Good history of Southeast mussel industry. CBD mention at end.

Mussel industry goes for exports to Asia

BY NANCY COLE

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CLOVER BEND — Jumping into the swift, murky water of the Black River last week, Lloyd Wade descended about 20 feet to the riverbed.

Tethered to his fishing boat by a breathing tube connected to a gasoline-powered air compressor, Wade began searching the sand and gravel for mussels, using only his hands as guides.

Within 10 minutes he had gathered a large mesh sack full of mollusks, which helper Eric Malott hauled aboard.

Using an aluminum template, Malott separated undersized shells from those that exceeded Arkansas' minimum, legal-harvest diameter — 4 inches for washboard mussels, 2 3 / 4 inches for mapleleafs, 2 1 / 2 inches for ebonyshells and 2 1 / 4 inches for monkeyfaces.

Malott tossed the undersized mussels back into the river along with any specimens of the 13 mussel species that are protected by either federal or state law.

Arkansas' mussel industry, more than a century old and originally founded for button production, has faded to a tiny remnant and faces a threat from habitat deterioration. The shells retained by Wade and Malott were destined for cleaning, sale and export to Asia for use by the cultured pearl industry.

Once in Asia, the shells are cut into small pellets of mother-of-pearl, the white substance on the inside of a mussel's shell. These beads, or nuclei, are then inserted into farm-raised oysters. The beads, an irritant to the oyster, are covered with nacre, the calcium carbonate material that can form a cultured pearl within six months to three years.

Lloyd Wade, 52, and his brother, Wayne, 55, are two of Arkansas' few remaining commercial mussel-shell harvesters. These third-generation "shellers" have made a living by collecting mussels for more than 20 years, usually working from March through October. Currently, they earn about $ 50 for every 5-gallon bucket of shells. They can make a little extra money by selling fresh mussel meat as fish bait, since Arkansas mussels aren't the types consumed by humans.

"I pity a new person," said Wayne, referring to would-be shellers and weekend divers who lack the experience to be able to regularly find and harvest large beds of legal-sized mussels that fetch top prices. In 2007, the Game and Fish Commission sold only 43 shelltaker licenses and 18 shell-taker's helper permits. That compares with an average of 1, 700 licenses that were sold annually during the 1970 s, said Amanda Leasure Duncan, one of only three licensed shell buyers still operating in the state. Duncan's father, Robert Leasure, started Leasure Shell Co. about 30 years ago on the banks of the White River near Possum Grape in Jackson County. Today the company owns several warehouses brimming with mussel shells. Most of the older shells are packed in 200-pound burlap bags favored by Japanese buyers; the newer ones are bundled in 100-pound plastic rice sacks preferred by Chinese buyers. "We probably have a thousand tons of shells in storage," many of them no longer in demand, said Duncan, 36, who manages the business. "It's crazy, but next year's fashion directly affects these guys who spend their time on the bottoms of rivers," she said. Most of Leasure Shell's current business consists of selling ebonyshell mussels to buyers in China, Duncan said. She buys those shells for $ 1. 35 per pound. Meanwhile, hundreds of tons of washboard and bleufer shells — known for their distinctive purple shells, which are used in costume jewelry, inlays and watch faces — remain in inventory waiting for tastes to change, Duncan said.

LONG HISTORY Commercial mussel-shell harvesting in Arkansas dates from April 1897, when Dr. J. H. Meyers found a

large natural pearl in a mussel known as a mucket that was taken from the Black River near Black Rock.

A pearl rush soon began and spread to the White and St. Francis rivers.

In 1900, Meyers began shipping the empty shells to a button factory in Muscatine, Iowa. To reduce transportation costs, Meyers and a couple of partners built a button-blank factory, which punched out pill-shaped “blanks” that were shipped to Iowa to be finished into buttons. The mussel meat was sold locally as hog feed.

