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Bulletin No. 27: Birds of Connecticut Salt Marshes - 50th Anniversary

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Mystic Marinelife Aquareium

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Connecticut College

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Birds of Connecticut Salt Marshes



50th Anniversary

The Connecticut Arboretum
Connecticut College
New London, Connecticut
Bulletin No. 27

THE CONNECTICUT ARBORETUM

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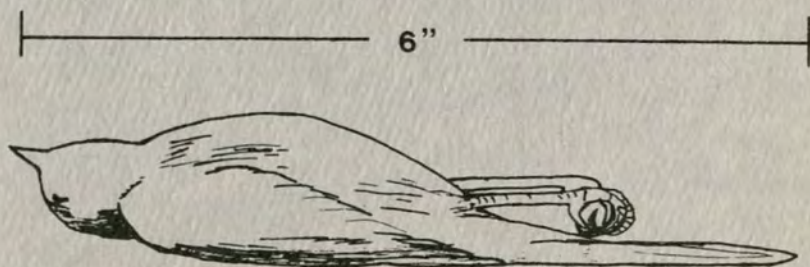
THE CONNECTICUT ARBORETUM ASSOCIATION

Membership is open to organizations and individuals interested in supporting the Arboretum and its program. Members receive Arboretum publications and enjoy other privileges, including notices of special field trips and lectures, and the use of the Arboretum facilities.

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Checks should be made payable to the Connecticut Arboretum and sent to the Director, Dr. William A. Niering, Connecticut College, New London, Conn. 06320.



The sizes given for species illustrated in this bulletin are based on standard measurements taken from the tip of the bill to the end of the tail.

Front Cover: Osprey (*Pandion haliaetus*)

BIRDS OF CONNECTICUT
SALT MARSHES

James Stone
Mystic Marinelife Aquarium

Illustrated by
J. Susan Cole-Stone

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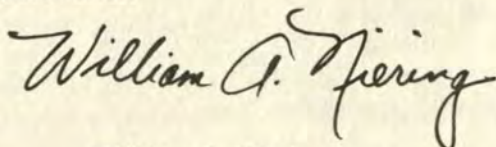
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FOREWARD

In 1962 the Arboretum alerted the residents of Connecticut to the rapid disappearance of our tidal marshes as a result of man's activities. *CONNECTICUT'S COASTAL MARSHES - - A VANISHING RESOURCE* was published in that year. Since that time five other bulletins have appeared on various aspects of our coastal resources - - a flora of the typical plants, a seaweed guide, one on marsh formation and two on the typical animals of the marsh and estuary.

We especially welcome this contribution by Jim and Susan Stone to the tidal wetland series. Mrs. Stone's artistry beautifully captures the exciting qualities of these marsh birds. The diverse marsh avifauna ranges from the small songbirds such as the northern yellowthroat to the large spectacular wading birds - - the herons and egrets. The osprey is one of our most characteristic species and one that has suffered a drastic decline in the past decade due to the indiscriminate use of chlorinated hydrocarbon pesticides. However, the good news is that the osprey has been on the increase since the cessation in use of such persistent pesticides. The bird life of our salt marshes represents an important facet in the energy flow and nutrient ecosystem.

Numerous people have also been involved in making this production a success. I wish to particularly thank Mrs. Stone for the spectacular osprey she especially prepared for the cover of this bulletin. I wish to acknowledge the continued dedicated efforts of Mrs. Nancy Olmstead as editor, and Mrs. Dale Julier for the design layout. I would also like to thank Mrs. Jan Fitzpatrick and Mr. Earl Shinault of the College Print Shop for their meticulous work in printing. We hope you will find this bulletin an exciting addition to our coastal wetland series.



William A. Niering
Director of Connecticut Arboretum

INTRODUCTION

It has been estimated that 385 or so species of birds have been seen in the state of Connecticut. One might fully expect to see at least half of these birds in and around the tidal marshes of our state. There are two key reasons for this. The first has to do with the general nature of birds. They are highly mobile creatures, and in many cases migratory. The east coast of the United States is the site of a major "highway" in the sky called the Atlantic flyway. This flyway is an unmarked path (unmarked, at least, to human eyes) over which countless thousands of birds traverse to and from winter and summer haunts. Since tidal marshes are located coastally, they are often the first terrestrial habitats encountered by birds that have been migrating over the ocean. Depending upon how you look at it, either the bird or the marsh is in the right place at the right time.

The second reason concerns the marsh itself. These coastal wetlands are highly productive parcels of land which provide abundant food and shelter for birds and myriad other animals. The tidal marsh acts like an ecological magnet, attracting birds as they pass through the area. Certain species have specific requirements that are filled only by the salt marsh. A bird such as the clapper rail, for example, nests only in the marsh, and is rarely found far from that habitat. Others, such as the song sparrow, may just as easily be seen at the edge of an inland field as at the upland border of the marsh.

In an ecological sense, the tidal marsh is a half-way point between land and sea. Areas such as these, where two ecosystems meet, are called ecotones. Ecotones are characteristically inhabited by three distinct faunal groups. In the case of the tidal marsh, we have one group of animals whose lives are linked intimately with the waters of the nearby estuary and the sea itself. A second group is derived from the upland, while the third set of inhabitants is endemic to the unique environmental conditions that occur in the marsh. The resulting aggregation of animals is rich and diverse. This is true of the avifauna as well as the rest of the many life forms that live in and utilize these vital coastal wetlands.



Great Blue Heron

GREAT BLUE HERON
(*Ardea herodias*)
42-52 inches

This bird is virtually unmistakable. Standing nearly four feet tall, the great blue heron is the largest member of its family to occur in North America. Its color is more steel-grey than blue, with a buffy neck and streaked throat. A black crown patch on the predominantly white head of the adult usually bears a few ornate plumes; however, these are not always visible.

Considering the size of this species, it is surprising how easily it is sometimes overlooked by the observer. From a distance, its slaty tones melt with the hues of the marsh vegetation. Posing motionless or moving with measured deliberation, the great blue heron often remains unseen until its six and one half foot wing span carries it aloft.

In the marsh, we often see this bird by the grassy edges of the tidal creek or wading in the shallows where it waits unflinchingly for an unwary fish to stray within striking range of the dagger-like bill. Frogs, snakes, and small birds are also table fare for this heron. When prowling an upland field, insects and small mammals may be added to the menu.

Many great blue herons migrate as far as northern South America. However, a few choose to remain in our region throughout the winter. These birds prefer protected coastal waters that have not completely frozen over.



