



Peaceful coexistence on Ferry Slip Island: An American Oystercatcher with chick near a Laughing Gull's nest



Ask these fishermen the importance of estuarine habitats. Approximately 95% of our fish depend on them during some phase of their life cycle.

Brunswick Wildlife Home is the Salt Marsh (Part I)

Welcome home! Like other estuary and salt marsh inhabitants we also call the Cape Fear Estuary “home”. In addition to a multitude of recreational pursuits, most of us like to forage even if indirectly through a commercial fisherman.

The estuary, a place of transition from fresh to saltwater, is our region’s most important habitat, richest in nutrients. The components include the river, barrier islands, mainland, dredge spoil islands, and beautiful meadows of cordgrass salt marshes.

Barrier islands and their maritime forests provide storm protection for the estuary. In addition to Battery Island, other islands include the Smith Island Complex of Bald Head, Middle, and Bluff Islands; Zeke’s Island; Horseshoe Shoals (the large spoil island near the ferry route); and several spoil islands that are part of Audubon North Carolina’s Cape Fear River Islands Important Bird Area (IBA).

Estuary dynamics are ever changing: the volume of river flow; changes in salinity levels; the rhythm of tides; changes in depth and temperature; and flotsam and jetsam of tidelines marking current changes. Periodically major events such as hurricanes, Nor’easters, and floods greatly amplify the dynamics.

Tidal creeks rise and fall, flooding the marsh before retreating. The rhythm of twice daily high and low tides controls the lives of most marsh inhabitants including those crawling or flying in to forage. They are adapted to these cycles. Their lives depend on it.

The salt marsh is harsh habitat. Over the course of hundreds of thousands of years, organisms have adapted to it. Just adapting to tolerate salt is an awesome accomplishment. An organism's niche includes the air, food, clean water, shelter, and living space they need to survive. If their habitat changes dramatically, they may not survive.

The estuary's importance is derived from the rich nutrients from the river's silt deposited in its salt marshes which supports fish, crustaceans, and shellfish beds. Historically, the estuary has been rich in seafood and furnished livelihoods for commercial fishermen. Sports fishermen depend on the success of the natural fish nurseries and our tourist and retiree development industries, the economic engines that drives the Lower Cape Fear's economy, its wild beauty.

Salt Marsh nurseries not only provide food and protection for maturing fish but they also filter water; provide foraging for birds, mammals, and mollusks; and protect us from floods and storm surges

Spoil islands may not be formally considered part of an estuary. In our case, they are integral to our beach nesting bird population, as humans return part of nesting grounds that development has encroached upon.

Battery is the anchor of Audubon's IBA that stretches north past the ferry and also includes Striking, South Pelican, Ferry Slip, and North Pelican Islands. Battery is the only natural island; however, in the distant past spoils were added to the now-important southwestern end.

Battery Island supports the largest breeding colony of wading birds in the state, featuring great numbers of nesting White Ibis plus small numbers of up to ten additional species of waders.

Why is Battery Island for the birds? Habitat! Wading birds nest in red cedars, yaupon and other shrubs on the higher, southwestern end. The island is protected from mammalian predators such as raccoons and foxes, by the strong currents of the river channel.

Similarly, the mix of species on other IBA islands matches the combination of open sand and vegetation each prefers. The IBA supports vibrant breeding grounds for beach nesting birds such as Laughing Gulls, Royal Terns, American Oystercatchers, and Brown Pelicans that establish colonies close to each other for mutual protection from predators.

Audubon enforces a year-round ban on human activity and works to maintain appropriate levels and height of vegetation on the spoil islands.

The attractiveness of our salt marshes is derived from other attributes. Salt marshes are divided by zones. Around the upper zone edge southern red cedar, marsh elder, silverling, wax myrtle, yaupon holly, and sea oxeye are usually found. The daisy-like, yellow sea oxeyes ring the edges during early May and June. The upper zone contains plants such as salt meadow hay (*Spartina patens*), black needlerush, and glasswort.

The “wrack line”, like a bird buffet, is the loosely thatched ring of cordgrass, weeds, dead critters, and flotsam that shifts about the upper level depending on the level of high tides and storm surges.

The intertidal zone is the region between low and high tides where smooth cordgrass (*Spartina alterniflora*) is dominant. At low tide, tidal creeks, mudflats, shallow fishing pools (pannes) are revealed. The waders in particular enjoy flying in for a meal of panne-locked minnows.

Part two will cover salt marsh birds and other critters, the salt marsh food web, and threats to and plans protecting North Carolina’ estuaries and fish populations.

John Ennis

Please do not disturb the birds! My photos were taken with a long telephoto lens and I had a captain very experienced with the treacherous currents and rapidly changing water depths near these islands. For a photo op, I recommend joining one of next week’s Ibis Fest trips or by volunteering for a Cape Fear Audubon Society work day on the IBA.



**Tidal creek and marsh in Davis Canal
on Oak Island**



**Clockwise from top left are water and aerial views of Battery
Island; Horseshoe Shoals; and the Smith Island Complex**



**Fort Caswell with Battery Island and shipping
channel in the background**