

## UF's Natural Area Teaching Laboratory (NATL): Uses and needs

T. J. Walker, Chair, Natural Area Advisory Committee  
15 March 2000

The Natural Area Advisory Committee has overseen the development of NATL since NATL's establishment in 1994. In January 2000, the Committee surveyed academic users of NATL to document current usage and future needs. A questionnaire (copy attached) was sent to the Florida Museum of Natural History, the College of Education's Teaching and Learning School and eight departments in three other colleges. All questionnaires were returned, and this document summarizes the responses.

### *Uses for classes*

Each of the eight departments and one school queried listed three or more courses that used or planned to use NATL (Table 1 and Appendix). A total of 76 courses were listed, and classes in 53 of the courses had already used NATL. More than 2,500 students in these classes use NATL each year, as calculated from how often the course is offered and the estimated number of students per offering (last column of Table 1).

Table 1. Use of Natural Area Teaching Laboratory by classes (see Appendix for details).

<b>College</b>	<b>Department or School</b>	<b>Courses that use NATL or plan to use it<sup>1</sup></b>	<b>Students per class × times offered per year<sup>2</sup></b>
<b>Agriculture &amp; Life Sciences</b>	Entomology and Nematology <sup>3</sup>	31	576
	Forest Resources and Conservation	5	118
	Plant Pathology	8	117
	Soil and Water Science	6	298
	Wildlife Ecology and Conservation	3	83
<b>Arts and Sciences</b>	Botany	8	272
	Zoology	4	245
<b>Education</b>	Teaching and Learning	4	510
<b>Engineering</b>	Environmental Engineering Sciences	7	342
	<b>SUM</b>	<b>76</b>	<b>2561</b>

<sup>1</sup>In 53 of the 76 courses for which the instructor uses or plans to use NATL, classes have already used it. Of the 76 courses, 45 are offered once a year, 20 are offered every other year, and 11 are offered two or more times per year.

<sup>2</sup>For each course, the estimated number of students per class was multiplied by the number of classes per year, and these products were summed for all courses in the department.

<sup>3</sup>Classes need only walk across the street.

### ***Other academic uses***

Six of the departments and the Teaching & Learning School indicated that they used or planned to use NATL for academic activities in addition to those associated with regularly offered courses (Table 2, except for class-related projects).

The Florida Museum of Natural History uses NATL for teaching K-12 students about ecology and biotic diversity. Docents lead small groups on trips into NATL. Last year these tours included 2,431 students, teachers, and chaperones, from 10 nearby counties. This type academic use should continue and grow as NATL succeeds in restoring its upland pine ecosystem and in continuously displaying five diverse stages of old-field succession.

Table 2. Other ways in which the eight departments and one school use or expect to use NATL. (number of departments/school responding YES).

<b>Activity</b>	<b>Will use NATL for this purpose</b>	<b>Has already used NATL for this purpose</b>
Class-related special projects	7	7
Stand-alone special projects	7	6
Thesis or dissertation research	4	3
Short courses (name):	2	1
EYN: Entomopathogenic nematodes		
EES: Wetlands bio-indicators		
Other (describe):	4	3
BTY: Plant material for lab use		
EES: Training area for field methods		
T&L: Schoolyard ecosystem & wildlife workshop		
WEC: Wildlife surveys		

### ***Academic needs***

Those returning questionnaires suggested that adding these facilities would improve NATL's usefulness for their academic programs:

FIMNH: Boardwalk and observation platform for Stormwater Ecological Enhancement Project (SEEP); somewhat natural seating for 10-15 between SEEP and Museum; ephemeral pond for amphibian breeding.

EES: Instrumentation for SEEP; boardwalk for SEEP.

SWS: Permanently open soil pits, properly shored up and fenced.

T&L: Bench seating with central lecture/demo podium; standing-height work tables for hands-on activities.

EYN: Shields for street lights on edges of SEEP to improve it as a firefly habitat.

The Advisory Committee has already discussed most of these facilities, and others, as possible improvements to NATL. It has formally approved the ephemeral pond for amphibian breeding and has conditionally approved the installation of soil pits. It will soon produce a prioritized list of desired enhancements.

