

Pond Scum

Researchers prepare a plan to use Riverside Campus ponds



Eight years ago, 10 ponds were built on the Texas A&M University Riverside Campus. But the agricultural program for which these ponds were intended moved away from that campus and the ponds were neither used nor maintained. Thomas DeWitt, assistant professor of ecological genetics with the Department of Wildlife and Fisheries Sciences, and his colleagues recently discovered these ponds and set out to make educational and experimental use of them through the creation of mesocosms, or culture systems for fish larvae.

According to Dewitt's report, the existing aquatic projects were conducted in Dewitt's 180-gallon aquaria at the Riverside Campus indoor facility. Using the ponds reduces many problems these indoor aquaria produce, such as conflict among faculty research and teaching programs. For this reason, the Texas Water Resources Institute (TWRI) chose to award a Water Resources Research Grant for the restoration and operation of these ponds.

Because of their neglected state, the ponds required a few improvements. Two ponds needed work removing cattails, one had to be deepened to match the others, and two more ponds were added.

Despite the necessary improvements, the ponds have major potential. Because they were dug in

a natural clay area, they can hold water without requiring liners. The pond site was also equipped with water and electricity, making on-site research potentially more productive. In addition, there are security fences and regular police patrols of the area to protect research.

DeWitt recommended that the ponds be used for at least eight undergraduate courses in the Department of Wildlife and Fisheries Sciences to evaluate and measure natural selection factors, predator behavior and morphology, experimental foodweb manipulations, habitat structure and use, ecology, and several additional proposed research studies.

These ponds also offer the ability to perform nutrient and chemical studies, behavioral and functional ecology experiments, and community ecological and evolutionary studies of algae, aquatic vascular plants, invertebrate grazers and predators (snails, insects, crustacean), larval amphibians, fish, and turtles.

“The ponds not only provide a new research area, but also encourage cooperation among faculty,” DeWitt said. “These ponds have the potential to provide priceless training and learning expansion into the future.” 