

Natural Area Teaching Lab (NATL) User Survey 2015

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Introduction

The Natural Area Teaching Lab (NATL) is a 60-acre outdoor classroom dedicated to educating University of Florida (UF) students and the public about ecology, biodiversity, and natural processes. NATL is broken into two tracts: NATL-west and NATL-east. A portion of NATL-west and all of NATL-east make up the restricted area, which is set aside for students and faculty to use for research projects (with permission). The public area, found within NATL-west, contains four distinct ecosystems with nature trails featuring interpretive signs, kiosks, and activities (**Fig. 1**). These trails are meant to educate visitors on the diverse organisms present within NATL and encourage interest and curiosity in nature.



Figure 1. This map shows the two major areas in NATL, defined by their use. The restricted area (in pink) is reserved for student projects and research. The public area (in yellow-green) is open to all visitors and is replete with educational information along four self-guided nature trails.

While a great asset to the Gainesville community and the public, NATL was first established to meet the needs of the many UF students who relied on the undeveloped area to complete research projects and engage in hands-on learning. Many students visit the area to complete work related to their thesis or dissertation, as well as smaller class projects. NATL recently installed a boardwalk that starts near the entrance to the Florida Museum of Natural History (FLMNH) and leads into the Upland Pine ecosystem, which directs many UF Cultural Plaza visitors into NATL and vice versa. Museum docents lead field trips for K-12 students and other groups several times a year. Several UF courses use NATL as an example of native Florida ecosystems that students can visit in an afternoon field trip.

Creation of NATL and History of Use

In 1993, the original committee behind the creation of the area that is now known as NATL sent questionnaires to all UF departments interested in natural resources and life sciences to gauge prospective use of the area. Through this feedback, the committee estimated that 28 courses from seven departments in three colleges would use the proposed 45-acre area for field trips and projects (Griffin et al. 1993a). This promise of student involvement encouraged the committee and was included in the final proposal sent to Campus Planning in 1993. In May 1994, the University Land-Use and Facilities Planning Committee approved the proposal and NATL was created. Adjacent pieces of land were added in 1997 and 2005 to bring the area up to 60 acres. With this added research space, student involvement grew.

A user survey in 2000, prepared by the chair of the committee that manages NATL, found that 76 courses from eight departments in four colleges reported using

NATL as part of their curriculum. Another survey in 2008, by a NATL graduate teaching assistant, found that 36 courses were using NATL (Van Etten 2008). This 2008 survey estimated that 1,160 students were using NATL as part of a course's curriculum in the previous year.

Florida Museum of Natural History

Due to their proximity and shared learning objectives, the Florida Museum of Natural History (FLMNH) and NATL have enjoyed a history of educating the public about wild Florida ecosystems. Since its inception, NATL has had at least one representative from FLMNH on the Natural Area Advisory Committee, which oversees current uses and improvements of NATL. The FLMNH also was integral in the construction of NATL's self-guided ecosystem nature trails. Volunteers from FLMNH not only supplied intellectual material and logistical advice for the trails' construction but also helped build the six kiosks found in prominent locations along the trails. These contributions helped solidify the continued use of NATL by FLMNH visitors.

Likewise, NATL graduate teaching assistants have participated in a variety of FLMNH-led events, such as the annual celebration of Earth Day and ButterflyFest. During these events, teaching assistants lead tours of NATL's ecosystems, distribute maps and educational material about NATL, and answer questions related to the focus of the event. NATL teaching assistants also have trained museum docents to lead activities in NATL, which include K-12 field trips throughout the school year as well as spring break and summer camps for children (**Fig. 2**). These camps have days focused on topics such as entomology, ecology, biodiversity, conservation, and nature photography and NATL acts as a nearby field trip destination that allows the campers a hands-on experience to augment the information they are taught by the museum docents. One such program is called Nature Detectives, in which kindergarten to fifth grade students are taught how to identify animals in NATL, using tracks, burrows, and other natural signs. These programs give students of all ages, who may not have known about this campus resource otherwise, an opportunity to experience NATL.



Figure 2. Dana Griffin, Botany professor and original member of the Natural Area Advisory Committee, points out plants of interest to museum docents, who will share the information with K-12 students through Florida Museum of Natural History field trips.

For more information about how the Florida Museum of Natural History uses NATL, visit:

[Natural Area Teaching Lab Trails](#)

[Florida Museum of Natural History Event Calendar](#)

[Florida Museum of Natural History Guided Programs](#)

Center for Leadership and Service Volunteer Events

Each year, NATL is a service site for UF's Center for Leadership and Service's (CLS) Days of Service volunteer events (**Fig. 3**). These Days of Service are meant to engage the UF student population in community service through encouraging them to

donate one Saturday morning and afternoon to helping a local organization. The three service days are Summer Plunge, held in late July, Gator Plunge, held in mid-September, and Martin Luther King Day, on January 19.