### ***Non-academic uses***

Academic uses are the core of its mission, but NATL can also be valuable for educating the public about ecology and biodiversity. Public use is currently minor but it is destined to increase, mostly because NATL adjoins the University's Cultural Complex. Many visitors to NATL will enter from the Florida Museum of Natural History, which plans to make self-guided nature trails in the northern ("high-use") portion of NATL. Other visitors may come from the Center for the Performing Arts or the Harn Museum. The Natural Area Advisory Committee has long proposed that the level, park-like area just north of SEEP and just south of the new parking garage be made into a small, low-maintenance park. Such a park would provide an informative public entrance into NATL's self-guided trails and SEEP's (proposed) boardwalks. It would invite visitors to learn about the natural heritage of north peninsular Florida and would be an oasis from the asphalt and formally landscaped areas that dominate the Cultural Complex (soon to be joined by a parking garage). Anna Lee, as part of her senior project in Landscape Architecture, is currently developing concepts for the interface between NATL and the Cultural Complex.

**Appendix:** List of courses that use or plan to use NATL.

Department/ school	Course No.	Course Name	Times offered per yr	Est. no. students /offering	Already used NATL?	Annual nos.
Botany	BOT 2010	Introductory Botany	1	60	yes	60
Botany	BOT 2710	Practical Plant Taxonomy	1	40	yes	40
Botany	BOT 3153	Local Flora	2	18	yes	36
Botany	BOT 5655	Physiological Plant Ecology	0.5	15	yes	7.5
Botany	BOT 5725	Taxonomy of Vascular Plants	0.5	30	yes	15
Botany	PCB 3043L	Introduction to Ecology	2	40	yes	80
Botany	PCB 5046	Advanced Ecology	1	15	yes	15
Botany	PCB 5695	Ecosystems of Florida	1	18	yes	18
Ent & Nematol.	AGG 2931	Parasites, Vectors, & Diseases	1	12	no	12
Ent & Nematol.	AGG 2931	Biology & Natural History with Fireflies	2	24	yes	48
Ent & Nematol.	AGG 3535	Agricultural Ecology	1	25	no	25
Ent & Nematol.	ENY 3005	Principles of Entomology	3	65	yes	195
Ent & Nematol.	ENY 3030	Insect Field Biology	1	20	yes	20
Ent & Nematol.	ENY 3222	Biology & Identification of Urban Pests	0.5	15	yes	7.5
Ent & Nematol.	ENY 3225	Principles of Urban Pest Management	0.5	15	yes	7.5
Ent & Nematol.	ENY 3541	Tree & Shrub Insects	0.5	4	yes	2
Ent & Nematol.	ENY 4161	Insect Classifications	3	10	yes	30
Ent & Nematol.	ENY 4453	Behavioral Ecology & Systematics	1	12	yes	12
Ent & Nematol.	ENY 4455	Social Insects	1	12	no	12
Ent & Nematol.	ENY 4660	Medical & Veterinary Entomology	1	4	yes	4
Ent & Nematol.	ENY 4905	Invertebrate Soil Biology	1	20	no	20
Ent & Nematol.	ENY 5006	Principles of Entomology	3	3	yes	9
Ent & Nematol.	ENY 5222	Biology & Identification of Urban Pests	0.5	5	yes	2.5
Ent & Nematol.	ENY 5226	Principles of Urban Pest Management	0.5	5	yes	2.5
Ent & Nematol.	ENY 5611	Immature Insects	0.5	5	yes	2.5
Ent & Nematol.	ENY 6116	Insect Classifications	3	4	yes	12
Ent & Nematol.	ENY 6130	Taxonomy of Parasitic Hymenoptera	0.5	3	yes	1.5
Ent & Nematol.	ENY 6203	Insect Ecology	1	15	yes	15
Ent & Nematol.	ENY 6209	Chemical Ecology	0.5	6	no	3
Ent & Nematol.	ENY 6454	Behavioral Ecology & Systematics	1	4	yes	4
Ent & Nematol.	ENY 6665	Advanced Medical & Veterinary Entomology	1	35	yes	35
Ent & Nematol.	ENY 6821	Insect Pathology	0.5	5	yes	2.5
Ent & Nematol.	NEM 3002	Principles of Nematology	1	16	yes	16
Ent & Nematol.	NEM 5707	Plant Nematology	0.5	12	no	6
Ent & Nematol.	NEM 6101	Nematode Morphology & Anatomy	0.5	6	yes	3
Ent & Nematol.	NEM 6102	Nematode Taxonomy & Systematics	0.5	6	yes	3
Ent & Nematol.	NEM 6201	Nematode Ecology	0.5	6	yes	3
Ent & Nematol.	PMA 3010	Fundamentals of Pest Management	1	50	no	50
Ent & Nematol.	PMA 4570	Field Techniques IPM	1	10	no	10
Environmental. Engineer. Sci.	EES 3000	Environment & Humanity	4	40	yes	160
Environmental. Engineer. Sci.	EES 3000L	Environmental Science & Humanity Lab	4	30	yes	120
Environmental. Engineer. Sci	EES 5307	Ecological Engineering	0.5	20	yes	10
Environmental. Engineer. Sci.	EES 5315	Ecology and Environment	0.5	15	yes	7.5

