1925

The Birds of Florida

Harold H. Bailey

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A POPULAR AND SCIENTIFIC ACCOUNT OF THE 425 SPECIES AND SUBSPECIES OF BIRDS THAT ARE NOW, AND THAT HAVE BEEN FOUND WITHIN THE STATE AND ITS ADJACENT WATERS; WITH SPECIAL REFERENCE TO THEIR RELATION TO AGRICULTURE

BY

HAROLD H. BAILEY

OF MIAMI, FLORIDA

AUTHOR "*BIRDS OF VIRGINIA*"
MEMBER, C. O. C., W. O. C., AM. S. M.,
F. S. N. H., ETC.

ILLUSTRATED WITH 76 FULL PAGE FOUR-COLOR PLATES,—FIGURING OVER 480 BIRDS

BY

GEO. M. SUTTON

AND
WITH AN OUTLINE MAP OF THE STATE SHOWING AREAS; AND A TOPOGRAPHICAL DRAWING OF A BIRD

COMPLETE IN ONE VOLUME
LIMITED EDITION

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This work is affectionately dedicated to the memory of
Mary Barr Munroe and Elizabeth Carr Gratigny
whose unselfish devotion and efforts have stimulated
interest in the study and protection of
our Florida birds, and to
Minnie Merritt Palmer
who derives her greatest pleasure in life in aiding others, and
thus has made possible the publication of this book

Introduction

Florida has often been referred to as the last frontier state in the Union. From a natural history standpoint this was especially true until drainage, a destroyer of faunal life in all its branches, became rampant. Previous to my permanent residence in Florida I had heard this fact advanced and discussed at some length; and after travelling over the state, and the southern portion of it in particular, this fact became more forcibly impressed upon me. I soon realized that should Florida wish to preserve her once bountiful but fast declining natural history resources, not only that to-day's tourist might see living specimens, but that there might be even mounted specimens in the state for future generations to study, much work would have to be done in a short space of time.

DESTRUCTIVE FACTORS

The drainage of the state, forest fires and automobiles, together with good roads are now, and will continue to be, the main factors in diminishing, in all her branches, Florida's wild life.

Automobiles are becoming daily a greater menace to the lives of both birds and mammals, and I have examined at different times some forty species of birds that had been killed by automobiles, as they flew back and forth across the roadways. While some species have already gone beyond recall, we can now hope to save but a small remnant of those still fairly abundant, by the education of the masses, and through the strict enforcement of the laws covering all birds and mammals in general. For gone are the great bird rookeries mentioned by the early writers such as Audubon, Wilson, Scott, Maynard, Ridgway, and others; and with the mammals, the wolf has gone, while the panther, bear, deer, and manatee are fast disappearing.

A certain amount of drainage of South Florida is necessary, and a network of good roads is a most desirable thing to have, but these with modern firearms, forest fires, lax enforcement of laws, Indians roaming at large without means of support; and the cutting of timber and cultivation of large areas of land, will soon drive out many, and completely destroy a number of species of both birds and mammals. Thousands of birds are also killed each year by the crude oil discharged from ships in our harbours, and while passing along our shores. This crude oil also menaces our shell fish and fish industries to a great extent.

SAVING OUR FAUNA

To help save or prolong our diminishing wealth of faunal life, a large reservation in the "glades," such as the "Big Cypress" and Lake Okeechobee, should be set aside for them as a State and National park, and lesser preserves scattered over the state for the birds and mammals to find a haven in at all times. The Seminole Indians should be put on a reservation, and be given rations by the Federal Government and be made to stay there, and abide by the state and federal laws, as is done with other tribes.

A paid game warden system for the entire state, with a commissioner at the head to see that the wardens do their duty and that the laws are enforced, which has proved such a success in other states, will do much to save as well as to increase the bird and mammal life.

A fish hatchery, game farm to rear stock for depleted sections, better conservation and supervision over our salt water resources, all will greatly aid in the work, and last but not least, a

state forestry system, to take care of the timber resources and stop the forest and "glade" fires that yearly destroy millions of feet of timber, as well as acres of virgin soil, birds' nests with eggs or young, and even the old birds or mammals themselves, besides other forms of beneficial faunal and floral life. It is to be hoped that a wise state administration, helped by both federal and state laws, will at an early date realize the great importance of this, and the asset, as well, that the birds are to the state, and provide adequate protection for them. With the hope of thus stimulating interest in our Florida birds and floral and faunal life in general, the author commenced this work.

PREVIOUS BIRD DATA

Several advanced ornithologists, as well as many of lesser experience, have visited the state from time to time and made small or extensive collections in years past. In several instances I have quoted data from their lists, of species that have not been obtained since those records were taken, or, where the bird is of such rare occurrence that it was deemed advisable to give the early record as well. In such instances I have given due credit to the recorder.

The results of the labor in the form of specimens, of these former collectors are now reposing in several of the larger museums of our country, though outside our state; safe from Dermestes, dust, and sunlight; so even after the total extinction of many rare forms shall have occurred, there will always be specimens preserved of our Florida birds.

Many of these visiting scientists have returned northward after a pleasant visit to our state, and have published local or complete lists of the birds seen or taken by them or their guides while in the state. These lists are of course quite valuable to a certain class of bird students, but are, however, not available or of interest to the rank and file of the casual bird observers or the tourists in general.

In consequence they have stimulated little interest in bird study. The majority of these bird students have been men of wealth, who either could not spend the entire year in Florida on account of business matters, or who did not care to endure the hardships occasioned by collecting specimens or notes during the summer time. For at this time of the year, the "glades" where many of the birds are found, are overflowing with water; while snakes, mosquitoes, gnats, deer, and horse-flies (to say nothing of the heat) make life therein almost unbearable. But of course the early spring or summer is the breeding time, and the best time to study bird life to advantage.

MIGRATION

Millions of birds migrate into and through Florida from the north and westward each year, many going farther south to spend the winter, and passing through again in the early spring, while many remain part or all winter with us. Were it not for these migrant birds, which destroy tons upon tons of harmful insect, mammalian, and amphibian life we would not be able to live in Florida during the summer time, and the winter months would be almost as bad, for we have little or no cold weather to kill off the abundant insect life.

Three lines of migration are travelled in Florida twice yearly by the birds.

A. Down the Atlantic coast, and across to the Bahamas and the keys to Cuba and on down.
B. Through the center of the state, and down across the Gulf of Mexico.
C. And down through our western area, from the Alleghanian range farther north.

Many birds after having travelled thousands of miles back and forth, return to the same locality for their summer or winter home, often to their detriment. This migration habit is a distressing and terrible thing at times, for countless numbers are destroyed as they fly by night, many hitting obstructions such as wires, buildings, lights and lighthouses; and thousands upon

thousands are destroyed annually as they cross the "Gulf Stream" or "Gulf," on their way to and from the West Indies, Central, and South America. Such an actual occurrence was personally witnessed by the author during one of his trips across the Gulf Stream, off the Florida coast.

FOOD

Few persons realize the amount or the variety of food taken and destroyed by a bird during each day, or night, for many birds feed by night and rest during the daytime. The food of the birds in most cases has been given, and the benefit or the injury they are to the state has been recorded. This result has been made possible by the examination of the contents of the stomachs of several thousand birds, taken at different times of the year, and when food conditions would vary.

DISTRIBUTION

The geographical position of the state admits several of the tropical birds to our boundaries, such as the Flamingo, Caracara, Ani, Paroquet, Jacana, etc., principally in the southern peninsula; while our western area with an altitude up to about three hundred feet, holds such forms as the Robin, Phoebe, Orchard Oriole, Cedar Waxwing, and others, although they are more common to the north and westward where the altitude is much higher. Unfortunately we have no mountains in the state, for then our list of breeding birds and winter residents would be much greater; for even though they find it no cooler after reaching their breeding grounds, many of the migrants desire a more northern habitat, or higher altitude in which to feed during the summer as well as to rear their offspring.

SOURCE FROM WHICH DATA HAS BEEN OBTAINED

In gathering the material or data for this work, the author has travelled more than forty thousand miles by land in Florida, and many more by water studying the birds in their native habitats. He has also made use of the data within his private collections, numbering many thousands of specimens; and has examined the stomach contents of all the species listed, with few exceptions in order to determine which birds are harmful and which are beneficial to the agricultural interests of the state. He has also been most fortunate in personally securing specimens of many of the rare stragglers that only occasionally visit our state. Many of the birds found within our borders are also found and seen elsewhere by the bird students or tourists, and have been studied as well by the author from the Atlantic to the Pacific coasts of the United States, the Bahamas, and Mexico; covering a period of more than thirty years interest in ornithology.

STATE AREAS

By referring to the map at the back of the volume, the reader will find that the state has been divided into several areas, namely, north, central, south, east coast, west coast gulf coast, and tropical; and references to such areas are made from time to time throughout the text. Of course, the lower area is only tropical in having flora and fauna therein, as it is not really in the tropics. While the east and gulf coasts are somewhat similar both in fauna and temperature, there are several birds found in one area and not in the other, and vice versa. Some of our tropical birds also work up into the southern area as far north as Lake Kissimmee, and stragglers are, of course, found at times far beyond their natural limits.

RARE VISITORS

Storms coming up from the "Gulf" or across from the Bahamas, have been instrumental in sending to our shores several species of birds; as well as seeds, plants, and shells; thus adding to the state list many new species. Some of the tropical forms, particularly the "doves" have been brought in this way, or by residents as pets, and have been liberated, or have escaped, and later been recorded.

BIRD STUDY

The study of our birds is a most fascinating pastime, both from an aesthetic and scientific viewpoint. The wonderful construction of the nests, various materials used in their construction, and the beautiful colors and marvelous patterns of and on the eggs, and their incubation; as well as the feeding, care of the young while in and around the home; all are a source of endless delight and joy to one who may be in the state during the breeding time. On the other hand, our winter visitors can, however, secure much enjoyment by watching the birds along the roadside, around the ponds and lakes, and across the "glades"; when travelling the highways bordering the irrigation ditches and drainage canals; and while sitting on the balmy ocean, gulf, and river beaches and shores. Here may still be seen, in limited numbers, many varieties of duck, heron, gull, tern, and other water birds; while the comical pelican exhibits his acrobatic powers in pursuit of his food to the delight of the resident and tourist alike. Also as we glide over the paved roads, the land birds may be seen, from the stately Bald Eagle and "vulture," as he circles above, to the Meadowlark or Red-winged Blackbird pouring out his song as he sits upon the telephone or telegraph post or wire, adjacent to the roadside.

STATE FLORA

The writer has not gone into details concerning the flora of the state, for it has been covered extensively by Dr. Charles Torrey Simpson* in his several delightful and instructive books; as well as by Dr. J. K. Small† in his technical works on the state, especially southern Florida, and I therefore refer my readers to their writings with pleasure.

* See "In Florida Wilds," by Dr. Chas. Torrey Simpson.
† See "Flora of Miami," by Dr. J. K. Small.

