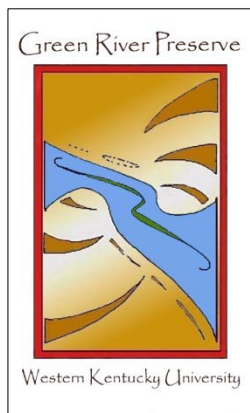


WKU GREEN RIVER PRESERVE



The Western Kentucky University Green River Preserve has a mission to foster knowledge and protection of our highly biodiverse region and natural heritage through research, education, and conservation. In 2000 we submitted our first grant application to purchase conservation land for WKU on the Green River in Hart County with funding from the Kentucky Heritage Land Conservation Fund Board (KHLCFB). In 2013 we purchased the 8th tract of land for management by WKU. The size of the Green River Preserve (GRP) is now over 1,500 acres. It includes 7 miles of river frontage and helps protect 12 endangered species of mussels, cave shrimp, and bats, and many other species and habitats. **WKU has received grants of over \$3.6 million for purchase and management** of the GRP. President Gary Ransdell and Chief of Staff Deborah Wilkins have helped with this work at every critical juncture. This remarkable place has generated enormous benefits for WKU in multiple areas.

Education: A broad range of classes, labs and field trips from several departments are held at the GRP. A sampling includes biology: zoology, ecology, wildlife, aquatic field biology, entomology, plant taxonomy; geology: structural geology, environmental geology; folk studies: vernacular architecture, field anthropology; and other classes and projects including some by visiting universities. Interns participate in restoration activities with American chestnuts, switchcane, bottomland hardwoods, prescribed burns, mussel sampling, and other projects. Some class papers have been published. K-12 outreach includes a VAMPY ecology summer course, Hart Co. High School AP environmental science, and more.

Research: The GRP is an ideal location from which to study the ecology of the Green River watershed, home to high biological diversity and one of earth's best developed karst systems. Research accomplishments include: (1) community and ecosystem ecology of the upper Green River watershed in the context of global change; (2) restoration ecology of riparian corridors, forest herbs, and native barrens; and (3) bioacoustic devices to monitor mobile organisms. The GRP contributes to WKU's research productivity: since the opening of the Preserve in 2004, 11 peer-reviewed publications, 12 master's theses, 7 undergraduate honors theses, and over 90 presentations at conferences have focused on the Preserve or included it as a study site in a larger project; most of this work includes students as co-authors. **External research grants associated with this work have exceeded \$2.2 million.**

Conservation: We were awarded the first annual Stewardship Award in 2010 by the KHLCFB for management of the GRP, and the 2012 Biological Diversity Protection Award from the Kentucky State Nature Preserves Commission. GRP habitats include bottomlands, uplands, barrens, canebrakes, caves, and limestone glades. The upper Green River hosts 109 fish and 59 mussel species, and ranks 4th in the US in imperiled fish and mussel species. GRP lands surround rich mussel beds with historical documentation of 9 endangered mussels, and a spring with 1 of only 9 known populations of the endangered Kentucky cave shrimp. The GRP is a swarming area for endangered Indiana bats and gray bats, and provides critical habitat for neotropical songbirds, bald eagles, and a great blue heron rookery.

Service: The GRP has developed strong ties to the Hart County community. While we host training experiences for rescue squads, conservation agency training, scout camping, non-profit group retreats, hiking and canoeing groups, and refugees, the most important of our service interactions are those with wounded soldiers and their families. With enormous cooperation from the people of Hart County, we host an annual deer management hunt and an annual family canoe retreat for the soldiers. The local community also cares deeply about the historic Gardner House located on the GRP: it is roughly 200 years old, and it is being carefully restored by the WKU Folk Studies Department. Their 2011 open house featured local history, architecture, and archaeology, and brought in 140 visitors who value WKU's dual stewardship of cultural and natural heritage.

Future Directions: Our productivity has greatly accelerated recently. Under the direction of Dr. Gordon Baylis we are developing a plan for the future of the Preserve that incorporates ideas from across the university, and includes dramatic increases in research, teaching, outreach, and contributions to economic development. Initial actions include hiring a part-time site manager, assignment of two co-directors, and plans to develop facilities to support maintenance, housing, meeting space, and research. In the long term, we hope these efforts will help the GRP function as a Long-Term Ecological Research site, where the value of prior work increases with time. [1/24/2014]

