
University of Mississippi
Field Station
"NATURE'S LABORATORY AT OLE MISS"

WELCOME TO THE UNIVERSITY OF MISSISSIPPI FIELD STATION

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Member:
Organization of Biological Field Stations
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**All photos by Michelle Edwards unless otherwise noted photographer unknown on page 9*

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From the Director ...

Established in 1985, the University of Mississippi Field Station's long-term goal is to become the leading research and educational facility in the Mid-South. To achieve this goal, our staff is committed to working with visiting researchers, teachers and community groups to make their experience as productive and rewarding as possible.

One of our newest and most important growth avenues is the establishment of partnerships and collaborations with academic and government research laboratories, centers and institutes. Look for information about our partner organizations on page 8. We hope to establish even more partnerships and major collaborations in the future.

We have noted an increase in the number of school groups coming to the station for field trips. We believe it is important for children to develop an awareness and never-ending curiosity about the natural world we live in and depend upon. We welcome inquiries by teachers and school administrators.

As a unit of the University of Mississippi, our mission is to provide a natural laboratory for research, education and service. We invite you to join us in "nature's lab at Ole Miss."

Ray Highsmith

WELCOME TO THE UNIVERSITY OF MISSISSIPPI FIELD STATION

About the Field Station

The UM Field Station is a research and educational facility designed to serve visiting faculty and students, public and private schools, government agencies and the broader community of the Mid-South. The Field Station, at ~34°25'N:89°23'W, is located on a 740- acre site 11 miles northeast of the UM Oxford campus (see pages 10 & 11 for an aerial photograph).

Habitats

The UM Field Station lies within the Eocene Hills of the interior coastal plain of the Southeastern U.S. and is characterized primarily by sandy and sandy-loam soils. Research opportunities include wetlands, grasslands and closed-canopy forests. The forested stands are mixtures of shortleaf pine and oaks with loblolly pine, sweetgum, red maple, winged elm and black gum. Sandy seepage areas at the base of slopes support the highest plant diversity. Natural and constructed wetlands, including more than 200 experimental ponds ranging from 0.1 to 2 acres available for comparative studies, are fed by springs and small streams. Pond water depths are typically about 1 meter but can be adjusted. An aviary for study of wild turkeys is located in a remote area.

Facilities

The main research building and an adjoining building at the Field Station house several offices and laboratories. Two 200-square-foot and three 500-square-foot laboratories have hoods and are suitable for studies utilizing chemicals. Also there is a 500-square-foot culturing laboratory, a 400-square-foot aquarium room and a computer lab. Adjoining the offices is a 400-square-foot conference room suitable for a maximum of 15 to 20 people. A 1,900-square-foot greenhouse is available for use by researchers.

The primary teaching facility has a 1,450-square-foot auditorium, two 1,000-square-foot teaching laboratories, an 800-square-foot general office area and three small laboratory rooms, one with a hood.

A two-bedroom cabin with bath and kitchen is available for use by visiting students and researchers. There is also a small four-bunk cabin without utilities available for overnight use.

Field Guides

Turtles of the University of Mississippi Field Station

Salamanders of the University of Mississippi Field Station

Frogs of the University of Mississippi Field Station

A Field Guide to the Butterflies Common to the University of Mississippi Field Station

A Guide to Representative Plants at the University of Mississippi Field Station

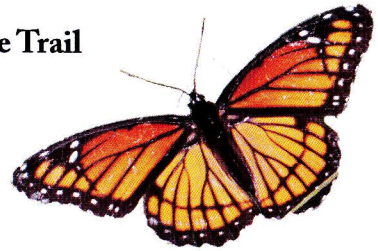
Medicinal and Edible Plants of the University of Mississippi Field Station

Plant species list : www.baysprings.olemiss.edu/research/ltmp/plantspecies/

Guide to the Eagle Scout Nature Trail

Guide to the Eagle Scout Nature Trail: Kindergarten to Fourth-Grade Curriculum

Guide to the Young Scholars Nature Trail



The Field Station is a dynamic and growing part of the University of Mississippi and the surrounding Oxford and Abbeville communities. Our mission is an important one – to promote ecosystem stewardship by providing a natural laboratory for research, education and service – and is the driving force behind all we seek to do here.

