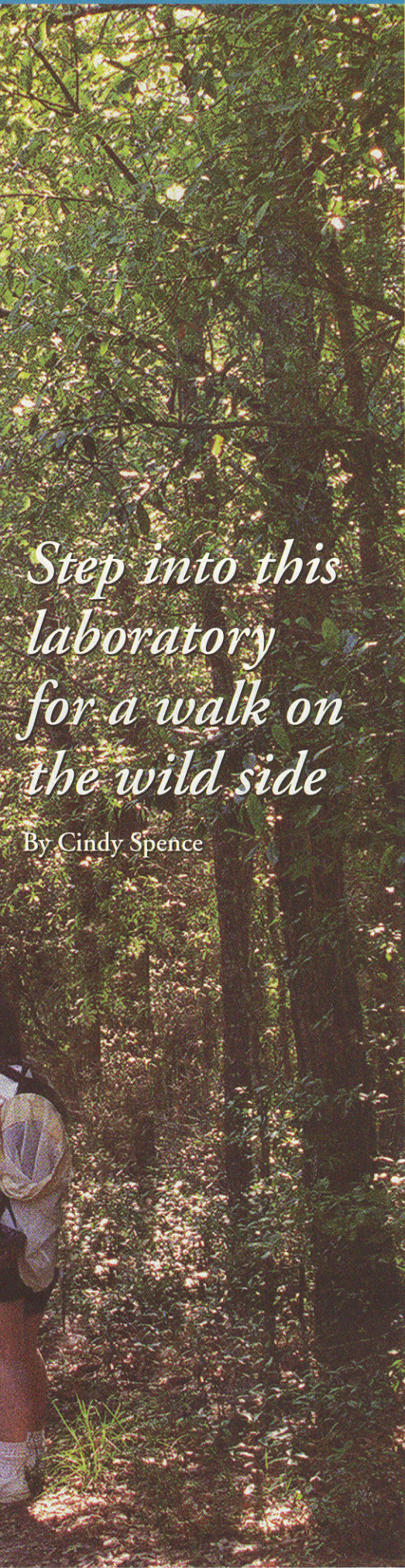


WY Campus Wilderness





Step into this laboratory for a walk on the wild side

By Cindy Spence

Why is entomology Professor Don Hall, renowned on the University of Florida campus for using technology to teach, getting back to nature?

Where are his computer-animated ants? Why is his *Flight of the Bumblebee* soundtrack silent? Where are the lasers, lights and digital images that have made Hall a pioneer of multi-media teaching?

The high-tech bells and whistles are gone for this meeting of Insect Field Biology. Today, Hall needs something he can't find in a multi-media classroom. Today, he needs bugs.

"A live insect is 10 times better than the best computer graphics available," Hall said. "A live bug will steal the show every time."

So Hall has traded his mouse for a clipboard and donned a sun hat as he and his students trek to one of UF's oldest and largest classrooms: the Natural Area Teaching Laboratory.

A Hidden Treasure

Tucked away on the southwest corner of campus, the Natural Area Teaching Laboratory has had an active, though quiet, history. Ask about it, and few people can direct you there.

A walk through its 40 acres is like a

(Left) UF entomology Professor Dan Hall often takes his class to the Natural Area Teaching Laboratory for some hands-on instruction.

walk across Old North Florida. The lab's chief guardian, entomology Professor Thomas Walker, says parts have never been cleared or farmed and may look as the campus did when the original buildings went up early this century.

The lab has served an important role in teaching courses that require a natural Florida environment. A big boon to teachers and students is its location on campus, rather than miles away like UF's Austin Cary Forest. Off-campus field trips are unnecessary, and its location is low-traffic, too, unlike Lake Alice, UF's other major natural area.

That it has survived has been happenstance — until this decade.

In the late 1980s, a building boom began on the largely undeveloped southwest corner of campus. Up went the Harn Museum of Art, the Center for the Performing Arts and the Florida Museum of Natural History exhibits hall. Nearby, the Student Recreation Center was built, then a softball stadium and soccer practice fields. Where once there was vacant land, there now was a complex of buildings and their parking lots.



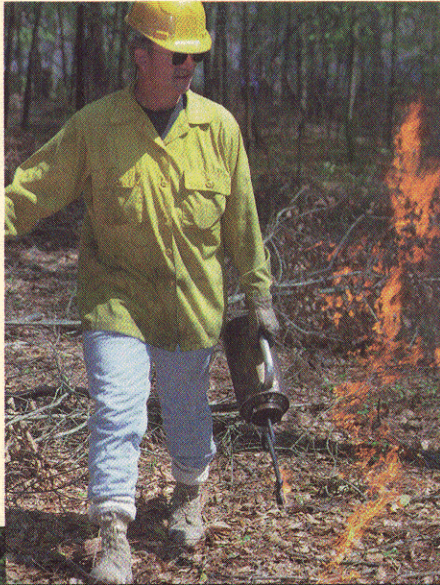
Milt Putnam

Milt Putnam

In May 1993, Walker and others, realizing that the campus construction boom might never end, started lobbying on behalf of the lab, which users call NATL.

