

THE JOY OF SLIME MOLD | FLOATING THROUGH THE AMAZON | GREAT SALT LAKE

# Audubon

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GULF COAST  
BIRD PATROL  
100 YEARS OF  
PROTECTING  
PELICANS,  
EGRETS,  
HERONS, AND  
SPOONBILLS



For more than 80 years Audubon Texas's coastal wardens have been safeguarding the magnificent birds that live, breed, and nest on 80 islands on the Texas Gulf Coast. If the recent oil spill reaches them, they're apt to confront it with the same guile and grit that has helped bring back the iconic brown pelican.

**By Bruce Barcott** Photography by Randal Ford

# coast guard



Coastal warden Chester Smith, 89, has been protecting the birds on Sundown Island for a quarter century. He helped rescue the brown pelican from the brink of extinction, and his dedication to conservation has inspired a family tradition: His son will take over as Sundown's warden when he retires.

**W**hen Chester Smith hired on as warden of Sundown Island 24 years ago at the age of 65, a handful of endangered brown pelicans had just begun nesting on the tiny isle in Matagorda Bay, between Galveston and Corpus Christi, on the Gulf Coast of Texas. “At that time almost all the brown pelicans had been killed off by DDT thinning their eggshells,” he recalls. That year Smith counted fewer than 10 pairs nesting on Sundown, a 60-acre island made of dredge spoils from the nearby Matagorda Ship Channel.

Over the next quarter century Smith tended the island and its birds like a one-man lifeguard, policeman, and master gardener. “I patrolled it and done my best to ask people not to get out on the island, because they’d scare the birds off their nests and the young ones wouldn’t hatch,” says Smith, a lean, gregarious retired oil refinery worker. “I learned how to keep the fire ants under control. We planted native trees and brush. And over the years we figured out how to keep the island from washing away.”

Today, at 89, Smith can watch the fruits of his labor fly in low “brown bomber” squadrons over Matagorda Bay every day. Last year he counted 1,600 nesting pairs of brown pelicans on Sundown Island. “I see them now up around Galveston; they’re nesting on South Deer Island and North Deer Island,” Smith says. “You even see them in the Houston area! That’s something. And most of them, you can trace ’em back to Sundown Island.”

Thanks to the work of Smith and others like him, the brown pelican recently joined the bald eagle as one of the conservation movement’s signature achievements. In November 2009 the U.S. Fish and Wildlife Service (USFWS) officially removed the bird from the endangered species list. From its initial listing in the early 1970s, when it had been hunted and poisoned to near-extinction, the population has rebounded to more than 650,000 pelicans along the Atlantic, Gulf, and Pacific coasts.

The first step in the pelican’s comeback was the 1972 ban on DDT, the widely used pesticide that thinned eggshells, causing them to shatter during incubation. Even after DDT had dissipated in the food chain, though, pelicans needed safe shoreline nesting ground. That’s where wardens like Smith and Audubon Texas’s Coastal Sanctuary Program stepped into the breach.

The oil spill reminded the world that the Gulf Coast, especially Texas—which as *Audubon* went to press had been spared the effects of the spill—contains some of the world’s most important nesting sites and migratory stopover habitat. Every spring tens of thousands of reddish egrets, great blue herons, brown pelicans, roseate spoonbills, Forster’s terns, black skimmers, and royal terns fledge their next generation on more than 150 small islands between the mainland and large barrier islands. Audubon Texas leases 80 of those tiny islands from the state and manages them as bird sanctuaries.

The Coastal Sanctuary Program constitutes one of the nation’s oldest and most successful conservation partnerships. Six of the managed sites have been designated Globally Important Bird Areas by Audubon and BirdLife International. Last year the program won the USFWS 2009 Recovery Champion award in recognition of its critical role in the brown pelican’s recovery.

Since 1923 the patrol has kept watch. Today Smith is one of six Texas Audubon coastal wardens who protect the birds—and keep the islands, which are constantly scoured by waves and currents, from washing away. In a sense the pelicans, egrets, herons, and spoonbills are paying rent—and the wardens are the building supers. “The wardens let us know what’s going on out there,” says John Huffman, Texas Coastal Program coordinator for the USFWS’s southwest region. “They’re the eyes and ears of the whole conservation community.”