THE UM FIELD STATION: RESEARCH, EDUCATION AND SERVICE

Research

Our state-of-the-art facilities attract research scientists from across the United States and abroad. The research conducted here covers a broad spectrum of disciplines, from the potential healing properties of plants to turkey behavior, fish growth and reproduction, controlling invasive insect species and mitigating pesticide run-off from farm fields. Approximately 30 research projects are conducted at the Field Station each year by faculty, graduate students, agency and institute partners, and visiting scientists. The numerous ponds (see pages 10 & 11) provide opportunities for controlled experiments and large-scale projects. Information on facilities and user fees is provided on page 7.

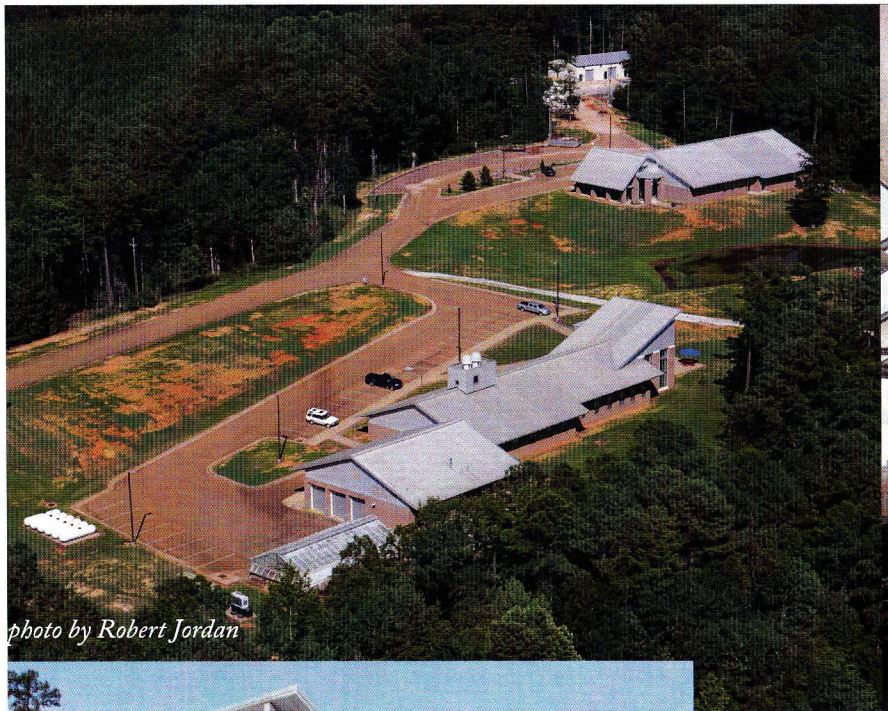
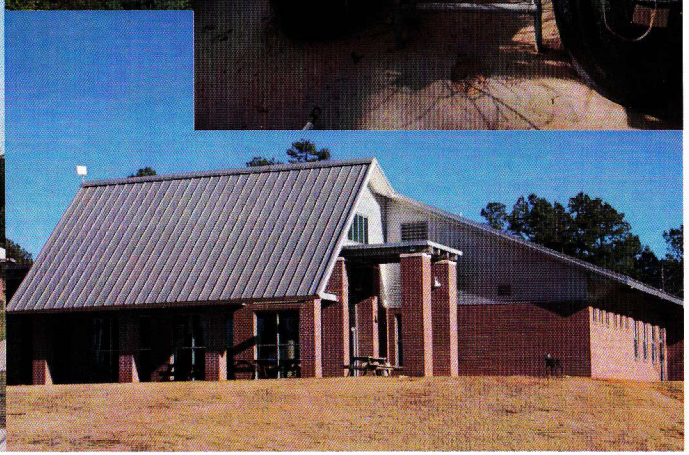
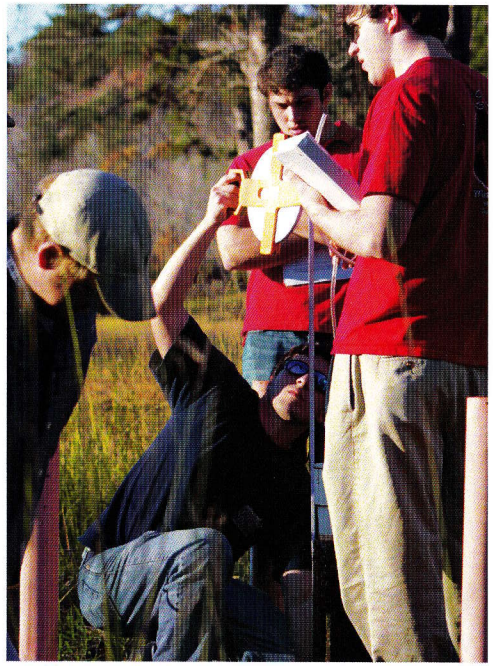


