations, collections, and occasional fruit collection.
Description	Plant-pollinator interactions are important aspects of ecology, yet little is known about this topic for plants in Northeastern Ohio. By recording pollinator species composition, visitation rates, plant and flower size, and seed production for several plant species I plant to improve our understanding of this topic, and lay the groundwork for future research. • Observe and record visitation rates to flowering plants at BNP. Most work will focus on Beardtongue (Penstemon digitalis), and Allegheny Monkeyflower (Mimulus ringens), but as possible I will also record visitors to other species, including spring beauty (Claytonia virginica), cut-leaf toothwort (Dentaria laciniata), swamp loosestrife (Decodon verticillatus) and others. I will collect a small fraction of fruits from some plants. •

	Collect insects visiting flowers plants at BNP to allow identification to species and determine which insects visit which plants. • Measure flower size and nectar for some species.
Agreement	Accept