Green Heron

GREEN HERON
(*Butorides striatus*)
16-22 inches

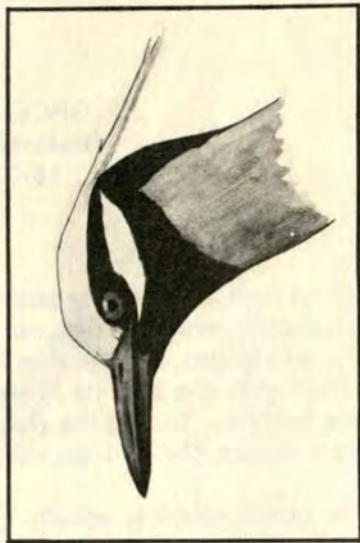
This is one of the smallest members of the family Ardeidae; when hunched over it stands no more than twelve inches tall. Only in very good light can you see the greenish gloss on the head and back that gives the bird its name. The chestnut neck is a more noticeable feature. During the breeding season adults have orange legs. From a distance, the bird has an overall dark appearance.

The green heron is equally content with fresh, brackish, or salt water environments and so is likely to be found anywhere there is ample water and plenty of weedy cover. During the breeding season this species frequently nests in the trees and shrubs of the upland border of the marsh. Mated pairs often nest alone, but like other herons and egrets they sometimes form breeding colonies as well. This is our most common breeding heron and can probably be found nesting in the vicinity of all our major coastal marshes.

The green heron is often seen singly on the marsh. It does not usually flock or aggregate while feeding as night herons or snowy egrets sometimes do. Quite often it will perch motionless on the banks of a tidal creek or mosquito ditch, waiting patiently for a small fish to happen by. When disturbed, the bird flies out over the marsh proclaiming a nasal "skeow" alarm call. It quickly settles down beside another creek, usually out of sight.



Black-crowned Night Heron



Yellow-crowned Night Heron

BLACK-CROWNED NIGHT HERON
(*Nycticorax nycticorax*)
23-28 inches

Two species of night herons inhabit our coastal region; this bird and the yellow-crowned night heron (*N. violacea*). Of the two, the black-crowned is by far the more abundant. As the name implies, these birds are most active at night, although while rearing young, feeding forays may occur at any time.

The black-crowned night heron is greyish with a black cap and back and white underparts. A few long white plumes usually ornament the crown of adult birds. It is rather squat looking, less likely than any of the other herons to stand with its neck fully extended. The yellow-crowned appears completely grey except for a distinctive pattern on the head and face (see inset).

Anyone who has ever strolled along the shore at dusk and heard a guttural "squawk" choked from above has almost certainly heard a night heron. They are especially vocal during spring and fall migration. Although most of the night herons in our state occur along the coast, they can also be found far inland. Like other members of the heron family, the young of this species often wander over great distances at the conclusion of the breeding season. This may account for some of the inland sightings. Black-crowned night herons sometimes nest in large colonies. Ornithologist Marie Beals reported a rookery of 1000 nests on Greak Neck, Long Island in 1934. Destruction of suitable feeding and nesting areas (salt marshes and adjacent woodlands) has taken its toll along the entire eastern seaboard. Colonies such as the one Beals reported in 1934 have been greatly reduced.



Snowy Egret

SNOWY EGRET

(*Egretta thula*)

20-27 inches

There are three pure white herons which may occur in local salt marshes. Of the three, only the snowy egret has black legs with bright yellow feet. The common or great egret (*Casmerodius albus*) is considerably larger, with black legs and feet. Our other white heron is actually the immature form of the little blue heron (*Florida caerulea*). It is about the same size as the snowy egret, but may be told by its greenish legs. The latter species is seen less frequently in our state than the common and snowy egret.

In breeding plumage, the snowy egret is our most striking member of the heron family. Both male and female wear ornate plumes on the head and back. During the early 1900's this species was nearly put to extinction at the hands of ruthless plume hunters. Females were often taken right off the nest, their eggs or young left to perish. Happily, these birds, along with others of the heron clan, are faring well thanks to protective legislation.

Although the snowy is abundant along our coastal marshes, it is not a well established breeder in the state. Chimon Island, off the coast of Norwalk, is the only site in Connecticut where a substantial nesting colony of these birds exists.

One other white egret should be mentioned. The cattle egret (*Bubulcus ibis*) found its way from Africa to South America sometime around 1930. It pushed northward to the U. S. and has recently begun breeding in our state. It can be told from the snowy by its heavier yellow bill and buffy head, breast, and back.





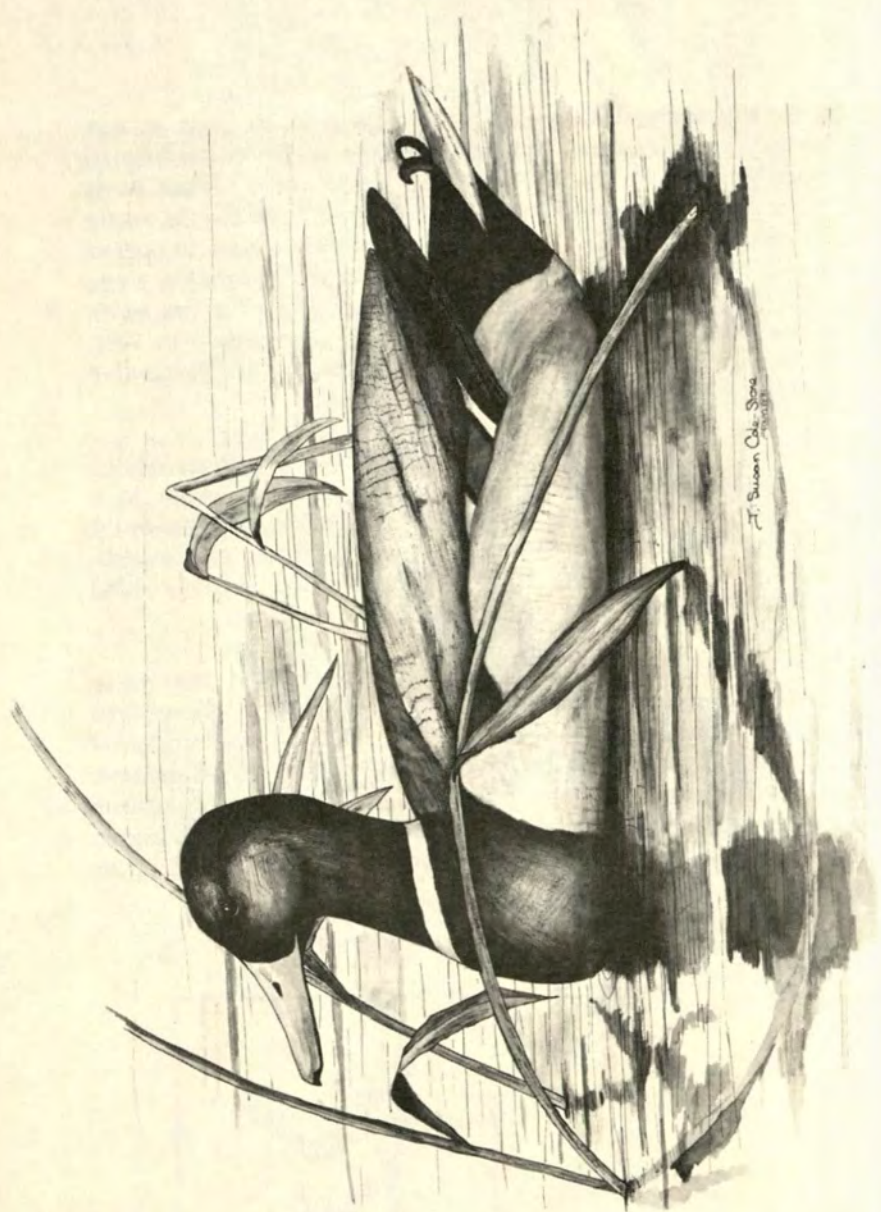
Mute Swan (male)