Other states, notably Florida and North Carolina, also employ bird wardens. But during a recent journey through Texas’s Coastal Bend country, the thornscrub and prairie grass shoreline that stretches roughly from Galveston to the Mexican border, I discovered that Texas Audubon wardens are a little different. They’re tough,

irascible, and just a touch on the eccentric side. As they patrol the shallow bays and saltwater marshes of the western Gulf Coast, they carry a little extra Texas in their step.

**T**oday’s bird wardens trace their lineage back to the late 19th century, when the plume trade drove many of America’s most magnificent birds to the brink of extinction. The fashion for feather-decorated hats fueled a commercial slaughter similar to that suffered by the Great Plains bison. In the early 1900s Congress and many states passed legislation defending birds, but



**As a young man Leroy Overstreet, now 85, had a tendency to get into bar fights. These days he puts his toughness to use combating the coyotes that threaten the roseate spoonbills on Green Island.**

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without funding for enforcement, poachers largely ignored the laws. In response, local Audubon societies began hiring hunters and boatmen as bird wardens—an idea that in 1903 led President Theodore Roosevelt to create the first federal bird refuge on Florida's Pelican Island, the forerunner of today's National Wildlife Refuge System.

Those early wardens were tough hombres. One job description called for someone “well acquainted with local conditions, a strong, fearless man and one fully alive to the value of bird protection.” The most celebrated founding warden, a poacher-turned-protector named Guy Bradley, was murdered in 1905 when he confronted a gang of egret poachers in the Everglades.

The current generation carries on Bradley's tradition, with one notable exception. They're not all men. Smith's success with the Sundown Island pelicans, in fact, was underpinned by the work of Emilie Payne, a legendarily tenacious warden. “She was the first person to really get out and help the pelicans,” Smith tells me.

Back in the early 1970s one of the region's few remaining rookeries survived on a dredge spoil island in Corpus Christi Bay. It hosted a grand total of three nesting pairs. “They endured all kinds of disturbances back then,” recalls Payne, a housewife who earned a biology degree while raising her family in Corpus Christi. “Fishermen, unleashed dogs, and boaters stopping to picnic. We even had flying students buzzing the island in their airplanes.”

Payne ran her skiff out to the island on weekends and holidays for nearly 20 years. She posted signs asking people to keep a respectable distance during nesting season. She cleaned up oil spills. She helped rehabilitate the pelican's reputation among fishermen, who considered the bird a competitor.

Over time Payne saw the colony flourish. By the mid-1980s the pelican population had grown to more than 100 mated pairs. The birds began recolonizing former nesting grounds on nearby islands. “Emilie was the spearhead,” recalls Pat Suter, head of the Sierra Club's Coastal Bend chapter. “She is one determined lady. Their recovery is due in large measure to her persistence.”

By the time Payne stepped down from the job in the 1990s, the local pelican population topped 1,000. The birds kept expanding their territory, eventually finding Sundown Island—and their next protector, Chester Smith.

“I'm having a busy spring,” Smith says. “I'm keeping an eye on

this oil spill now,” although in May the Gulf's prevailing Loop Current was sweeping the slick east toward Florida, away from Texas. “And I'm working with the Corps of Engineers and the U.S. Fish and Wildlife Service to shore up Sundown's erosion problems. But the birds are doing well. It's exciting to see them all come in at the height of the nesting season in the middle of May. Makes you feel like you've accomplished something.”

**F**urther down the coast, near Corpus Christi, David Newstead watches over an ever-changing collection of islands. And by change, he means wholesale. Waves and strong currents continually erode some established islands, while the Army Corps of Engineers creates new ones. “We lose a lot more than we gain every year,” Newstead tells me.

At 35, he is the youngest warden, but he's the senior biologist among the corps. A trim man with a crinkly smile, Newstead wears three hats. He's a staff scientist for waterbirds within the Coastal Bend Bays & Estuaries Program, a local habitat restoration organization; an Audubon bird warden; and president of Audubon's Coastal Bend chapter. “We're lucky to share David's time and expertise with the Bays & Estuaries Program,” says Bob Benson, executive director of Texas Audubon. “As their scientist, his charge is the flora and fauna of the entire bay system, but he's got such a strong natural affinity for birds that it works out well for all of us.”

