



BARATARIA-TERREBONNE NATIONAL ESTUARY PROGRAM

# *Wings Over the Wetlands*

## *Wading Birds in Louisiana*



*“Louisiana is thought to have more wading birds than any other state. In fact, biologist’s estimates suggest that hundreds of thousands of these birds can be found across Louisiana, in some cases, far outnumbering estimates of other states.*

*Perhaps this is due to the variety and abundance of wetland habitats across the state. Possibly it’s due to the subtropical climate. Or it could be due to the productive influence of the mighty Mississippi and Atchafalaya Rivers. In reality, however, it is likely the combined influence of all three.”*





# *Wings Over the Wetlands*

## *Wading Birds in Louisiana*

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## *What is a Wading Bird?*

*“Seventeen species of wading birds regularly occur in Louisiana.”*

Selecting the most graceful bird group within the entire class (Aves) of birds—arguably the most graceful of all animal classes—is a difficult task. Nevertheless, it is equally difficult to deny the top spot to the exquisitely sculpted, long-legged, long-necked, long-billed wading birds.

Biologically, the bird group known as the “wading birds” is composed of those species belonging to the families Ardeidae (bitterns, herons, egrets), Threskiornithidae (ibises and spoonbills), Ciconiidae (Wood Stork), and Phoenicopteridae (flamingoes), all of which possess proportionately long legs, long necks, and long bills adapted for wading and feeding in relatively shallow water, and all of which belong to the bird order Ciconiiformes.

To be sure, other bird groups possess similar combinations of long legs, long necks, and long bills. Both the cranes (order Gruiformes) and some shorebirds (i.e. stilts, curlews, godwits, and some sandpipers, order Charadriiformes) are prime examples. But the cranes are more genetically allied with the rails, and the shorebirds possess bloodlines which are closer to the gulls and terns.

Seventeen species of wading birds regularly occur in Louisiana. These include the American Bittern, Least Bittern, Great Blue Heron, Great Egret, Snowy Egret, Reddish Egret, Tricolored Heron, Little Blue Heron, Cattle Egret, Green Heron, Black-crowned Night-Heron, Yellow-crowned Night-Heron, White Ibis, White-faced Ibis, Glossy Ibis, Roseate Spoonbill, and Wood Stork.

**Adult Dark Morph Reddish Egret (opposite).**

**Great Blue Heron (right).**



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*“Every aspect of a wading bird’s life history involves water: foraging, breeding, nesting, roosting, and migrating.”*

Adult Green Heron.

## *Wading Birds in Louisiana*

Would you believe that most of Louisiana’s 33 million total acres is officially classified as wetlands? While it is true that a substantial portion of these wetlands has been drained or otherwise degraded, Louisiana is still a very “wet” place, particularly when compared to other states.

In Louisiana, the term “wetlands” encompasses much more than the wide, 3 million acre swath of marshes located within the coastal zone itself. In fact, of the 60+ distinctive natural communities identified by the state’s biologists, at least 47 can be classified as “totally wet” (bays, lakes, rivers, bayous, etc.) or “wetland” (marshes, swamps, bottomlands, etc.) in nature.

Obviously, this is great news if you happen to be a wading bird living in Louisiana! For wading birds, “water water everywhere” translates not only to “food food everywhere,” but also “safety safety everywhere.” Every aspect of a wading bird’s life history involves water: foraging, breeding, nesting, roosting, and migrating.



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Feeding is a wading bird’s most spontaneous activity and occurs throughout the state’s freshwater, brackish, and saline marshes and at the edges of most any water body including estuarine bays, lakes, ponds, woodland pools, swamps, rivers, bayous, creeks, canals, and ditches. Breeding and nesting most often occur over carefully selected swamp or lake habitats. Roosting sites employ the tallest canopy tree layers available along rivers and streams as well as within and along the edges of swamps and lakes.

Louisiana is thought to have more wading birds than any other state. In fact, biologist’s estimates suggest that hundreds of thousands of these birds can be found across Louisiana, in some cases, far outnumbering estimates of other states. Perhaps this is due to the variety and abundance of wetland habitats across the state. Possibly it’s due to the subtropical climate. Or it could be due to the productive influence of the mighty Mississippi and Atchafalaya Rivers. In reality, however, it is likely the combined influence of all three.



## *Identifying Wading Birds in the Field*

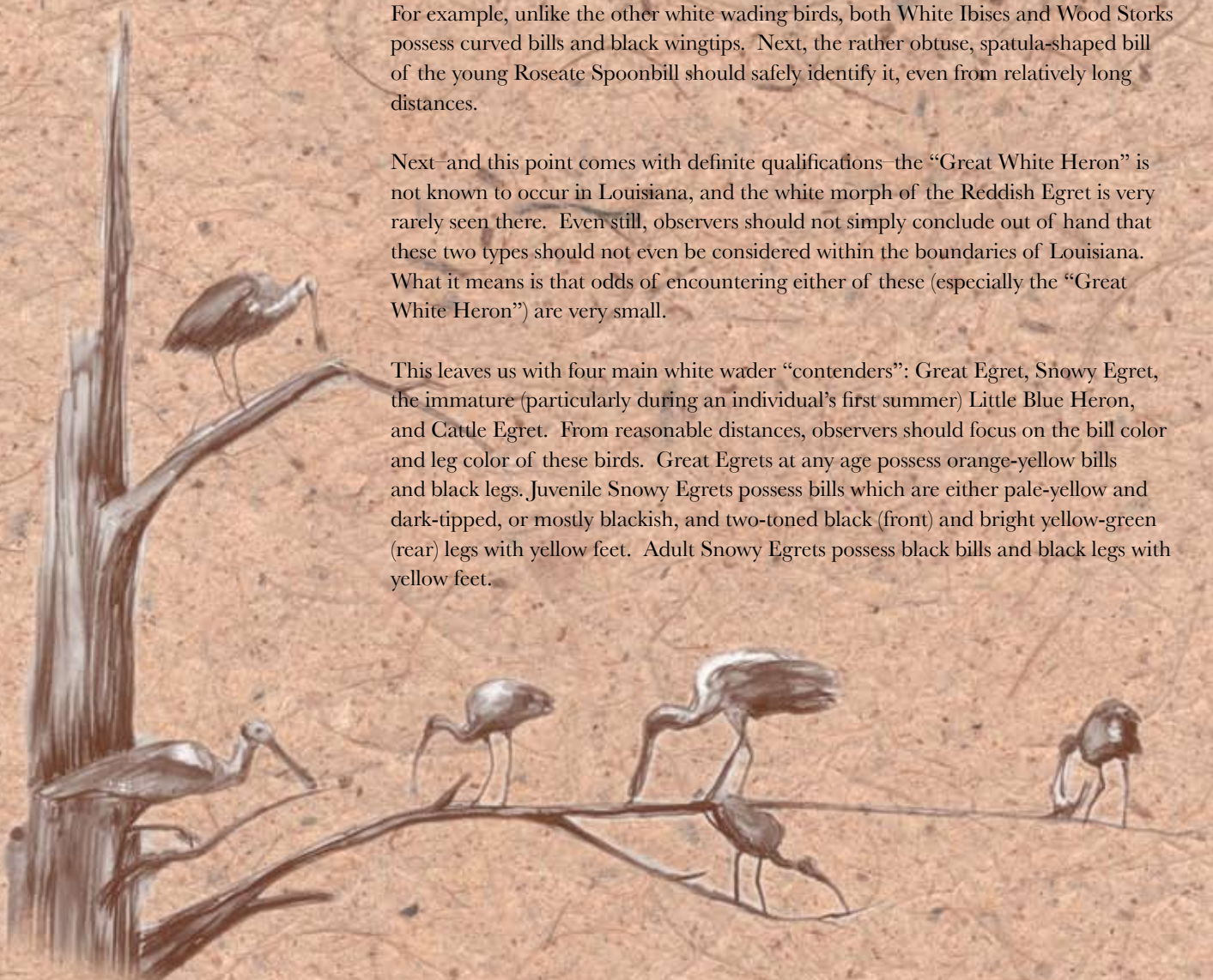
One would think that identification of individual species within a bird group as conspicuously large, slow-moving, common, and relatively approachable as the wading birds would be simple and straightforward. To a degree, this is true, but not without a couple of important caveats.

The major recurring problem with wading bird identification in the field involves properly separating the “white ones,” for there are indeed a number of wader species featuring white or at least occasionally white individuals: “Great White Heron” (white morph of the Great Blue Heron), Great Egret, Snowy Egret, Reddish Egret (white morph), Little Blue Heron (juvenile), Cattle Egret, White Ibis, Roseate Spoonbill (juvenile), and Wood Stork.