MUTE SWAN
(*Cygnus olor*)
58-60 inches

Prior to the early 1900's, the only swans to be seen in our region were the occasional whistling swans (*Olor columbianus*) that passed through in the fall on their way south. These birds spent the winter months along the Atlantic coast from the Delaware Bay to Georgia. In 1912, a number of mute swans were imported from Europe and released at Southampton and Oakdale on Long Island. We still see whistling swans now and then, but the mute swan has become a common site in most of our area. In fact, most, if not all of the mute swans seen in the region are descended from the original stock introduced earlier this century.

Both species have pure white plumage and long, slender necks. The mute swan, unlike the whistler, usually holds its neck in a graceful "S" curve. The young of this species, however, frequently do not position the neck in this manner and resemble a brownish-looking whistling swan. At close range, another distinguishing feature of the mute swan is its bright orange and black bill.

Current research indicates that the population of the mute swan is still expanding. It is feared by some that, if allowed to reproduce unchecked, these birds may become an environmental problem, displacing native waterfowl. Many duck hunters believe that these long-necked cousins of the ducks are better competitors and may cause a decline in local populations of edible fowl. Various methods of controlling the swans are being investigated, including an open season.



Mallard (male)

MALLARD
(*Anas platyrhynchos*)
20-28 inches

The mallard is probably the most readily recognized duck in the United States. The male of the species is surely one of the most colorful. However, the emerald green head and chestnut breast are not year-round apparel for the mallard drake. After breeding season the male enters into "eclipse plumage". The postnuptial molt has left him temporarily flightless. As if to compensate, his plumage matches the subtler tones of his mate, rendering him less conspicuous. Males in eclipse plumage also tend to be more secretive. After a brief time flight feathers grow in, the molt is completed, and the bird is restored to his handsome self.

After watching a number of mallards, it becomes evident that there can be a great deal of variation in plumage from one bird to the next. This is due to their ability to interbreed with numerous other species. Some ducks that have cross-bred with mallards include the common barnyard duck (which is actually a domesticated form of the mallard), black duck (*A. rubripes*), pintail (*A. acuta*), and the muscovy duck (*Cairina moschata*), a large domestic species imported from Mexico. The resulting offspring run the gamut from completely tawny looking birds to what appear to be white bellied, oversized mallards.

Along with the black duck, the mallard is our most abundant and heavily hunted species. The black duck is very closely related and looks much like a female mallard, only darker. The two species interbreed regularly and may one day be lumped together as a single species.



Northern Harrier (male)

NORTHERN HARRIER

(*Circus cyaneus*)

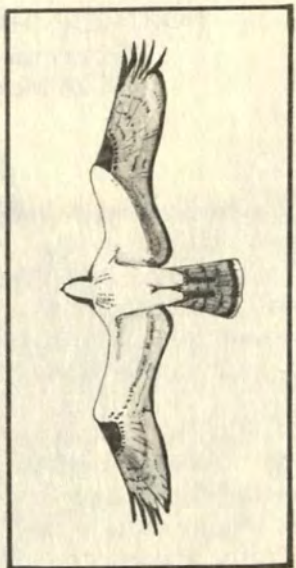
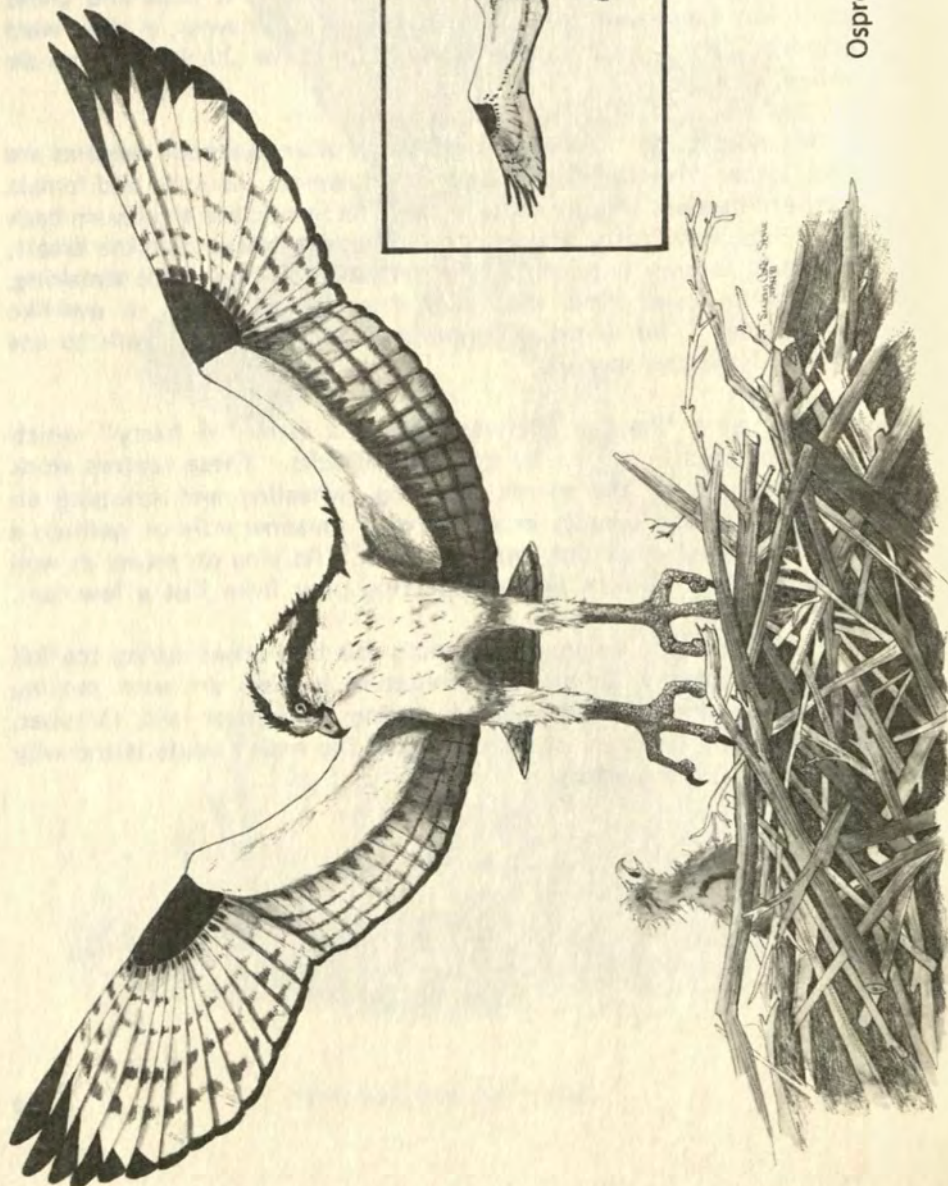
18-24 inches

Harriers are agile birds with long wings and tails. Like many other hawks, they can often be recognized by their manner of flight. The wings are held in a dihedral (a wide "V" shape) and the bird frequently rocks from side to side as it flaps and glides just a few feet over the marsh grasses. Marsh hawks, as they were formerly called, seldom rise more than 15 or 20 feet in the air while hunting.