LEGEND

The measurements of the eggs, which are given in hundredths of an inch, as well as the nesting material, height of nest above ground, etc., are averages, exceptions of course being found in all cases. The dates of arrival and departure in migration, are likewise average ones, earlier or later ones having been noted in most cases. The Latin names and the numbers, which follow the vernacular names are generally those decided upon by the committee on nomenclature of the American Ornithologists Union, while those in parentheses are local names given the birds in Florida. An outline showing the topography of a bird is shown at the front of the volume.

IDENTIFICATION

There have been so many cut and dried descriptions given of the birds, as well as keys for their identification, that the author has purposely refrained from further use of similar matter for the birds found within our state, but gives the reader instead, a color key to all the birds of Florida with the exception of a very few rare stragglers which are not apt to come under the reader's attention. These plates have been so wonderfully drawn as to shape and color, that

the author has no hesitancy in saying, that if reproduced as well as the originals there will be no trouble in identifying all the birds one sees in the state. The arrangement of the grouping of figures, and many of the layouts for backgrounds of the plates were furnished the artist by the author, but he wishes to give to the artist George M. Sutton, full credit for the marvelous accuracy and painstaking labor shown in the plates, and which has added so much to the work.

ACKNOWLEDGMENT

I am indebted to W. W. Worthington for the use of his unpublished records covering his several collecting trips to the state, and also to C. J. Pennock, Col. Wirt Robinson, A. H. Helme, A. C. Bent, J. H. Riley, Gilbert Rossignol, A. T. Wayne, W. W. Williams, my father H. B. Bailey, Gaines Wilson, W. R. Collins and others, for data given on certain species. The published writings of W. E. D. Scott, as well as others, have been examined, and where drawn from, credit will be found in each instance. The writer feels that there may be some overlooked published or unpublished records that might have been incorporated in this work, but of the latter, those who made them have had ample time to submit them to the writer. Sight records in identifying living birds, in but very few cases have been used; even those that admit of little doubt, for sight records are seldom accepted by the working ornithologists. The author realizes that mistakes will creep into every book, and that no bird book has yet been published that could not have had added to it some worthwhile record or information, but should the results of his efforts prove of interest, and tend to stimulate a more widespread study of our Florida birds, he feels that he has been amply repaid for the hardships he has endured while in the pursuit of the data submitted herein.

And lastly, the author wishes to acknowledge the personal care and labor that the engravers, printers and their artisans have given to the work, thereby greatly helping to make it a lasting monument to the vanishing birds of the last frontier state in the Union.

H. H. B.

Miami, Florida, May First, 1924.

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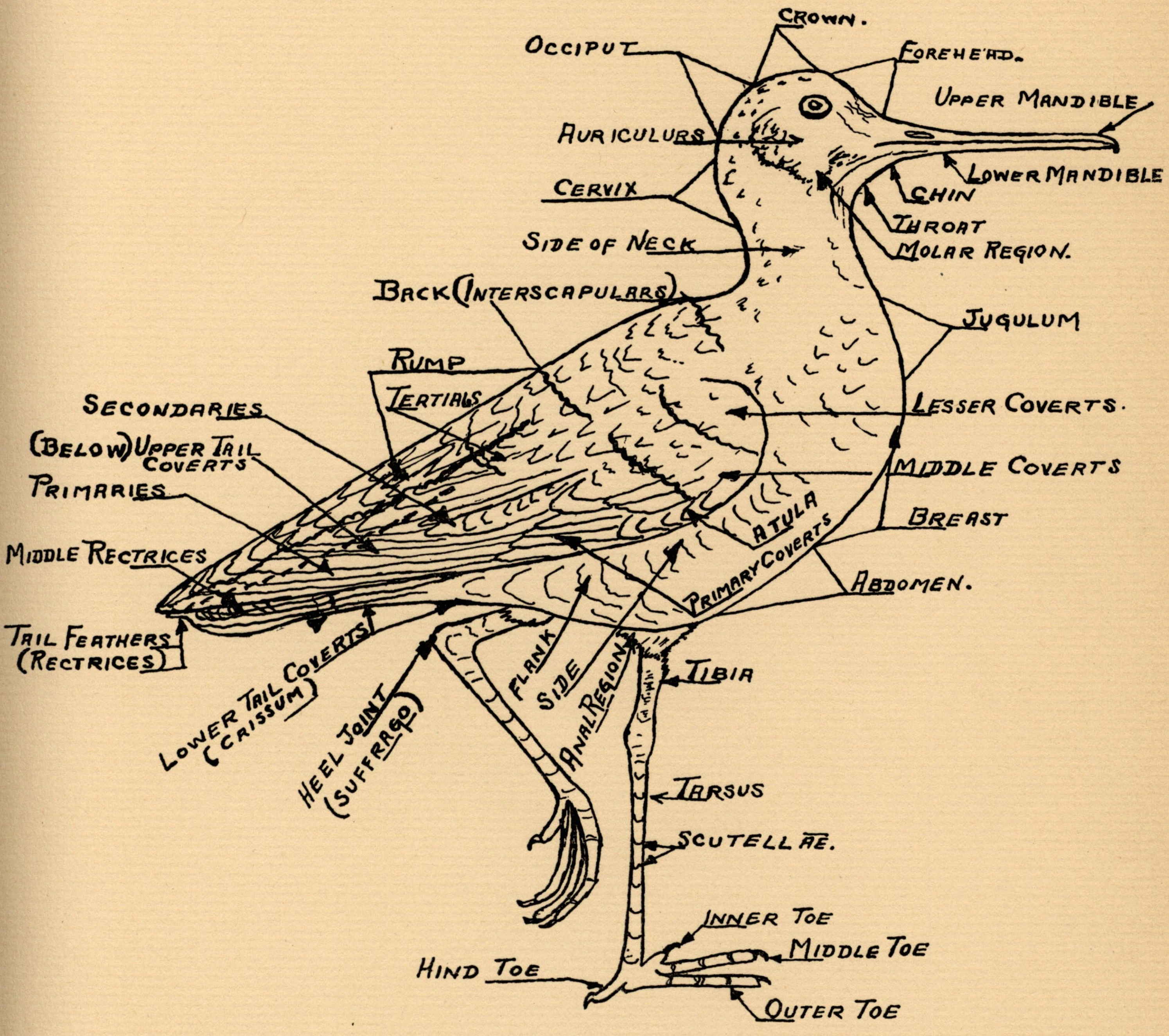

TOPOGRAPHY OF A BIRD.

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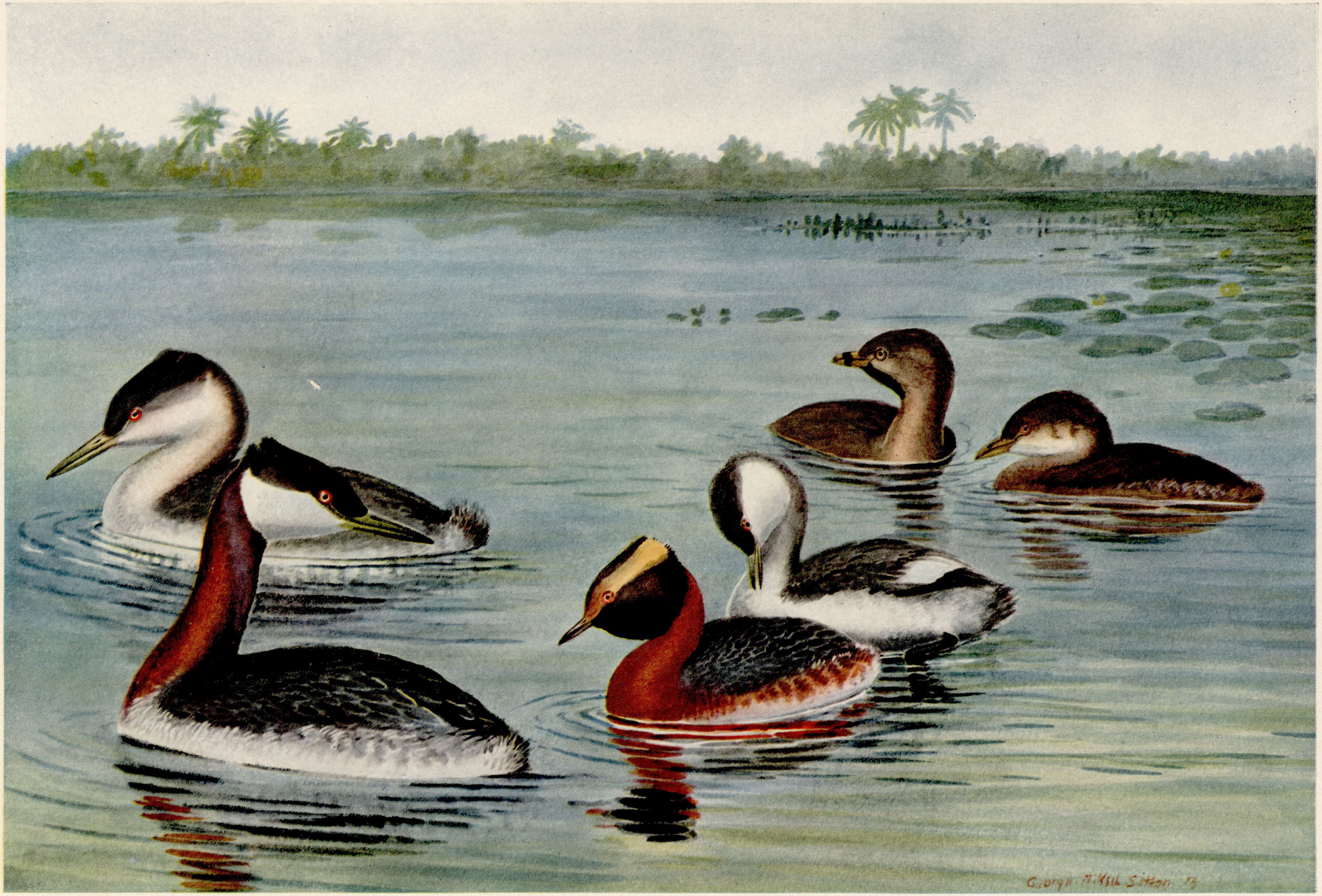


HOLBOELL'S GREBE, WINTER
HOLBOELL'S GREBE, SUMMER
PIED-BILLED GREBE, SUMMER, ADULT
HORNED GREBE, WINTER
PIED-BILLED GREBE, IMMATURE
HORNED GREBE, SUMMER

THE BIRDS OF FLORIDA

Family Colymbidae: Grebes

HOLBOELL GREBE. No. 2 — See Plate 1

Pedetaithya grisegena major

Of the three members of the grebe family found within our borders, this one is without doubt the rarest of them all, and less seldom seen. I am indebted to Mr. A. H. Helme for a record of the capture of a bird of this species at Cedar Keys, on the Gulf Coast, during February, 1905.

I have seen specimens of grebes in Biscayne Bay that I took to be of this species, and it is possible that this bird is more common than we generally suppose, but as few grebes are collected by visiting naturalists when in Florida, records have not often been made.

The birds dive for their food, which consists of small minnows, shrimps, and marine crustaceans; and some vegetable matter. They are expert divers, and can also totally submerge without diving, as well as remain under water for a considerable length of time. In size they are about half way between the loon and the smaller horned and pied-billed grebes, which makes them rather easily identified. They do not go in flocks, as do the ducks—seldom more than a single specimen being seen at a time.

