**2013 NATL MINIGRANT PROGRAM**

**Proposer or designated leader of a student group**

***Name:*** Elena Ortiz-Acevedo

***Academic classification***: PhD Candidate

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***Experience or training related to proposed project***: I have experience in constructing visual aids for the collection rooms in the McGuire Center for Lepidoptera and Biodiversity – Florida Museum of Natural History. The visual aids are made from magnet sheets to which I attached pictures of the species that were stored in that particular section of the compactor. The pictures are used as a visual guide throughout the collection rooms. Also, I am a trained lepidopterist (M.S. Entomology and Nematology, UF, 2011) and hence am familiar with Lepidoptera biology and hostplant associations.

**Sponsor (must be a UF faculty member)**

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**Title of project-** Hostplants of Butterflies and Moths in NATL: Enhancing visitors’ experience through signs about Lepidoptera biology.

**Project summary-** Lepidoptera are an important group for educating the general public and children about ecological interactions, conservation, and beauty of the natural world. In popular culture, it is becoming more common to plant nectar sources for butterflies and refer to them as “butterfly gardens”. However, butterflies and moths greatly depend on their hostplants, which are less known to the public, less attractive and are more difficult to propagate. As a result, there is a discrepancy: most of the plants offered by retailers labeled as “butterfly-plants” (with a few exceptions such as milkweeds) are the nectar plants that pull the butterflies away from nature and contribute little to their thriving. The project intends to rectify this common misunderstanding by providing signs that explain the importance of hostplants. Each sign will depict a hostplant and an associated Lepidoptera species, and will briefly describe the biology of both.

**Starting date-** The project will start in the spring semester 2014. During Fall 2013 and Spring 2014, I will gather data related to the plants and lepidopterans that will be targeted. I will begin working on the signs the first week of the spring semester (~ January 6th). The signs will be approved by the sponsor and then will be submitted for approval by the NAAC Chair.

**Completion date-** The project will be completed six months after the start date. I expect that all the signs will be printed by the first week of July 2014.

**Description of project-**

***Objectives:*** The main objective of the project is to enhance visitors’ experiences when they are in NATL and to attract more visitors. We can further enhance the educational purposes of NATL by using signs depicting life cycles of Lepidoptera and their hostplant associations. This will work not only at the academic level (e.g., field trips by UF students), but it will also increase community awareness of the natural processes that constantly occur in our surroundings, yet are frequently overlooked. As a community of scientists trying to conserve the natural world, we should take advantage of the natural beauty of NATL and of butterfly and moth fauna that occurs there to educate visitors. Specifically, within the scope of this project, we want to focus on organismal interactions and show the public that interactions are key to organismal survival. By focusing on flagship species, such as butterflies and larger and more colorful moths that are already known to the public, we will be building on the existing foundation of knowledge. The aim is to create another focal point in public awareness of butterflies and moths: their immature stages and their dependency on the hostplants.

 The relevance of the proposed signs will also be enhanced by the proximity to the Butterfly Rainforest. The museum visitors will complement the “indoor” walk through the Butterfly Rainforest with an outdoor field experience, using butterflies as the link between the two. While the Butterfly Rainforest features and educates the public about adult Lepidoptera, NATL will play a role in introducing the immature stages.

***Procedures:*** The signs will be designed with the help of Adobe Indesign and made into pdfs.Writing of the text and collection of the photos will be conducted by the PI under supervision and help of the sponsor of the project. A wealth of knowledge and photo resources already existing at the McGuire Center can be tapped. The signs will be printed on a special weather-proof media already tested at NATL by the way of the botanical signs found there. They will be slightly larger than the botanical photosigns (7x11 inches) as they will contain more information. Also, they will also be submitted via email to the NAAC Chair for future reference or in case they need to be replaced in case of loss or damage. At the end of the six month period, all 20 signs will printed and ready to be set up. Due to the seasonal nature of some interactions, the signs will be placed in NATL at the appropriate time of year. We will mainly focus on insect-plant interactions for the spring-summer semesters, corresponding to ~75% of the signs. The remaining signs will correspond to species present during the fall semester. We will attempt to cover the four trails found in NATL by designing an equal number of signs for each, however this will depend on the insect-plant interactions found for each.

***Potential lasting impacts on NATL:*** Thanks to this project NATL will develop further as a self-guided teaching lab. The fact that NATL is both a part of the University’s teaching process and is open to the general public ensures that the information in the proposed signs will be widely disseminated. The signs will be conspicuously displayed and will be durable, so they will create a long-lasting value that will enhance NATL for a number of years. They also can be easily removed when no longer appropriate for the time of year and during maintenance of NATL. The signs can be replaced in case of loss using the digital files submitted at the end of the project.

***Budget:*** The items proposed in the following budget include approximate shipping costs.

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| --- | --- | --- | --- |
| *Item* | *Description* | *Quantity* | *US$* |
| Signs | 2’ x 3’ - Printing by Color ReflectionsEach large sign will be split in 10, 11”x7” final size for a total of 20 signs | 2 | ~ 335 |
| Sign Stakes | 11”x7” Stake holders, 36” in height, 25 pieces per pack (Item 11736 - www.gardencentermarketing.com) | 1 | ~ 100 |
| TOTAL | **~ 435** |

**Provision for periodic communication with NAAC administration-** The design and contents of the signs will be subject to the sponsor approval before being submitted to the NAAC chair. I will attempt to have one sign every two weeks and send it to the NAAC Chair via email. I will meet with the NATL OpComm every month in order to discuss any comments or changes to the signs submitted via email. After approval of all the signs I will send them for printing. In addition, I will provide photos of our progress to the graduate TAs for social media posts.

**Signatures**

Student\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sponsor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_