In most birds of prey the sexes are alike, although females are often larger than their counterparts. However, the male and female northern harriers are quite dissimilar. The female has an auburn back and wings, with rusty underparts and brown streaking on the breast. The male is grey with whitish underparts and very little streaking. Both have facial disks that give them somewhat of an owl-like appearance. The white rump patch is the best field mark to use in identifying this species.

The name "harrier" derives from the term "to harry" which means to raid or harass by constant attacks. These raptors work persistently over the marsh, banking, wheeling and stooping on the constant sea breezes in search of a meadow vole or perhaps a rail that has strayed out into the open. Relying on sound as well as sight, they pounce on unsuspecting prey from just a few feet.

An interesting enigma concerning this bird arises during the fall migration. Many female and immature harriers are seen moving through southern New England during September and October, but very few males are observed. What the male's route is and why he chooses it is a mystery.



Osprey

OSPREY
(*Pandion haliaetus*)
21-25 inches

Fifty years ago the basin of the lower Connecticut River was home to over 150 pairs of ospreys. These birds were at the pinnacle of a thriving food chain that was founded on the fertile waters of the river and Long Island Sound. However, being the hunter and not the hunted had its price. When man contaminated the land and waterways with pesticides and other chemicals, those animals at the top of the food chain suffered the greatest damage. This is called the snowball effect and it occurs when successive links of the chain accumulate greater and greater amounts of a contaminant. In this case the eggs became contaminated with DDT and the result was nearly the annihilation of the osprey population in Connecticut. An egg transplant program and a ban on the use of DDT has resulted in an increased number of ospreys recently, although a full recovery will probably take many years.

The osprey is a large fish-eating hawk of the coast and larger inland lakes and rivers. It is dark above with white underparts and a dark line through the eye extending around the back of the neck. In flight, from a distance, this bird may sometimes be taken for a gull. However, the wings are broader than a gull's and the wing tips not as pointed.

While fishing, the osprey often hovers in one place like a tern or a kingfisher. If a fish is spotted near the surface the hawk drops down head first, thrusting out its talons just before hitting the water. Two toes face forward and two back as the claws find their mark, but when the hawk alights on a nearby oak snag to devour its catch one of the hind toes swings forward for perching stability.

Menhaden make up a large portion of the osprey's diet along the coast, although any small fish near the surface is fair game.



Clapper Rail

CLAPPER RAIL
(*Rallus longirostris*)
14-16 inches

The clapper rail is the ultimate marsh bird. Its long, slender bill is equally adept at snaring a passing killifish, probing for worms in the detritus-rich mud, or ferreting out snails, insects, and other invertebrates from the dense marsh grasses. The legs are long enough for wading into the shallows but the marsh hen, as it is sometimes called, is an adequate swimmer as well. It has even been known to slip beneath the surface to avoid detection, with only the bill remaining above water to act as a snorkel!

The plumage of this secretive bird has a tawny appearance that blends well with the marsh vegetation. It has been said that these birds have innumerable trails which crisscross the marsh like a maze, allowing for a quick escape from an approaching predator. Most impressive, however, is the ability all rails have to compress their bodies and slip between the dense marsh grasses without disturbing so much as a single blade. In fact, the adage "thin as a rail" refers to the qualities of this bird.

The clapper has an affinity for saltwater environs, and with a few possible exceptions, is found exclusively in salt and brackish marshes. A similar bird, the king rail (*R. elegans*), shows an opposite preference and occupies mainly fresh marshes. The two species overlap occasionally in brackish areas where it is speculated that they may interbreed. As far as I know, however, there have been no reports of hybrid individuals.





