

Permit 2016-016

Name (Last, First, MI):_ Han, Sarah, I _____, Date: _07/21/2016_____

Affiliation: _University of Akron_____

Email address: __Sih12@zips.uakron.edu_____

MailingAddress: _Todd Blackledge. 302 E. Buchtel Ave. Akron, OH 44325_____

Title of Research: _Energy Damping Properties of Micrathena Bridging Thread_____

Briefly describe the research to be conducted at the BNP in non-technical language (this paragraph will be used in describing your research to the public).

A spider’s web is constructed in a way to capture prey. Insect prey differ in size and flying speed, so the moment of impact upon a web can vary greatly. Different spiders use different web architecture, and the distribution of energy can differ between these different constructions. The Spined Micrathena uses a long bridge thread in its orb-web, which may affect how the energy of impact is spread throughout the web.

Briefly describe the goals of the proposed research.

___ Investigate the effect of Micrathena’s long bridging thread on the energy damping and distribution of the whole web system under impact. _____

On which research areas of the preserve will your research occur? _____

___ Beefey Woods/Oak Forest_____

What are the GPS coordinates or locations of your proposed research? _General Beefey Woods/Oak Forest area_____

Does your proposal involve areas that are not part of the designated research areas? No ___

(if yes, this permit will require approval from the Bath Trustees ♦ this can only be sought four times a year, and so approval of your permit may take up to several months). Talk with the BNP Committee for more details.

What is the expected duration of your proposed research? August-December 2016

What is the Web address of your research outline? http://http://gozips.uakron.edu/~tab27/

Briefly outline of methods to be used. Be sure to include outlines of the equipment to be used (if any) in the research.

Micrathena webs will be found in the forested research area of the BNH. A high-speed camera will be used to film the impact of small projectiles fired from a spring gun into the web, with bridging thread in a constrained and unconstrained state.

Outline the use of markers/cages/fences/etc. for your research. Note: in receiving a research permit, you must agree to remove all such research tools at the completion of your study.

None

What is the potential impact of your research on nature preserve?

Little to no impact. Only a few spider web will be damaged, and the hundreds of eggs the other spiders will produce will more than make up for any losses.

Have you looked at the listings and web sites of the research being conducted at BNP? <http://www3.uakron.edu/biology/bath/active.html> Yes ___ No ___

Are there any potential conflicts of your research with others at BNP? Yes ___ No ___

Explain: _____

To be granted a research permit for work at the BNP, you must agree to the following terms:

- ◆ Researchers are responsible for obtaining the appropriate state or federal permits for the conduct of their research on the BNP (e.g., when working with regulated species).
- ◆ Researchers are responsible for removing all markers, etc. from their research plots when the research is completed.
- ◆ Researchers must build a web site (immediately after being granted a permit) outlining their research at the BNP so that other researchers can avoid the proposed research site(s). Therefore, the web site must clearly outline, using one or more maps, the exact location(s) of the proposed research.
- ◆ Researchers will file an annual (due in yearly increments based on the date of the permit) and final report. Such reports will include: user days on the BNP, a summary of results of the project(s), a list of data generated and contact information for those interested in the data, and a list of publications resulting from the project(s).
- ◆ Any publications resulting from research conducted at the BNP must acknowledge the use of the preserve by referencing the BNP permit number. A copy of any such publication should be filed with the BNP committee.
- ◆ To abide by the rules and regulations of the BNP in any and all conduct of research at the BNP.

By signing the request for a BNP research permit below, I agree to the above terms and state that all of the above information is correct to the best of my knowledge. I also agree to amend my above permit request if my research plans change such that they are no longer well represented in the information supplied in this permit request. If I fail to notify the BNP oversight committee of significant changes in my research, or if I do not follow the rules of the BNP, I realize that the BNP oversight committee can revoke my research permit, and disallow any further work by me, research or otherwise, at the BNP.

Signature: *Sarah Han* Date: 07/28/2016

Print Name: Sarah Han

Approval:

Bath Township: _____ Date: _____

University of Akron: _____ Date: _____