



LSU AgCenter fisheries agent David Bourgeois identified seashells for Dexter Parent of Ascension Parish on the beach at Rockefeller Refuge in Cameron Parish.

Coastal Roots

Students learn science, help protect Louisiana from sea surge

Some of the plants that helped buffer the southeastern Louisiana coast during hurricanes Katrina and Rita in 2005 were planted by youth groups participating in the LSU Coastal Roots program.

"We started growing wetland plants from seeds in the schools to help some of the coastal erosion in this area," said David Bourgeois, an LSU AgCenter and Sea Grant agent who helped start Coastal Roots in 1998 in Lafourche Parish.

The other two principal players in the program since its beginning are Ed Bush, horticulture professor, and Pam Blanchard, formerly Sea Grant educational coordinator and now professor with the LSU College of Education.

Together they developed an educational program as a way to bring awareness of Louisiana's vanishing coast to schools. Aimed at elementary and secondary school students, the program helps young people learn to grow coastal plants and then place them in the wetlands to help prevent erosion. The program provides wetland plant and habitat educational materials to teachers and students. The lessons are designed to not only teach about wetland plants but also the biology behind how wetland plants grow. Lesson topics include plant identification, wetland habitats, photosynthesis, composting, pollination, genetics, wetland soils and global warming.

"When the program first started, we solicited schools to participate," Bour-

geois said. "Now the teachers come to us. They have to seek their own funding, but they want to do this."

Currently, 17 schools in nine parishes participate in Coastal Roots. The schools establish plant nurseries. They grow seedlings of native plants and then transplant the plants in coastal restoration projects.

From 2001 to 2006, about 1,640 students (grades 4-12) in 21 schools were directly involved in learning and doing something about coastal restoration, Blanchard said. Other numbers include 12,467 plants of nine plant species transplanted and 29 acres of habitat replanted.



Photos by Bruce Schultz

Bourgeois explains the importance of shoreline vegetation to Hannah Fontenot of Evangeline Parish, Will Fox of Ascension Parish and Matthew Gauthier of Vermilion Parish.

Blanchard said the plantings helped stabilize levees and shorelines, reforest coastal habitats and create a Louisiana black bear corridor. The plantings have occurred at conservation areas, state and city parks, shorelines, nature preserves and hurricane protection levees.

The parishes involved in the program include Assumption, East Baton Rouge, East Feliciana, Jefferson, Lafayette, Lafourche, St. Charles, St. James, Terrebonne, Vermilion and West Baton Rouge.

"This is more than growing plants and then going on a field trip to plant them," Bourgeois said. "The students learn scientific principles and about the environment."

Most of the plants, Bourgeois said, serve to trap sediment on shorelines or levees. Plants at the water's edge establish roots to help hold the soil while other plants farther from the water provide a buffer zone against losing soil to the effects of storm surge.

"These students know what they're doing is helping save Louisiana's coast," Bourgeois said.

Students grow and plant wax myrtle and cypress trees and black mangrove to help restore the wetlands to what experts believe was their original state. Wax myrtle has deep roots, provides seeds for birds, grows quickly and reproduces easily. It also provides habitat and food for migrating birds. Because wax myrtle can tolerate some salt, it is planted in brackish waters. Cypress is planted on higher ground.

Black mangrove is also salt-tolerant and suited for areas near the coast. Students plant the seeds from black mangrove in the winter and grow them in containers. Restoration plants established

by students in the spring of 2004 were about a foot tall when hurricane Katrina hit Louisiana's coast, Bourgeois said. Although there was some minor damage to the plants, most survived and are providing additional shoreline protection as mature plants.

"Because those plants stayed there and held the soil, we know the program is doing some good," said Bourgeois.

■ **Rick Bogren and Linda Foster Benedict**