“In 1993, we wanted to be sure that this would stay a permanent resource,”

Some areas of the NATL are kept in check with controlled burns.



said Walker, whose office is in the entomology and nematology building across the street from the lab.

In 1994, the NATL advisory committee convinced administrators to leave the area undeveloped and designate it specifically for the kind of teaching and student research projects that require a slice of Old Florida.

Their arguments did not rely simply on the merits of leaving a pocket of land undeveloped. A campus survey revealed that seven departments in three colleges were already using the land — designated for teaching or not — for 28 courses.

“It’s already been used a lot and certainly will be used a lot more,” Walker said. “It’s very much a work in progress and very interdisciplinary.”

Three ecosystems characteristic of North Florida can be found there: hammock, upland pine and old-field succession, and an area where abandoned clearings revert to nature over time.



UF students Sharyl Brantley (left) and Lindsay Burnette check a net for dragonflies.

The upland pine provides one of the most dramatic teaching opportunities, Walker said. The pine forest relies on fire for its health. Without fire, oaks and other hardwoods would encroach and shade out young pines, changing the ecosystem into a hammock over time.

While natural fires usually begin with lightning strikes during summer thunderstorms, the NATL relies on controlled burns to mimic nature. The burns help



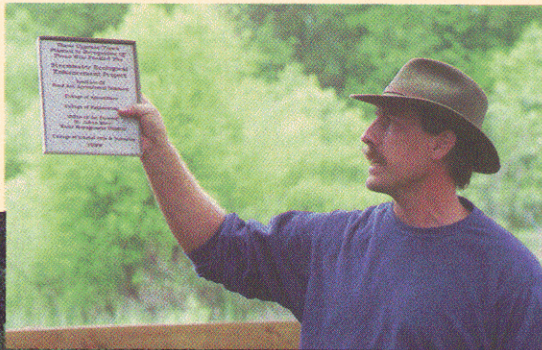
maintain the boundary between the pine and hammock.

True to the lab's teaching mission, one or two acres will never be burned to show the negative effects of eliminating fire from upland pine ecosystems, Walker said. Some burning is scheduled yearly to allow students to understand fire's role in nature.

Big Students, Little Students

Marilyn Roberts, education coordinator at the Florida Museum of Natural History, calls the Natural Area Teaching

Graduate student Mark Clark is the project coordinator for the Stormwater Ecological Enhancement Project.



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Laboratory a godsend.

The museum, which abuts the natural area, opened in January 1998, with many of its exhibits still under design or construction.

That didn't deter visitors, however, and field trips kept coming.

"The NATL provided us with a way to offer tours and meet educational needs at this time when our exhibits are not as numerous," Roberts said. "But even once our exhibits are up, we'll still use it. It has added a new dimension to our tours and has allowed us to use the natural environment as well as the museum environment."

Walker said a nature trail is planned that will connect with the museum grounds. But already docents and students use the fire lanes and existing paths, and the potential exists for the museum to provide thousands of visitors a year.



Thomas Wright

Students collect foliage specimens for their class.

Eventually, Walker said, the nature trail will expose visitors to more than 240 species of plants and hundreds of varieties of insects, arachnids, amphibians, reptiles, birds and mammals that live in the natural area.

(Below) UF students and Friends of the Wetlands plant trees in the NATL.

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Marilyn Roberts points out a woodpecker nest in a downed pine tree to eighth grade students from Hudson.

Roberts said the natural area is filled with “teachable moments.” Even children as young as kindergartners are interested in learning about how the land is being managed to nurture nature. The flowers, insects and birds become teaching tools.

“It’s just gorgeous out there, with all kinds of wildflowers,” said Roberts, who estimates about 2,400 schoolchildren toured the lab this past spring.

And the visitors are not limited to Gainesville. Roberts said a third of the museum visitors are from Alachua County, a third from nearby counties and a third are from farther counties, making the Natural Area Teaching Laboratory a statewide educational resource.

The \$65,000 Question

Walker says students have been a key part of the laboratory’s success, and perhaps the best example of students giving something back to the laboratory is the wetlands area.

Student involvement in the 3-acre wetland started in 1995, when a member of a class called Ecosystems of Florida received his take-home exam. The exam question: How would you improve the stormwater retention basin in the Natural Area Teaching Laboratory?

The answer led that student and several

others to form the Wetlands Club in 1995 and begin working to make the retention basin into a diversified wetland.

Mark Clark, a club member and past president, said the basin was not originally planned as part of the NATL because it was manmade. He steered the Wetlands Club to change that plan and complete the permitting, funding, design and engineering. The \$65,000 project was finished this past spring.

“Retention basins are notoriously unattractive, often fenced in, littered with trash, and square,” Clark said. “But they don’t have to be. Instead of segregating the retention basin from the landscape, we wanted to make it a desirable part of the landscape.”