photo by Robert Jordan



Education

The UM Field Station is an excellent location for field trips and a number of faculty utilize the station for instruction during the academic year. Typically, about 2,000 students and others visit UMFS each year, including introductory visits for incoming freshmen. UM courses utilizing the station range from Wetland's Ecology to Wetlands Law and Regulation in the School of Law. A number of science courses visit the station for day trips or to conduct projects during the semester and include such topics as geology and hydrology, entomology, ichthyology, mammology and ecology. Graduate students, primarily in the Department of Biology, utilize the Field Station for their thesis research.



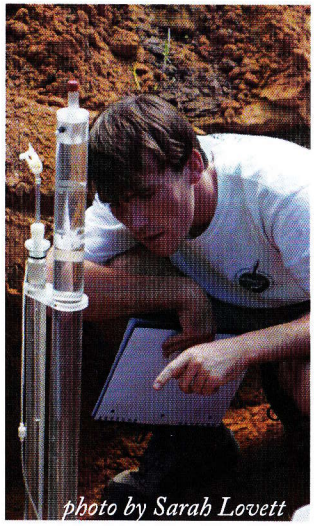


photo by Sarah Lovett

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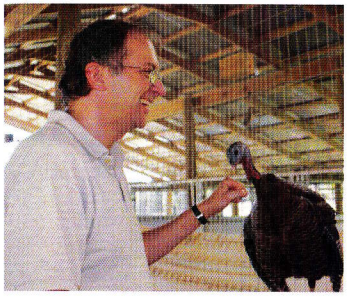


The UM Field Station Ralph Powe Research Award

The UM Field Station annually awards grants-in-aid for $500 each to graduate students working on projects in which the majority of the research is conducted at the Field Station. These research grants honor the numerous contributions of Dr. Ralph Powe, who was the first chair of the UM Field Station Advisory Board.

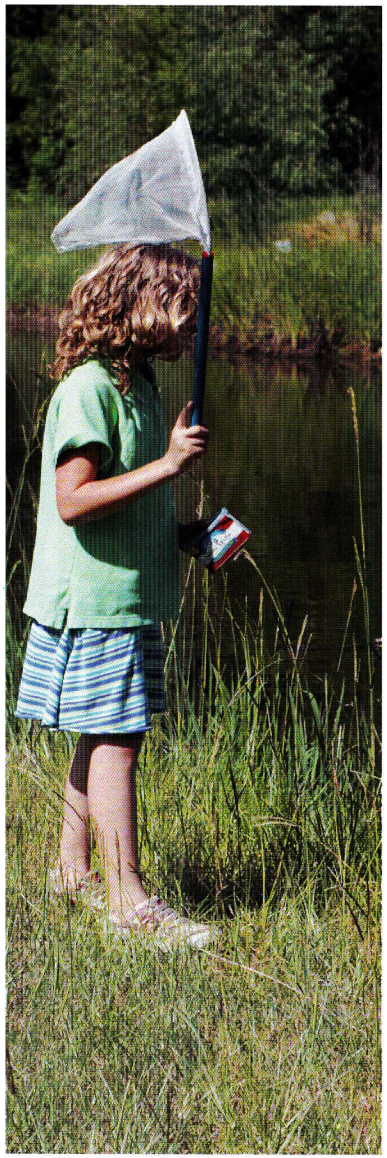
Many teachers from a broad range of disciplines at the university take advantage of the natural setting of the Field Station. The opportunities are endless. We have served students from the School of Law (Enviromental Law) to English (creative writing) and, of course, Biology and Geology. We encourage teachers to schedule a tour and take their students to "nature's laboratory."

