

How to apply for a \$500 minigrant to enhance the information infrastructure of the Natural Area Teaching Laboratory

This application information may be downloaded as an MS Word file at <http://natl.ifas.ufl.edu/minigrants.htm>. Applications must be submitted as an MS Word or PDF file attached to an email message to natl@ufl.edu, with a signed paper copy sent by campus mail to Jack Putz, NAAC Chair, PO Box 118526, Campus.

To be considered, submissions must include the **bold-faced items** indicated below, and consist of *no more* than three pages.

Proposer or designated leader of group of proposers (must be a UF student)

Name: Michael C. Granatosky
Academic classification: Junior
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Experience or training related to proposed project:

2008-present: Collections Assistant, Herpetology Department, Florida Museum of Natural History, Gainesville FL.

2008-present: Necropsies of the Everglades Pythons (*Python molurus*) determining reproductive fitness and dietary choice, Florida Museum of Natural History, Gainesville FL.

2009 TA position, Wildlife Techniques (WIS 4945C), Herpetofauna Field Techniques, Department of Wildlife Ecology and Conservation, Ordway-Swisher Biological Station, Melrose FL.

2009 Student, Wildlife Techniques (WIS 4945C), Department of Wildlife Ecology and Conservation, Ordway-Swisher Biological Station, Melrose FL.

Sponsor (must be a UF faculty member)

Name Dr. Kenneth L. Krysko
Department Wildlife Ecology and Conservation
E-mail address kennedyk@flmnh.ufl.edu
Campus-mail address PO Box 117800, Dickinson Hall

Title of project

Habitat selection, ontogenetic shifts, and microhabitat refugia: A study of conspecific hylids in a diverse study site.

Project summary

Current work on amphibians has allocated little attention to life history characteristics away from breeding ponds, and hylid treefrogs are no exception. Such important factors as macro and microhabitat selection, ontogenetic habitat shifts, and interspecific competition has been addressed in few studies, and a great deal of information still needs to be addressed in order improve our insight on hylid biology. The Natural Areas Teaching Lab (NATL) on the University of Florida Campus provides a unique opportunity to answer some of the unexplored questions associated with hylid biology. Due to the exceptional state of management, NATL maintains of four primary ecosystems (i.e. hammock, upland pine, oldfield succession, and wetlands), and currently reports four different species of hylid treefrogs (i.e. *Hyla cinerea*, *H. femoralis*, *H. squirella*, and *Osteopilus septentrionalis*). Therefore, I propose to explore habitat selection between interspecifics, use between different ontogenetic stages, and microhabitat selection based on trap construction and location.

Starting date

Anticipated start date 1 July 2010.

Completion date

Field portion of the project will be completed by 31 August 2010. Final report will be provided by 15 October 2010.

Description of project

In order to assess the possibility of selection pressure within the NATL treefrog community, a series of 96 PVC pipes will be systematically divided throughout the four primary ecosystems present within NATL. At each site the 24 pipes will be first divided into three primary size classes (i.e., 1 in, 3/4 in, and 1/2 in diameter), to assess whether treefrog species show microhabitat preference toward nesting cavities based on diameter. This subsample will be further subdivided into two groups by placing half of traps in a tree approximately six feet above the ground, and a corresponding PVC pipe at the base of the tree. This division will indicate whether treefrog species are more prone to select nesting cavities on the ground, or whether an arboreal niche is preferred. The traps will be checked twice per week for a sampling period between July 1st 2010 and October 1st 2010. All treefrogs found within the pipes will be measured for snout-vent length to determine an approximate age category. In addition, each treefrog will be given a toe-clip mark to differentiate between recaptures or new arrivals. Cuban Treefrogs (*Osteopilus septentrionalis*) will be removed and euthanized humanly, as Florida Statute 372.265 specifically prohibits the release of non-native wildlife without a permit from the Florida Fish and Wildlife Conservation Commission (FWC). These measurements are important as they will serve as an indicator for ontogenetic patterns of selection. All treefrogs will be returned to their respective trap locations.

The systematic trapping of treefrog species within NATL will indicate how selection pressure either distribute or concentrate stresses acquired during inter and/or intraspecific competition. Nested ANOVA tests will be used to determine whether or not habitat selection occurs at the ecosystem, the local, or microhabitat level. Additionally, ANOVA tests will be used to speculate whether differential habitat selection occurs according to species, sex, age, or at the individual level.

Results from the proposed study will greatly increase our insight into treefrog biology, and such findings should then be used to effectively manage for unique requirements that may exist throughout ontogeny, or between species and sexes.

Upon completion of this study, data (following a selected scientific journal format) will be delivered in digital format to NAAC, along with a pamphlet designed for the public that distinguishes all treefrogs found in the NATL. Additionally, I would like to develop a lab exercise and present this study to UF students, as well as consider presenting a poster at the subsequent Florida Academy of Sciences annual meeting.

Provision for periodic communication with NAAC administration

Monthly meetings could be arranged on the 15th of each month, or at the convenience of NAAC administration.

Signatures

Only the paper copy needs be signed.

Proposer _____ Date 9 September 2009 _____

Sponsor _____ Date 9 September 2009 _____