On a blustery April day, Benson and I join Newstead on his weekly rounds. We hop on his boat and head out of Aransas Pass, a fishing town, past rusty shrimp trawlers and tumbledown bait shacks with hand-painted signs. As we

motor into the wide shallows of Redfish Bay, a popular recreational fishing spot, brown pelicans glide low off our starboard rail. We pass a handful of islands no bigger than one-car garages. Signs appear here and there: “DO NOT LAND OR ENTER. Island closed during bird nesting season, February-August.”

Newstead spots a small flock of Forster's terns setting on an island. “That's a good sign,” he says. “We've been watching this island closely. The problem here is keeping raccoons off the island.” (They steal eggs.)

“How do you keep them off?” I ask.



**Thanks to the tireless efforts of wardens Emilie Payne and Chester Smith, brown pelican populations on Texas coastal islands have grown from three nesting pairs in the early 1970s to some 1,600 pairs today.**

**The most celebrated warden, Guy Bradley, was murdered in 1905 when he confronted a gang of egret poachers in the Everglades. The current generation carries on Bradley's tradition, with a notable exception. They're not all men.**

“Havahart traps usually do the job,” Newstead says. “Fire ants are often a problem, too. If you don’t keep them controlled, they’ll skeletonize a chick just as it’s breaking out of the egg.”

Newstead slows the boat as we approach Terminal Causeway Island, an Audubon-leased property fringed with black mangroves. “This one’s starting to get cranked up,” he says. “Five years ago there wasn’t so much activity, but the birds are figuring out how to nest in the mangroves.” Benson spots a handful of roseate spoonbills—it’s tough to miss their fiery pink feathers—great blue herons, and cattle egrets nesting in the branchy shrubbery.

“Looks like we could use some signs out here,” says Benson.

“It’s a tough call,” says Newstead. “We can’t put signs on every island. At a certain point you’ve got to rely on people’s common sense. Hopefully seeing those heron nests is enough to let people know what’s going on here.”

**S**aving and protecting these nesting oases is becoming more critical as larger islands—especially barrier islands that have traditionally served as nesting grounds—succumb to development. Dallas, Houston, and Austin were among the country’s fastest-growing cities in 2009. Many newcomers crave shorefront property and marine recreation. When beaches and estuaries turn into housing developments and quiet bays become popular weekend fishing spots, birds start to disappear. Researchers at the University of Texas at Austin’s Marine Science Institute recently found that between 1979 and 2007, the average number of people on the beach on Mustang Island, the barrier island off Corpus Christi, grew fivefold, from 19 to about 95. In that same time, 10 of 28 bird species suffered significant population losses. Forster’s terns, gull-billed terns, and black skimmers declined between 53 percent and 88 percent. Double-crested cormorant populations fell by 82 percent.

For many of Mustang Island’s birds, it wasn’t just habitat loss but the increased presence of humans that led to their disappearance. When people recreate on beaches and shoreline, they don’t always stroll quietly. They run. They shout. They throw Frisbees. Perhaps most alarming, in birds’ eyes, they let their dogs roam freely. Shorebirds don’t just need habitat. They need habitat with minimal human disturbance. “That human disturbance is often innocent, but it stems from ignorance,” says Benson. “[Newcomers] aren’t familiar with the nesting islands and the general rules of the water down here. They see a tiny little island and they think picnic spot, not bird rookery.”

As nesting space continues to come at a higher premium, some Texas wardens have turned to business savvy and deal-making creativity to protect and expand nesting grounds. “There’s a nice diverse rookery over in Nueces Bay,” north of Corpus Christi, Newstead says. “But the material on the island is too claylike for ground nesting birds like gull-billed terns and black skimmers. And black skimmers are especially tough in terms of nesting encouragement. They’re real skittish. They’ll sit at a site for a month before they’ll lay an egg.”

Wardens have used sand-filled tubes, concrete rubble, and crushed shells to shore up islands. Through the grapevine, Newstead heard about a local seafood company that paid to have its oyster shells hauled to the dump. Then he found a glass crusher. “You chuck a five-gallon bucket of oyster shells into the hopper, and out comes the crushed material,” he says, smiling. Earlier

this year he and some volunteers laid down four tons of crushed shells, “a nice, rough substrate,” on the unnamed island. “If it works, we’ll have helped bring back those terns and skimmers, two of the most imperiled species on the coast.”