HORNED GREBE. No. 3 — See Plate 1

Columbus auritus

This is rather a common bird in the large salt water bays of the East Coast Lake Worth, Biscayne, and Hoctawhatchee, as well as being common in the Gulf off our western area, where a few may be seen by November 5th.

These birds become rather abundant by November 15th to December 1st, and during the coldest weather up north (January and February) are very numerous all along the coast line both East and Gulf. They also have been taken occasionally on the inland lakes, for Williams reports two from Lake Jackson, Leon County, on December 7th, 1908.

They resort at times to the St. Johns and Indian Rivers, so we see they are rather extensively distributed over a large part of our state during the winter months. By the middle of March they are moving northward, for they do not remain to breed. While with us their food consists mainly of small minnows and fish, shrimp and marine crustaceans, while some vegetable matter such as eel-grass and water-moss is taken. Little of this is, however, taken on or near the surface of the water, the birds diving to secure it; often remaining under water for thirty or forty seconds before coming to the surface. Many are killed during the winter by coming in contact with crude oil on the water; which sticks to their plumage when they are in pursuit of food. Many of these oil soaked feathers are plucked out by the birds, only to stick in the throats or pass into the gizzards—the fumes from which soon cause death.

PIED-BILLED GREBE. No. 6 — SEE PLATE 1

Podilymbus podiceps podiceps (*Hell diver*, *Dob-chick*, *Water-witch*)

This bird can be seen in the drainage canals, ponds, lakes, and ditches all months of the year. Young birds that were able to care for themselves have been seen during June, and an early record of young just out of the shell I have noted on December 18th, 1922, at Hialeah, Dade County, during the extra high water in the "glades." They swim in the water with body almost wholly submerged; and with their thin neck and small head, they are the most inconspicuous of the water birds.

On being discovered they immediately dive; often coming up a hundred feet or more away from the spot where they went down. They build their nest of dead marsh grass, weeds, and stalks;—a floating platform; or often attached to the upright stalks of plants growing out in the water. Six to eight eggs are laid—a pale-bluish white ground, covered with a white chalky substance. Soon after being laid in the water soaked nest, the eggs become dirty and plant stained, and as the birds cover the eggs with decayed vegetation on leaving the nest, their home is rather hard to find; protective coloration greatly aiding them. Fresh eggs, December to May. Size 1.68″ x 1.16″.

They are usually found in pairs or often up to seven in number. Their food consists of small fish, aquatic insects, some vegetable matter, small frogs, tadpoles, and snails, gathered mostly by diving; little being taken near the surface. Many from farther north spend the winter within our borders, arriving in November and December and departing in March and April. They are found sparingly as breeders all over the State in suitable localities.

Family Gaviidae: Loons

LOON. No. 7 — SEE PLATE 2

Gavia immer immer (*War loon*, *Northern diver*)

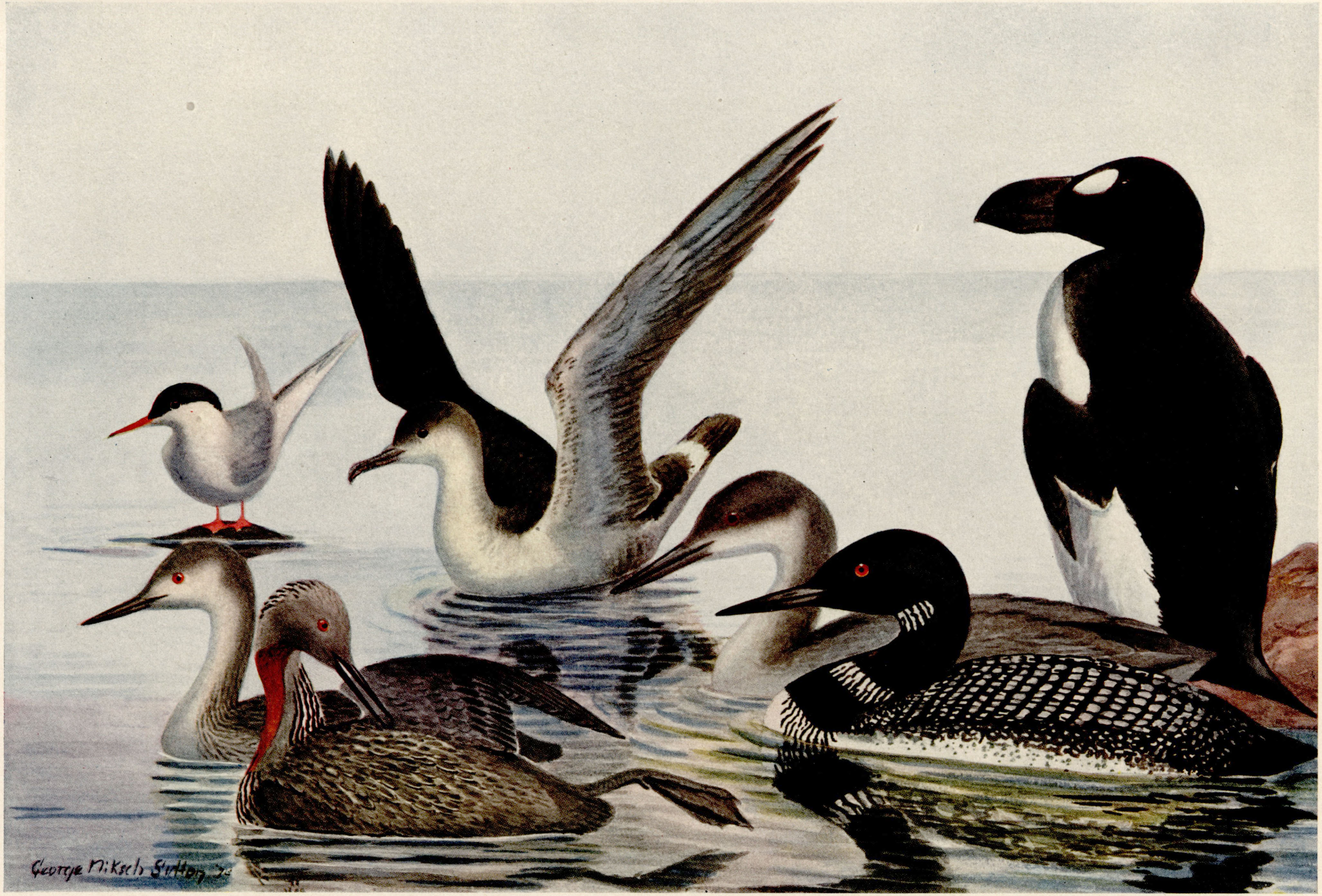
We find the loon all during the winter in our bays, rivers, ponds, and lakes; in fresh water, brackish, and salt. They are also common in the Gulf Coast from November till April as well as on the East Coast; and numerous birds have been seen in Biscayne Bay as late as April 15th.

I have also one record for two birds, male and female, on July 7th, 1923. These birds were very close to the Causeway and I stopped and watched them for some time.

The majority of them migrate from farther north, arriving in numbers during November and December, and can be seen flying northward again during March. By the 10th of April the majority have passed our borders *en route* to their breeding grounds and summer habitat. Their food consists of small fish and shell-fish, snails, and other marine life, procured by diving in the waters which they inhabit. They have powerful legs and webbed feet, and they seldom fly unless migrating or moving from one feeding body of water to another. They are expert divers and are able to remain under water for some time, and while doing so, swim great distances, especially when pursued by a boat.

Although we have many suitable inland fresh water ponds or lakes resembling their northern breeding places, none remain in Florida to rear a family; the mountains of Pennsylvania and New York being the closest breeding habitat to our State.

Thousands are now killed each winter by the discharge of crude oil from ships, and I have counted as many as eight to a mile, as they sat upon the sandy beach trying to remove the sticky feathers. Many of these birds can be captured by hand; so weak are they; but will soon die.



ARCTIC TERN GREATER SHEARWATER GREAT AUK
RED-THROATED LOON, WINTER AND SUMMER LOON, WINTER LOON, SUMMER

RED-THROATED LOON. No. 11 SEE PLATE 2

Gavia stellata

This loon is also a winter resident, inhabiting the salt-water bays and river mouths. They arrive from the North during November and early December, and some go on down into the Gulf where they remain for four or five weeks. In Tampa Bay, they occur regularly though sparingly in February, and they migrate northward to their breeding grounds earlier than the common loon, and have not been noted later than March 8th.

While with us they feed upon small fish and shell-fish, crustaceans, and marine insect life. Those coming to us for the winter travel down the East Coast migration route, returning the same way. They are not so heavy a bird as the common loon, so on taking flight rise more easily from the water. Like the other member of the family, many succumb to the oil menace.

Family Alcidae: Auks, Puffins, Murres

GREAT AUK. No. 33 SEE PLATE 2

Plautus impennis (*Extinct, formerly found in Florida*)

There is no doubt that this bird once inhabited the shores of Florida and was taken by the Indians as an article of food. It is presumed that they came down from farther north, at least a few hundred miles in migration during the winter months. Bones have been taken from the Indian Mound or Shell heap at Ormond by Professor W. D. Blatchley, State Geologist of Indiana, and after comparison with other Great Auk bones from Funk Island (Northeast of Newfoundland, North Atlantic) where they bred, have been found to correspond exactly. Professor C. H. Hitchcock of Dartmouth College also took a bone from the same mound in the same year, 1902.

Those interested in this extinct bird and its former sojourn in Florida can find interesting reading in the Auk, vol. 19, page 255.

Family Stercoradiidae: Jaegers and Skuas

PARASITIC JAEGER. No. 37 SEE PLATE 3

Stercorarius parasiticus

This bird has been found as a straggler along the Gulf Coast where it has been taken sparingly; as well as off our East Coast where records have also been taken occasionally.

Its food consists of the smaller minnows and fish, most of which it secures by chasing the terns and smaller gulls and making them disgorge, when this food is either caught in midair or secured as it reaches the water below, before it would be otherwise quickly gobbled up by sharks or other fish.

A. H. Helme took specimens at Cedar Keys, Florida, in 1905, while Scott and Bent both give it as a migrant on the Gulf Coast.

Col. Wirt Robinson took a male specimen at Matansas Inlet near St. Augustine on May 18th, 1894.

LONG-TAILED JAEGER. No. 38 — See Plate 3

Stercorarius longicaudus

This bird is known to us only as a rare straggler off our coast. I have never met with it in my travels so far, either in or off the coast of Florida, though it has been seen off the Gulf Coast during February, and there is a record of its having been seen off the St. Johns River on April 8th,* as well as during February.†

It procures its food, as does the foregoing species, by making the gulls and terns disgorge their hard-earned catch of minnows or other small fish. All the jaegers visit us in such small numbers that they are not likely to be seen alive by the tourist or layman, nor do they enter into our economic life at all.

* Wayne, "Birds of So. Carolina," page 3.
† Bent, N. M. Bull., No. 113, page 28.