Semipalmated Plover



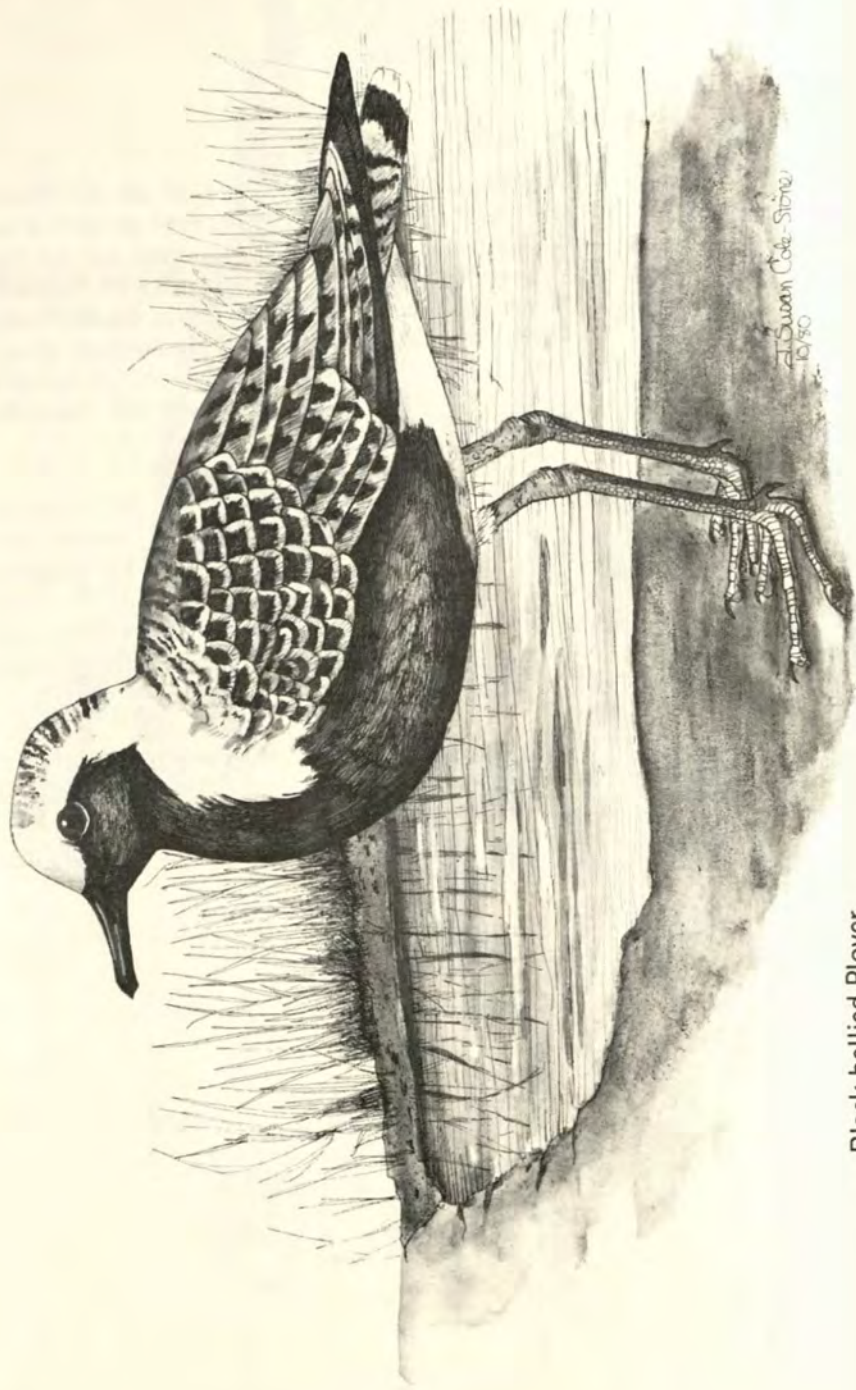
Killdeer

KILLDEER
(*Charadrius vociferus*)
9-11 inches

The killdeer is probably the most adaptable of all our shore birds. It may be found nesting in upland fields as well as open areas along the coast. Some have even been known to nest on the flat rooftops of suburban shopping centers! Several species of "belted" plovers may occur in our area; only the killdeer has double belts or rings around its neck (see single ring of semipalmated plover [*C. semipalmatus*] in inset). In the field, the rusty-orange rump is another useful diagnostic mark. The thicker, heavier bill identifies this bird as a plover rather than a sandpiper.

The killdeer's reputation for valiantly protecting its young is well known. If a predator approaches the nest the parent will bound off, dragging one wing as if it were broken. This feigning display usually draws the would-be attacker away from the nest in hopes of an easy meal. When the bird is satisfied that all is safe it makes an instant recovery and flies off, leaving the surprised predator nothing to show for its efforts.

During fall migration, killdeers which have nested inland migrate to the coast before heading south. At this time of year, the species may reach its highest concentration along the shore. Killdeers often feed on exposed tidal flats, mixed in with black-bellied plovers, semipalmated plovers, and other shore birds.



Black-bellied Plover

BLACK-BELLIED PLOVER

(*Pluvialis squatarola*)

10-11½ inches

Of the seven or so species of plovers that may occur along our coast, only the black-bellied and lesser golden plovers (*P. dominica*) have jet black underparts. Most New Englanders, however, see only the black-belly in breeding plumage. This species uses the Atlantic flyway for the round trip excursion to and from its nesting range in the Canadian tundra. During the spring they are found in their full breeding regalia as they pause to feed on their way northward. The golden plover has a somewhat similar breeding range but uses the Mississippi flyway in the spring. For unknown reasons, a number of these birds return to South America for the winter via the Atlantic coast.

As compared to their breeding plumage, both plovers have a rather drab appearance as they move through our area in the fall. The golden is perhaps the more distinctive of the two, retaining a bit of the gold hue of its upper parts. The black-bellied plover has a greyer look, but is most easily told when it flies. Black patches (called axillars) under the wings set it apart from any other shorebird in fall plumage.

Both of these plovers represent an interesting enigma that concerns bird migration. They nest in the far north and travel considerable distances to their wintering grounds. Yet they leave their Arctic summer home while food is still in good supply and before weather conditions have deteriorated. What stimulus triggers their instinct to move southward? Perhaps it is the decreasing length of daylight hours or the changing positions of the celestial bodies.

Look for these and other shorebirds to start moving through our region as early as mid-July.



T. Swann, Lib. Stoma.
1896

Greater Yellowlegs

GREATER YELLOWLEGS
(*Tringa melanoleuca*)
13-15 inches

From May through October the resounding cries of the greater yellowlegs are a familiar sound in the tidal marsh. Although this species does not nest in our state, non-breeding birds may reside here throughout the summer. Most adults, however, continue on northward to the spruce bogs and muskeg of Canada.

The bright yellow legs of this fairly large sandpiper are evident with good field glasses even at a considerable distance. In flight the bird shows a white rump patch. The lesser yellowlegs (*T. flavipes*) a closely related species, is a 3/4 size look alike. However, judging size in the field is often difficult. The longer, slightly upturned bill of the greater yellowlegs is a somewhat more reliable field mark in distinguishing the two birds. They may also be recognized by their calls. The smaller version sounds a plaintive two note "phew-phew" while the greater calls a staccato three note "kew-kew-kew".

Although both species are considered to be abundant fall migrants, only the greater yellowlegs appears in large numbers during spring migration. The lesser yellowlegs is one of the first shorebirds to depart Canadian meadows and bogs for the long journey southward. They begin arriving in our area during the month of July and reach their greatest numbers in mid to late August. The larger species moves through a bit later, peaking in numbers during early September.



T. Susan Cole - Stone
10/90

Semipalmated Sandpiper

SEMIPALMATED SANDPIPER
(*Calidris pusilla*)
5½-6½ inches

Look for this small bird picking through the debris left behind by the previous high tide. The semipalmated sandpiper and a number of similar looking members of this family are known collectively as "peeps". Identification of the various peeps is sometimes difficult at best. This species is often confused with the western sandpiper (*C. mauri*), a bird which is usually absent from our area in the spring but a regular migrant during the fall. The western has a slightly decurved bill (this trait is confined to the female) and appears less grey than the semipalmated. Another peep, the least sandpiper (*C. minutilla*), has a slightly smaller bill and yellowish legs. As its name implies, it is the smallest of all our peeps. All of these birds are most easily told from each other when they occur together, making a ready comparison possible.

The semipalmated sandpiper is the most numerous of all the peeps that move through our area. In the spring of 1924, a ten mile stretch of beach on Long Island's south shore was found to have flocks of these birds which totaled 25,000 individuals.

By late June most have completed the 5,000 mile journey from South America to breeding grounds on the Canadian tundra. Like many shorebirds, these sandpipers are found along the coast during migration but may nest hundreds of miles from the nearest seashore.



Herring Gull

HERRING GULL
(*Larus argentatus*)
23-26 inches

This is the ubiquitous gull of coastal New England. In adult plumage this species sports a grey mantle (back and wings) with black wing tips. The heavy yellow bill is marked with a red spot on the lower mandible. A similar species, the ring-billed gull (*L. delawarensis*), has nearly identical plumage but is noticeably smaller and has a dark ring near the tip of the bill. The great black-backed gull (*L. marinus*) looks somewhat like a larger edition of the herring gull with a black mantle. The juvenile plumages of these and other gulls in our area can be quite confusing. The reader should consult Peterson or one of the other field guides for a detailed description.

