

Permit 2018-010

Name:

Andrea G. Kornbluh

Department or Organization:

University of Akron

Email Address:

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Are you requesting renewal of a previously approved permit applicaton?

No

Type of activities at The University of Akron Field Station and Bath Nature Preserve
Research

Title of project or class name and course number:

The effect of Apocynum cannabinum density on pollinator visitation rate

Date/Dates requested:

June 30 2018 - September 1, 2019

Number of people in group:

1

I am requesting permission to use a Research Area.

Yes

I am requesting permission to use a Sensitive Area.

Yes

I am requesting permission to use areas outside of the designated Research or Sensitive Areas.

No

I would like to use the Martin Center for Field Studies and Environmental Education for this prop...

Yes

Will the activity involve destructive sampling/collecting?

Yes

Which Research Areas?

18 Acres

Garden Pond

Grandview Alley

Round Top

Which Sensitive Areas?

Garden Bowl

Please indicate any preparation or set-up you will need in the Martin Center for Field Studies an...
Occasional microscope use ... no need to set-up or maintain space.

Please explain how the material will be collected (including equipment), and an estimate of how m...

A few inflorescences (3-5 maximum) will be clipped with gardening shears to examine floral anatomy. Mature fruits will be collected by hand - approximately 20 fruits per patch of plants or no more than 25% of total fruit production, whichever is fewer - in order to quantify seed production. One plant will be collected as a voucher specimen to document the project in the University of Akron herbarium.

Provide a brief description of (1) your proposed activities, (2) goals, and (3) impacts of your u...

The goal of the proposed project is to test a hypothesized relationship between floral density and pollinator visitation rate, as well as examine the effect of distance between patches of *Apocynum cannabinum* on total seed production. Three replicates of low, intermediate, and high density will be described in full, and the location of additional patches will be recorded.

In order to describe the density and distribution of *A. cannabinum*, I will measure the size of distinct patches of plants and count the number of stems. Patches will also be described in terms of the average number of flowers produced by each plant. The distribution will be mapped in order to quantify the distance between patches. Pollinator visitation will be observed and quantified. Major pollinators will be identified to aid in future studies of this system. Total fruit production of each study patch will be counted, and several individual fruits (20 fruits or < 25% of total fruit per patch) will be randomly selected to quantify average seed production.

The direct impacts of this project are increased visibility of the University of Akron research activities taking place at the site and additional data regarding the plants and pollinators that occupy the Bath Nature Preserve. Most of the *A. cannabinum* study populations are located along the N. Fork, Creekside, and Bridle Trails which the public uses frequently. This presents many opportunities for the researcher to interact with the public. The data collected will supplement existing knowledge of plant-pollinator interactions at the Preserve. The project will also add to the growing list of research projects involving the University of Akron Field Station and will indirectly support the positive interactions between the University and Bath Township.

By checking this box, I agree to the above terms and state that all of the above information is c...
I agree