

Permit 2008-008

Application for a Research Permit for The BNP

Name (Last, First, MI):_Uma Divya Bellur (sponsored by Todd A

Blackledge)_____, Date:___May 5th 2008_____

Affiliation:___Student,Georgetown University, Washington

DC_____

Emailaddress:___dbu@georgetown.edu_____

MailingAddress:___37th and O streets Biology Department Reiss 406

Georgetown University, Washington DC 20057

Title of Research:___ **Chemical mediation of prey preferences by spider-hunting wasps**

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).

- While spiders are predators, they are themselves heavily preyed upon by mud-dauber wasps (*Sceliphron caementarium*). Spiders' web architecture has been considered to be a defensive behavior against wasp predation, with three dimensional (3D) webs thought to provide more effective physical barriers than their two-dimensional (2D) counterparts. Our results suggest that wasps choose spiders based on chemical cues, rather than web architecture. I will determine whether all spider taxa taken by *S. caementarium* share similar chemical cues. At the BNP, I will sample spiders from 5 different families to analyze spiders' chemical profiles. This research is advised by Dr

Todd Blackledge, Biology Department, University of Akron. Dr Blackledge will also help me to collect spiders from the BNP.

Briefly describe the goals of the proposed research.

The goal of the proposed research is to determine whether all spider taxa taken by *S. caementarium* share similar cuticular chemical profiles. We will collect spiders from 5 different families to evaluate their chemical profiles. Both web-building and non web-building spiders will be sampled.

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

Grandview alley (outside crop circles), Wetland, and the Oak Forest research areas.

What are the GPS coordinates or locations of your proposed research? ___ general throughout the three listed research areas _____

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?___July 8th to July 20th 2008_____

What is the Web address of your research outline? None

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

We will collect spiders by visual searches by walking through the nature preserve. We will collect spiders during evenings as spiders are more active and easy to locate at that time.

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.

_____ Not applicable

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

_____ Our research will not impact the preserve.

We will be collecting 5 individual spiders from 5 families. Thus, sampling will not alter spider populations on the preserve significantly.

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 __yes__ No____

Are there any potential conflicts of your research with others at BNP? Yes _____ No__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: _____ Date: _____

Print Name: _____ Divya Uma _____

Signature:  _____ Date: _____ 30May2008 _____

Print Name: _____ Todd Blackledge _____