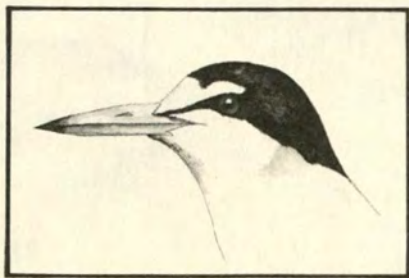
Herring gulls were formerly confined to more northern areas. During the 1800's they nested no further south than Maine or perhaps New Hampshire. By 1910 they had become established in Massachusetts and by 1929 a few pairs were found to be nesting in our area (Fisher's Island, NY). Extensive colonies of this species, such as those at Sandy Point in eastern Long Island Sound and the Norwalk Islands in the western Sound, have had devastating effects on other shore birds. Competition for nesting sites and predation on eggs and young have been the major reasons. The roseate and common terns have probably suffered the most damage.

The advance southward of the herring gull has been attributed to the increase of garbage dumps where these highly adaptable birds have learned to scavenge. The Migratory Bird Treaty of 1918 has also probably contributed to the increased number and range of this species.





Common Tern



Little Tern

COMMON TERN
(*Sterna hirundo*)
14-15 inches

Terns are closely allied to the gulls but they seem to have diverged on a different evolutionary path to fill an ecological niche which the gulls have left open. Many similarities exist between the two groups, yet the differences are obvious. Terns are lighter-bodied with a more buoyant flight, have narrower wings and slither bills, and are smaller than most gulls. The common tern is the most numerous representative of this group in our region. In some portions of its range, this bird is known as the "sea swallow", in part due to its forked tail and graceful manner of flight. In fact, its species name, *hirundo*, means swallow.

There are several species of look-alike terns that visit the New England coast. The common tern can be best told by its black-tipped orange bill and dark wing tips. The roseate tern (*S. dougallii*) has a black bill (although some individuals may show some red at the base) and lighter wing tips. In these and many other terns, a portion of the black cap is lost at the end of the breeding season and the bill color changes, making identification even more difficult. Immature and winter birds can be quite confusing, so again, the use of a field guide is recommended.

The common tern often shares the marsh with a diminutive relative, the little tern (*S. aibifrons*). In some marshes, the smaller species may outnumber the larger. The little tern is recognized by its yellow bill and white forehead (see inset), as well as its size. It frequently nests on a sand bar adjacent to the tidal marsh, fishing in nearby sheltered waters.



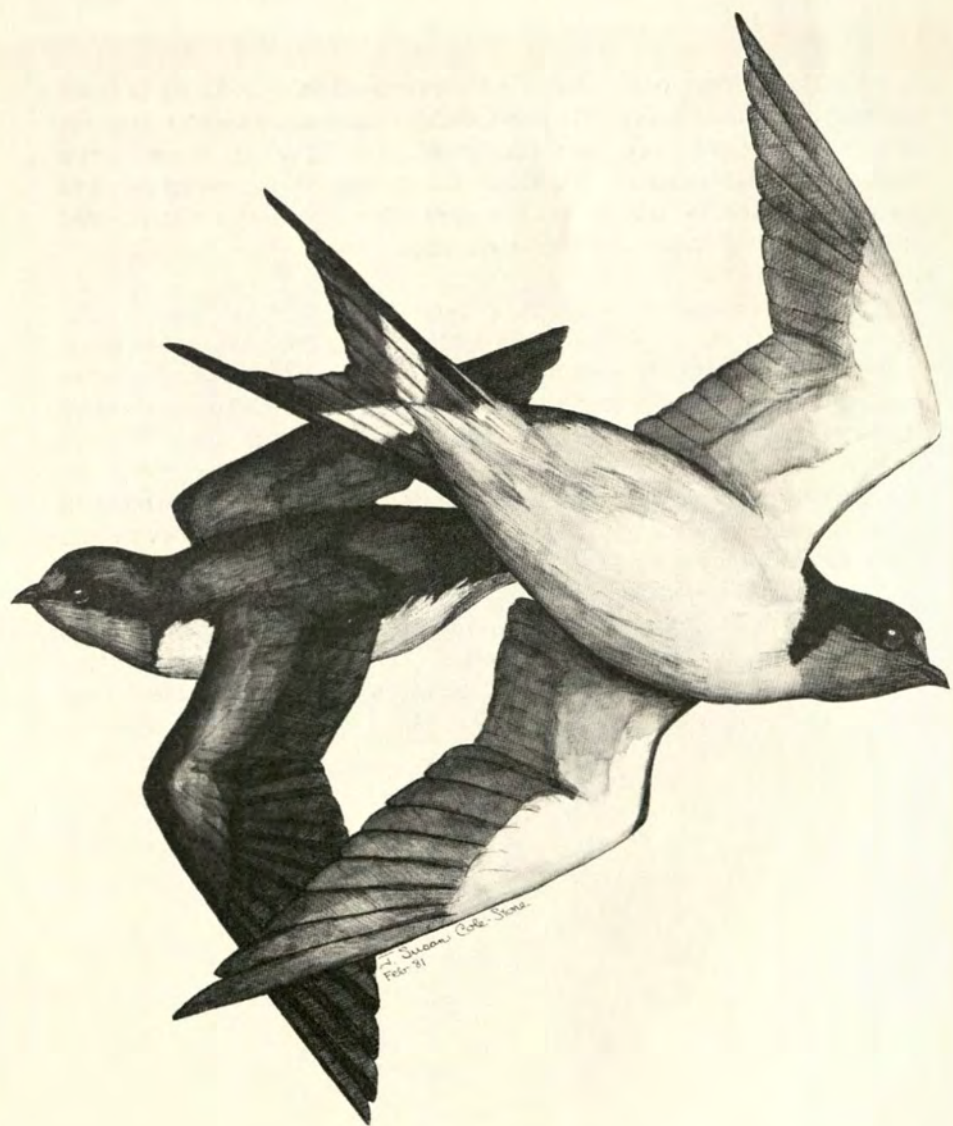
Belted Kingfisher (female)

BELTED KINGFISHER
(*Megaceryle alcyon*)
11-14 inches

The kingfisher looks as if it were constructed of spare parts from a variety of other birds. Its head and bill appear to be too large for the body and the feet seem too small. Nevertheless, this bird is a highly effective predator on small fishes such as mummichogs and silversides. The female differs from her mate in having a rust-colored breast band but shares the top-heavy appearance.

Kingfishers may hunt from a fixed perch or patrol a particular stretch of water. When foraging on the wing, they will hover hummingbird-style and then plunge headlong into the water, securing an unlucky fish with the heavy bill. Although not nearly as graceful as terns, they are nevertheless equally successful.

