

CHRISTMAS BAY

*Saving the last of the seagrasses:
A 'David and Goliath kind of fight'*

Heaps of ancient oyster and clam shells discarded by the extinct tribe of Karankawa Indians can still be seen on the banks of Christmas Bay.

Across the bay out into the Gulf are the eroded remains of the sunken Confederate blockade runner, *Acadia*.

But the truly historic site is basically why Christmas Bay has been added to the list of Texas coastal preserves.

Seagrass... the largest and the last surviving seagrass beds in the Galveston Bay system.

Not only that, but Christmas Bay has four of the five species of seagrasses that grow along the Texas coast and it is the only bay in the Galveston Bay system with more than one species of seagrass. A dubious distinction, but one well worth noting given that in the past 30 years, 90 percent of the seagrass in the Galveston Bay complex has been lost and replaced by a burgeoning population and intense industrialization.

Man-made alterations to Christmas Bay and its surrounding habitats have been minimal, which is why the area serves as a productive nursery ground for gamefish, including the Atlantic croaker, spotted seatrout, red drum, southern flounder and sand seatrout.

The bay and surrounding marshes of the Brazoria National Wildlife Refuge



are a part of the Central Flyway and, each winter, a wide variety of approximately 15,000 ducks and 40,000 geese flock to this relatively pristine region a few miles southwest of San Luis Pass.

Fifteen threatened or endangered species have been spotted in the Brazoria County/Christmas Bay area, and, while it

no longer boasts the production of decades past, the bay now serves as the only open shellfish waters in the county.

With the exception of a few so-called "squatters" cabins perched on pilings sunk in the bay and a small subdivision nearby, Christmas Bay has been spared the often harmful effects of coastal development. Mostly because local residents won't have it any other way.

In early 1988, Continental Savings of Bellaire, principal owners of the 40-unit Peregrine town home complex and beach houses of the Lazy Palms subdivision, applied for a permit to discharge treated domestic waste water into the bay. What followed was a loud and sustained protest by residents, fishermen, environmentalists, and local, county and state officials.

Several months into the battle, the U.S. Environmental Protection Agency added the Galveston Bay system, including Christmas Bay, to its list of protected

estuaries.

In the end, a compromise was reached between Brazoria County residents and Continental Savings officials, who agreed to build a sewage treatment plant that would discharge into the Gulf of Mexico, not Christmas Bay.

Precinct 1 County Commissioner



Ronnie Broaddus described the compromise as a precedent-setting decision that would benefit future generations. The *Brazosport Facts* reported Broaddus as saying, "This was a David and Goliath kind of fight. Winning the battle shows that a group of people can make a difference."

As for the cabins built directly on bay water, which is state-owned, there may come a time when these too will go, says Sally Davenport, coastal division director for the Texas General Land Office. Many of the cabins have been there since the 1930s and although they are very popular among the people permitted to

occupy them, Davenport says, "They are basically a headache. On the lower coast they are a necessity if you want to go fishing in some isolated areas, but this is not so much the case on the upper coast."

"We know the recreational cabins on Christmas Bay are going to be very much an item of discussion as we do our coastal preserve management plan. We may ultimately phase them out of that area, but there has been no real data on the damage—if any—that they do. It has been brought up that they might shade areas that could be productive for grasslands and there are also concerns about raw sewage coming from them that could

contaminate the bay," says Davenport, adding that during the 1970s there were as many as 700 cabins coastwide, but many were destroyed by hurricanes or by barges running over them and some were abandoned.

Throughout the entire coast, there are now about 450 cabins, which can be transferred from one person to another or rebuilt if they are destroyed. However, no additional cabins will be permitted. They are privately leased and permitted by the Land Office for five years at a time, but the state office has the authority to relocate them if necessary, says Davenport.

Oystering is prohibited only in the vicinity of the cabins because many of them are built on oyster reefs, says Jeffrey Kirk Wiles, environmental quality specialist with the Texas Department of Health's Shellfish Sanitation Control Division.

