Other Species Cultered in Texas (Shellfish, Sportfish and Alligators) Complied by Granvil D. Treece*

In the past, oyster aquaculture operations have been permitted on the Texas coast; however, none have been sustainable. There are apparently some peculiar 'catch 22' regulations limiting the movement and transportation of oysters, limiting the ability of growers to move shellfish to cleaner, approved waters to purge them before marketing. Most of the inshore waters along the Texas coast are considered closed to shellfish harvesting by the Texas Department of Health for one reason or the other, such as storm runoff, discharge from municipalities, or the presence of water fowl. The Texas Parks and Wildlife Department, in an attempt to control shellfish diseases such as the bacteria Dermo, has prohibited the movement of shellfish without a permit. This makes it difficult to near impossible to depurate shellfish in cleaner, approved waters offshore. Private wells can be used, but producers must pay for private laboratory tests on the shellfish meat. The Texas Department of Health also has bacteria limits in shellfish which make is almost impossible to sell the shellfish for human consumption without depuration, and their methods of testing for bacteria have in the past been archaic, counting all bacteria rather than specific pathogens such as *E. coli* separately. However, bay scallops have potential in Texas aquaculture because only the muscle of the scallop is consumed by humans, so bacterial counts should not pose a problem as they do with the oyster. Bay scallops are a potential way for the shrimp farms to diversify into a second crop. In 2008 the wild harvest oyster growers in Texas asked the state (Texas Dept. of Agriculture) to be considered as aquaculture, so they might qualify for some of the future USDA relief /assistance funds offered by the Government agency, but their request was denied. Other states consider the wild growers as aquaculture growers.

According to the oyster expert, Dr. Sammy Ray, at Texas A&M University – Galveston (now deceased), an oyster hatchery or farm would not be suitable in Texas and a potential oyster aquaculture venture should look elsewhere, such as the West coast or the East Coast of the USA, where it is cooler, there are fewer diseases in cooler waters, less fouling in cooler waters, and more reasonable regulations to work with. All these reasons make it very difficult for shellfish culture in Texas. However, the attached photo from Kim Siewers shows why people are interested in oysters from Texas. The large oyster shell is from Texas and is the same age as the smaller Canadian oyster shell.



Oyster on the half shell.





The Texas Dept. of Agriculture in Austin has a seafood marketing program (Go-Texan) that promotes Texas oysters and shrimp.





The Environmental and Consumer Safety Section of the Texas Department of State Health Services declares certain bays in Texas open or closed to shellfish harvesting. The following is a typical notice from that department.

IN THE MATTER OF OPENING OF MOLLUSCAN SHELLFISH HARVESTING AREA *DEPARTMENT OF STATE HEALTH SERVICES, AUSTIN, TEXAS

SHELLFISH ORDER NUMBER 1297

Pursuant to Chapter 436, Texas Health and Safety Code, and rules promulgated thereunder in Title 25, Texas Administrative Code, Chapter 241, it is hereby ORDERED that Conditionally Approved Area 4 of Galveston Bay, and Approved Area 2 of East Matagorda Bay as designated on maps, are opened to the taking of molluscan shellfish.

Issued in Austin, Travis County, Texas.

Sample Report: STATUS OF SHELLFISH HARVESTING AREAS IN TEXAS

GALVESTON BAY (CA AREA 1)	OPEN	
GALVESTON BAY (CA AREA 2)	CLOSED	rainfall
GALVESTON BAY (CA AREA 3)	CLOSED	rainfall
GALVESTON BAY (CA AREA 4)	OPEN	
GALVESTON BAY (NORTH AP AREA)	OPEN	
GALVESTON BAY (CENTRAL AP AREA)	OPEN	
GALVESTON BAY (EAST AP AREA)	OPEN (Pri	vate Oyster Leases Only)
GALVESTON BAY (SMITH POINT AP AREA)	OPEN	
WEST GALVESTON BAY	OPEN	
FREEPORT AREA (BASTROP AND CHRISTMAS BAYS)	OPEN	
EAST MATAGORDA BAY (AP AREA 1)	OPEN	
EAST MATAGORDA BAY (AP AREA 2)	OPEN	
MATAGORDA BAY (CA AREA)	OPEN	
MATAGORDA BAY (AP AREA)	OPEN	
TRES PALACIOS BAY (CA AREA)	CLOSED	rainfall
TRES PALACIOS BAY (AP AREA)	CLOSED	elevated sample results
CARANCAHUA BAY (CA AREA)	CLOSED	elevated sample results
LAVACA BAY (CA AREA 1)	CLOSED	rainfall
LAVACA BAY (CA AREA 2)	CLOSED	rainfall
LAVACA BAY (CA AREA 3)	OPEN	
LAVACA BAY (AP AREA)	OPEN	

POWDERHORN LAKE	CLOSED	elevated sample results
ESPIRITU SANTO BAY	OPEN	
SAN ANTONIO BAY (CA AREA)	OPEN	
SAN ANTONIO BAY (NORTH AP AREA)	OPEN	
SAN ANTONIO BAY (SOUTH AP AREA)	OPEN	
MESQUITE BAY	OPEN	
ST. CHARLES BAY	CLOSED	red tide
ARANSAS BAY	CLOSED	red tide
COPANO BAY	CLOSED	red tide
CORPUS CHRISTI BAY	CLOSED	red tide
LOWER LAGUNA MADRE	CLOSED	red tide
SOUTH BAY	CLOSED	red tide

Sportfish

Sportfish, especially black bass have been cultured in the U.S. since 1890. Until the late 1970s TPWD supplied pond owners with free fish in Texas. Since then the private sector assumed the role of providing fish. Florida black bass, introduced into Texas in the 1970s, generated much interest. The private sector generally utilizes larger open pond culture, whereas State and Federal facilities generally use tanks, raceways, and smaller ponds. There are approximately 21 sportfish producers in Texas. The private sector consists of approximately 576 acres that produce 1" to 3" bass and forage fish for pond stocking.

Golden Shiner



Baitfish (goldfish, golden shiners, fathead minnows, etc.) production generates approximately \$400,000 in sales in the state annually from approximately 20 acres. This only makes up a small portion of the demand. More than \$10 million of baitfish is transported each year from Arkansas to Texas. The industry in Arkansas became well

established in the 1950s and 1960s. In 1972, Arkansas had 30,000 acres of golden shiners. Aerial spraying, minimal baitfish research facilities and many predators like birds, snakes, turtles and dragonfly nymphs continue to be common problems in this industry.

Alligator Farming

Alligator farming was once a much larger industry in the USA than it is today. Alligator production reached over 250,000 hides annually in the USA in the early 1990s, but after other countries began to produce gators, the price of hides dropped from \$16 to \$20 a foot to below \$10 a foot. Texas harvested 9,000 alligators on farms in 1991, but with the price drop in hides, most of the farms have closed. An estimated 12 farms are presently growing alligators in Texas and the estimated farm gate value is \$100,000 annually. Photos from AquaNIC.















Above photo: Alligator Farm in Crescent, Texas