Additional button-blank factories eventually were built at Brinkley, Clarendon, Corning, Newport, Parkin and Pocahontas. By the mid-1930 s, Arkansas was producing about one-third of all U. S. button blanks.

When mussel-shell supplies began to falter as a result of overharvesting, the U. S. Fish and Wildlife Service helped the Game and Fish Commission restock streams in the early 1940 s.

The industry’s greatest shock came after World War II, when zippers, metal fasteners and plastic buttons became increasingly popular. In 1954, Arkansas’ first button blank factory in Black Rock closed, marking the end of an era.

Demand for mussel shells developed once again in the 1960 s, when Japanese buyers sought them to make cultured pearls, using a technique developed in 1893 by Kokichi Mikimoto.

Annual sales of cultured pearls worldwide now exceed “well over $ 500 million,” said Bo Perry, a spokesman for the Cultured Pearl Association of America Inc., a New York-based trade group. Most production occurs in Japan, the Philippines, Tahiti, Australia and China, he said.

During the past 15 years, the fortunes of the U. S. mussel-shell industry suffered dramatically when a mysterious akoya oyster blight slashed Japanese pearl production for several years. The industry’s value peaked at $ 54. 5 million in 1995, according to the U. S. Geological Survey, which tracks the production of gemstones and related materials. In 2006, the latest year for which national statistics are available, the U. S. shell harvest was valued at $ 3. 3 million. Tennessee accounted for more than 70 percent of the U. S. harvest in dollar terms and exceeded 2. 8 million pounds, more than 120 times the size of Arkansas’ harvest of 23, 296 pounds. Last year, almost 109, 000 pounds of mussel shells were harvested in Arkansas, according to reports submitted to the Game and Fish Commission by shell takers and shell buyers.

RENEWABLE RESOURCE Arkansas is home to about 80 species of freshwater mussels, although one or two are believed to be extinct, said Bill Posey, a malacologist, or mollusk specialist, with the Game and Fish Commission. Eight species have been placed in the federally endangered category, two are classified in the less severe federally threatened category, and three are considered by the state to be of “special concern.” None of the species in those categories can be harvested legally, Posey said. Only about six mussel species are of interest to commercial harvesters, he said. John Harris, the author of a 32-page brochure entitled Arkansas Mussels, which was published in 1990 by the Game and Fish Commission, said current harvest regulations are adequate. “I feel like the commercial shellers have long been real proponents of mussel conservation, because it’s in their best interests for the resource to be self-propagating,” Harris said. Donning his wet suit last week, Lloyd Wade referred to mussels as “a renewable resource.” Commercial harvesting is permitted in only 39 of Arkansas’ 75 counties, with a number of exceptions for specific portions of certain rivers, creeks and lakes.

The state’s size and species limits are critically important in ensuring that mussels are not overharvested, said Alan Christian, a biologist and aquatic ecologist at Arkansas State University in Jonesboro.

“Many of the populations are doing very well, especially in the larger rivers such as the Black, White and Cache,” Christian said.

One key to maintaining the resource is allowing mussels to reach sexual maturity and reproduce for several years before permitting them to be harvested, he said. Some mussels live as long as 60 years and most begin reproducing after about eight years, Christian said.

The greatest threat to the state’s mussels has been habitat destruction, said Harris, assistant head of the environmental division of the Arkansas Highway and Transportation Department.

“As a group, they are considered to be extremely imperiled because of degradation to our rivers and streams,” he said.

Contributing factors include dams, dredging, construction and pollution, Harris said.

Elsewhere in the country, the introduction of exotic species like the zebra mussel have wreaked havoc with many native species, said Kieran Suckling, executive director of the Center for Biological Diversity in Tucson, Ariz.

Mussels represent the “worst native-species crisis in the country right now, by leaps and bounds,” Suckling said.

Southeastern mussels, which represent “the greatest mussel diversity in the entire world,” are “in a biological meltdown,” he said. “But they don’t get the level of funding that the Florida panther and the bald eagle get.”