Suitable fishing waters are about all the requirements that this species has, so it can be found throughout the state in appropriate habitats. Breeding birds must have a bank or ledge in which they can excavate their burrows. For this reason, the kingfisher is probably a more common nester inland (along river banks) than around the tidal marsh. During the winter, those that do not migrate often seek the unfrozen waters of the coast, so that inland birds may winter-over along the coastal region.



Barn Swallow

BARN SWALLOW
(*Hirundo rustica*)
5 3/4 - 7 3/4 inches

It seems as though the airspace over the tidal marsh is constantly in motion. One group of birds adding to the visual din is composed of small, dark, accomplished aerialists. These insect-hawking birds are the swallows. They are masterful flyers, exquisite to watch as they scour the air for gnats, flies, and mosquitos. The barn swallow can be distinguished from other swallows by its deeply forked tail and cinnamon underparts. It has blue-black wings and back with a russet forehead and throat.

Another member of this family that frequents the marsh is the tree swallow (*Iridoprocne bicolor*). This handsome bird has a glossy bluish-green back and wings, with a pure white underside. The tail is only slightly forked. These two species are the swallows we usually expect to see around the marsh, although in certain areas purple martins (*Progne subis*) and bank swallows (*Riparia riparia*) may sometimes occur.

Most swallows are exclusively insect eaters and generally do not arrive in our region until mild weather has produced a reasonable crop of flying bugs to sustain them. An extended cold snap can pose serious problems for these birds. The tree swallow, however, can vary its diet to include seeds and tends to cope better with foul weather. It usually appears earlier in the north during spring migration than other swallows and often lingers later into the fall. The barn swallow seems to arrive en masse during late April or early May. By late September, most have departed for South America.



Common Yellowthroat (male)

COMMON YELLOWTHROAT

(*Geothlypis trichas*)

4½ - 5½ inches

The yellowthroat is a bird of thickets, shrubs, and wet places. It thrives along the upland edges of the marsh and hence is one species of warbler we always expect to see there during the warmer months. However, getting a good look at this energetic little bird is not always an easy task. He flits from one branch to the next, looking under the leaves of a bayberry bush or rummaging through the blossoms of a marsh elder in search of insects.

The male yellowthroat is yellowish-green with a distinctive black "mask" and a bright yellow throat. The female lacks the black mask but may be recognized by her yellow throat and whitish belly. Young males sometimes have an incomplete mask.

Although quite small, the yellowthroat probably consumes considerable numbers of insects, many of which are considered by man to be pests. Ornithologist E.H. Forbush reported one bird that ate 89 aphids in a minute's time. Moths, beetles, grubs, ants, and plant lice are some other insects that make up the yellowthroat's diet.

The yellow warbler (*Dendroica petechia*) is another species that is fond of the marsh edge. This bird can usually be found higher in the trees and shrubs than the yellowthroat. The yellow warbler is entirely yellow (although somewhat greenish on the back) with reddish-brown streaks on the breast and sides. In the female the streaks are absent or very faint.



Red-winged Blackbird (male)

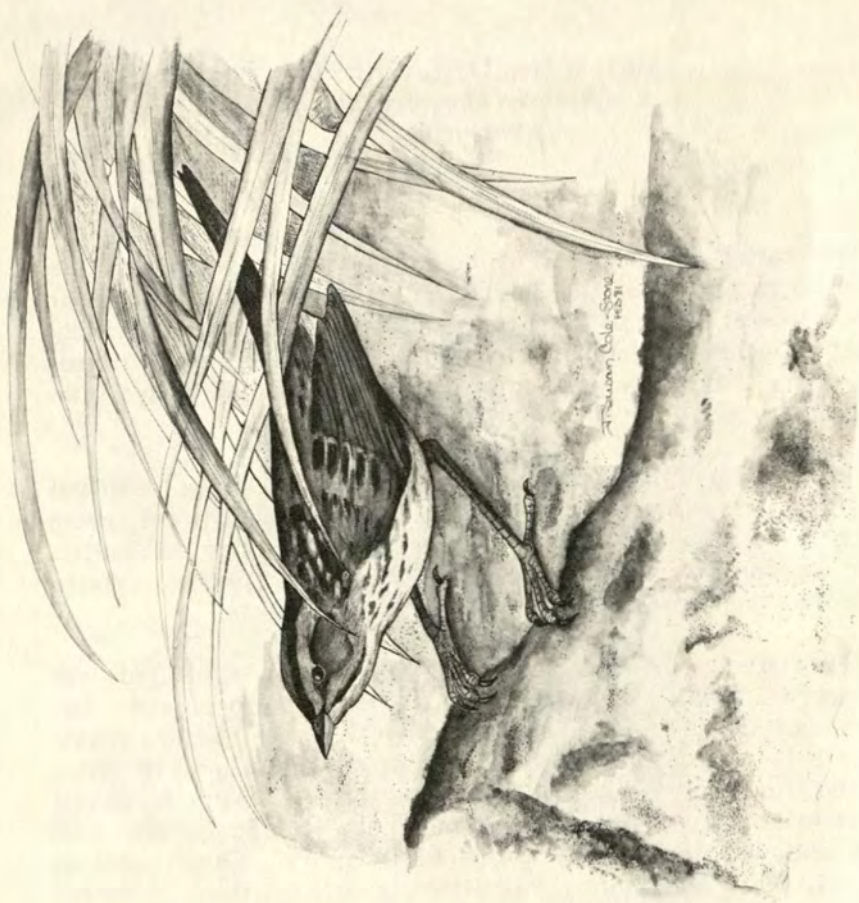
RED-WINGED BLACKBIRD
(*Agelaius phoeniceus*)
7-9½ inches

The cattail marsh is prime habitat for the redwing, but the species is so numerous that just about any marshy area will harbor at least several dozen of these birds. Extensive salt marshes usually contain substantial populations, with a mixture of breeding birds and others that are vagrant immatures or on feeding forays from nearby fresh marshes.

The redwing is black with orange-red shoulder patches (epaulets) bordered by yellow or buff. Females are quite different, being brownish with heavy streaking. If not for the pointed bill females could be confused with sparrows or some other finches. Young males look like females with a trace of the red epaulets.

Many studies on avian territoriality have been conducted with this species. Males rely not only on their song to proclaim territory, but depend on visual effects as well. The classic redwing stance is to perch at the edge of its territory while singing, thrusting out the shoulders to expose the brightly colored epaulets. In one experiment, a male had his epaulets temporarily darkened with shoe black and was unable to maintain his territory. Other redwings took his place and ignored his attempts to evict them. The red epaulets play a major role in the territorial displays of this species.

Although some redwings winter-over, most migrate to the southern U.S. They are very hardy birds, among the last to leave in the fall and the first of our spring arrivals.