“The task we faced was how to get this manmade depression to function as part of the natural process. It was a wonderful opportunity for us as students to put into action what we’ve learned.”

Club members redesigned the topography of the basin, planted 53 new species in and around the wetland and at least 1,500 plants, some donated but some collected from roadside ditches.

The vegetation will filter pollutants from the watershed, which includes the massive Park-N-Ride lot on Hull Road. The vegetation also will provide wildlife habitat. Eventually, trees that have been planted may provide a shoreline rookery. Clark said the wetland integrates the free services of a natural system with the needs of an urban environment for stormwater retention.

“Rarely do you have a project of this scale undertaken by a bunch of students,” Clark said. “On one hand, we had students asking for support, which got us the attention of administrators. On the other, we had Professor Walker, a respected, longtime professor, to provide continuity and vouch for us.”

Clark said the \$65,000 cost, most to recontour the basin, came from the colleges of Agriculture, Engineering, and Liberal Arts and Sciences, the provost, and the St. Johns River Water Management District. All the administrators, Clark said, seemed to recognize the potential value of the project.

“For students, there was a real need for wetlands of this type that they could actually get to,” Clark said. “Students can get to the Natural Area Teaching Lab and do something in a 50-minute class period and still get to their next class.”

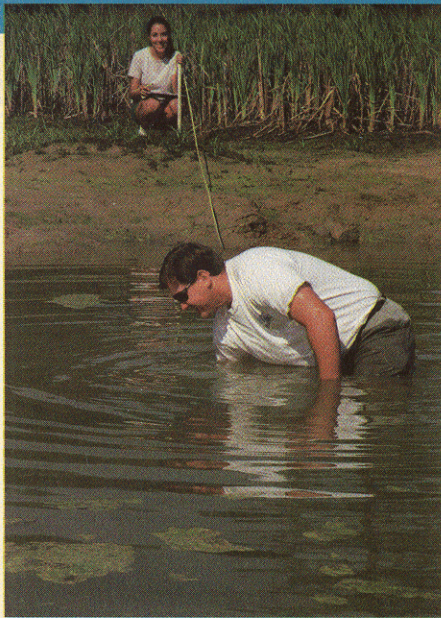
The wetland now is ready for research and education.

“Not a lot is known about the long-term aspects of constructing a wetland for stormwater management and integrating it into a landscape,” Clark said. “This project will allow us to observe how created wetlands mature in these systems and will push UF to the forefront of this technology.”

Professors Thomas Walker (front, left) and Paul Thompson (front, right) are ready to plant some foliage with their students in a wetland area of the NATL.



Milt Putnam



Students count the plant specimens that were planted in this wetlands area of the NATL.

Insect Field Biology

While Don Hall's class may appear to have the lab to itself, about 20 acres away geography students could be surveying or zoology students could be collecting green frogs and Hall's students wouldn't know it.

The lab is comfortably nestled in the shadow of its higher-tech brethren: multi-media classrooms, computer labs, elite medical research centers. But its role is no less vital.

Students point out there needs to be a place where a student can use a butterfly net to trap a spicebush swallowtail for a closer look, or collect specimens of sassafras, or see what a professor is talking about when he describes a cocoon. On this day outside, no one's attention is wandering as the Insect Field Biology class treks across the lab.

"If I had just one plant to teach a course with it would be this one," says Hall, holding up Spanish needles. "Most people consider it a nasty weed, but I just love it because insects love it."

"A whole zoo of insects completely develop in this plant," Hall says. "It's just a great plant to teach with."

And Hall is in luck, because in the Natural Area Teaching Laboratory, Spanish needles are in plentiful supply.

Sometimes the best classrooms aren't rooms at all. •

Natural Area Teaching Lab Map Legend

Hammock: shade-tolerant hardwoods that form a canopy above a spongy groundcover of leaf litter and organic soils. Its black cherry, flowering dogwood, oaks and hickories shelter creatures like broadhead skinks, Florida box turtles, pileated woodpeckers, cardinals, wrens and squirrels.

Upland Pine: dominated by longleaf pines with few shrubs and a dense groundcover of grasses and herbs. Sandy soil allows for maximum recharge of rainwater into underground water supplies. Sandhill katydids, gopher tortoises and poppy mallows make their homes here.

Old Field Succession: land that has been cleared and farmed and then abandoned. The area is divided into five plots that will be cleared in intervals to show changes over time. This environment is particularly diverse, with many species of plants and animals inhabiting it at various stages of succession. A typical old-field succession in North Florida is dominated successively by annual weeds, blackberry and dog fennel, loblolly pine and mixed hardwoods.

Wetlands: The Stormwater Ecological Enhancement Project is designed to show how a wetland created for stormwater retention can function in a natural environment.

The northern half of the NATL is intended for heavy travel and a nature trail.

The southern half includes most of the upland pine and hammock and is designated low-use to protect it from too much foot traffic. Its less-traveled state will facilitate class use and student projects.

The NATL web site is

<http://csssrvr.entnem.ufl.edu/~walker/natl.htm>