Service

The UM Field Station staff take great pleasure in hosting events for the public and for the university, especially when they involve children, the next generation of stewards for our state. Each summer we have Ecology Day Camp and Math & Science Camp for kids and we play host for the USDA's Adopt-A-School program. Each program teaches kids the importance of preserving our habitats and ecosystems.

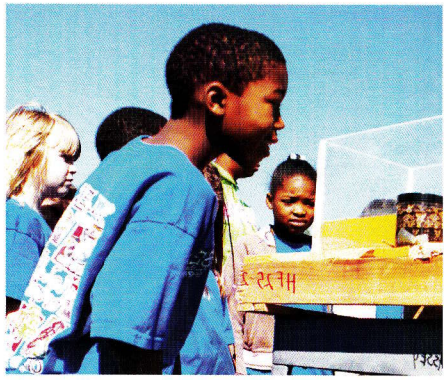
Many teachers also take advantage of the facilities and bring their students for tours of the laboratories, ponds and other facilities. The Field Station offers something for every age, from elementary to high school.

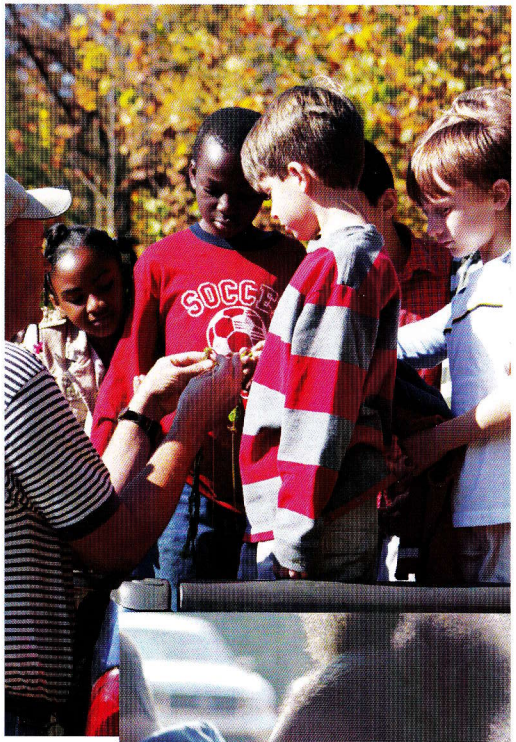
The kids don't get to have all the fun though - our auditorium is filled several times per year with beginning teachers taking part in Project Learning Tree, and we have hosted workshops, open houses and Natural Resource Council meetings.

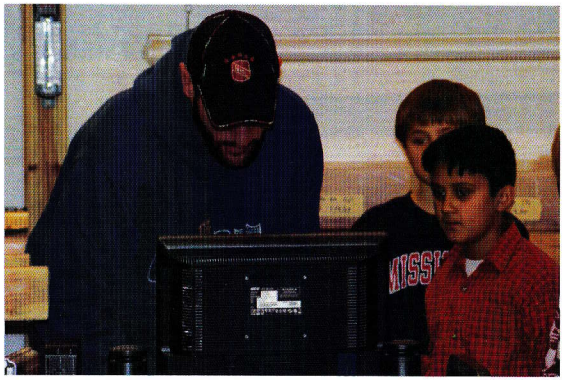


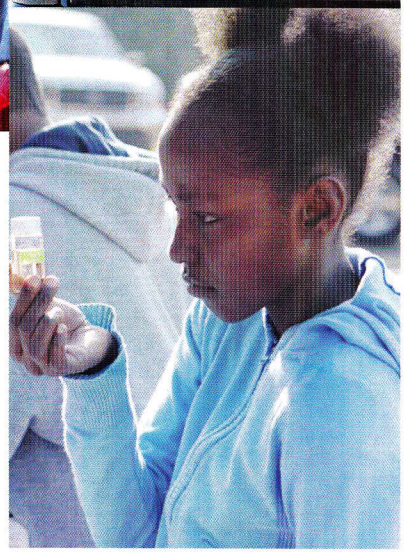
"What you have to offer our students is unbelievable. What a great resource to have so close to us!"

