

# Value of NATL to the University

Below is a summary of what the SW 24<sup>th</sup> Avenue Focus Group learned about the value of NATL during its hearings of 27 Oct 2003 and 15 Jan 2004.

**Mission:** NATL is dedicated to teaching students and the public about ecology and biodiversity.

**Much used by classes:** NATL was first proposed in 1993 by faculty from departments that were already using the area. A 1993 survey of intended usage found that 7 departments, in 3 colleges, intended to use NATL in 28 courses serving 1239 students. In 2000, a similar survey showed that 9 departments/schools, in 4 colleges, had already used it for 53 courses and that the intended usage was now for 76 courses that would annually serve 2561 students.

**Other academic uses:** NATL is used for special projects, thesis research, short courses, workshops, and a convenient source of plants and invertebrates for classes and research. Docents lead many K-12 groups that are visiting the Florida Museum of Natural History on nature walks into NATL.

**Diverse ecosystems arranged optimally:** NATL has significant samples of all three of the ecosystems that are characteristic of uplands in north peninsular Florida: hammock, upland pine, and old-field succession. It also has a large retention basin that is now an ecologically engineered wetland (the Stormwater Ecological Enhancement Project or SEEP) and a sinkhole pond that overflows into an active sink. The arrangement of the ecosystems facilitates the division of NATL into a northern area that is shared with the public and a southern area that is for academic use only.

NATL's public area contains SEEP and the old-field plots that demonstrate how the biota changes as tilled fields revert toward their original, self-perpetuating ecosystems. It also contains about one-third of NATL's upland pine and hammock ecosystems.

NATL's academic-only area has the sinkhole and sinkhole pond and the remaining two-thirds of the upland pine and hammock ecosystems. Excluding the public minimizes disturbance of natural communities and allows equipment used in research projects, by classes or individuals, to be left in NATL with low likelihood of theft or vandalism.

**Well-located for its public role:** NATL's public area is adjacent to the exhibits building of the Florida Museum of Natural History and interfaces with the Cultural Complex via a Natural Area Park.

**Ideally located for its academic role:** NATL is part of the UF campus and is next to the Park-and-Ride lot, with its parking garage and excellent bus service. Students can reach the site and do meaningful fieldwork in a normal laboratory period. Special transportation need not be arranged and paid for, and travel time to and from outlying areas need not be deducted from the lab period. K-12 groups that visit FLMNH use the picnic area of Natural Area Park, where a kiosk invites them to enter and explore NATL's public area.

**Academic-only area has special attributes:** The south-most portion of NATL has the greatest biodiversity because it includes the sinkhole and its pond and NATL's most pristine hammock with the largest trees. On the south it abuts a three-acre stormwater facility that cannot be developed and on the east it connects with a 12-acre UF conservation area. Lastly, it occupies the northern third of a large karst basin that drains into a collapsed sink.

**Enhancements and infrastructure:** NATL's value as an academic facility has been amplified during the past nine years by fencing its borders; developing trails; establishing a well-marked 50-meter grid system; making an early, grid-based photographic record of vegetation; completing a grid-based survey of soil types; making checklists of important components of the biota, such as plants, birds, mammals, reptiles, amphibians, butterflies, moths, crickets, katydids, and nematodes; re-contouring and planting its retention basin (SEEP); initiating old-field plots; erecting and maintaining two kiosks; developing Natural Area Park; and constructing an academic pavilion. Of special note are steps taken to restore the upland pine ecosystem and to reduce the impact of SW 34th Street by construction of a 670 ft long, 7 ft high earthen berm.

This handout prepared by the Natural Area Advisory Committee. Its NATL website, at <http://natl.ifas.ufl.edu/>, has detailed documentation of both the value of NATL and the potential effects of the extension.

# How the extension would impact NATL

The Final Report of the SW 24<sup>th</sup> Avenue Focus Group lists these **seven impacts**, based primarily on the testimony of faculty who use the area.

**Presence of the road will preclude certain management techniques including prescribed burns that maintain upland pine habitat and enable the best use of the land for teaching and research.**

The upland pine ecosystem depends on fire for its perpetuation. When NATL was established the lack of fire for more than 50 years had so degraded the ecosystem that the pines were no longer reproducing. It has taken nine years of volunteer labor and six prescribed burns to restore the ecosystem to where the seeds of the longleaf pines can once more germinate and the seedlings survive. If prescribed burning is ruled out, NATL will lose its most treasured upland ecosystem.

**A road will bring noise pollution, air pollution, light trespass, stormwater runoff and related pollutants, exotic seed sources and other undesirable edge effects into the NATL beyond the road right-of-way.**

The effects of roads on natural ecosystems go far beyond the land that is lost to the right-of-way. For example, studies that require identifying birds by their songs are impaired and fungi that are sensitive to traffic-generated particulates are killed.

**The NATL cannot be duplicated or reproduced on campus with the same habitat diversity, established data history and convenient accessibility.**

Of NATL's three upland ecosystems only the hammock ecosystem is available elsewhere on campus

An example of established data history, is that in 1997 the vegetation of NATL was documented with 297 photographs taken in four directions from the stakes that mark NATL's 50-meter grid. (These are on the web at <http://natl.ifas.ufl.edu/gridphotos.htm>.)

The convenience of NATL is best illustrated by comparison with off-campus sites that are the only alternatives to most of what is available in NATL. Visits by classes to off-campus sites require arranging and paying for transportation and take more time than is available in laboratory periods of usual durations.

**Development of a road on the NATL's southern border will reduce area that is available for research and teaching.**

The land that would be donated amounts to about 3 acres, and the proposed route of the extension will isolate 1.6 acres that contain the sink and sinkhole pond. Thus the 22 acres that is presently in NATL's academic-only area will be reduced by about 21% (4.6/22). This will significantly increase conflicts among the projects of the many courses and students that use this part of NATL

**Wildlife and vegetation native to this area will have a smaller and fragmented habitat area, and reduced access to water.**

Forty-eight acres of continuous wild lands (15 of which are not in NATL) will be reduced to fragments of 28, 14, and 3 acres. The biggest piece, which is within the main body of NATL, will be isolated from the two fragments that have permanent or near-permanent water. Animals in NATL that are accustomed to seeking water in the cutoff areas may become roadkill (e.g., dragonflies, frogs, salamanders, some mammals).

**The flora and fauna currently present at the NATL will be diminished, altered and impaired by the intrusion of this proposed road.**

The biggest hit would obviously be the upland pine ecosystem but nearly as bad is the fact that the road goes through the richest, most pristine part of NATL's hammock ecosystem.

**Other impacts will be identified and addressed through an Environmental Impact Statement that will be required as part of the Planning, Design and Environmental (PD&E) study prior to road construction.**

This study need not be made if the University chooses to keep intact its premier facility for teaching students and the public about ecology and biodiversity.