Sharp-tailed Sparrow



Song Sparrow

SONG SPARROW
(*Melospiza melodia*)
5-6½ inches

SHARP-TAILED SPARROW
(*Ammospiza caudacuta*)
5-6 inches

With three chirps, a trill, and a brief flurry of notes, the song sparrow proclaims his territory from atop a stand of bayberry. This species likes wooded fields, old farmlands, and clearings, so the periphery of the tidal marsh provides ideal habitat. Even without seeing its markings, we can recognize the bird by its characteristic posture. Its stance is very erect, tail jutting almost straight down and the head tilted slightly back. The enthusiastic song carries several hundred yards.

The song sparrow is medium size in terms of most sparrows. It has heavy streaking on the breast and sides, and a dark breast spot sets it apart from other streaked sparrows of the coast.

Although it may feed on beetles, caterpillars, and other insects, the song sparrow, like other members of the finch family, dines mainly on seeds and berries. These are particularly hardy birds and many winter-over here in the northeast.

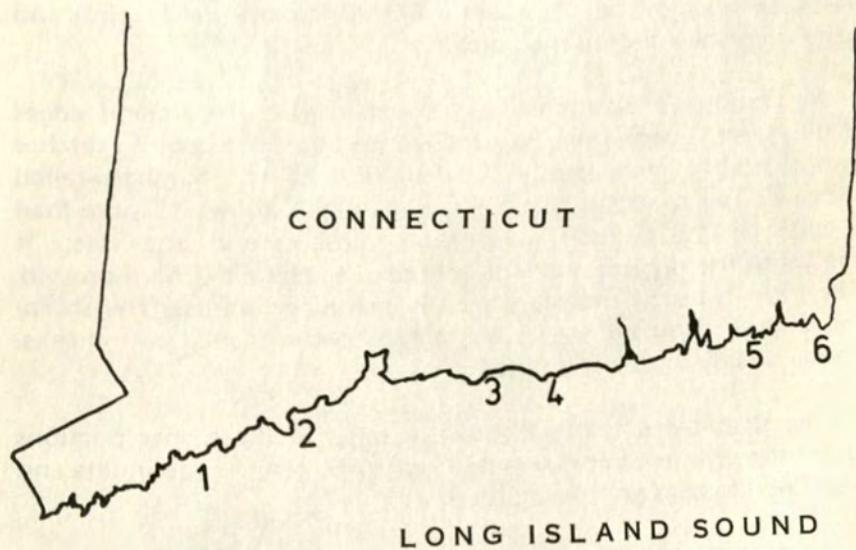
We usually associate the song sparrow with the upland edges of the marsh. Among the *Spartina* grasses and the mosquito ditches lives a smaller, more lightly streaked bird called the sharp-tailed sparrow. This species is rather shy and usually allows no more than a quick glimpse of itself to even the most careful observers. It prefers to flee on foot and will only take to the air if hard-pressed. The flight is buzzy and short, usually just a few yards. The sharp-tail is best identified by its ochre face pattern and grey cheeks. Its tail is fairly short and pointed.

The sharp-tailed sparrow generally nests in the higher portions of the marsh where salt marsh hay and spike grass predominate and tidal flooding does not frequently occur.

Another marsh dweller is the seaside sparrow (*A. maritima*). This species is the rail of the finch family, being even more difficult to glimpse than the sharptail. The seaside is a large sparrow with dingy grey plumage and a yellow line just in front of the eye. Its bill is longer and thinner than that of most sparrows, probably because its diet consists mainly of insects, small crustaceans, and other invertebrates instead of seeds. This sparrow frequently inhabits the wettest portions of the marsh.

SELECTED MARSH AREAS FOR BIRDING

1. Sherwood Island State Park, Westport.
2. Lordship Marsh, Stratford.
3. Guilford Sluice, Guilford.
4. Hammonasset State Park, Madison.
5. Bluff Point State Park, Groton.
6. Barn Island Wildlife Management Area, Stonington.



BIRDS OF THE SALT MARSH

	winter	spring	summer	fall
Mallard	+	+	+	+
Mute Swan	o	+	+	+
Great Blue Heron	o	+	+	+
Snowy Egret	-	+	+	+
Green Heron	-	+	+	+
Black-crowned Night Heron	-	+	+	+
Clapper Rail	-	+	+	+
Killdeer	o	+	+	+
Black-bellied Plover	-	+	o	+
Greater Yellowlegs	-	+	o	+
Semipalmated Sandpiper	-	o	o	+
Herring Gull	+	+	+	+
Common Tern	-	+	+	+
Osprey	-	o	o	o
Marsh Hawk	-	o	o	+
Belted Kingfisher	o	+	+	+
Barn Swallow	-	+	+	+
Common Yellowthroat	-	+	+	+
Red-winged Blackbird	o	+	+	+
Song Sparrow	+	+	+	+
Sharp-tailed Sparrow	-	+	+	+

(+) Very common to abundant, usually seen in the proper habitat.

(o) Often present, but not abundant.

(-) Rare or irregular.

A LIST OF SEVENTY-FIVE BIRDS OF THE TIDAL MARSH AND ADJACENT WATERS

- | | |
|------------------------------|--------------------------|
| Horned Grebe | * Semipalmated Sandpiper |
| Pied-billed Grebe | Western Sandpiper |
| Double-crested Cormorant | Sanderling |
| * Great Blue Heron | Great Black-backed Gull |
| * Green Heron | * Herring Gull |
| Little Blue Heron | Ring-billed Gull |
| Great Egret | Laughing Gull |
| * Snowy Egret | Bonaparte's Gull |
| Louisiana Heron | Forster's Tern |
| * Black-crowned Night Heron | * Common Tern |
| * Yellow-crowned Night Heron | Roseate Tern |
| Glossy Ibis | * Little Tern |
| * Mute Swan | Mourning Dove |
| Canada Goose | Short-eared Owl |
| * Mallard | * Belted Kingfisher |
| Black Duck | Eastern Kingbird |
| Canvasback | Horned Lark |
| Bufflehead | Tree Swallow |
| Hooded Merganser | * Barn Swallow |
| * Northern Harrier | Common Crow |
| * Osprey | Fish Crow |
| American Kestrel | Black-capped Chickadee |
| * Clapper Rail | Marsh Wren |
| American Coot | Grey Catbird |
| American Oystercatcher | White-eyed Vireo |
| * Semipalmated Plover | Yellow Warbler |
| * Killdeer | Yellow-rumped Warbler |
| * Black-bellied Plover | * Common Yellowthroat |
| Ruddy Turnstone | Eastern Meadowlark |
| Whimbrel | * Red-winged Blackbird |
| Spotted Sandpiper | Common Grackle |
| * Greater Yellowlegs | Savannah Sparrow |
| Lesser Yellowlegs | * Sharp-tailed Sparrow |
| Red Knot | Seaside Sparrow |
| Pectoral Sandpiper | Swamp Sparrow |
| Least Sandpiper | * Song Sparrow |
| Dunlin | Snow Bunting |
| Short-billed Dowitcher | |

* Those illustrated in text.

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