As with any problem in bird identification, it pays to approach the problem in a methodical investigative fashion: thus, in Louisiana, with a little experience and foreknowledge, we can immediately eliminate several of the “white wader” contenders. For example, unlike the other white wading birds, both White Ibises and Wood Storks possess curved bills and black wingtips. Next, the rather obtuse, spatula-shaped bill of the young Roseate Spoonbill should safely identify it, even from relatively long distances.

Next—and this point comes with definite qualifications—the “Great White Heron” is not known to occur in Louisiana, and the white morph of the Reddish Egret is very rarely seen there. Even still, observers should not simply conclude out of hand that these two types should not even be considered within the boundaries of Louisiana. What it means is that odds of encountering either of these (especially the “Great White Heron”) are very small.

This leaves us with four main white wader “contenders”: Great Egret, Snowy Egret, the immature (particularly during an individual’s first summer) Little Blue Heron, and Cattle Egret. From reasonable distances, observers should focus on the bill color and leg color of these birds. Great Egrets at any age possess orange-yellow bills and black legs. Juvenile Snowy Egrets possess bills which are either pale-yellow and dark-tipped, or mostly blackish, and two-toned black (front) and bright yellow-green (rear) legs with yellow feet. Adult Snowy Egrets possess black bills and black legs with yellow feet.







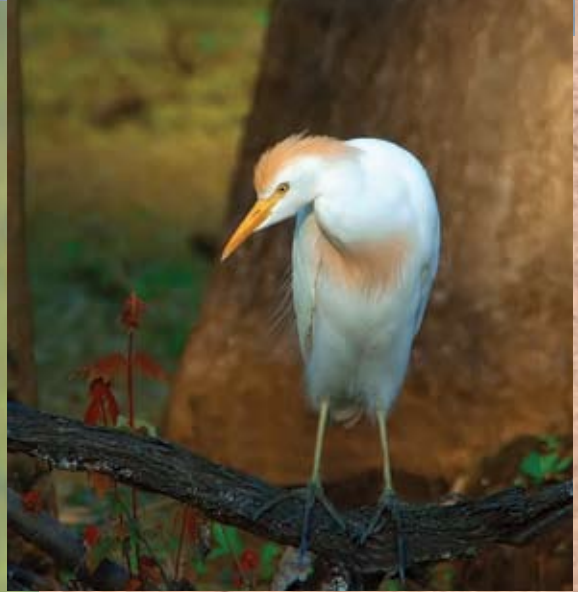
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**Four main white wader “contenders”:** Great Egret (top left), Snowy Egret (top right), immature Little Blue Heron (bottom left), and Cattle Egret (bottom right).

Immature Little Blue Herons possess pale-grayish dark-tipped bills and pale-greenish legs. Lastly, Cattle Egrets exhibit the most variation in bill/leg colors: dark bill and dark legs in juveniles, yellow bill and dark legs in non-breeding adults, and orange bill and dark-orange legs in breeding individuals.

Next, and again from reasonable distances, an assessment of overall body size and body part proportions is helpful. Great Egrets are tall, lanky, slender birds with exaggeratedly long bills. Snowy Egrets possess structural builds and body part proportions similar to those of Great Egrets, but possess only about half the body size of Great Egrets. Likewise, juvenile Little Blue Herons are only about half the size of Great Egrets but very closely approach Snowy Egrets in body size and structure. In the latter case, a close look at the bird’s lores (non-feathered area between base of bill and eye) should clear things up. Snowy Egrets at any age possess yellow lores. Young Little Blue Herons possess grayish lores. Last, Cattle Egrets at any age are very



obviously stockier and shorter-necked/shorter-billed/shorter-legged, compared with any of the other white waders. Also, for the most part, Cattle Egrets are far more terrestrial in their foraging patterns than any of the others.

From distances of a quarter-mile or more, white wader identification can become quite problematic, for neither bill color nor leg color are apparent from that far off. From such distances, observer experience becomes paramount, especially with flying birds. Surprisingly, relative body size determinations tend to fail as an identifier from those distances. Only those observers intimately familiar with individual wingbeat frequencies between the white wader species can even begin to figure them out. The longer the wingspan, the slower the wingbeat frequency. Thus, Great Egrets are the slowest, Snowy Egrets and young Little Blue Herons are intermediate, and Cattle Egrets are comparatively quite fast.

Another common problem in wading bird identification involves properly separating White-faced Ibis from Glossy Ibis. Louisiana is a real battleground in this case,

Note the differences between the White-faced Ibis (top photo) and Glossy Ibis (bottom photo). The White-faced Ibises possess red eyes and some red skin on the lores. Both ibises possess relatively pale bills, but the bill of the White-faced Ibis tends toward pale gray, whereas that of the Glossy Ibis tends toward pale brown.



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because both species are resident here. Moreover, both species are among the wariest of the wading birds and, more often than not, will fly off as soon as observers approach too closely or even stop their vehicle opposite a flock in a flooded field. Occasionally, flocks will stay put (especially when observers stay in their vehicle and use it as a "blind"), allowing closer studies of fine details through binoculars or spotting scopes- almost always necessary to confirm species identification. When adults are seen in good light, White-faced Ibis will show red eyes, and reddish facial skin bordered by white feathering; Glossy Ibis have dark brown eyes, and dark grayish facial skin bordered above and below by a thin line of paler blue skin. Bill, leg, and plumage colors are generally unreliable field characters. During the non-breeding season, adults are duller-plumaged, and White-faced Ibis lack the white facial feathering. Immatures of the two species are indistinguishable from each other until they start to acquire the adult-like eye and face colors.

And, finally, juvenile night-herons can also pose a formidable identification challenge. In Louisiana, this is primarily a summer and early fall problem because the vast majority of Yellow-crowned Night-Herons have departed for their tropical wintering grounds by mid-fall, leaving Black-crowned Night-Heron as the "default" species here during late fall and winter. Juveniles of both species are mostly brownish above with white spots, and paler below with dark streaks, but Yellow-crowns tend to be more grayish brown and have smaller spots and streaks, Black-crowns browner with larger spots and streaks. Additionally, Yellow-crowns have proportionately thicker, blunter, all dark bills, and longer legs which project farther beyond the tail in flight, whereas Black-crowns have more dagger-shaped, extensively yellowish bills and proportionately shorter legs.

**A juvenile Yellow-crowned Night-Heron (left) and a juvenile Black-crowned Night Heron (right). Note differences in bill shape and color, spotting pattern on the upperparts, streaking pattern on the underparts, and relative leg proportions.**



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American Bittern



# The Bitterns

American Bittern (*Botaurus lentiginosus*)

Least Bittern (*Ixobrychus exilis*)

*“In a group more known for its rather flamboyant plumage and coloration, the bitterns are the notable exceptions.”*

In a group more known for its rather flamboyant plumage and coloration, the bitterns are the notable exceptions. True to their camouflaged appearance, the bitterns live secret lives, stowed away amongst tall reeds, rushes, and cattails of fresh and (occasionally) salt marshes. Outside of migration, bitterns only rarely take wing.

The American Bittern is called *garde soleil* (god-so-LAY; “sun-gazer”) by the Cajun people who live and work around its hidden haunts. This is due to its habit of initially freezing still when disturbed and pulling its head and neck in a perfectly vertical position, allowing its brown-striped body to blend in with the surrounding reeds, and going so far as to wave along with the vegetation with the coming of each breeze.

In Louisiana, there are no nesting records for the American Bittern, which generally breeds throughout much of Canada south through California, Colorado, Kansas, Illinois, and West Virginia. Still, it is a regularly recorded transient here during spring migration, and also turns up with some frequency down in the coastal zone marshes during the winter months. But actually observing one of these secretive birds is another thing altogether! Best bets are at dawn or dusk, when birds take low, abbreviated flights over the marsh between nearby roosting and foraging sites.

Weighing in at a mere 3-ounces (a bit larger than a bobwhite quail, but only half the weight!), the Least Bittern is North America’s smallest wading bird. Like the American Bittern, its body plumage is a cryptic conglomeration browns, blacks, and cream-whites, but patterned in much more handsome fashion. The Least Bittern generally has a more southerly breeding distribution in North America than does its larger counterpart, and is a regular breeder in Louisiana. The species mainly winters from Mexico and southern Florida south.