Like other wardens, Newstead is trying to anticipate the impact of the Deepwater Horizon spill on his region. “It could affect us like a hurricane,” he says. “In the past we’ve seen birds relocate to our area after a hurricane has wiped out their nesting habitat elsewhere. We could see that here. A whole bunch of new birds showing up on our island means we’ve got to have room for them. That makes the management of our islands all the more critical, and gets us thinking about how we might be able to bring more habitat and new or reclaimed islands into play.”

**M**y final stop is Arroyo City, a sleepy fishing town about 35 miles north of the Mexican border. That’s where I meet up with Leroy Overstreet. The 85-year-old may be the most colorful warden in the system.

“I’m an outdoor person,” he tells me as he fires up his outboard motor and pushes away from a county dock. Overstreet is a thin strip of rawhide in rubber boots, blue jeans, and a baseball cap. A half-smile crosses his face. “The day I can’t get outside, I feel like kicking dirt in my face just to get a feel for it.”

A former ranch hand, rodeo cowboy, and mechanical engineer, Overstreet is equally experienced in the fine art of bar fighting (in his younger days), the complexities of U.S. patent law (he holds five patents for farm implements), and the rude business of varmint eradication (coyotes, beware).

“The nesting season’s running a little behind this year on account of this cold weather,” he says, steering the boat up a channel toward Lower Laguna Madre. “But there are plenty of birds to see on Green Island.”

That’s where we’re headed. A 114-acre refuge located between the mainland coast and South Padre Island, Green Island shines as the jewel in the crown of the Coastal Sanctuary Program. It was Audubon’s first leased island back in 1923, when it housed one of the last extant nesting colonies of reddish egrets, one of the birds hit hardest by the plume trade.

Today 18 species of colonial-nesting waterbirds roost, nest, rest, and feed on its sandy shores and in its thick tangle of shrubs and trees. Reddish egrets, still the rarest North American herons, remain the island’s superstars. In a typical year 800 pairs of the spectacularly plumed birds—more than one-fifth of the species’ worldwide breeding population—return to Green Island to nest.

It’s Overstreet’s job to keep them safe. That’s where a keen tracker’s eye comes in handy. “Coyote,” he says, spotting a shaggy canine skulking in the brush along the side of a canal. They are the bane of the nesting birds. “I see way too many of ’em,” Overstreet tells me. “A lot of my job is keeping coyotes from eating birds.”

There’s little love in his voice. He’s seen the damage coyotes can cause. “I shot one a while back and opened it up to see what it had been eating,” he says. “I found 27 birds in its stomach. Twenty-seven! And these were birds that had been nesting in the islands.” Shooting is a control method of last resort, and over the years Overstreet has exhausted other strategies. “They’re too smart for traps,” he says. “Raccoons will walk into traps, but a coyote won’t come near them.” The government won’t allow him to use poison.

“The oil spill could affect us like a hurricane,” says David Newstead. “In the past we’ve seen birds relocate to our area after a hurricane has wiped out their nesting habitat elsewhere. We could see that here.”

So Overstreet is forced to guard the birds at gunpoint.

When we reach Green Island, Overstreet ties up the boat and leads me down a rickety dock that seems in imminent danger of collapse. This is disrepair by design. Along with predators, people pose a major threat to successful nesting on the coastal islands. Curious boaters, day-trippers, and fishermen are the usual culprits. A big warning sign helps people keep their distance during nesting season, and a broken-down dock deters them from coming ashore.

We pass over a mat of sargassum covering the beach and make our way up a trail into a thornscrub thicket. The ground cover is typically Texas: dry soil, agave, and prickly pear cactus under tough mesquite and spiny hackberry trees.

It's a perfect nursery. I follow Overstreet up a set of stairs into a bird blind in the overstory. As we peer through cutout windows, the treetop world comes alive with colors so beautiful they put a little ache in your heart. On the eastern edge of the thornscrub, a clutch of roseate spoonbills prepare their nests. Here and there, great blue

herons construct their sturdy thick-branched aeries. "The white ibis you see over there, they're spending the night but not nesting yet," says Overstreet. And everywhere—on every hackberry tree, at least—are reddish egrets. Their matted and shaggy cinnamon neck feathers look like the slicked-back hair of surfers after a hard session, and they yak away in their optimistic grunts.