- Lafayette Elementary School Assistant Principal Jeffrey Clay









Facilities Available

Visitor Cabins - two on-site cabins, one available for short-term stays and another with a full kitchen and bath for long-term stays.
Short term cabin fees - $10 per person per night
Long term cabin fees - $25 per person per night

Field Sites
$20 per week

Labs
Labs available for $100 per week

Ponds
Available for rent, prices are *per year*
Small pond cell - $200
Regular Pond - $500
Mesocosm and Constructed
Wetland Cell - $1,000

Teaching Laboratories
Available at $20 per day

Wi-Fi / Ethernet
Available in all buildings, including cabins

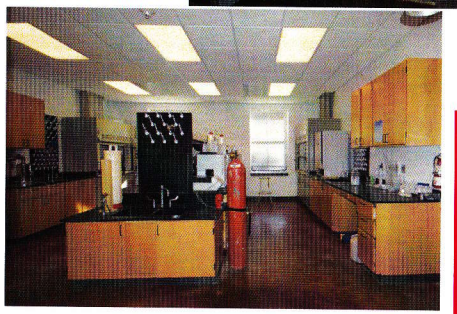
Weather station
On-site 24/7 weather data

Greenhouse
Researchers should submit a request to the director to use the greenhouse facilities.

Auditorium
Available for large groups – $100 per day

Conference Room
Holds 15 - 20 people
$50 per day

Aquarium Room
400-square-foot with photoperiod control
$100 per week



Limited assistance can be provided to researchers in field site selection and setup. Kawasaki Mules are available for working in remote areas of the Field Station.

UM Field Station Analytical Equipment List

- Dionex Ion Chromatography System
- Hewlett Packard 5880 GC System
- Hewlett Packard 5890 Series II plus GC System
- Hach Standalone UV Detector

The UM Field Station is partnered with the following research institutions / programs. These important partnerships allow us to grow and move toward our goals of research, education and service.

FIELD STATION PARTNERSHIPS

USDA Sedimentation Lab

The National Sedimentation Laboratory is one of more than 100 locations of the USDA-Agricultural Research Service. The facility's program is part of the national program of the ARS in natural resources, and it is dedicated to study and find solutions to problems associated with soil erosion and sediment delivery from upland areas, erosion and sedimentation in stream channels. The program also studies the impact of sediment and other agricultural contaminants on the biological well-being of streams, and the loss of nutrients and agricultural chemicals from agricultural activities on the landscape.

CWWR

Housed at the UM Field Station, the Center for Water and Wetland Resources was established to investigate water as a resource and examine its role in ecosytem function such as sediment transport and the creation of valuable habitats.

NIUST

The National Institute for Undersea Science and Technology was established in 2002 by the University of Mississippi and the University of Southern Mississippi in partnership with NOAA's Undersea Research Program. Program objectives are focused on ocean exploration, research and advanced technology development. The undersea vehicle technology center division has a laboratory / shop on the UM Field Station property that houses three undersea vehicles.

NCNPR

The National Center for Natural Products Research in the UM School of Pharmacy, is the nation's only university research center devoted to improving human health and agricultural productivity through the discovery, development and commercialization of pharmaceuticals and agrochemicals derived from plants, marine organisms and other natural products.