When flushed, the Least Bittern exhibits a weak, sputtering, rail-like flight style. Also, like the rails, it is able to laterally compress its body (hence the expression “thin as a rail”) as it slithers through thick marsh vegetation when hunting or fleeing. Like the American Bittern, it will also exhibit that frozen “sun-gazing” posture when disturbed. Even more furtive than its larger cousin, the Least Bittern is rarely encountered in the field outside of spring and fall migration periods. During the nesting season, it is definitely much easier to hear (frequently uttered, long-carrying, “coo-coo-coo” notes) than to see. The Least Bittern is one of the relatively few bird species in which the male handles all of the nest-building chores.





Least Bittern





# Great Blue Heron

(*Ardea herodias*)

*“Along with the diminutive Black-crowned Night-Heron, the Great Blue Heron enjoys the widest North American distribution of any wading bird...”*

Along with the diminutive Black-crowned Night-Heron, the Great Blue Heron enjoys the widest North American distribution of any wading bird, ranging from southern Canada south through just about all of the United States and Mexico. The Great Blue Heron also commonly occurs through the Greater Antilles and the Galapagos Islands. Far from being limited to large water bodies, this species forages in just about any wet place, including beaches, bays, marshes, ponds, lakes, rivers, swamps, and even backyard garden pools!

At 4-feet in height, and with a 7-foot wingspan, the Great Blue Heron is the largest North American heron or egret. Typically, large birds such as the storks, vultures, eagles, and the true cranes test the limits of the laws of aerodynamics. Heavier body weights equate to more drag and wing-load, which most big birds deal with by developing a soaring—as opposed to flapping—flight style, but not so with the Great Blue Heron, which, even at its fastest flight speed, has one of the most painfully slow wingbeats of any bird. Yet even on takeoff, Great Blue Heron wingbeats do not appear the least bit labored.

Because of its large size, the Great Blue Heron is capable of taking surprisingly large fish. Individuals have been observed taking catfish of 1 lb. and over, as well as 12-oz. bluegills. Other common prey items include frogs, salamanders, lizards, snakes, shrimp, crawfish, grasshoppers, locusts, dragonflies, mice, and rats.

When disturbed, Great Blues launch off with a most annoyed cry that sounds like a deep and hoarse, “FRAHNK...FRAHNK!” So deep and low is this cry that the usually still wetland air around it detectably reverberates.



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# Great Egret

(*Ardea alba*)

*“Known as the “Long White” by 19<sup>th</sup>–20<sup>th</sup> century plume hunters, the Great Egret was very nearly hunted out of existence by 1920 in the United States.”*

Standing an average of 39-inches tall and possessing a 50-plus-inch wingspan, the Great Egret weighs but 2 lb., resulting in the most willowy build of any waders. Adding to this lithe structure is its super-thin, laterally compressed body, and overtly narrow, snake-like head.

Amazingly, the Great Egret makes its home on all of the world’s continents, with the exception of Antarctica. Outside of the Rocky Mountain states of Montana, Wyoming, Colorado, and Utah, and parts of New England, it is commonly found throughout the United States and all of Mexico. In Louisiana, Great Egrets are common throughout all wet habitats, far outnumbering the Great Blue Heron whenever the two occur together, which is quite often. Circumstantial evidence indicates that the Great Egret is one of several wading bird species which has especially benefited from rice-crawfish aquaculture. Even during the winter months, Christmas Bird Count data from the rice-growing parishes of Lafayette, Acadia, Jefferson Davis, and Cameron show the Great Egret to be the most numerous of any local heron or egret.

Known as the “Long White” by 19<sup>th</sup>-20<sup>th</sup> century plume hunters, the Great Egret was very nearly hunted out of existence by 1920 in the United States. The species made a rapid comeback, however, and is now among the most common and numerous waders throughout the Atlantic, Pacific, and Gulf coasts as well as the entire Mississippi River Alluvial Valley.

Foraging Great Egrets possess a hunting posture unique among the wading birds: standing perfectly still, but leaning well forward, with neck and head almost completely outstretched. Like the Great Blue Heron, the list of prey items on the Great Egret’s menu is very long, with crawfish always hovering near the top.

Also, like the Great Blue Heron, the Great Egret nests throughout the entire state of Louisiana, but highest nesting densities tend to cluster along the swampy watersheds of the Mississippi, Red, Atchafalaya, Mermentau, and Sabine Rivers. Wherever it nests, the aggressive Great Egret usually selects nest sites up near the top of the rookery, giving quarter to no other species except the Great Blue Heron, Roseate Spoonbill, and the undisputed “King of the Hill,” the Anhinga.





# Snowy Egret

(*Egretta thula*)

*“One of the most common wading birds in the United States, the Snowy Egret has a range that is more widespread than all but the Great Blue Heron and Black-crowned Night-Heron and is certainly more numerous than both of those species combined.”*

One of the most common wading birds in the United States, the Snowy Egret has a range that is more widespread than all but the Great Blue Heron and Black-crowned Night-Heron and is certainly more numerous than both of those species combined. This is an amazing scenario, especially considering the degree at which “snowies” (called “short whites” by plume hunters) were slaughtered for the United States/European hat trade. In fact, so low had the gulf coast Snowy Egret population plummeted, that Louisiana’s Edward A. McIlhenny (renowned naturalist, and progenitor of now-world-famous “Tabasco” brand pepper sauce) took it upon himself to restore the state’s population by excavating a large pond and installing bamboo nesting platforms for the birds.

In *Louisiana Birds* (1974) George Lowery, Jr. wrote, “McIlhenny’s efforts in behalf of the Snowy Egret were largely responsible for its survival.” McIlhenny’s “Bird City” project was a featured article in the *Saturday Evening Post* magazine, and then culminated in the 1939 book, *The Autobiography of an Egret* by McIlhenny himself.

Described as a “dashing hunter” by Texas ornithologist Harry Oberholser, the Snowy Egret typically employs a “quiver step” walking technique as it stalks small aquatic creatures within the shallow water habitats in which it forages. With its black legs and yellow feet, it is thought that the resulting color contrast aids the bird in its kinetic hunting style.

Interestingly, Oberholser (*Bird Life of Texas*, 1974) also suggested that crawfish top the long list of Snowy Egret prey items. It is doubtful that this opinion is shared by the consensus of Louisiana observers, who would probably put “minnows” at the top of the list. Nevertheless, on breezy, heavily overcast spring mornings, Snowy Egrets have been routinely observed to hover tern-style, over the edges of commercial crawfish ponds, snatching up immature crawfish as they move out of the deoxygenating water and onto the surface of adjacent aquatic vegetation to “gulp” air. Year round, Snowy Egrets are also among the most commonly observed (along with Great Egret, Yellow-crowned Night-Heron, White Ibis, and White-faced Ibis) wading bird species within rice-crawfish aquaculture units.



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# Reddish Egret

(*Egretta rufescens*)

*“So closely tied to salt water is the Reddish Egret, that it is only very rarely observed away from any coast.”*



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**Like the Little Blue Heron, nuptial plumage of the Reddish Egret is restricted to the crown, nape, and neck, where those normally small feathers become long and rangy, resulting in a “lion’s mane” appearance.**

A bit heavier billed and somewhat huskier than other midsized herons and egrets, the Reddish Egret possesses not only the smallest but also the most habitat-restricted range of all North American wading bird species. Here in the United States, the Reddish Egret is confined to the beaches and adjoining salt marshes of the Texas, Louisiana, and south Florida Gulf coasts. These areas represent the northernmost edges of its mostly tropical range, which extends southward no farther than coastal Bahamas, Cuba, Mexico, and Guatemala.

So closely tied to salt water is the Reddish Egret, that it is only very rarely observed away from any coast. Inland United States records of post-breeding wanderers are limited to a few sightings in southern Colorado, Trans-Pecos Texas, southern Missouri, southern Illinois, and western Kentucky. In Louisiana, sightings of Reddish Egrets most commonly occur throughout the coast during midsummer through early fall, but a few sightings have also been recorded during winter and spring. According to state breeding bird data, the only known Reddish Egret rookeries have been located on barrier islands, spoil banks, and “mud lumps” off of the coast of southeastern parishes such as Terrebonne, Jefferson, St. Bernard, and possibly Plaquemines.

Like the Little Blue Heron, nuptial plumage of the Reddish Egret is restricted to the crown, nape, and neck, where those normally small feathers become long and rangy, resulting in a “lion’s mane” appearance.