Family Laridae: Gulls and Terns

KITTERWAKE. No. 40 — See Plate 3

Rissa tridactyla tridactyla

The Kitterwake is only a rare straggler in our waters, feeding as do the terns and gulls on refuse thrown over from the passenger ships. Its numbers are so few that it cannot be classed as a bird of much benefit to us. They winter from Virginia northward as a rule, and only a few birds find their way during January, February and March farther south and off our East Coast shore line. These return northward after tarrying but a short time, for they must be at least as far north as the Gulf of St. Lawrence by early April, which is their nearest and southmost breeding area.

Besides refuse, they follow schools of small fry, which form their principal diet; catching them in their beak as the fry break water when pursued by some large shark or other fish.

GLAUCOUS GULL. No. 42 — See Plate 3

Larus hyperboreus

Occasionally I have seen this large gull in our salt-water bay (Biscayne) on our East Coast, where it feeds with the other gulls on refuse thrown out by the yachts. It is also seen in the ocean, where it follows the steamers passing back and forth, in hopes to secure some food cast over by the steward, or again following a school of small fish that is being pursued by porpoise, shark, or other large fish.

It remains but a short time in our waters, however, preferring to winter to the north of us. It is distinguished from the other large gull (the adult "Herring Gull") by its white wing-tips.

PLATE 3

KITTIWAKE
LONG-TAILED JAEGER
PARASITIC JAEGER
GLAUCOUS GULL
BLACK-BACKED GULL

GREAT-BLACK-BACKED GULL. No. 47 SEE PLATE 3

Larus marinus

In company with other gulls, this fine, large bird has been seen at times along our East Coast, though mostly well off shore; following a school of small fish pursued by some larger ones. It also acts as a scavenger and, with the other gulls, helps to keep our beaches clean by consuming refuse cast from the ships as they pass up and down our coast.

The birds prefer to winter farther north as a rule; being common as far south as the South Carolina Coast.

HERRING GULL. No. 51 SEE PLATE 4

Larus argentatus argentatus

Of the larger gulls, this species is most often seen frequenting our bays and brackish waters with the smaller gulls, where they pick up refuse cast from the yachts, house-boats, and sewers. We also see them along both coastal beaches, picking up refuse fish and feeding upon a school of fish pursued by pelicans, porpoises, or an osprey. They arrive during October and migrate northward in late March and early in April. They are not common south of Cuba* though numbers can be seen along our Gulf Coast area all winter. A few birds have been seen on Biscayne Bay in late April, but they were doubtless young birds that would not have bred that season, and so did not start northward with the main flocks.

As large numbers spend part of the winter months with us, they are very beneficial birds owing to their scavenger habits.

At times they become cannibalistic, for while hunting in Back Bay, Virginia, and Currituck Sound, North Carolina, I have often watched them harass and kill with their heavy beaks wounded or weak ducks, and then pick holes in the back of the carcass from which the heart and entrails were quickly removed.

* See Barbour, "Birds of Cuba."

RING-BILLED GULL. No. 54 SEE PLATE 4

Larus delawarensis

The Ring-billed gull is quite a common bird during the winter months, when it can be seen off the ocean and Gulf Coast beaches and in our bays; in company with the herring, laughing, Bonaparte, and Franklin Gulls. It is a scavenger like the others, and helps to keep our waters clean of refuse and trash. They arrive during September and October, and depart during April; though occasionally a few remain later. Adjacent to their breeding grounds in the west, they feed on grasshoppers, grubs, worms, and other insect matter; quite the opposite to their feeding habits when with us.

LAUGHING GULL. No. 58 SEE PLATE 4

Chroicocephalus atricilla megalopterus (*Black headed gull*)

We have a small colony of these birds now breeding on one of the keys in Florida Bay and they are doubtless breeders elsewhere for I have seen birds during the entire summer months. I also found them abundant on the south end of the Andros Island, Bahamas, during May and July; and from their actions judge they had a colony nesting site not far distant.

We find them very plentiful in our bays and lower rivers, where they help to keep the shores and waters free from garbage cast overboard from the yachts, houseboats and other craft. They also consume large quantities of the smaller fish and minnows.

For a nesting site they utilize the dry drift and refuse cast up by some previous storm, making a slight depression in it and sometimes adding to it some coarse grass or seaweed as a lining. Three eggs, rarely four, constitute a full set, the ground color varying from gray to brown; spotted, specked and blotched with various shades of brown, and fainter markings of lavender. Size 2.25″ x 1.60″. Fresh eggs, June 10th to 20th. They are extremely abundant birds during the winter months, for then we also have the northern birds with us.

FRANKLIN GULL. No. 59

See Plate 4

Chroicocephalus franklini

Like the following species with which it is often confused, this fine little gull is common in our bays during the fall, but rare in the early spring months. It feeds largely on the refuse found floating on our waters, as well as along the shore line, and must be considered of great benefit to us for its kind assistance in helping to keep our inland waters clean. Minnows, crustaceans, shrimp, and other forms of equatic life are also taken.

They arrive during late October and depart the latter part of March. A few stragglers may be seen during the winter off our lower keys in Florida Bay, and from Cape Sable southward along the Gulf Coast, but the majority continue on down to South America to spend the winter.

BONAPARTE GULL. No. 60

See Plate 4

Chroicocephalus philadelphia

This is our most common gull on the East Coast during the winter months, as well as being found in the Gulf also in lesser numbers. The young birds in their light plumage are easily confused with the preceding species as both are about the same size. Especially useful are they as scavengers; and large numbers can be seen hovering around the mouth of the sewers emptying into out bays and rivers, as well as feeding on the refuse cast overboard by the stewards of the yachts and steamers plying our waters.

November finds many with us, and they remain until the first week of April. They are not so abundant on the Gulf Coast as on the East Coasts and are seldom found on our inland lakes. Besides refuse they consume small minnows, young gar and other small fish and marine crustaceans; but during the summer months when at or near their breeding grounds in the north-west, they consume great quantities of insect life, from mosquitoes to ants and their eggs.

SABINE GULL. No. 62

Xema sabini

This is a rare straggler and seldom seen in our waters outside of the Gulf Stream off the East Coast, where it passes backward and forward to and from its winter home off the Coast of Peru. Its food is similar to that of the other smaller gulls; consisting of refuse found floating on top of the water, as well as minnows and other small fry. They pass southward during late October, and northward during late March.

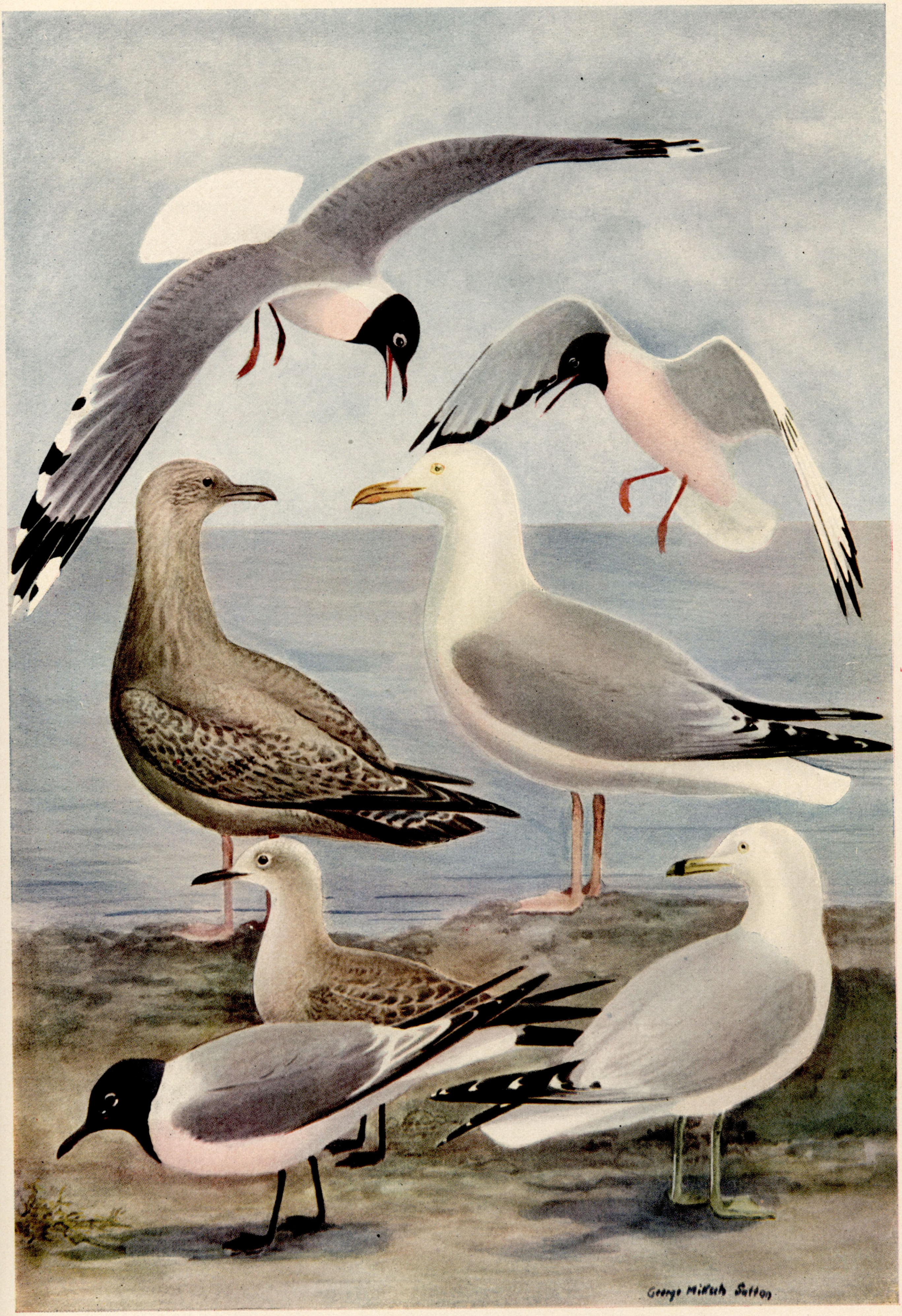
Unless our fishermen and tourists are well off-shore, engaged in mortal combat with some big fish, or unless one is bound for Cuba or the Bahamas, it is unlikely that such a scarce bird will be seen.

GULL-BILLED TERN. No. 63

See Plate 5

Gelochelidon nilotica aranea (Marsh tern)

This beautiful tern, one of many of the family found with us, breeds in suitable localities along our Coast. They winter south of our borders, arriving during early April and departing



FRANKLIN'S GULL
HERRING GULL, IMMATURE
LAUGHING GULL, IMMATURE
LAUGHING GULL, ADULT

BONAPARTE'S GULL
HERRING GULL, ADULT
RING-BILLED GULL

southward in September and October. For a nest, they scratch a slight hollow in the sandy beach above high tide, and lay from two to three eggs. The ground color of the eggs is a grayish or yellowish buff, profusely marked over the entire surface with blotches, spots, and specks of reddish brown, and with fainter markings of lilac. Fresh eggs, June 15th to 20th. Size 1.80" x 1.30". The rough, peculiar texture of the shells makes the eggs easily distinguishable from those of other terns.

Their food while in our waters consists mostly of small minnows or frys, gar-fish, and aquatic life, floating on or near the surface of the water.