In the past, CLS dispatched students to locations for volunteering without allowing them to choose a preferred site. This situation was still beneficial for NATL, but sometimes resulted in volunteers who were not appropriately dressed for the outdoors. Since 2014, volunteers are allowed to choose which sites sound most appealing to them based on a description given by the site representative during the sign-up process. This allows students to volunteer in groups and to arrive prepared for the challenges of working out in NATL. Since this change, NATL has seen a surge in volunteers interested in working outside and experiencing nature, which has resulted in repeat volunteers. Some of these students have reached out to the NATL Operations Committee to become regular volunteers, helping on a weekly basis for a semester or longer. This relationship with the CLS has led to greater exposure of NATL, especially to incoming freshmen and non-science majors who may not be familiar with the area through their coursework.



Figure 3. Students posing with trail trimmers, trash grabbers, and other tools used to beautify NATL as part of the 2015 Martin Luther King Day of Service held by the Center for Leadership and Service, University of Florida.

For more information on the Center for Leadership and Service's volunteer days, visit their website: http://www.leadershipandservice.ufl.edu/programs/days_of_service/

2015 User Survey

In April 2015, the current chair of NATL, Dr. Emma Weeks, contacted faculty in the departments previously known to use NATL as part of their yearly curriculum. She contacted them through emails inquiring which classes they currently teach that involve a field trip or project in NATL. Those responsible for the classes also were asked to estimate the number of students that enroll and how many times the course is taught each year (and with what regularity). Dr. Weeks found that 47 courses were currently using NATL. These courses are taught by 11 departments in four colleges. The heaviest users of NATL are departments from CALS (66%), with the Entomology and Nematology department (36%) and the School of Forest Resources and Conservation (15%) being the departments most actively using NATL for teaching. These courses bring an estimated 3,518 students to NATL each year. For a list of these courses, see **Table 1**.

Survey recipients also were asked to provide a short-list of improvements they would like to see made in NATL, to increase its overall usefulness as a teaching facility and convenient outdoor destination. The responses largely focused on updates to the pavilion and improved visibility on campus and the areas immediately surrounding NATL. Suggested improvements to the pavilion include: an area to temporarily store equipment (e.g. lockers), access to a whiteboard or other presentation technology, increased table space for larger classes, bathrooms, and a water fountain. Visibility-related suggestions focused mainly on the lack of information about how to get to NATL, in the form of maps or directions (especially bus routes) on the NATL website. A sign

near the intersection of nearby roads pointing in the direction of NATL also was suggested. The Natural Area Advisory Committee (NAAC) was recently made aware of these suggestions and hopefully many new improvements will be underway soon.

Table 1. A comprehensive list of courses that currently use the Natural Area Teaching Laboratory as part of their curriculum, as reported by those responsible for teaching these courses.

Course	Course name
BOT 2010	Introductory Botany
BOT 2710	Practical Plant Taxonomy
BOT 3151C	Local Flora
BOT 5695	Ecosystems of Florida
BOT 5725	Taxonomy of Vascular Plants
BSC 19020	FYI: Biology at UF
BSC 2011L	Integrated Principles of Biology II Lab
EES 4103	Applied Ecology (transitioning to Ecological Engineering)
EES 6308C	Wetlands Ecology
ENY 1001	Bugs and People
ENY 2040	The Insects
ENY 3005L/5006	Principles of Entomology
ENY 4161/6166	Insect Classification
ENY 4660L	Medical and Veterinary Entomology Laboratory
ENY 4701/6905	Forensic Entomology
ENY 4905	Spider Biology
ENY 4905/HUM 2930	DIY Campus Eco-Art
ENY 5164	Invertebrate Field Biology
ENY 5611	Immature Insects
ENY 6203L	Insect Ecology
ENY 6665L	Advanced Medical and Veterinary Entomology Lab
ENY 6934/FOR 6934	Insect Symbioses
FNR 3131	Dendrology/Forest Plants
FNR 3410C	Natural Resource Sampling
FOR 3153C	Forest Ecology
FOR 3200C	Foundations in Natural Resource Conservation
FOR 3214	Fire in Natural Resource Management
FOR 3430C	Forest Mensuration
FOR 6934	Fire in Natural Resource Management

NEM 6101	Nematode Morphology and Anatomy
NEM 6102	Nematode Systematics and Molecular Phylogeny
NEM 6942	Nematode Diagnostics
PCB 3601C	Plant Ecology
PCB 4043C	General Ecology
PCB 4674	Evolution
PLP 4653C	Basic Fungal Biology
PLP 6656C	Fungal Biology
PLS 3004C	Principles of Plant Science
SCE 6246	Science Instruction in Informal Settings
SWS 4244	Wetlands
SWS 5248	Wetlands and Water Quality
WIS 4523	Human Dimensions of Natural Resource Conservation
WIS 4945C	Wildlife Techniques
ZOO 4307C	Vertebrate Biodiversity
ZOO 4472	Avian Biology
ZOO 4926	Introduction to Animal Behavior

UF Colleges Using NATL (2015)