Of all North American wading bird species, the Reddish Egret possesses what is surely the oddest hunting technique. Described by some as the “drunken sailor” technique, Texas ornithologist Harry Oberholser describes it thusly: “When feeding. . . the Reddish Egret dashes and staggers about in shallows as if wildly excited, wings flopping and body inclining forward. It strides rapidly in one direction, abruptly halts, leaps in the air, reels usually in a half-turn, descends, and lurches off on another course. Amid these frantic starts, stops, and pirouettes, it seizes prey with a swift thrusting jab of its bill.”

Typical prey species include tidal animals such as topminnows, other small fishes, small crab and shrimp species, marine worms, and anything else unlucky enough to cross this strange hunter’s path.





# Tricolored Heron

(*Egretta tricolor*)

*“Indeed, the Tricolored Heron lives every bit up to its old genus name, Hydranassa, or Queen of the Water.”*



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Rivaled in grace only by the Snowy Egret, the Tricolored Heron's 2.5-foot by 2.5-foot frame weighs in at a mere 13-ounces! These extreme mass-to-weight proportions result in such a perfectly streamlined and elegant form, mesmerizing all those fortunate enough to observe it each time it takes wing, low and slow, over the marsh. Indeed, the Tricolored Heron lives every bit up to its old genus name, *Hydranassa*, or “Queen of the Water.”

Confined mainly to coastal habitats, the Tricolored Heron ranges along both the Atlantic and Gulf coasts of the United States southward through most of the Caribbean Islands, Mexico, Central America, and South America south to Ecuador and Brazil. In Louisiana, this species crowds its breeding colonies into the coastal zone, but isolated nesting has also been documented up the Red River and Ouachita-Black River watersheds. Demonstrably more marsh-loving than swamp-loving, even the nesting sites of the Tricolored Heron always seem to be located well away from the tall-tree forest edges of the other waders, and in more open scrubby wetlands with mangrove, marsh elder, buttonbush, and other wetland shrubs predominating.

When perched, the blue-backed Tricolor Heron might be confused with the similar-sized Little Blue Heron, but on the wing it becomes more easily distinguished from the latter, as it often flares to one side or the other, flashing its two-toned blue-white underparts, a field mark shared by no other wading bird.

Strongly migratory, most of Louisiana's Tricolored Herons evacuate the state by November, headed for points south. During the winter months only a few remain stateside, and mostly confined to coastal zone haunts south of the Interstate-10 corridor. Tricolored Herons return to Louisiana early each spring, migrating back into the state; circumnavigating coastal Texas and the Gulf Intracoastal Waterway northward and eastward. Spring arrival in Louisiana begins at the onset of March, coinciding with the early-spring arrival of trans-gulf migrants like Yellow-crowned Night-Heron, Green Heron, Cattle Egret, and woodland species such as Ruby-throated Hummingbird, Northern Parula, and Yellow-throated Warbler.



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# Little Blue Heron

(*Egretta caerulea*)

*“Little Blue Herons occupy a wide array of breeding sites throughout Louisiana, particularly within the many swampy habitats associated with the floodplains of all of the state’s rivers.”*

Little Blue Herons are wide ranging in inland swampy habitats from the eastern half of the United States, south through Mexico, Central America, and as far south as Uruguay, South America.

From a distance, the Little Blue Heron looks entirely steel-blue; but closer inspection reveals a delicately-colored neck and head which George Lowery, Jr. (*Louisiana Birds*, 1974) describes as “vinaceous purple.” Moreover, “young-of-the-year” Little Blue Herons tend to confuse observers in that their plumage is entirely white, with only their dark-tipped, blue-gray bills providing the clue to their real identity. By the following spring, these birds begin their molt into true adult plumage, exhibiting a mix of blue and white feathers earning them the nickname “calico crane.”

Little Blue Herons occupy a wide array of breeding sites throughout Louisiana, particularly within the many swampy habitats associated with the floodplains of all of the state’s rivers. In mixed-species rookeries, Little Blue Herons undergo the highest degree of nest site competition with the aggressive Cattle Egret, for both species tend to select sites of similar heights and similar substrates (primarily, the tops of buttonbush). During egg laying, male Little Blue Herons will not eat and only rarely leave the immediate vicinity of the nest.

Much like the Tricolored Heron, the Little Blue Heron is strongly migratory, departing Louisiana by October for tropical wintering grounds. By mid- to late March, squadrons of Little Blues, often mixed in with Fulvous Whistling-duck, Blue-winged Teal, shorebirds, and other herons, stream up the Mexican and Texas coastlines and into the ricefields of southeastern Texas and southwestern Louisiana. Once there, birds may spend up to 2 weeks, alternating periods of resting and foraging, before continuing north and east.



RONNIE GAUBERT



## *What and How Wading Birds Eat*

As a group, the waders are primarily carnivorous and eat just about anything that does not eat them first! Prey items range from insects, spiders, and other invertebrates, including substantial amounts of shellfish, amphibians like frogs/tadpoles, salamanders, and newts, reptiles such as lizards and snakes, small bird species and nestling birds, and small mammals such as mice and voles.

The herons and egrets (family Ardeidae) are true hunters, foraging via a combination of deliberate stalking interspersed by long periods of stillness, simply waiting for prey to reveal its location, at which time the prey is apprehended with lightning speed. This is when those long, graceful, “S” shaped necks come into play. In a classic case of form following function, the cervical (neck) vertebrae of the ardeids have evolved into a long, snake-like coil configuration, allowing for an incredible store of flexion and extension. About midway through the “S” of the neck, the esophagus of herons and egrets actually detours behind the vertebral column, allowing for a completely unhindered forward thrust of the neck, head, and bill when the moment of truth arrives. Lastly, the business end of the ardeid foraging machine – the bill – is long, strong, and relatively heavy, allowing for greater leverage in grasping and holding all types of prey, from “jittering” crawfish to slick, wildly thrashing catfish.

Not all ardeids are so tightly bound to the stealthy foraging philosophy. In fact, the Reddish Egret possesses one of the most kinetic foraging modes of any North American bird species. Should you get the opportunity to observe one of these uncommon to rare Louisiana surf-dwellers, take your time and wait for it to launch into its trademark hunting routine, which includes much staggering, pirouetting, wing-flapping and wing-hooding, crouching, and exaggerated vertical extensions of its already-prominent neck. Back in the day, birders used to say that Reddish Egrets hunted “like drunken sailors.”

Reddish Egret.



DARLENE BOUCHER



Adult White Ibis with its favorite food.



GREG LAVATY

Among the stealthiest of all ardeid hunters, Snowy Egrets will also occasionally incorporate some extra movement into their routine, flushing bottom-dwelling prey by lifting their feet and sort of stirring the bottom as they move through shallow water. Too, “Snowies” are the only wading birds to hunt by taking wing and plucking prey off of the water’s surface, much in the manner of the terns.

In contrast to the more solitary ardeid stealth-hunters, the ibises and spoonbills (family Threskiornithidae) most often feed in flocks and rely more on food-collecting techniques such as mud-probing (sandpiper style) and bill-sweeping in which they generally gather more and smaller prey items per unit effort than do the ardeids. Typical ibis/spoonbill prey tends toward tiny fishes, mollusks, crustaceans, and tadpoles, along with incidental grains and other plant material. Spoonbill and ibis (and Wood Stork) bills are enriched with nerve endings which result in a highly developed tactual sensitivity, causing the bill to snap shut immediately upon contact with an appropriate prey item.

Whereas Wood Storks share a similar bill shape to that of the ibises, their foraging style differs in at least two ways. First, like Great Blue Herons, Wood Storks are not above snatching small amphibians, reptiles, birds, and mammals (and even, ugh, carrion!) when such opportunities present themselves. Second, like the ibises, Wood



A Great Blue Heron snatching an amphiuma from swamp waters.



RONNIE GAUBERT

Storks definitely forage “by touch,” but instead of probing or sweeping with their bills, Wood Storks simply rest their bill tips upon the bottom of shallow water, cock their bills partially open, and then wait for prey to move their mandibles.

A number of wading bird species practice a form of “assisted foraging” known as commensal feeding – either on a routine basis, or more occasionally when the situation dictates. In a fine discussion on commensal feeding, Paul Ehrlich and others (*The Birder’s Handbook*, 1988) partly define this behavior as occasions when “members of one species assist the foraging of another, but incur no significant costs and receive no benefits.” They go on to provide the most common example of such a relationship as a case of the “beaters” and the “attendants,” where the beaters stir up prey items as a result of their own foraging activities, and the attendants reap the rewards by simply following the beaters.

Within the wading bird world, we most commonly observe such a relationship with Cattle Egrets and the cattle with which they so closely associate. Moreover, Cattle Egrets literally jump at the opportunity to play attendants to farm tractors as they plow fields, turning up grubs and other subterranean invertebrates in the process.