They breed rather abundantly in the Bahamas, and with the development of our East Coast beaches as well as the Gulf resorts, these birds will doubtless forsake Florida as a breeding ground within a few more years. They fish mainly in the larger salt-water bays of both coasts, and between the outer and inner bars of the Atlantic Coast, seldom feeding close to inhabited shore-lines as do several other species of the tern family.

They are not so abundant as in former years, though they are slowly recovering from the slaughter due to the millinery trade of the 80's, when many of the smaller terns were almost exterminated.

CASPIAN TERN. No. 64

SEE PLATE 5

Hydroprogne caspia imperator (*Red bill*, *Gannet stricker*)

This handsome large tern is common in our waters during the spring and fall months, while a few may be noted along the beaches and in the outer bays throughout the winter. In flight it may be confused with the following species, the Royal Tern, but at close range can be distinguished by its blackish wings and tail.

As yet I have been unable to locate any record of these birds breeding within our borders, but I am satisfied that these birds do; for they breed to the south of us (Louisiana Coast) and northward (Carolina and Virginia) also, where I have studied them previously.

Their food consists of some refuse, minnows, and other small fish, which is secured by diving head foremost into the water and catching it in their beaks. These feeding antics may be watched with pleasure by our tourists lounging along the ocean beaches, or at times as they drive along our roadways bordering the larger bays.

ROYAL TERN. No. 65

SEE PLATE 5

Thalasseus maximus (*Gannet striker*, *Big striker*, *Big red bill*)

While these fine large terns breed abundantly on the Bahamas, no doubt a few breed in suitable places along our East Coast. They breed also on the keys off the Gulf Coast, and so they may be seen all months of the year, flying along our ocean beaches, or found perched upon some buoy, spar, or stake within our bays.

Their size, together with the bright reddish beak, heavy slow flight and drawn-in head, makes them a bird easily identified. They are very numerous, act as scavengers in our waters, and also can be seen feeding on the schools of small fish when chased by some large fish, sharks, or porpoises.

They can dive from quite a height for the small surface fish, often going entirely under water to catch it. They lay two to three eggs in a hollow which they scratch in the sandy beach, the ground-color of the eggs being a grayish white, heavily specked and spotted with blackish brown, and fainter markings of lavender.

Fresh eggs, June 5th to 20th. Size 2.60" x 1.70".

CABOT TERN. No. 67

Thalasseus sandvicensis acuflavidus

See Plate 5

The Cabot Tern is found quite commonly with us. It is a handsome bird and breeds sparingly in suitable locations along our coast, though I have never found it anywhere as common a bird as the other species of terns, nor does it breed in such large colonies.

The black bill, tipped with yellow, presents rather an easy identification mark to distinguish it from the other terns seen along our coast line. They arrive on the East Coast from farther south during the latter part of March, and during September depart southward with those having bred farther up the coast. For a nest, they scratch a slight hollow in the sandy beach, in which are laid two or three eggs. A few birds sometimes may be found in the tropical zone and lower Gulf Coast throughout the winter months.

The ground-color of the eggs is a rich creamy buff, streaked and blotched with heavy markings of blackish brown, and lighter shade markings of lavender.

Fresh eggs, June 5th to 20th. Size of eggs 2.12″ x 1.42″. We find them mostly along the ocean and outer Gulf Coast shores in preference to bays. Their food consists of minnows, small gar-fish, and shrimp, which they secure from the waters by diving, after the manner of the other terns.

FORSTER TERN. No. 69

Sterna fosteri (Big striker, Big sea swallow)

See Plate 5

At times this bird is very common along our coast, especially fall and spring, when large numbers may be seen feeding in the shoal-water tide rips near the ocean beaches, and in the bays. Like several other members of the tern family, they feed on refuse to a certain extent, while minnows, shrimp, small gar, and other fry are extensively taken. Aquatic life and insects, both alive and dead, are also picked up.

They breed sparingly along our coast, though the majority pass through to points farther north to breed; and return again during late August and early September. A few scattering birds have been noted in the South Florida and Tropical areas all winter. Their nest is placed on the drift cast up by some high tide, well back from the ocean, and three, rarely four eggs, constitute a full setting.

The ground-color of the eggs varies from a light brown to gray; spotted, specked and blotched with dark shades of brown, and fainter markings of lilac. Fresh eggs, May 12th to June 1st. Size 1.80″ x 1.30″.

COMMON TERN. No. 70

Sterna hirundo (Wilson tern)

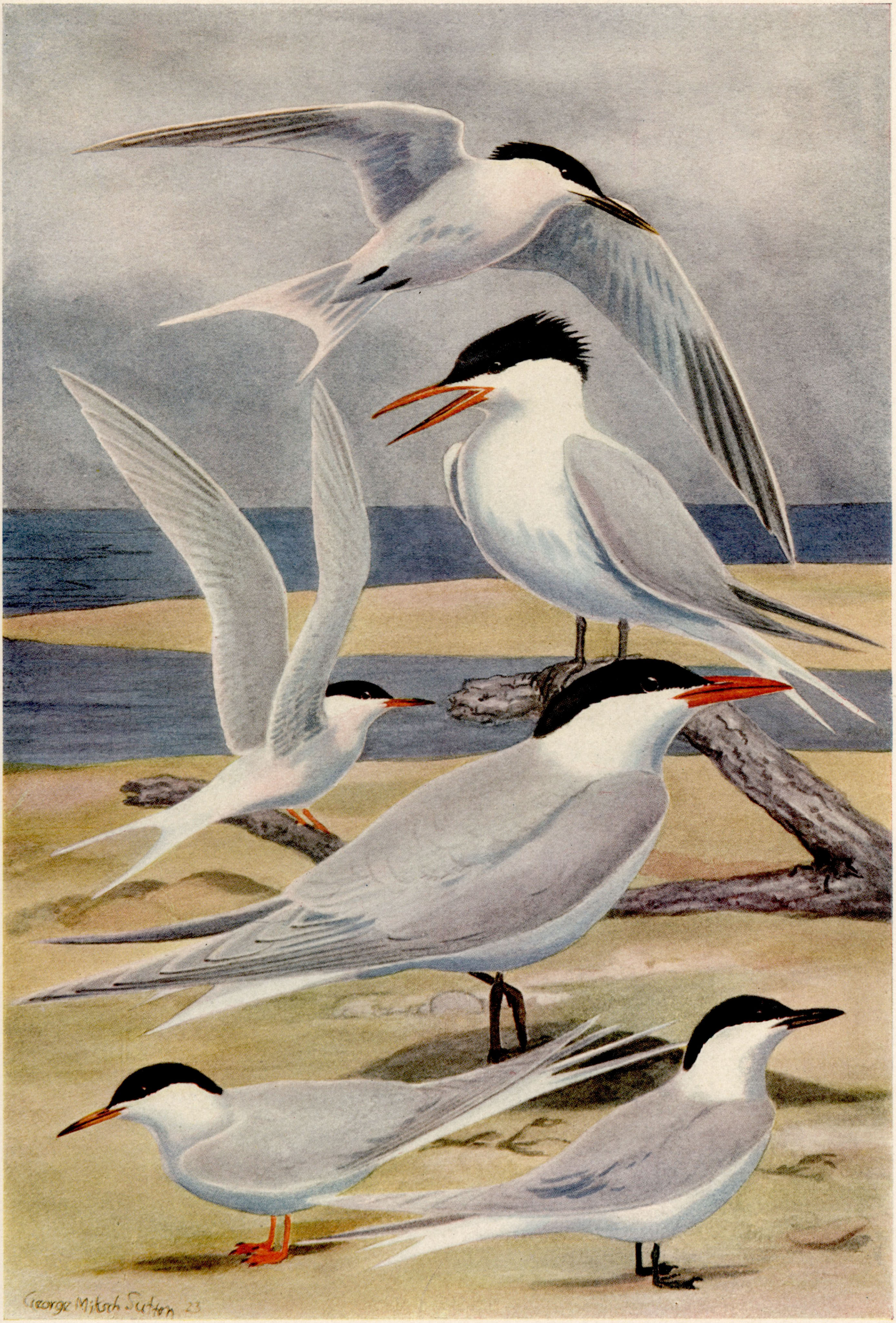
See Plate 5

This species, like the one preceding and following, is quite a common bird along our beaches and in our bays during the spring and autumn and is about the same size, and often confused with them. The distinguishing marks are, the shorter tail feathers, reddish bill tipped with black, and dusky outer web of tail feathers.

They breed in suitable locations on our lower keys in Florida Bay, laying their eggs in a slight depression in the drift cast up by the high tides, or in a slight hollow in the sandy beach; lining it with a few straws or grass.

The eggs are three to four in number, the ground-color varying from a dark buff to grayish; spotted, blotched and specked with dark brown and fainter markings of lavender. Fresh eggs, May 25th to June 15th. Size 1.80″ x 1.30″.

These birds are good scavengers, while a sight worth seeing is to watch a large number or even a single bird, drop from a great height head foremost into the water and rise with a minnow



COMMON TERN
CABOT'S TERN
ROYAL TERN
FORSTER'S TERN
CASPIAN TERN
GULL-BILLED TERN

caught from a passing school. All classes of smaller fry are taken while the birds are with us, and shrimp and gar-fish are especially liked.

From October to the middle of December they are quite common, and again from the middle to last of March. Mild winters, a few stragglers may be found at any time along the Indian and St. John's Rivers, and in lower Biscayne Bay.

ARCTIC TERN. No. 71

SEE PLATE 2

Sterna paradisaea

Of all the terns migrating along our shores both fall and spring, this variety is doubtless the least seen of any; not because of scarcity of numbers for they are legion, but because they do not come into our inner harbors as do the other varieties like the Forster, Common, and Roseate Terns, all of which they somewhat resemble, both in size and plumage.

They pass northward during the first part of March, and southward during early October, keeping well off in the Gulf Stream and feeding on the minnows and young fry of several varieties of larger fish.

Their winters are spent mainly in the Antarctic regions. None stop to breed with us, the most southern breeding ground known, being in Massachusetts.

ROSEATE TERN. No. 72

SEE PLATE 6

Sterna dougalli

One must be more than a casual observer to be able to distinguish in flight this bird from the three former species. A few breed along our coast line, but the majority go farther north to breed, passing through during April and returning in late August. Numbers of birds can be seen along our coast and a few in our bays, feeding on refuse or following schools of small minnows upon which they prey, as well as young gar, and fry of many of the larger varieties of fish.

There is quite a large colony breeding on the Dry Tortugas group of Islands, and scattered pairs on the Keys in Florida Bay. They breed commonly in the Bahamas, and with the exception of the "Least Tern" are the most common of the family.

The nest is only a slight hollow, scooped by the birds in the sandy beach, in which three eggs are usually laid. The ground-color of the eggs is a creamy buff, specked and spotted with brown and olive-brown. Fresh eggs May 10th to 25th. Size 1.82″ x 1.32″.

They spend their winters in Cuba, the lower Bahamas, and Gulf Coast, southward to South America. Occasionally a few may be found off our southmost Keys, all through the winter if the weather is mild.