**Appendix:** List of courses that use or plan to use NATL (continued).

Department/ school	Course No.	Course Name	Times offered per yr	Est. no. students /offering	Already used NATL?	Annual nos.
Environmental. Engineer. Sci.	EES 6007	Advanced Energy and Environment	0.5	20	yes	10
Environmental. Engineer. Sci.	EES 6308	Wetlands Ecology	1	20	yes	20
Environmental. Engineer. Sci.	EES 6932	Wetlands Hydrology	1	15	yes	15
Forest Resources & Conservation	FNR 3131	Dendrology/Forest Plants	1	50	yes	50
Forest Resources & Conservation	FNR 3410C	Natural Resource Sampling	1	30	yes	30
Forest Resources & Conservation	FOR 3342	Tree Biology	1	15	no	15
Forest Resources & Conservation	FOR 3622	Fire in Natural Resource Management	1	15	yes	15
Forest Resources & Conservation	FOR 6340	Physiology of Forest Trees	0.5	15	no	7.5
Plant Pathology	PLP 3002	Fundamentals of Plant Pathology	1	60	no	60
Plant Pathology	PLP 3653	Introductory Mycology	1	10	yes	10
Plant Pathology	PLP 4260	Introduction to Plant Pathogenic Fungi	1	5	no	5
Plant Pathology	PLP 4290	Principles of Plant Disease Diagnosis	1	5	no	5
Plant Pathology	PLP 5005	General Plant Pathology	1	5	no	5
Plant Pathology	PLP 5656	Mycology	1	12	yes	12
Plant Pathology	PLP 6262	Fungal Plant Pathogens	1	10	no	10
Plant Pathology	PLP 6291	Plant Disease Diagnosis	1	10	no	10
Soil & Water Sci.	AGG 3503	Agricultural & Environmental Quality	1.5	80	no	120
Soil & Water Sci.	SOS 3022L	General Soils Lab	2	60	no	120
Soil & Water Sci.	SOS 3023L	Soil Judging	1	8	yes	8
Soil & Water Sci.	SOS 4231	Soils & Land Use	1	20	no	20
Soil & Water Sci.	SOS 4715/5716	Environmental Pedology	1	20	no	20
Soil & Water Sci.	SOS 6717	Soil Genesis & Classification	1	10	no	10
Teaching & Learning	SCE 4342	Environmental Education Methods	1	25	yes	25
Teaching & Learning	SCE 6290	Science Instruction in Informal Settings	1	25	yes	25
Teaching & Learning	SCE 6338	Secondary Science Teaching Methods	1	10	yes	10
Teaching & Learning	SCE4310	Teaching Elementary Science	3	150	no	450
Wildlife Ecology & Conservation	FNR 3131	Dendrology	1	50	yes	50
Wildlife Ecology & Conservation	WIS 4523	Human Dimensions of Natural Resource Conservation	1	25	yes	25
Wildlife Ecology & Conservation	WIS 6525	Environmental Interpretation	0.5	16	no	8
Zoology	PCB 4044	General Ecology	1	60	yes	60
Zoology	ZOO 2303	Vertebrate Zoology	1	100	yes	100
Zoology	ZOO 3513	Animal Behavior	1	45	yes	45
Zoology	ZOO 4473	Avian Biology	1	40	yes	40



3. List and describe facilities that would make NATL more useful to your department's programs.

4. How could the management of NATL be improved?

5. Additional comments or suggestions?

This questionnaire completed by \_\_\_\_\_ (signature) \_\_\_\_\_ (date)

Return completed questionnaire to Tom Walker [Chair, Natural Area Advisory Committee]  
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Campus