Also, bird/bird beater/attendant relationships have been somewhat routinely documented with Tricolored Herons, and Great and Snowy Egrets attending hunting cormorants as well as hunting mergansers in shallow waters.



Ornithologist James Kushlan did an entire study based on comparing the foraging success of “slow walking” Little Blue Herons that followed foraging White Ibises versus those Little Blues which didn’t. Results: the attending birds caught twice as much prey as the “independent” birds.



GREG LAVATY

**Hence the name - Cattle Egrets can often be found in close association with domestic cattle.**

In Louisiana, no discussion on wading bird foraging would be complete without mentioning the effect that aquaculture operations—particularly commercial rice, crawfish, and catfish farming—have had on wading bird populations in general. Many astute observers would in fact argue that these operations, which of course create artificially high and concentrated pools of prey items, are reciprocally creating artificially high populations of selected wading bird species, including Great Egret, Yellow-crowned Night-Heron, White Ibis, White-faced Ibis, Roseate Spoonbill, and perhaps Great Blue Heron and Snowy Egret as well. In truth, it is probable that all of Louisiana’s wading bird species (along with many other waterbird species such as grebes, American White Pelican, cormorants, waterfowl, as well as most species of shorebirds, and selected species of gulls and terns) have derived varying degrees of short-term benefits from aquaculture. Moreover, it also seems apparent that traditional predators of the abovementioned birds, including Northern Harrier, Bald Eagle, Golden Eagle, Merlin, Peregrine Falcon, Barn Owl, and Great-horned Owl, to mention some, are reaping similar benefits.

Detractors of the apparent beneficial avian effects associated with aquaculture point out that expansions of natural populations resulting from artificial means is never a good thing—that it’s more a matter of “when” and not “if” the bubble bursts. They argue that what would truly be beneficial for wildlife in general, would involve restoring the majority of agricultural operations back to the natural habitats from which they were derived. For their part, the farmers themselves obviously disagree with the latter suggestion, and are simultaneously perplexed by the ever-expanding flocks of birds descending upon their operations.

**American Bittern capturing a meal.**



GREG LAVATY



# Cattle Egret

(*Bubulcus ibis*)

*“Within recent history here in North America, the Cattle Egret is one of the few, if not the only, exotic species which found its way here completely on its own.”*



GREG LAVATY

Looking at a Cattle Egret working its favorite roadside or pasture, it is difficult to imagine such a squatty, land-loving, “wading” bird to be one of the best oceanic navigators in the world, yet that is precisely—among many other things—what this species has become.

Within recent history here in North America, the Cattle Egret is one of the few, if not the only, exotic species which found its way here completely on its own. It then successfully radiated throughout the continent, presently maintaining summer colonies from Oregon (intermittently) through southern Ontario and Maine, and southward through southern California to Florida. Southward, it maintains a year-round presence through Mexico, Central America, the West Indies, and most all of South America.

Originally an Old World (Europe, Asia, Africa) species, the Cattle Egret’s arrival into the New World is a well-documented story, crossing the southern Atlantic into northern South America in the late 1880s, into south Florida by 1942, and into southern Louisiana and Texas by 1955.

By far the most terrestrial wading bird species in the world, the Cattle Egret evolved its propensity for insect foraging alongside grazing wild mammals in the steppes and savannahs of Eurasia and Africa, parlaying it into a very successful strategy alongside domestic cattle upon its arrival in the New World. These days, Cattle Egrets commonly congregate not only around cattle but also behind plowing and harvesting farm equipment and commercial mowers along highway roadsides and within cities and suburbs. All of these human-wrought activities result in the flushing of their favorite foodstuffs—grasshoppers and crickets—along with bounty of “incidental take,” such as spiders, centipedes, earthworms, frogs, and lizards. Regarding aquatic foraging, only in specific instances resulting in similar human-induced windfalls will a Cattle Egret occasion to wet its feet in aquatic systems, most often in newly flooded ricefields, where multitudes of terrestrial insects and other invertebrates float up to the surface.

As with all of the other wading bird species, Cattle Egrets exhibit a definite preference for nesting over water and usually do so within the confines of mixed species rookeries, where their competitive presence is sorely felt, particularly among “lower tier” members such as Snowy Egret and Little Blue Heron with which it nests. So aggressive are Cattle Egrets in nesting situations that they often needlessly tangle with “higher tier” mixed rookery members such as Great Egret and Roseate Spoonbill—most often to the peril of the Cattle Egret.

For folks who know birds, perhaps the most basic characterization of the Cattle Egret would involve a direct comparison to any of the North American crows. Both are exceedingly resourceful birds and routinely out-compete other species with which they interact.











# Green Heron

*(Butorides virescens)*

*“Often going by the Cajun moniker Cop-cop in southern Louisiana, this little heron possesses a 2-foot wingspan, but weighs only 7 oz.”*

Often going by the Cajun moniker “Cop-cop” in southern Louisiana, this little heron possesses a 2-foot wingspan, but weighs only 7 oz. In addition to its stocky build, the Green Heron shares a few additional qualities with the bitterns. Like the bitterns, it will often adopt a “sky-gazing” pose when disturbed; and young birds possess brown streaked necks, much like both the American and Least Bitterns.

Green Herons are known for their ability to utilize any wet spot, from ditch culverts to expansive swamps. Besides a bit of water, all they need are a few shrubs for proper concealment. Expectedly, Green Herons possess the most extensive breeding range of any wader in Louisiana, being absent from only the Short-leaf Pine and Long-leaf Pine regions of north-central and western Louisiana, including most of the Florida parishes. They are also among the least likely—perhaps due to their small size—to utilize mixed-species rookeries, though on occasion will nest in small, loose, same-species colonies, similar again to that of the Least Bittern. During courtship, the male Green Heron puts on quite a show, expanding its throat and erecting its neck feathers while calling and alternately hopping from foot to foot in a sort of exaggerated “strutting” action.

When foraging, Green Herons are most often observed to “still-hunt” in a totally horizontal position, body crouched and tilted forward and neck stretched out. Frozen in this position, they often resemble a partially submerged branch or tree root. On the other hand, the Green Heron is among the only wading-bird to be observed taking prey via actually diving into the water. Strangest of all, in Japan, Green Herons are commonly known to “angle” for fish by tossing items as varied as live insects, berries, pieces of crackers and even twigs which they may actually whittle down to proper size, into the water, then hunker down and wait for fishes attracted by their “bait.”





# The Night Herons

Black-crowned Night-Heron (*Nycticorax nycticorax*)

Yellow-crowned Night-Heron (*Nyctanassa violacea*)

*“As their names and their proportionately large red eyes proclaim, both of these species are primarily nocturnal hunters.”*

Stocky, large eyed, and heavybilled, these are the *gros becs* (pron. grow-Beck; “big beak”) of the Cajuns. Several generations of Cajuns, especially those deep-swamp dwellers such as trappers and fishermen, relied on night-heron flesh—especially that of the Yellow-crowned Night-Heron—for a substantial portion of their spring and summer diets. These days, of course, the killing of any wading bird is illegal.

As their names and their proportionately large red eyes proclaim, both of these species are primarily nocturnal hunters. Both are heavy bodied and short-necked, and both possess stout, powerful bills. Not surprisingly, both are crustacean specialists, though like most wading birds, they will eat just about anything that they can catch.

Also noteworthy is the fact that, like several other wading bird species (most notably, Great Egret, Cattle Egret, and Green Heron), both of the night-herons are seemingly acclimatizing to civilization. This is especially true for the Yellow-crowned Night-Herons, as numerous observers recently recorded it nesting in cities and suburbs in mature live oak trees, preferably near water, and preferably within parks, golf courses, botanic gardens, and other somewhat protected locales.

The Black-crowned Night-Heron habitually draws its head down tight against its body, both when perched and in flight, giving it a characteristic “hunch-backed” profile. To further earn a sinister reputation, Black-crowned Night-Herons are not above taking eggs and even young chicks from adjacent nesting terns, herons, and ibises in mixed rookeries. It seems that this bird’s genus name (*Nycticorax* = “night raven”) is quite appropriate.

Immature Black-crowned Night-Heron



GREG LAVATY

DAVID CHAUVIN



Black-crowned Night-Heron





**Yellow-crowned Night-Heron**







DAVID CHAUVIN

**Prey-wise, the Yellow-crowned Night-Heron is a well-known crawfish specialist.**

Like the Green Heron, Black-crowned Night-Herons have been known to “angle” for fish by using various items (insects, bits of twigs, etc.) as “bait” which they set upon the water and wait for fish to move in for a closer inspection.