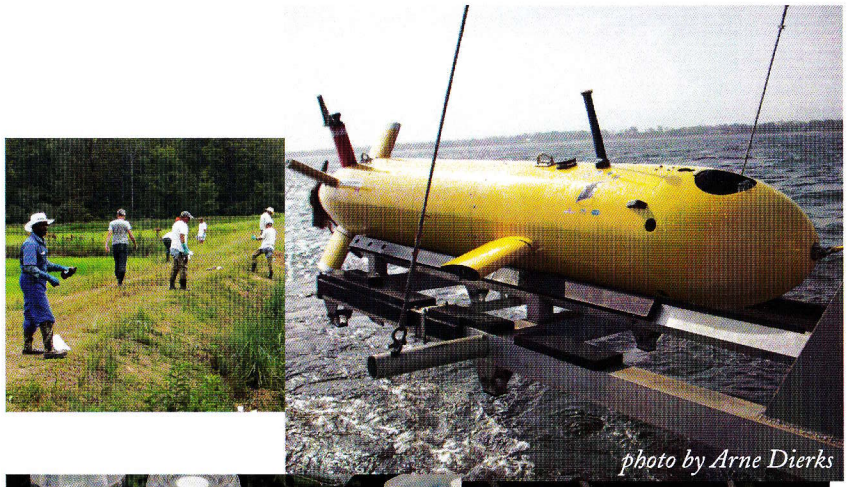


photo by Arne Dierks

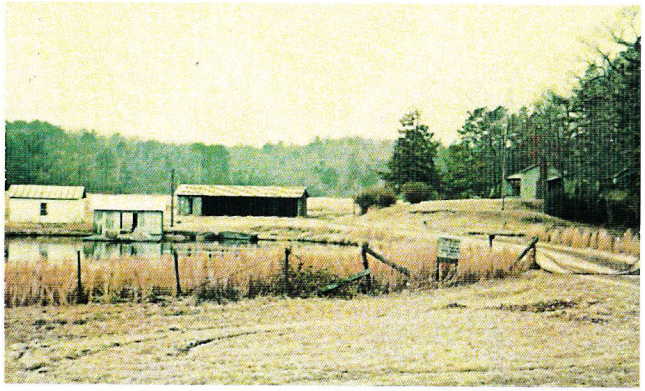
photo by Robert Jordan

HISTORY OF THE UM FIELD STATION

The beginnings of the University of Mississippi Field Station can be traced to a spring-fed swampy area that was converted to a bait farm with several large rearing ponds. Ole Miss Fisheries Inc, was established in July 1947 and, after acquisition by the Herbert Kohn Corp. of Memphis was known as Minnows Inc.

The original bait-fish farm, with the exception of two acres where the Bay Springs Baptist Church is located, consisted of 165 acres purchased from the Hickey family. This fertile bottom land lies in the flood plain along the headwaters of the Bay Springs Branch of Puskus Creek. Bay Springs Branch and an unnamed creek that flows from the southwest converge at the eastern boundary of the fish farm to form Puskus Creek. Puskus Creek is a tributary of the Little Tallahatchie River drainage and receives runoff from the many seeps and springs found throughout the area.

While the farm was at its peak, between 3 and 4 million fish were produced annually, 80 percent of which were golden shiners, and the remainder goldfish. Most were sold in Mississippi because of the expensive $500 license required for transporting the fish out of state.



The fish-rearing operations stopped in the early 1980s and the facility was sold to the Weyerhaeuser Co. which owned adjoining forest land. The farm lay fallow for two or three years until the university began negotiations to purchase the land. During that interval, much of the open land area and most of the ponds became overgrown with alders, willows, other shrubs, blackberry vines and honeysuckle.

The majority of the ponds were reclaimed as the property was converted to a research station. Efforts to bring the facility back into shape for teaching and research required concerted efforts of many individuals and organizations.

The Field Station, dedicated in May 1985, was originally administered by the UM Department of Biology and was known as the Biological Field Station. Dr. Luther Knight was appointed the director and served until January 1991. Subsequent directors were Drs. John Rogers and Marjorie Holland. Dr. Ray Highsmith became director in 2005. In 1995, the station was transferred to the university's Office of Research and Sponsored Programs. With the change in administration and usage by other disciplines, such as geology and environmental law, the property was renamed the UM Field Station.

Today the UM Field Station is a modern teaching and research facility with state-of-the-art buildings and labs. Many new projects are under way and we are excited about the possibilities the future holds! Dr. Charlie Cooper, former Supervisory Ecologist at the USDA Sedimentation Lab and a vital influence in the early days of the Field Station, said it best, "*You have everything out here from wetlands to hills; the variety and versatility are a treasure.*"

photo by Robert Jordan

Field Station
The University of Mississippi

Morning fog on the ponds, Winter 2009