"Few, if any, of these cabins have sewage treatment devices. We can't find fecal coliform bacteria on a particular day coming from a specific cabin. However, from a public health standpoint, anytime there is a possible discharge of human sewage on top of an oyster reef, we have to make a closure."

Aside from the questionable water quality around the cabins, Texas Water Commission hydrologist and marine biologist Jeff Kirkpatrick summarizes four years of water quality data on Christmas Bay as "real good, almost excellent. Our samples show that the nutrients are low, chlorophyll is low, the dissolved oxygen is normal, and the fecal coliform bacteria are low."

Isolation from development, the absence of waste water discharge and healthy circulation account for it being "just a clean little bay," says Kirkpatrick. "It's between the Gulf Intracoastal Waterway and the Gulf, so there's good circulation through there. On an incoming tide, it draws in clean Gulf water and on the outgoing tide, it's flushed. It's pretty well remained in its natural state."

A lack of turbidity in the bay and unobstructed sunlight enable the valuable sea grasses to hold on and flourish.



Dennis Emiliani (left) and Dr. Pete Sheridan (right) with National Marine Fisheries Service frequently sample the seagrass habitats to determine what species use them.

Dr. Pete Sheridan, fishery ecologist with the National Marine Fisheries Service, frequently conducts ecological assessments of the area.

"We take samples to compare the various habitats in the area—whether it's the intertidal marsh grass or the subtidal sea grasses and bare sand areas—to see what value each habitat has for the various species that use them, for example juvenile blue crabs, small brown shrimp and fishes.

"What we've found over eight years of work throughout the bay system is that when the intertidal marsh is flooded, many animals will move up onto the marsh surface. There are also many animals out in the seagrass, but when we look at the bare sand area right next to them, there are very few animals."

"So, if you want to have good shrimp, crab and fish habitat, it's better to have marsh and seagrass than bare sand and bulkheads," says Sheridan, who finds Christmas Bay's coastal preserve status a relief. "I'm sure developers have had their eye on it but now we don't have to worry about it."

Brazoria County Texas Marine Advisory Service agent Charles Moss also believes that naming the bay a preserve has reduced the opportunity for commercialization.

"It's a little jewel of a bay locked in with marsh and protected from pollution. That's one of the reasons Brazoria County is so attractive to petrochemical companies and other marine resource users. Our tender spots are protected by the Refuge and salt marshes. Our development areas are all front beach with the sand dunes serving as barriers."

Moss says the primary users of shallow Christmas Bay are recreational fishermen, adding that the highest number of tournament winning trout are caught there. Before being "exceedingly overfished," he says there were large populations of quahog clams, which is the

preferred clam for chowder on the East Coast.

Although the bay is still open to clamming, he adds that "it's awfully hard work to get a mess of them. The odd thing is, we'd find these mature clams in the bay—in fact, there was a prize winner in excess of four pounds. There were some historic, heavy shell clams about the size of a quarter horse hoof."

Because of the prevailing southeast breeze, Christmas Bay is also becoming a popular place for wind surfing, says Moss. "It's a very kind, non-consumptive sport that just utilizes the buoyancy of the water and the energy of the wind. If I had to pick a sport that made the least impact on the environment, wind surfing would be right at the top."

Other than what Moss jokingly calls the "visual intrusion of gaudy sails" of the surfboards, Christmas Bay has re-

mained an oasis in the Galveston Bay system. He also joined in the fight against discharging treated sewage into the bay because "the tidal influence is minimal and whatever goes into bay water will stay there awhile before being flushed out."

And, while he still can't quite figure out why the majority of the bay has been overlooked by developers, Moss says preservation status came just in time.

"We were really concerned that somebody was going to come in and say, 'Man, this is an undiscovered paradise, so let's put in this monster condo, bring in a bunch of river sand to build our own beach, and off we'll go.'" — P.C. ■

Christmas Bay is primarily used by recreational fishermen (top). The nearby Brazoria National Wildlife Refuge is a part of the Central Flyway and attracts a wide variety of birds each winter (bottom).