In Louisiana, the Black-crowned Night-Heron’s nest site choices are predominately within the coastal zone, but a few sites have been documented northward into the Red and Ouachita-Black Rivers as well.

The Yellow-crowned Night-Heron is much more attached to canopied wetland forests (that is mature baldcypress swamp habitats) than its black-crowned relation. Prey-wise, the Yellow-crowned Night-Heron is a well-known crawfish specialist, feasting heavily on them both in swamp and—much to the dismay of farmers—in artificial aquaculture situations, where it will go so far as to raid the pyramidal “walk-in” crawfish traps by tipping them over and relieving them of their contents. Crawfish farmers are even experimenting with changing the color (traditionally, white) of the traps’ plastic collars in efforts to deter the birds.

In Louisiana, Yellow-crowned Night-Herons nest as densely within the swamps of the Red River system as of those associated with the Atchafalaya Basin and other coastal haunts.

**Courting Black-crowned Night Herons.**



DAVID CAGNOLATTI

DARLENE BOUCHER



## The Ibises

White-faced Ibis (*Plegadis chihi*)

Glossy Ibis (*Plegadis falcinellus*)

White Ibis (*Eudocimus albus*)

*“Louisiana is one of the few places – if not the only place – where Glossy and White-faced Ibises may be studied together in the field.”*

Called bec croche (pron. BECK-crawsh; “crooked beak”) by Cajuns, the ibises, as well as night-herons, once supplied several generations of Louisiana deep-swamp trappers and fishermen with sustenance. Unlike the herons and egrets, the ibises are powerful fliers, with wingbeats and flight styles that more resemble those of waterfowl or cormorants than wading birds. In flight, ibises usually arrange themselves in long, undulating lines of 12-200 birds. In Louisiana, crawfish is a primary food source for all three species.



Flock of White Ibis.

RONNIE GUBERT  
GREG LAVATY





White-faced Ibis





Glossy Ibis



In Louisiana, the ibises usually favor marshes (vs. swamps) for foraging, which they most often carry out in small groups of 6-24 birds. During the winter months, gregarious roosts along isolated hardwood river bottoms and cypress swamps may hold thousands of birds. During a mid-1990s Christmas Bird Count held around the Lacassine National Wildlife Refuge (Cameron and Jefferson Davis Parishes), a “mega-flock” of about 44,000 individuals, predominately White-faced Ibis, was counted during departure from and re-entry to their nocturnal roost along the Mermentau River.

Considered together as “the dark ibises,” or “the Plegadis ibises,” non-expert observers find the White-faced and Glossy Ibises virtually impossible to distinguish in the field. The Glossy Ibis is a much more cosmopolitan species, ranging throughout much of Europe and western Asia southward through India, Madagascar, the Philippines, and even Australia, whereas the White-faced Ibis is pretty much restricted in distribution to the western United States and tropical America.

Louisiana is one of the few places – if not the only place – where Glossy and White-faced Ibises may be studied together in the field. In Louisiana, White-faced Ibis far outnumber Glossy Ibis, but a few Glossies always turn up in White-faced flocks. Refer to the “Identifying Wading Birds in the Field” section of this document for tips on separating these two species. And don’t forget to bring a spotting scope along. You’ll need one!

**White-faced Ibis (below).**



GREG LAVATY



White Ibis





The White Ibis is a New World species ranging from the southern Atlantic and Gulf coasts of the United States southward through the Caribbean, Mexico, Central America, and northern South America. This species uses both grass-dominated (marshes, ricefields) and tree-dominated (swamps) wetland habitats for foraging. Like the dark ibises, the White Ibis is fundamentally gregarious, forming massive roosting colonies which break up into hundreds of small flocks for daily commutes to and from foraging areas. With the fast-flying ibises, these commutes can be substantial, covering one-way distances of 20 miles or more.

**Immature (first year plumage) White Ibis.**



DAVID CHAUVIN

RONNIE GAUBERT

# Roseate Spoonbill

(*Platalea ajaja*)

*“Nicknamed the Cajun Flamingo by some Louisiana birders because of the plethora of “flamingo” reports which pour in each summer from uninitiated observers, ...”*

Nicknamed the “Cajun Flamingo” by some Louisiana birders because of the plethora of “flamingo” reports which pour in each summer from uninitiated observers, the Roseate Spoonbill is actually a very close relative of the ibises. Compared with other wading birds (with the notable exception of the Wood Stork), the Roseate Spoonbill is a fairly stout and heavy bird, possessing an almost “Disney-like” combination of colors, especially during breeding season, when the naked skin on the head turns pale sea-green, along with a rich, dark-salmon tail, to go with its pink wings and belly and watermelon-red scapulars, chest, and legs. Juvenile (first year) birds are mostly white, sometimes with the palest suffusion of pink.

The United States Gulf Rim, from south Texas eastward intermittently to south Florida, represents the northernmost breeding range for this primarily tropical species. Nevertheless, post-breeding wanderers have shocked bird-watchers as far north and west as Utah, Nebraska, and Pennsylvania. Just after the early 20<sup>th</sup> century harvest by plume hunters, the Roseate Spoonbill’s United States breeding range had shrunk to but a few isolated/protected coastal haunts in Texas, Louisiana, and Florida. These few colonies managed to survive until the mid 20<sup>th</sup> century when the United States Fish & Wildlife Service began to actively acquire more coastal lands for its National Wildlife Refuge Program. Today, the outlook for this species in the United States is considerably brighter. In Louisiana, according to the 2000 *Louisiana Breeding Bird Atlas*, breeding Roseate Spoonbills have been identified in no less than 18 mixed wading bird rookeries spread over 9 Louisiana parishes, including some as far inland as Evangeline, St. Landry, and Iberville Parishes.

Contrary to what most folks might expect, the Roseate Spoonbill’s spatula-shaped bill is not used to scoop up mud, as many ducks and geese do. Instead, the bill is richly enervated, and functions more like a broad palate, able to taste and feel prey as the bird moves it below the water’s surface, scythe-style, where it clamps down whenever food is detected.

Often, Roseate Spoonbills hunt in water deep enough to submerge their entire heads when feeding. Typical prey items include small fishes and shellfish, aquatic insects, and small amounts of plant material.



GREG LAVATY

DAVID CHAUVIN









# Wood Stork

(*Mycteria americana*)

*“In Louisiana, summer Wood Storks originate both from Florida and Mexican/Guatemalan breeding colonies.”*

Weighing in at a hefty 5+ lbs. and possessing a wingspan of 5.5 feet, the Wood Stork is rivaled only by the Great Blue Heron as the largest of the North American waders. In the United States, this big bird formerly nested throughout the swamps of South Carolina, Georgia, and all of the Gulf Coast states but is currently restricted to the few remaining old-growth baldcypress swamps in peninsular Florida. However, each summer, post-breeding wanderers both from its remnant southeastern United States enclave and from Mexico and Central America routinely show up throughout the Gulf Coastal states and southern California, with some moving as far north as Montana, Michigan, and New Brunswick.

In Louisiana, summer Wood Storks originate both from Florida and Mexican/Guatemalan breeding colonies. It seems that rice-crawfish aquaculture has provided crucial foraging habitat, though numerous foraging reports also emanate from natural swamps and marshes, particularly toward the end of the summer and into early fall.

Primarily, Wood Stork prey items include numerous species of fishes but they will also readily take the usual wading bird fare of salamanders, frogs, lizards, snakes, crustaceans, large insects, and even turtles, wood rats, and baby alligators. John James Audubon reported Wood Storks also taking young rails and grackles.

As with all true storks, Wood Storks are exceptionally strong fliers, though you'd never know it from the always slow, deliberate, and stately movements of these large, heavy birds. So heavy are Wood Storks that they most often linger in their baldcypress roosts until at least mid-morning, when sun-created thermals literally lift them up into soaring altitude where upper level winds carry them to their foraging grounds in nearby swamps, ricefields, and marshes.



DAVID CAGNOLATTI



## *The Nuptial Plumage Phenomenon*

As with numerous other bird species, wading birds exhibit markedly visible changes over certain parts of their bodies in response to the onset of breeding season. With wading birds, the most notable changes include the appearance of bright colors about the bill, lores, and legs, and a special molt in specific areas of the head, neck, and scapular feathers, producing elaborately elongated and/or lace-like feathers known as nuptial plumes. Nuptial plumes can be raised or lowered at will; and combined with the almost surrealistic breeding season color changes in the “bare parts” (bills, lores, and legs) nuptial plume displays play an important role in the well-documented, often complex, courtship activities of this group.