LEAST TERN. No. 74

SEE PLATE 6

Sterna albifrons antillarum (Sand peter, Kill peter, Sea swallow, Little striker)

This beautiful little bird, the smallest of the family, I am glad to say, is increasing rapidly in numbers, after having been almost exterminated some years ago for the millinery trade.

They arrive in April (5th) on the East Coast, and depart during September and October to spend the winter farther south—from the Louisiana coast to Central and South America. The birds are now breeding so commonly on one of our beaches that I have been able to drive my automobile within three feet of a nesting colony and, without moving from my seat, have looked down upon sitting birds, eggs, and later young. Never in all my past experience have I ever been able before to visit a sea bird colony in such proximity in an automobile, and I am glad to state that large numbers of young were reared there. No doubt the craze of developing new subdivisions will move this breeding colony farther out, but we shall never see them killed again to satisfy the millinery trade.

They deposit their two eggs, which is a full setting, in a slight hollow in the sandy beach which the birds excavate with their feet and bodies to the depth of about a half inch. The ground-color of the eggs varies from grayish white to pale olive-buff, sprinkled with small spots and blotches of dark brown; and with fainter markings of lilac or lavender.

Fresh eggs from May 1st to 18th. Size 1.25″ x 0.95″. While they eat a small amount of refuse, their main food while with us consists of small minnows, secured from schools just outside the reefs and breakers. Young are able to fly and feed themselves by July 20th, and previous to leaving the nest are fed whole minnows by the old birds, which fly with them in their beaks after catching them sometimes several miles from the nesting ground.

SOOTY TERN. No. 75

SEE PLATE 6

Sterna fuliginosa (Egg bird)

While not seen as commonly as the former species, they may be sighted by fishermen and boating parties on the lower keys, for they frequent those waters and breed commonly on the Tortugas Keys, where a large colony nests regularly. They arrive in our waters abundantly about April 10th, and depart during September, though some remain all winter off our southward keys and lower Gulf Coast. They take as food, large quantities of minnows and a small amount of refuse, and a nesting colony must consume tons of minnows during the time they are with us.

The nests are slight hollows scratched by the birds in the sandy beach or on the bare top of a rocky inlet as case may be, no nesting material being used. Fresh eggs, May 5th to 20th. Size 2.02″x 1.48″.

Only one egg is laid as a set, and in former years the birds were robbed of their egg by the natives as an article of food; but in the "States," the majority of that abuse has now stopped, though it is still practiced in the Bahamas.

A few birds straggle northward after the breeding season is over, returning shortly and migrating as far south as South America for the winter.

BRIDLED TERN. No. 76

SEE PLATE 6

Sterna anaetheta recognita (Egg bird)

This handsome tern is only a straggler to our State, having been taken occasionally near the lower keys. They do, however, breed abundantly on some of the Bahamas Keys, and the writer had the pleasure of visiting in 1921, one of the largest breeding colonies over there.

Their food consists almost entirely of small minnows caught from the schools infesting these waters, while marine crustacea is also taken sparingly.

The single egg laid, which constitutes a full set, is placed in a slight depression of the soil, though often on the bare rocks and under bushes, cacti, or boulders on top of the key. Hidden thus, they are rarely accessible to the ravages of the larger gulls and vultures, which prey so much upon the eggs and young of most of the sea-bird colonies. These birds like the "Sooty" and "Noddy" tern are classed as "egg birds" by the natives, who consume large quantities of eggs for food. The ground color of the egg varies from white to creamy white, spotted and blotched with various shades of gray, violet, lilac, or lavender; and heavy markings of brown. Fresh eggs, June 1st to 15th. Size 1.88″ x 1.25″.

Owing to the protection given the sea birds in the Tortugas Group, I believe they will eventually be found breeding in Florida, possibly closer to the mainland in future years.

BLACK TERN. No. 77

SEE PLATE 6

Chlidonias niger surinamensis (Black Sea swallow)

This small tern, easily distinguished by its color, is rather a rare migrant on our East Coast, though more common on the Gulf Coast. It is also found around our inland ponds and lakes.

LEAST TERN   SOOTY TERN
ROSEATE TERN
BRIDLED TERN   NODDY TERN
BLACK TERN

They do not breed with us, but inland from Illinois northward. Their food consists of a small amount of minnows and some refuse, together with marine crustacea, worms, beetles, flies, etc., found in the shallow waters and in the tidal rips. Insects are also taken abundantly at their summer home.

They arrive during the middle of April and are again common in September, spending the winter from our Gulf Coast southward to South America.

Some young birds remain off the Gulf Coast all summer, and I have seen birds at Cape Sable in May, as well as a flock of eight at Miami Beach on July 27th. Pennock also records them as common near St. Marks, Wakulla County, during July and October.*

* Wilson Bull. No. 109, page 111.

NODDY TERN. No. 79 See Plate 6

Anous stolidus (*Egg bird*)

Like the Sooty Tern, this bird is found more often in the vicinity of our lower keys and waters, where it also breeds in large colonies during May.

The majority arrive from farther south during late April and depart again during early September, spending their winters in the lower Gulf and West Indian waters, south to Central and South America. While with us, their food consists principally of minnows and other small fish taken from near the surface of the water, the birds reaching down and picking them up and not by diving under the surface as do many of the other species of terns.

There is a large colony breeding in Florida at the Tortugas Keys, and there are also several colonies scattered among the Bahaman Group not far distant.

Their nests are placed on low bushes or trees, and are composed of small sticks and twigs, sea grass, and some trash; and vary in height from four inches to six feet above the ground. The ground-color of the single egg laid, is a creamy buff or pinkish buff, specked and spotted with various shades of lilac and lavender, and deep reddish brown. Size 2.00″ x 1.28″. Fresh eggs, May 5th to 25th.

Family Rynchopidae: Skimmers

BLACK SKIMMER. No. 80 See Plate 9

Rynchops niger (*Scissor-bill*, *Cutwater*, *Shearwater*)

These peculiar birds are seen in long flocks along our coast while migrating north and southward in spring and fall, and a few large colonies also remain with us and breed, the most notable of which is the one near St. Augustine.

A few remain in Florida Bay and the Gulf all through mild winters. The local name of Cutwater and Shearwater is derived from the fact that the lower mandible is longer than the upper, and when the bird is feeding along the surf or in the bays, it is dropped down and cuts the water like a knife, the crustacea, shrimp, minnows, and other marine life on which it feeds, being forced up into the bird's mouth by the passage of the bill through the water. The long wings and peculiar flight make the birds easily distinguishable from any other sea-bird in flight; and around their nesting ground they are most awkward birds, for they can walk but little owing to their very short legs.

During the winters of 1921 to '24, I have noticed some Skimmers in Biscayne Bay almost every day, resorting to a small exposed sand bar in the bay, as well as an island fill being made by a hydraulic dredge. Tourists may see them sometimes passing over the causeway connecting Miami and Miami Beach, and along the Gulf Coast from Ft. Myers southward. For a nest, the birds scratch a slight hollow which is unlined, in the sandy beach and in which are laid three to four eggs; the ground-color of the eggs is a creamy white, spotted and blotched with heavy markings of dark and light reddish brown and chestnut; and lighter markings of lavender. Fresh eggs, May 25th to June 20th. Size 1.75″ x 1.30″.

Family Hydrobatidae: Shearwaters, Petrels, Etc.

GREATER SHEARWATER. No. 89 — SEE PLATE 2

Puffinus gravis

A few of these birds are seen from time to time off the East Coast opposite Fernandina (Borderman) during October and again in May as they pass northward and southward, *en route* from and to their breeding grounds in the South Atlantic Ocean.* During the summer they feed in the waters adjacent to the "Grand Banks" and northward, mainly on small fish, though refuse cast from the fishing smacks infesting those waters is also taken whenever they can get any.

Doubtless many pass along our coastline, though well off shore for they are very common on their summer feeding grounds. They are of little economic value to us, though no doubt destroying during their migration, much refuse that might otherwise be cast upon our shores.

* Wayne records birds that he found dead on the South Carolina Coast on August 26–27, 1894.

AUDUBON SHEARWATER. No. 92 — SEE PLATE 7

Puffinus cherminieri (*Pimlico bird*)

This bird of the deep ocean water is seldom seen except well off shore, though parties fishing in the Gulf Stream may expect to see it occasionally. They can be recognized from the gulls by their manner of quickly flapping their wings four or five times and then sailing, and then again repeating the wing movement; and they also skim very close to the top of the water.

They do not nest in Florida, but the Bahamas and West Indies, and their nearest breeding ground is about 150 miles from the Dade County shore line.

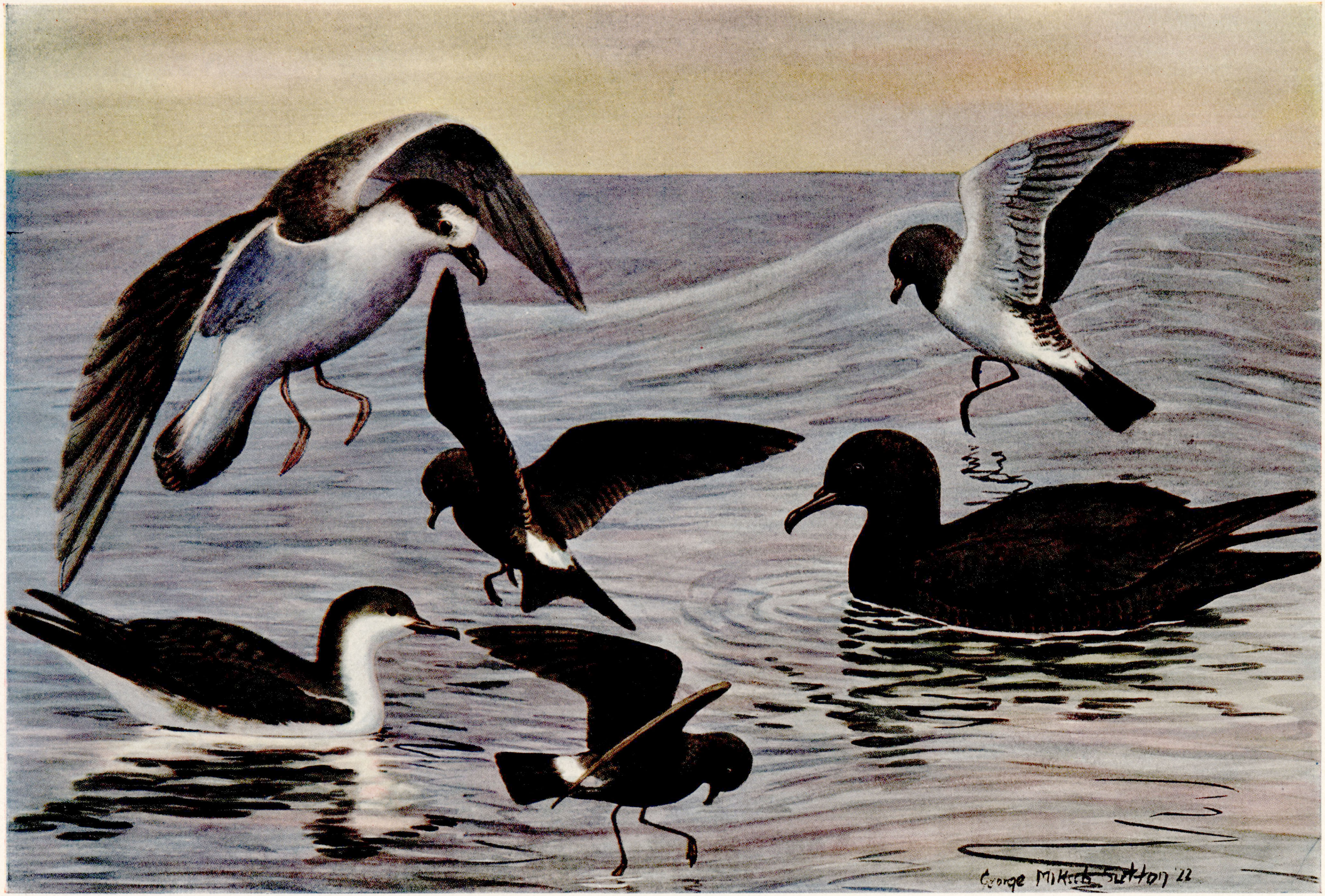
Their food consists of marine crustacean, small minnows, shrimp, and insect life found around the large kelp patches floating on the ocean, around which they seem to delight in feeding, no doubt attracted by the life found therein. I have seen these birds rather abundantly in October off the East Coast of Florida, when I was *en route* to and from the Bahamas.