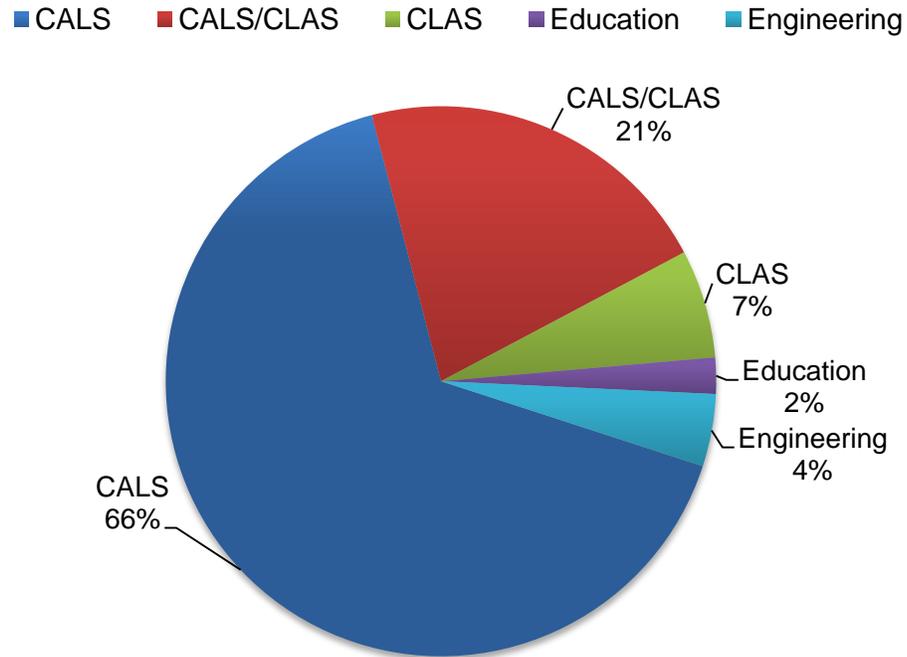


Figure 4. Four colleges at the University of Florida that use or plan to use NATL as of Summer 2015 as determined by a user survey (2015). Colleges included the College of Agricultural and Life Sciences (CALS), the College of Liberal Arts and Sciences (CLAS), the College of Education, and the College of Engineering. The CALS/CLAS distinction is used for classes in departments, such as Biology, that offer majors through both the College of Liberal Arts and Sciences and the College of Agricultural and Life Sciences that share nearly identical coursework.

UF Departments/Schools Using NATL (2015)

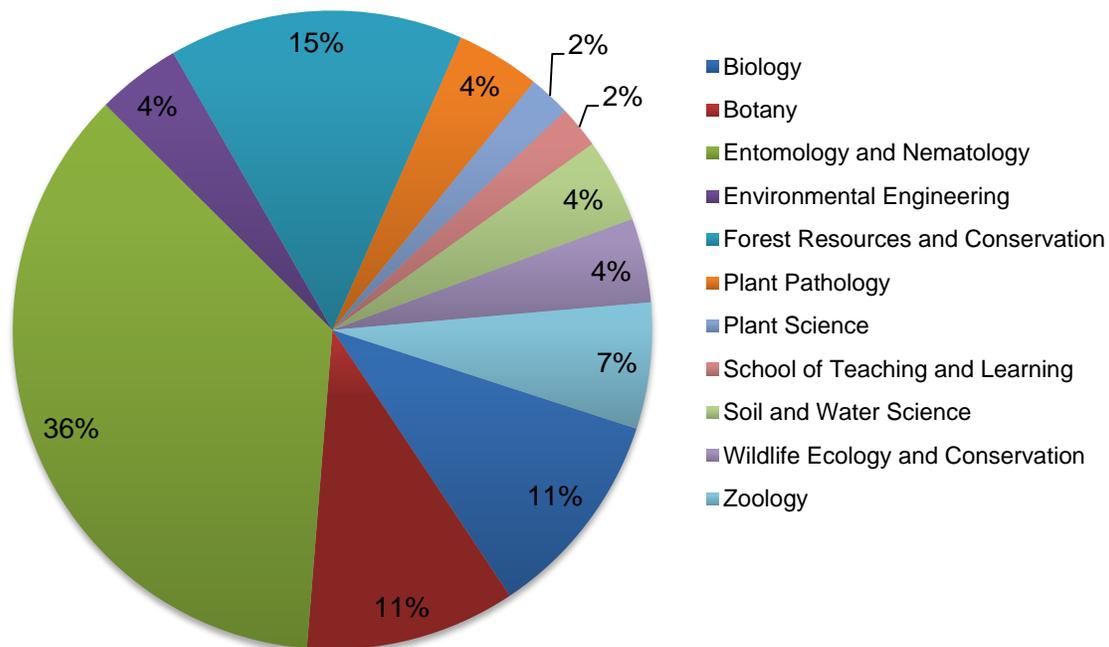


Figure 5. Eleven departments at the University of Florida that use or plan to use NATL as of Summer 2015, separated by percentage of courses within these departments that compose the total estimated use of NATL as determined by a 2015 user survey.

References

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