Coined by the French as aigrettes (from which the common name, “egret” was derived), these specialized feathers were treasured first by feather collectors, and then by fashion-hungry Victorian era men and women, all to the great detriment of numerous bird species, and especially so with wading bird species. In his *Louisiana Birds* (1955, 1960, 1974, LSU Press), George Lowery, Jr. laments the sudden and precipitous decline of several species of herons, egrets, and allies, which were “once virtually exterminated by plume hunters seeking feathers primarily for women’s hats. Since the plumes are at their finest in nesting season, the birds were killed mostly at that time. This persecution not only decimated the ranks of the adults but also left eggs unhatched and young to die in the nest.”

**Pair of Snowy Egrets in breeding plumage.**

**Pair of Cattle Egrets in breeding plumage (opposite).**



RONNIE GAUBERT





DAVID CHAUVIN



*“In Louisiana, for example, it would not be until the latter half of the 20<sup>th</sup> century before recovery of species such as the Snowy Egret and Roseate Spoonbill would be considered complete.”*

In *The Birder's Handbook* (Ehrlich, Dobkin, and Wheye, 1988), this quote from writer Herbert Job says it all:

“Here are some official figures of the trade from one source alone, of auctions at the London Commercial Sales Rooms during 1902. There were sold 1,608 packages of . . . herons' plumes. A package is said to average in weight 30 ounces. This makes a total of 48,240 ounces. As it requires about four birds to make an ounce of plumes, these sales meant 192,960 herons killed at their nests, and from two to three times that number of young or eggs destroyed. . . In 1903, the price for plumes offered to hunters was \$32 per ounce, which makes the plumes worth about twice their weight in gold.”

*The Birder's Handbook* goes on to state that later, the price per ounce would climb to \$80.

This practice reached its peak around the turn of the 20<sup>th</sup> century but by 1909 the federal government finally heard the outraged cries of ornithologists and other concerned citizens and eventually passed legislation known as the Lacey Act (1909), which effectively put an end to the commercial sale of United States wild bird feathers both at home and abroad.

But within the bird world, the aftermath of this fashion trend would be felt for the next 60-70 years, at least. In Louisiana, for example, it would not be until the latter half of the 20<sup>th</sup> century before recovery of species such as the Snowy Egret and Roseate Spoonbill would be considered complete.

**Roseate Spoonbills maintaining their pair bond.**





A bird colony partially showing wading bird "pecking order".



RONNIE GAUBERT

## *Wading Birds and Colonial Nesting*

According to the National Audubon Society's *The Sibley Guide to Bird Life and Behavior* (2001), approximately 13% of all bird species qualify as colonial nesters. Those birds which choose colonial nesting do so for several reasons. Besides the obvious "safety in numbers" hypothesis, additional factors include generalized region-wide scarcity of suitable breeding habitat, proximity to suitable foraging habitats, and what can most easily be described as the "networking" factor: the collective benefits associated with living in a group, such as learning where the best food supplies are located on a day-to-day basis.

Most wading bird species are colonial nesters, annually gathering in mixed-species conglomerates which can include 2-13 different species. In Louisiana, wading bird colonies commonly include other waterbirds such as Anhingas and Neotropic Cormorants, particularly in sites near the coast. Some other wading bird species will often merge into large seabird (Brown Pelican, Black Skimmer, miscellaneous gulls and terns) nesting colonies when conditions allow.

Generally, wading birds require colonial nesting sites which (1) possess woody vegetation to serve as platforms or substrate upon which to build nests, (2) are located over permanent water, and (3) are located within reasonable commuting distances to dependable foraging areas. In Louisiana, such sites are most often located within baldcypress-tupelo gum swamp habitat. In the absence of suitable







DAVID CHAUVIN



**Great Egret feeding young (opposite).**

swamp habitat, waders will settle for coastal riverbanks, artificial spoil banks, or even small islands (natural as well as artificial) – all preferably at the edges of marshes and/or aquaculture operations – as long as they possess enough woody vegetation (preferably hanging over permanent water if not actually within permanent water) upon which nests can be constructed. The “permanent water” requirement reduces opportunities for mammalian egg/nestling predators such as raccoons to wreak havoc on colonies. For obvious reasons, then, permanent water containing alligators is the most highly sought situation, even though alligators themselves take their toll on nestlings unfortunate enough to slip from their nests and into the water.

Most wading birds also exhibit a preference to select nesting sites which are as isolated as possible from vehicular and boat traffic. For some species, such as the Great Blue Heron, Tricolored Heron, and the *Plegadis* ibises, this preference can be more of a nonnegotiable requirement. Fortunately, there are several large colonies which conveniently persist adjacent to Louisiana roadways, presenting viewing opportunities to birders and photographers alike, offering folks a “close up” glimpse of these magnificent creatures, and providing excellent venues for education of the general public.”

From a conservation planning standpoint, southern Louisiana managers have been fortunate to have had the luxury of conducting numerous wading and seabird nesting surveys from 1976 through the present. In the most recent published survey, a total of 496 nesting colony sites within south Louisiana (all or parts of 32 parishes from Avoyelles Parish southward through the coastal barrier islands) were

**Roseate Spoonbill attending to aggressive young.**



GREG LAVATY



surveyed in April-June of 2001. Of those sites, 298 were inactive, 162 were active, and 36 were newly discovered active locations. From these data, the surveyors have extrapolated that an additional 289 undiscovered sites probably exist within the study area, bringing the hypothetical total to 487 active sites. Moreover, a substantial number of additional sites also exist within the unsurveyed northern half of the state, particularly within the Red River, Sabine River, and Ouachita-Black River watersheds.

It is important to note, however, that with the devastating passages of Hurricanes Katrina and Rita in 2005, and the ensuing region-wide drought through the 2006 spring-summer nesting season, a substantial number of these colony sites within Louisiana's coastal zone have been abandoned. Where have these birds relocated? At this point, researchers are still looking for answers.

Within mixed-species nesting colonies, a definite "pecking order" is apparent. When present, Great Blue Herons and/or cormorants claim the highest nest locales, usually at the tops of baldcypresses. Next lower come Roseate Spoonbills, followed by the ibises, Great Egrets, and then the night-herons. Snowy Egrets, Tricolored Herons, Little Blue Herons, and Cattle Egrets occupy the lowest substrates, which are most commonly atop the button bushes which subtend the tall canopy trees.

In the southern third of Louisiana, wading bird nesting season begins as early as the latter half of January, when Great Egrets initiate nest-building. As late winter turns to early spring, more species arrive with each passing week. The more strongly Neotropical the species, the later the arrival. Little Blue Heron, Tricolored Heron, and Yellow-crowned Night-Heron are the last to arrive, usually by mid-March along the coast and about 2 weeks later in northern Louisiana.

**Foraging Great Egrets.**



DARLENE BOUCHER



Adult and young Great Blue Herons.



Juvenile Tri-color Herons.

DAVID CHAUVIN



GREG LAVATY

Once eggs begin hatching, the wading bird nesting colony is instantly transformed into a wading bird rookery. Rookeries are typically full of action and quite noisy with the constant cries of nestlings and adults. During the daylight hours, the airspace around a rookery is almost always filled with adult birds hurrying back and forth from foraging areas with food for the nestlings as well as late arrivals who might still be in the process of transporting heavy twigs with which to build nests.

Throughout most of Louisiana, wading bird chicks begin fledging out of nests as early as the latter half of March, with peak fledging occurring by late May or early June. Once fledged, the adults work with the young birds by “flying” them to appropriate nearby sites for lessons in foraging as well as lessons in flying. For the first several weeks after fledging, the young usually return to their respective rookery sites for roosting each night. Soon afterward, though, adults escort them to newly selected roosting sites, most often at isolated sites, atop tall trees lining the banks of rivers, bayous, lakes, or swamps.

For the most part, wading bird nesting and rookery sites are ephemeral in nature, primarily because the concentration of waste products from both the adults and young birds tends to deoxygenate the water below, resulting in an accelerated demise in the very vegetation which supports the nests. Consequently, waders are forced to abandon even the best colonial nesting sites at regular intervals (every 10-20 years). Other factors causing nest site abandonment include periodic droughts, loss of nearby foraging areas, or encroachment by humans.