Murphy also reports them off St. Augustine on February 19.

SOOTY SHEARWATER. No. 94 — SEE PLATE 7

Puffinus griseus (*Pimlico bird*)

The Sooty Shearwater is an extremely rare visitor and is seen only during the summer from May to October, as a straggler in the Gulf Stream off our coast.



BLACK-CAPPED PETREL

AUDUBON'S SHEARWATER

LEACH'S PETREL

WILSON'S PETREL

WHITE-BELLIED PETREL

SOOTY SHEARWATER

Their food consists of refuse and small fish, which is similar to, and secured in a like manner to the other species of Shearwater.

BLACK-CAPPED PETREL. No. 98 SEE PLATE 7
Aestrelata hasitata

This bird was formerly found off our coast during the winter and is now generally supposed to be extinct. It bred abundantly on the Islands of Guadeloupe and San Domingo as late as 1840, but of late years there is no record of its having been found breeding in the West Indies.

A Florida record gives this bird as being taken in the Indian River (Brevard County) in 1846, by a Dr. C. H. Stillwell. This bird was given to Mr. Geo. N. Lawrence and it is recorded in Baird, Brewer and Ridgeway's "Water Birds of North America," volume 2, page 395.

Murphy* records having seen this bird on several occasions lately, so there are some doubtless alive, if his identification is correct. No specimens were taken, and as sight records of such a rare bird are always open to question I, therefore, only give this record for what the reader may think it is worth.

* Auk, vol. 30, page 509.

LEACH PETREL. No. 106 SEE PLATE 7
Oceanodroma leucorhoa leucorhoa

Often taken for the "Stormy Petrel," this small bird can be seen off our coast in the Gulf Stream during April, and September when it is following the steamers in search of food cast over by the steward, or some porpoise, whale, or shark hoping to get some morsel left floating on the surface, after a catch has been made by them.

Scraps of fish or fat meat thrown overboard will at once attract several of these birds to the immediate vicinity, and it is often easy to catch them, as well as the other varieties of petrels with a fishing line, the hook being baited with a piece of fat meat and allowed to float on the water's surface.

They breed on the Atlantic Coast from Maine northward.

WILSON PETREL. No. 109 SEE PLATE 7
Oceanites oceanicus (*Stormy petrel*, *Mother Cary chicken*)

It is very unlikely that this bird will be seen by either tourist or resident unless he be fishing, though it is rather a common migrant to our coast during the summer months. It breeds in the South Shetland, South Orkneys, and South Georgia Islands, during December, January, and February; and during April and May I have seen it in our East Coast waters, both outside and within Biscayne Bay.

It feeds on refuse, small minnows, and other forms of marine life, and will hover around to get the entrails of the fish, cast overboard by the fishermen when cleaning their day's catch.

WHITE-BELLIED PETREL. No. 110 SEE PLATE 7
Fregetta grallaria (*Mother Cary chicken*)

This is another of the rare stragglers that have been seen along our borders. A number of specimens were taken by a captain of a boat in St. Mark's harbor some years ago, and one of these was secured by a Mr. John Hooper of Brooklyn, New York. Since then, no more specimens have been recorded in the United States.

It breeds off the Coast of Chili during January; R. H. Beck having taken eggs and young on Santa Clara Island, as well as Goat Island.*

* Bent, U. S. N. M. Bull., No. 121, page 174.

They come north during April and May, returning southward during October and November. They can be distinguished from the Leach's Petrel in being smaller and much more blackish; and the tail being slightly forked in the Leach's, while that of the White-bellied is rounded.

Its food, which it gathers from the surface of the water, is similar to that of the other petrels.

Family Phaethontidae: Tropic Birds

YELLOW-BILLED TROPIC-BIRD. No. 112 — SEE PLATE 9

Phaethon americanus (*Long-tail*)

Fishing parties off our coast may occasionally see this beautiful bird in flight, and distinguish it by the extra long tail feathers. These often reach the length of two and half feet, and for this reason the fishermen designate it as the "long-tail." It does not breed in Florida, but in the Bahamas and at Bermuda. I have seen a single bird on several occasions while walking the ocean front at Miami Beach, but fishing parties well out have a much better chance of seeing them than the "beachites." Their food consists of squids, minnows, and other small fish, as well as other forms of marine life, which is secured by diving into the ocean often from quite a height, sometimes forty feet or more. Most likely these birds will be seen in March and April, and again in October, during which time they are migrating.

A specimen was shot April 21, 1886, on the Banana River, south end of Merritt's Island by a Mr. Peterson.*

* Auk., vol. 3, page 481.

Family Sulidae: Gannets

BLUE-FACED BOOBY. No. 114 — SEE PLATE 8

Sula nebouxi (*Guano bird*)

This bird is only a rare straggler to our shores, and is seldom seen except well off shore in deep water, where it follows the schools of small fish, on which it feeds.

It breeds in such large colonies off the Venezuela Coast, that its name of "Guano Bird" is well earned, for its dried excrement is often two inches thick on its breeding ground, and when mixed with other materials forms a very high grade fertilizer, some of which doubtless finds its way into the orange groves and truck patches throughout Florida.

I have examined a bird caught in the Gulf Stream by fishermen off our East Coast, Palm Beach County (1922), which was kept alive on shore for sometime. They are, however, not often seen or taken.

Bent records it as accidental on the Florida Coast.*

* Bull. U. S. N. M., No. 121, page 196.

BOOBY
BLUE-FACED BOOBY
GANNET
DOUBLE-CRESTED CORMORANT
RED-FACED BOOBY
MEXICAN CORMORANT
FLORIDA CORMORANT, FEMALE
FLORIDA CORMORANT, MALE

BOOBY. No. 115

SEE PLATE 8

Sula leucogastra leucogastra (*Guano bird, gannet*)

The common "booby," like the preceding species, is known as the "Guano bird" from the large amount of excrement taken as fertilizer from its breeding grounds. It does not breed with us, occurring only as a casual straggler along our coast-line, both ocean and gulf. They feed upon the large schools of minnows and other small surface fish, diving for them often from great heights, as does the pelican.

The Man-o'-war bird often chases them, and makes them disgorge their catch of fish, which is greedily caught, or picked up by the booby after having reached the water's surface.

Their nearest breeding ground is on one of the keys of the Bahama Group (Berry Islands), and after the young are able to take to the water and care for themselves, large flocks may be seen in the Gulf Stream during July and August.

In Andulon's Bay, 1840, they bred on one of the Tortugas Islands, but have not since bred there in many years. Bangs records an unusually large number, fishing off the coast opposite Micco, Broward County, during the big storm and cold spell of February 16th, 1895.*

* See Auk, vol. 19, page 395.

RED-FOOTED BOOBY. No. 116

SEE PLATE 8

Sula piscator (*Guano bird*)

This rare and odd-looking straggler to our shores is another of the "guano birds," and is occasionally to be met off our lower coast and bays; and on across to Cuba.

Its food is similar to that of the other boobies—minnows and other small surface fish being principally taken. It does not breed with us, though rather commonly on keys off the coast of Porto Rico.

Bangs records a large flock feeding near shore off Micco, Broward County, during the severe storm of February 16, 1895.*

* Auk, vol. 19, page 395.

GANNET. No. 117

SEE PLATE 8

Sula bassana (*Sea gannet*)

Along our Atlantic and Gulf Coasts during the winter, occasionally may be seen by our fishing parties, individuals or small flocks of these birds which have come down from the Canadian and Maine Coasts to spend the winter with us. They arrive during November and December; and, departing northward during March, reach their breeding grounds off the Gulf of St. Lawrence by April 15th. While with us, they feed well off-shore as a rule and only those fishing far out will be likely to see them. Their food consists of minnows and other small surface fish and squid, similar to that of the other boobies.

The last migrants moving northward are seen at our eastern boundary the last week of March. At times we find them more commonly in the Gulf than on the East Coast.

Family Anhingidae: Darters

ANHINGA. No. 118 See Plate 20

Anhinga anhinga (Snake bird, Snake darter, Water turkey)

While truly a tropical bird, the Anhinga is found with us abundantly, and remains throughout the year in suitable localities. The drainage of many of its best habitat ponds, sloughs, and creeks is driving it farther into the wilds each year, and it is therefore less likely to be seen nowadays than in former years. It is an expert flyer, and can circle from its nest upward and out of sight in a few minutes, making wide circles or spirals as does the eagle, though flapping its wings more quickly than does that bird.

Its food consists mainly of frogs, small snakes, turtles, lizards, and small fish, which it dives for and catches in its beak, and swallows whole. The bird has no tongue, while its ears are the smallest of those of any bird I have ever noticed when skinning, excepting those of the humming bird. When surprised in a small alligator hole or stream, it quietly sinks or settles below the surface, similar to the alligator, and it can remain under water for a considerable length of time.

They build their nests in trees or large bushes, in or near water, of sticks and Spanish moss; and from ten to thirty feet, or more above ground.

Three to four, rarely five, eggs are laid; the ground a pale, bluish white, unmarked and often partly covered with a thin chalky covering. They are easily distinguished from cormorant eggs, by their glossy surface. Fresh eggs, February 5th to April 30th. Size 2.24″ x 1.34.″ Often a second setting is laid during July, and another brood reared.

As they are unfit for food and doubtless destroy many young harmful snakes, they should be unmolested by the gunner at all times.

Family Phalacrocoracidae: Cormorants

DOUBLE CRESTED CORMORANT. No. 120 See Plate 8

Phalacrocorax auritus auritus (Nigger goose)

This bird is found only as a straggler with us, but can be easily distinguished from our local bird (Florida Cormorant) by its whitish head-tufts and browner back, as well as larger size. They are at times common in the Gulf, usually from the middle of November until late March, during which time they also may be seen on the East Coast. While in our waters, they consume many varieties of the smaller fish, even as large as herring ten inches in length.