Overstreet surveys the scene with a clinical eye. "We're not into full nesting yet," he observes. "In a few weeks they'll all come in. Then when they hatch, we'll have somewhere near 8,000 birds here."

Then he turns away to go scour the island for coyote tracks. There was a low tide last night, and Overstreet wants to make sure none of the varmints waded across. As long as he's the warden, nothing's going to threaten his birds. ■

**Bruce Barcott** is the author of *The Last Flight of the Scarlet Macaw*. He writes on birds, fish, cats, bears, and other environmental subjects for National Geographic, Outside, and The New York Times Magazine.

## On Edge | The Gulf oil spill may be a blow to birds on the fragile Texas coast.

"The theory is, ultimately we'll get something," says Winnie Burkett, an Audubon Texas Coastal warden. Early projections suggest that tar balls—sticky oil blobs considered less destructive than slicks because they don't contaminate or block food sources—might wash ashore on beaches and coastal sanctuaries, crucial wetland habitat that's home to dozens of colonial bird species. Here are six worth watching.

### Brown Pelican (1)

"There couldn't be a worse time of year for this oil spill," Burkett says. Brown pelicans, which were just removed from the endangered species list last November, started breeding in mid-March, just a month before the oil rig exploded. If oil hits Texas, these pelagic birds could contaminate their own nests. They may coat their wings with oil when diving for food or ingest the toxic substance while preening. A slick might also make feeding difficult. "If there's oil on the water and they can't see fish, their ability to find their food source goes down," Burkett says, potentially causing entire colonies to abandon their nests. Still, she says, the area's recent breeding success might help prevent a steep population decline.



### Royal Tern (2)

Like brown pelicans, royal terns depend largely on their eyes to find food. Oil-covered water could make spotting dinner from 60 feet above the surface a challenge. These terns—North America's second largest behind Caspian terns—are ground nesters, which exposes them to oil washing ashore. Furthermore, they regurgitate food to feed their young. "If they're ingesting fish affected by the oil or dispersant, they're passing that on in digested form to the chicks," says

Iliana Peña, director of conservation and education for Audubon Texas.

### Reddish Egret (3)

Oil slicks on Green Island, one of Texas's largest known reddish egret breeding sites, could hurt this coastal bird's population. Since plume hunters nearly wiped out the species a century ago, the U.S. Fish and Wildlife Service has monitored it closely. It's likely that only a massive storm would push the slick to the island, which is on the state's southern tip, says Peña. (At press time the spill was heading to-

ward Florida.) Oil contamination of sheepshead minnow, striped mullet, and other small fish that egrets eat poses an even greater risk.

### Roseate Spoonbill (4)

When these shockingly pink birds with naked green heads feed in shallow depths, the spatula-shaped bill for which they're named skims through the water, indiscriminately sweeping in small fish, crustaceans, and insects. If oil nears the Texas wetlands or beaches where many spoonbills live, they may not be able to avoid it, Burkett says.

"They're not visual feeders. They could wind up ingesting [the oil]."

### Black Skimmer (5)

Black skimmers feed mostly at dusk and into the evening, when the water is calmer and plankton and small fish head for the ocean's surface to eat. Since they find food by flying over the water and running the tip of their lower mandible just beneath the surface, they could inadvertently swallow oil. Plus, the chicks of these sand-nesting birds stay close to home for almost a month after hatching and head to the water at a young age, putting them in danger if oil hits land nearby.

### White-faced Ibis (6)

"White-faced ibises are declining rapidly and we don't know why," Burkett says. Though the total population still numbers more than a million individuals in Utah, Nevada, Oregon, coastal Louisiana, and coastal Texas, the oil spill may disturb large nesting colonies in the latter state, especially during high tides. These two-foot-tall birds already face nesting challenges from invasive species like nutria (ratlike aquatic mammals) that are altering their wetland habitat. Human disturbance to active colonies is also causing desertion.—Michele Wilson





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