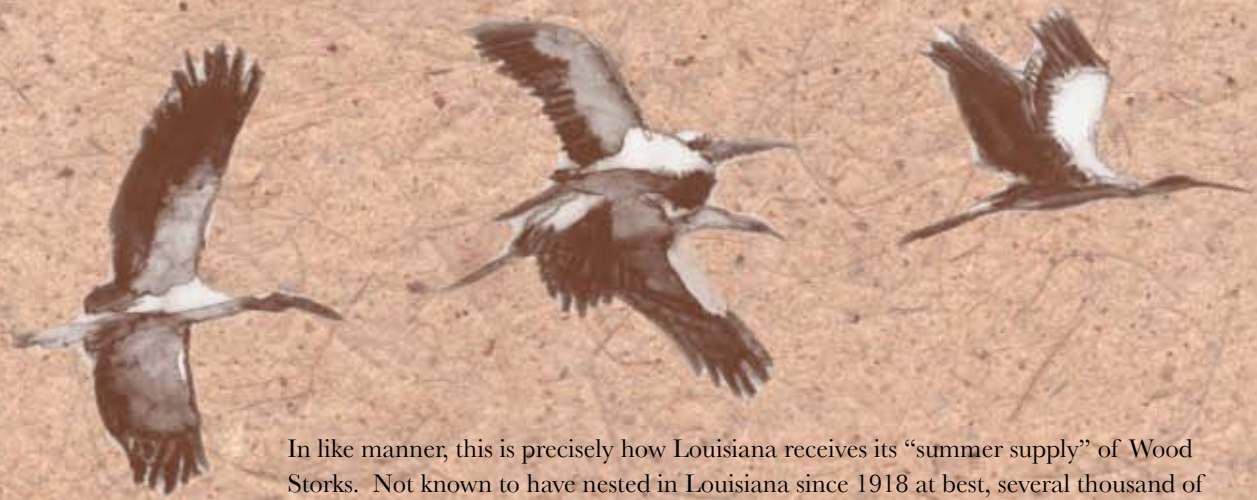


## *Wading Birds and the Post-breeding Dispersal Phenomenon*

Animal movements are among the least understood of the numerous behavioral aspects associated with wildlife. The process of migration, for example, has confounded scientists for many decades. Progress in unraveling this mystery is slow and not without its share of contention.

Dispersal is another mysterious movement phenomenon. In contrast to migration, it is thought that animals disperse in order to seek out new habitats in which to forage, roost, gain protection from various elements, and breed. Here in the United States, wading birds engage in a particular form of annual dispersal categorized as “post-breeding dispersal” because it always occurs just after the “young of the year” are fledged and on their own.

Ostensibly, the purpose of post-breeding dispersal by wading birds is similar to that of any animal dispersal phenomena: to seek out new habitat sets from which the organism may potentially use for one or more of its biological needs. Nevertheless, the actual geographical extent of the post-breeding wanderings of many wading birds is certainly amazing. The United States breeding range of the Roseate Spoonbill, for example, is mostly restricted to the coastal zone counties and parishes of Texas, Louisiana, and South Florida. Yet, each mid- to late-summer season, Roseate Spoonbills turn up as far away as New York, Pennsylvania, Michigan, Iowa, and Nebraska! One can only imagine the excitement associated with encountering one of these wildly colored birds amongst the somber late-summer marsh in central Michigan.



In like manner, this is precisely how Louisiana receives its “summer supply” of Wood Storks. Not known to have nested in Louisiana since 1918 at best, several thousand of these magnificent birds invade much of the state each May-September. The source of these Wood Storks? Post-breeders from Mexico and the Caribbean!

As opposed to post-breeding dispersal, most wading bird species in Louisiana also engage in true migrational movements as well. Like all migratory birds, migration in waders is probably spurred by seasonally diminishing food resources and winter-affected roosting habitat. In Louisiana, some wading bird species such as Great Blue Heron, Great Egret,



### American Bittern.



GREG LAVATY

Black-crowned Night-Heron, and the ibises commonly spend the winter here, and in fact seem to increase in population over the winter months due to an influx of individuals from more northern parts of their ranges.

Other species, including Snowy Egret, Cattle Egret, and (probably) Roseate Spoonbill exhibit decreased numbers during the winter, meaning that a substantial portion of the Louisiana population has exited the state for points south.

Still other species, such as Least Bittern, Little Blue Heron, Tricolored Heron, Green Heron, and Yellow-crowned Night-Heron nearly completely evacuate the state during winter, leaving behind only a few widely scattered “lingerers” down within the coastal regions of the state.

During early spring—usually beginning around mid-March—the more cold-intolerant species begin returning to Louisiana.

The late George Lowery, Jr., zoology professor and long time director of the Louisiana State University Museum of Natural Science, could rightly be called the “Father of Louisiana Ornithology” due to his many years of service in compiling bird records for the state. He might also be called the “Father of the Trans-gulf Migration Phenomenon,” since it was he who first perceived that most species of migratory birds crossed directly over the Gulf of Mexico during their return trip each spring from tropical wintering grounds in Central and South America. Of the migratory wading birds, Lowery noted that some, such as the Little Blue and Tricolored Herons, used a “circum-gulf” migration route, following the gulf coast of Mexico northward into Texas and then Louisiana. Others, including Least Bittern, Green Heron, Cattle Egret, and Yellow-crowned Night-Heron, he identified as “trans-gulf” migrants, taking the more direct—and much more dangerous—600+ mile route directly over the Gulf of Mexico from the Yucatan Peninsula northward to the southwestern coast of Louisiana.

Interestingly then, it seems that the smaller, “chunkier” wading bird species are the ones which opt to take the more direct but more dangerous route. Oddly enough, this observation probably makes good sense, for it is those smaller species which possess the stronger, more direct, more “wind-cutting” flight styles, as opposed to the more lethargic flight styles of the larger waders.



## *Saving Louisiana's Coastal Wetlands, Saving Louisiana's Waders*

Louisiana's wetland loss crisis is second to none. Even today, Louisiana still loses more than 24 square miles of wetlands each year – down from the highs during the 1970s and early 1980s. In all, tens of thousands of acres of wetland habitat have been lost due both to natural and anthropogenic effects over the last few decades. Future predictions suggest an even bleaker picture indicating the loss of an additional 500 square miles by the year 2050. For wading birds, this will likely be significant.

Because Louisiana hosts more wading birds than any other state, it is imperative to understand the ecological connection between wading birds and the wetland habitats that sustain them. However, current efforts are lacking. Periodic surveys that are undertaken are neither complete nor systematic making comparisons over time nearly impossible. Additionally, although these surveys suggest a downward trend in the population of many wading birds species through time, other data-intensive efforts such as the Breeding Bird Surveys suggest the opposite. Efforts must be made to conduct periodic systematic surveys to truly assess the health of wading bird populations in Louisiana. Likewise, efforts must be undertaken to evaluate the ecological connection between wetland habitats and wading birds. In the end, however, Louisiana must do more to rebuild lost coastal habitats including marshes, barrier islands, and natural ridges. The fate of Louisiana's vast wading bird population likely depends on it.



GREG LAVATY



## *What Can You Do?*

Educate Yourself. Become aware of the efforts of conservation organizations that help protect and manage wetland habitats and the wading birds that depend on them.

Barataria-Terrebonne National Estuary Program [www.btnep.org](http://www.btnep.org) 800 259-0869

Louisiana Ornithological Society [www.losbird.org](http://www.losbird.org)

Louisiana Bird Resource Center [www.lsu.edu/birdcenter](http://www.lsu.edu/birdcenter)

Louisiana Dept. of Wildlife and Fisheries <http://www.wlf.state.la.us>

The Louisiana Nature Conservancy [www.nature.org/Louisiana](http://www.nature.org/Louisiana) 225 338-1040

Louisiana Wildlife Federation [www.lawildlifefed.org](http://www.lawildlifefed.org)

Gulf Coast Bird Observatory [www.gcbo.org](http://www.gcbo.org) 979 480-0999

U. S. Fish and Wildlife Service <http://fws.gov/birds/Waterbird-Fact-Sheet.pdf>  
or <http://www.waterbirdconservation.org/nawcp.html> 337 291-3100

- It is illegal to harass or kill any species of wading bird. Report violations to the appropriate agencies.

Louisiana Department of Wildlife and Fisheries 1-800-442-2511

U. S. Fish and Wildlife Service 1-337-291-3114

- When afield, give wide berths to wading bird rookeries and never enter a wading bird rookery. Young egrets and herons startle easily and can fall out of the nest.
- Become a volunteer and help with coastal restoration. The Barataria-Terrebonne National Estuary Program maintains a volunteer program and is always looking for new members. Call us at 800 259-0869 or visit the web site <http://volunteer.btnep.org/>



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