



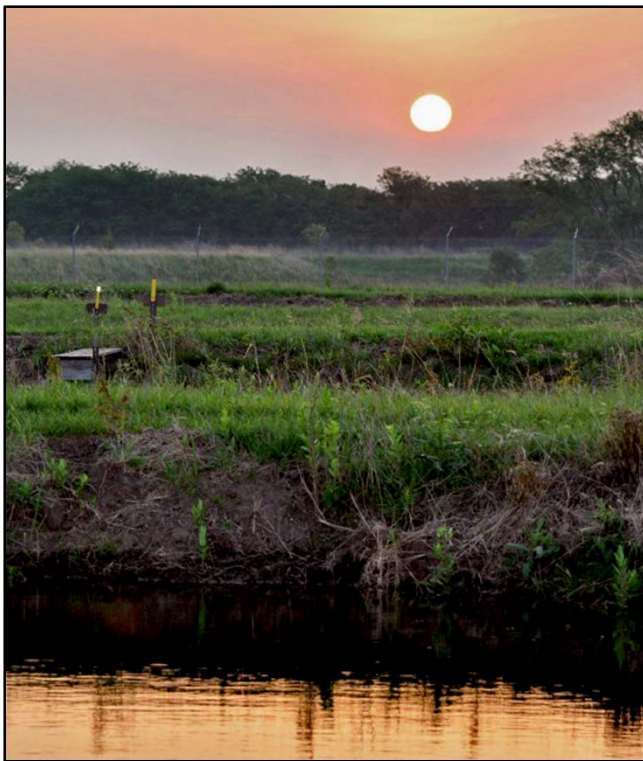
*KU student researchers collect fish from an experimental pond at the Field Station.*

### **About the KU Field Station**

The University of Kansas Field Station includes more than 3,400 acres of protected lands and specialized research facilities in northeastern Kansas. Located in the transition zone (ecotone) between the eastern deciduous forest and tallgrass prairie biomes, it offers opportunities for multidisciplinary study. It also is one of 60 sites that make up the National Science Foundation's National Ecological Observatory Network (NEON), established for monitoring environmental change.

At the Field Station, faculty, staff, students and visiting scientists conduct studies on such subjects as soil-landscape relationships; restoration and conservation ecology; animal, plant and community ecology; and aquatic ecology and watersheds. Students in the arts and humanities also use the Field Station as a base for academic projects. The Kansas Biological Survey, which manages the Field Station, offers workshops, summer courses, K-12 teacher training, and events for visitors of all ages. Public trails are open year-round.

More information and trail maps:  
[biosurvey.ku.edu/field-station](http://biosurvey.ku.edu/field-station)



*Situated within an 1,800-acre rural setting eight miles north of Lawrence, the Field Station's core research area serves as an integral site for long-term study of ecosystems, biodiversity and individual species.*

### **Mission**

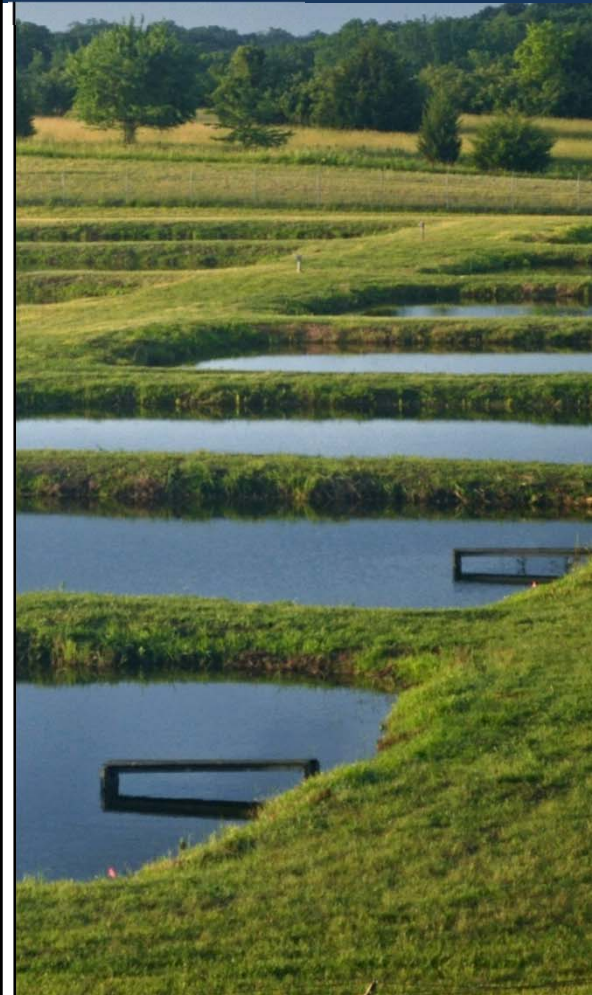
The mission of the University of Kansas Field Station is to foster scholarly research, environmental education, and science-based stewardship of natural resources.



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**KANSAS BIOLOGICAL  
SURVEY**



Above: Survey scientists and affiliated KU faculty and staff conduct classes for KU students, K-12 science teachers and other groups at the Field Station's Armitage Education Center. Right: Modern labs at the Field Station support research projects.



Top: Large fiberglass tanks (mesocosms) facilitate controlled aquatic experiments. Above: Endangered Topeka shiners, a subject of long-term study by Survey scientists. (Photo: Joel Sartore)



## Kansas Aquatic Mesocosm Program

The Aquatic Mesocosm Program facility at the KU Field Station provides a physical platform for a broad range of field-based research. Experimental ponds and tanks (mesocosms) function as surrogates of the natural environment and permit the use of replicated treatments and controls. They allow rigorous tests of ecological cause-and-effect relationships, which otherwise can be difficult to identify because of the multiplicity of variables and interacting factors in natural settings.

### Outdoor facilities

Major components of the mesocosm program include an experimental pond facility used for basic and applied research in aquatic ecology. The core facility includes nearly 100 experimental ponds ranging in size from .01 to .8 hectares; 77 ponds are .045 hectares, and 10 are .01 hectares. In addition, the facility has 80 large, 11-cubic-meter fiberglass tanks and a

variety of enclosures than can be used for *in situ* experiments in any of the ponds. On a larger scale (3 hectares, 13 meters deep), Cross Reservoir serves as a model of small Midwestern reservoirs.

Experimental mesocosms such as these effectively simulate the many thousands of ponds in central North America. Small ponds are a critical link between aquatic and terrestrial habitats because they often are the first type of aquatic habitat to receive nonpoint source pollutants.

The experimental pond facility was developed in stages over a 20-year period. It now is one of the largest such facilities in the U.S. and is used to address both basic and applied research questions.

### Indoor facilities

A 3,500-square-foot greenhouse/mesocosm building, completed in 2013, provides climate-controlled space that will facilitate year-round aquatic studies. A freestanding 1,200-square-foot aquatic research laboratory, equipped with a flow-through water supply from the pond facility,



An aerial view of the Field Station's experimental pond facility show research ponds, a containment pond at the center and Cross Reservoir at the upper right (northeast). provides a base for sample preparation and analyses.

In addition, the Armitage Education Center has adjacent wet and dry laboratory facilities, a full kitchen, showers, laundry, and classroom and meeting space to accommodate up to 40 people. Two sleeping cabins are available to researchers for overnight or longer stays.

For information on opportunities for conducting aquatic research at the KU Field Station, contact:

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Cover photo: Research ponds (mesocosms) at the Field Station.  
All photos / Kansas Biological Survey except where noted.