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# Creation of a Natural History Information Database with Mobile Device Access for the Pace Campus in Pleasantville


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## **FINAL REPORT**

### **Creation of a Natural History Information Database with Mobile Device Access for the Pace Campus in Pleasantville**

#### **Cornerstone III**

#### **Co-Principal Investigators:**

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**12-1-2012**

#### **A. Original Goals**

Our main goal was to develop a system that will permit individuals on campus to easily gain information about the species of plants, animals and natural areas on Pace's Pleasantville campus. By scanning a QR code on small sign posts near items of interest using their mobile devices, individuals will access relevant websites. A Twitter account was also to be made available so that students and faculty may inform others via "tweets" of noteworthy species (e.g. bird) sightings on campus. An important goal of the project was to enlist the assistance of Pace students in implementing the system.

#### **B. & C. Progress to Date & Specific Activities Completed**

**To date (Dec 1, 2012), as described in our proposal of 2011, we have done the following.**

- Obtained necessary equipment (computer, printer, laminator, plant signs, ipad, and camera).
- Communicated project details to faculty we anticipated would be interested in participation of their students
- Developed a rubric for guiding and evaluating the work of students
- Selected Target Species and campus sites for initial focus
- Created a first set of QR markers to facilitate web access to species pages using a mobile device such as a smart phone or ipad.
- Completed functioning examples for plant and animal species on campus (to test the system and enhance our web site)
- Created a Twitter account for dissemination of information on sightings of species on campus

**Well ahead of our anticipated schedule, we have:**

- Created a home page with a number of links (<http://webpage.pace.edu/naturespace/>)
- Written a Javascript routine for searching our species database

- Enlisted the help of a large number of students (both undergraduate and graduate) in creation of documents with information to be incorporated in species web pages
- Involved students in art and English
- Created pages/documents for a significant number of species (40+; note: most not yet uploaded)
- Uploaded 16 completed web pages for 13 plant species and 3 animal species to our site.
- Taken photographs of many species for future incorporation in species pages
- To publicize the NaturesPace project, we have written an article to be published in The Pace Chronicle, The Pulse, or Opportunitas. Schwartz has already communicated with Tiffany Lopes of Marketing and Communications and Heather Askildsen of The Pace Chronicle.

#### **D. Activities Not Completed.**

We, rather than ITS students, have set up mobile-device – web communication. However, we have involved a former CS major (now majoring in Environmental Studies) in the project.

We have completed all other activities described in our original proposal.

#### **E. Outcomes**

1. Increased dissemination of information about and interest in our natural world (yielding improved education on biology, natural history and environmental issues)
2. Involvement by and interaction among students in different disciplines
3. A website that publicizes Pace as an innovative university that fosters education about and protection of our natural environment

#### **F. Creation of a Class.**

We did not create a class. However, as described below, project-related activities were incorporated into classes.

#### **G. Impacts - Students**

An ongoing objective of our project is to engage students in a range of disciplines. As of the writing of this report, we have involved an environmental studies student (who received independent course credit during the spring of 2012), undergraduate biology students (one independent study student and 16 students in Concepts of Environmental Science - Bio 205; Fall 2012), and six graduate students in the Environmental Sciences program (Environmental Science Communication - ENS 625; Spring 2012) in the creation of documents used to form species web pages. The environmental studies student, who was formerly in the CS program, also was employed during the summer and fall of 2012. An effort has been made to align student assignments with basic themes of courses. For example, for better integration with course subject matter, students in Bio 205 created documents on *exotic species* found on campus. Students in art and English have been invited to contribute creative works and seemed enthusiastic about this opportunity. Schwartz met with members of Vox, Pace's Arts & Literary Magazine, in the fall of 2012. They indicated that they will devote an issue of Vox to writings about the natural world to

which we will link through our website in the spring of 2013. To encourage involvement, on our home page, we have included an invitation and instructions on how anyone at Pace can help augment the site. Furthermore, in the coming year, we plan to communicate with additional faculty with the goal of boosting student participation.

### **H. Impacts – Faculty**

Angelo Spillo and Cara Cea have assisted by involving their students (see above) in the project. Four professors in the art department were made aware of the project and their students (Fall Semester 2012) may submit photographs of examples of their work for uploading to our website. We have a link to John Staton's (Art Dept.) website on our website and there is also a poem by Dr. Deborah Poe (English Dept.).

### **I. Unintended Outcomes Achieved**

We developed a web page with far more features than we anticipated at this early stage of our project.

Our interaction with and involvement of students and faculty in art and English was not an initial goal.

### **J. Reflection of Hoped Outcomes**

We greatly appreciated the enthusiasm of some students and faculty. It is too early to determine the impact of NaturesPace on the Pace community. As our system is more fully implemented and publicized we expect to be better able to assess its influence.

### **K. Furthering of Thinkfinity Cornerstone 3**

Our project crosses disciplines, involves both students and faculty and helps disseminate information. We are using technology to enhance experiences in natural environments and promote curiosity and learning about the biological world. By wedding the technological with the natural, our project should not only improve the education of our students at Pace but also increase the likelihood that they will become concerned citizens and thus help alter the trajectory imposed on the earth's environment and biodiversity by the unfortunate actions of our species.

### **L. Future Plans**

1. Expand online database for plant and animal species on the campus
2. Incorporate audio clips of birds, frogs and insects on our website
3. Implement online (mobile device accessible) tour of ecologically significant campus sites
4. Develop GPS capability for web page access
5. Upgrade sophistication and aesthetics of website
6. Increase student and faculty participation
7. Develop additional course exercises and projects related to the implementation

and upgrading of the system

8. Further publicize the NaturesPace website and the project's goals by:
  - a) Demonstrating the system during Earth Month
  - b) Describing the system during the Faculty Institute
  - c) Introducing the system to staff of the Welcome Center
  - d) Demonstrating the system to local nature center personnel, local newspapers, etc.
  - e) Beginning preparation of an article for publication for an educational journal (e.g. American Biology Teacher)