I do not know of a breeding record for the State; those seen so commonly during the summer and breeding in Florida being the smaller forms, 120A.

They are strong swimmers, and the serrated mandibles easily hold the fish which is caught while swimming under the surface of the water, and which is swallowed whole. At such times, the wings are also used as a means of propulsion, as well as the short stocky legs and feet, and it is impossible for one in a boat to paddle as fast as a cormorant can swim while under water.

MAN-O-WAR BIRD
WHITE PELICAN
BROWN PELICAN, YOUNG
YELLOW-BILLED TROPIC BIRD
BROWN PELICAN, ADULT
BLACK SKIMMER

FLORIDA CORMORANT. No. 120A

See Plate 8

Phalacrocorax auritus floridanus (*Shag, Nigger goose*)

These birds can be seen in our rivers, lakes, bays, and brackish waters all months of the year. They breed in large colonies during December, January, February, March, and April, locating their nests made of sticks and dry twigs from low mangrove bushes to tall trees. Three and four eggs constitute a full set.

Fresh eggs, December 20th to April 20th. Size 2.30″ x 1.40″. The ground color is bluish white, which is mostly covered with the chalky substance, so common to all the family. They are expert divers and the hooked beak and serrated mandibles easily hold any fish they may catch, which is tossed in the air and swallowed whole, head foremost.

When not engaged in roosting in the mangroves or swimming leisurely around on the water, one may see them sitting on some stake or buoy out over the water, asleep, or intently watching for some passing school of small fish on which they feed.

When flying, their black bodies and rather short wings, and long out-stretched necks, and rapid wing-beats, make them a bird easily identified.

They remain in the local waters not far distant from their breeding place throughout most of the year. At times, we see them in the ocean sparingly, behind the reefs off our lower keys, and also in the Gulf, as far south as our boundary. The fish taken are mostly of such varieties as are not counted as edible food, and while the birds cannot be classed as beneficial, I would not consider them harmful.

MEXICAN CORMORANT. No. 121

See Plate 8

Phalacrocorax vigua mexicanus (*Shag, Nigger goose*)

There is little or no distinction given this bird by the local inhabitants from that of the former species. This species does not, however, breed within our borders, though it does in the nearby Bahamas. It is rather uncommon along our lower and Gulf Coasts, excepting during the breeding season, April, May, June and July, when it is lacking entirely.

Its food consists chiefly of the smaller fish that go in schools, into which it either dives or swims and catches the minnows or fry in its serrated beak. All members of the family swim rapidly while under water assisted by their wings, and none of them dive into the water while flying, to catch their prey as do terns, and pelicans.

There is a colony breeding on one of the keys off the east side of Andros Island, and another at Watling Island, Bahamas; and it is from these colonies that the birds seen on our east coast, at least, come, while those in the lower Gulf Coast come up from Texas and Louisiana.

Family Pelecanidae: Pelicans

WHITE PELICAN. No. 125

See Plate 9

Pelecanus erythrorhynchos

This is rather a rare winter migrant, being seen more often below Cape Sable and in the Gulf area, than along the East Coast. Col. Wirt Robinson saw a large flock near St. Augustine, during April, 1893.

They remain with us for about three months, January, February, and March, during which time they may be found mostly in the brackish water, streams, lakes, and bays. Their white plumage, in contrast to that of the Brown Pelican, makes identification very easy.

Young birds caught by a fishing line and piece of fat meat or fish bait, make nice pets, though rather expensive ones on account of the large amount of fish or table scraps they can consume. I have seen them as far east as the Virginia Coast in September, which leads me to believe there will be some breeding ground found on the Atlantic east of Texas, but as yet we know of none.

They consume daily, large quantities of small fish, from the size of minnows up to mullet nine inches long, most of which they catch while standing in the shallow waters and, on account of this capacity for fish, they, as well as the Brown Pelicans, are not as a rule on good terms with the commercial fishermen.

BROWN PELICAN. No. 126 SEE PLATE 9

Pelecanus occidentalis

Every one does or should recognize this bird, for it is commonly seen along our coastal and bay shores all months of the year. They afford much pleasure and amusement to tourists and residents alike, watching them drop often from a height of a hundred feet, straight into the water for their food of fish, which they seldom miss. They still breed commonly along our coast, both ocean and gulf, though many of the former colonies are being gradually broken up by fishermen who begrudge them the few edible fish they occasionally secure. Young birds are easily distinguished from the old ones, even in flight; by their light plumage.

They nest in large colonies, either on the ground or close to it, or in mangrove trees and bushes on the keys, from ten to fifty feet up. Two to three eggs are laid in a nest of dry sticks or trash, the ground color of the eggs being a dirty, creamy white, generally heavily coated with a chalky layer. Size 3.2″ x 1.95″. The eggs soon become nest stained to many hues; and the foliage around the nesting colony takes on a whitish appearance from the excrement. This, together with rotten eggs, and dead young that have fallen from the nests, produce, under the tropical sun an odor one will long remember, if he should care to visit a real pelican rookery. Many young are eaten by the "Conkers" and "Spongers" working in our local waters, but I believe that the birds are still holding their own, if not increasing in numbers.

They breed on the East Coast (January and February on Pelican Island) and on the southern keys off Cape Sable (December 1st to April 15th), while on the extreme South Gulf Coast region, they breed in February, and off the Carolina Coast in July. My earliest record is for Munroe Co., December 5, 1924.

Family Fregatidae: Man-O'-War Birds

MAN-O'WAR BIRD. No. 128 SEE PLATE 9

Fregata magnificens rothschildi (Frigate bird, Bow-sun bird, Poison bird)

Of all the awkward ungainly water birds I have seen when on land, this bird doubtless takes the prize, but when in the air, its wonderful flight power wholly redeems it, and places it in a class of its own.

In my estimation, its flight power is only surpassed by that of the Turkey Vulture, and I have had ample opportunity to study it in flight over both the Atlantic and Pacific breeding

RED-BREASTED MERGANSER
MALE FEMALE
HOODED MERGANSER, MALE
HOODED MERGANSER, FEMALE
AMERICAN MERGANSER, FEMALE
AMERICAN MERGANSER, MALE

grounds. I am glad to say, that it still breeds, though sparingly, on the lower Florida Keys, though it is only a question of a few years before it will be driven off entirely, like the Flamingo, Spoonbill, and others. It breeds commonly all through the Bahamas.

Single individuals may be seen all months of the year sailing off our coasts and over Biscayne Bay, and easily distinguished by its great expanse of wing and long forked tail. They nest in colonies on keys or rocky islands, placing their nests of dead sticks in the mangroves, cacti, or bushes thereon, and laying only a single, white egg, unmarked. Fresh eggs may be found during March and April. Size 2.82″ x 1.92″. They are the most brittle or delicate of any large egg I have ever handled,—often breaking when being blown with the ordinary mouth tube.

So long is the expanse of the wing, that they locate their nest so that they can flap their wings while on the nest and so rise from it. From observations, I believe they are unable to rise from either the ground or water if down on it. I have seen hundreds of birds on the ground in a nesting colony, slowly dying through starvation, as they were unable to rise owing to their long wings beating the ground and their short legs were unable to assist them to arise. While on the Mexican Coast, I have taken fully grown birds from the ground in a nesting colony and placed them upon the water, and saw them drown through their efforts to rise. They procure their food from the water by out-stretching their long necks to reach it, never letting the wings or feet touch the water. The name of "poison bird" is given them by local fisherman, who think that they catch their fish by dropping some excrement which is then eaten by the fish below, and which soon becomes sick and rises to the surface, when it is then caught by the Man-O'War Bird.

Family Anatidae: (Ducks, Geese and Swan)

MERGANSER. No. 129 — SEE PLATE 10

Mergus merganser americanus (*Fish duck*, *Saw bill*)

This member of the duck family is found with us only as a rare migrant and winter visitor, frequenting the salt-water bays and streams, as well as inland lakes and ponds. Its food, the greater part of which consists of fish, makes the bird generally unfit for food, and it is, therefore, seldom shot by any sportsman who recognizes it in flight.

It is a splendid diver, often remaining under water for several minutes at a time, as well as travelling a long distance below the surface when wounded and pursued, or while catching fish. They tarry but a short while with us, arriving during November and returning northward with the schools of mullet and other surface fish as they move north during February and March.

RED-BREASTED MERGANSER. No. 130 — SEE PLATE 10

Mergus serrator (*Saw bill*, *Shell drake*)

Many of these fine diving ducks remain with us during all the winter, arriving early in November and departing the middle of March and early in April for their northern breeding grounds. Both on the East and Gulf Coasts one may find them both in salt and fresh waters, and always active in diving for their food of small fish and shrimp, minnows, shell-fish, and other forms of aquatic life.

They are handsome birds, especially the males, strong of flight, and were it not that their flesh has such a fishy flavor, many more would be killed for food by the sportsman.

Occasionally one may be seen during the summer, and it is possible that a nesting pair of birds may be discovered in Florida, even though they might have been cripples, or that their oily plumage from our crude oil-covered waters has kept them from migrating northward with others of their kind.

HOODED MERGANSER. No. 131 — SEE PLATE 10

Lophodytes cucullatus (*Hairy-crown*, *Shell-drake*, *Wooly-headed sawbill*)

This handsome bird breeds in suitable localities throughout the central part of our State, where it lays its eggs in holes in trees not far distant from some pond, lake, or river. While it can occasionally be seen in the brackish waters, it prefers the fresh water and its fish to that of the salt. The large crest or crown makes it a conspicuous bird and easily identified, though sometimes confused by novices with the "wood duck." Migrants from farther north arrive in November and December, and depart northward in early March.

Eight to twelve eggs are laid, the nesting cavity in the hollow tree being lined with dry grass and roots, and feathers from the birds' breast. Well wooded ponds or along tree-lined banks of streams are generally selected, the denser the foliage, the better. The ground-color of the eggs is pure white, unmarked, though they soon become nest stained. Size 2.20″ x 1.75″. Fresh eggs April 15th to May 1st.

The birds are expert divers, and can swim under water rapidly, where they secure most of their food of all varieties of fish and shell-fish, as well as snails and crustacean.

I have examined many specimens, shot in the famous Back Bay and Currituck Sound regions of Virginia and North Carolina, where all other varieties of duck eat some part of the abundant eel and foxtail grasses or their seeds, but I have never found these birds eating any part thereof

MALLARD. No. 132 — SEE PLATE 11

Anas platyrhyncha platyrhyncha (*Grey duck*, *Gray mallard*, *Green head*)

While the true Mallard is found with us abundantly during Fall, Winter, and early Spring, I have been informed that there is also a breeding variety with us during the summer. Possibly these are cripples which are not physically fit to migrate, but in which the maternal instinct is dominant; but only time and further study will settle this point.

Those migrating from the north reach us during late October and early November, frequenting our fresh waters, mostly, and feeding on aquatic plants, grain, seeds; and minute insect matter found in the shallow waters and ooze. As a game bird they are splendid eating and much sought after by gunners, and many are killed during the open season.

Those leaving us in migration northward depart in March and early April, when many from the Louisiana and Texas marshes also pass overhead and occasionally drop down to rest, or for a feed *en route*.

BLACK DUCK. No. 133 — SEE PLATE 11

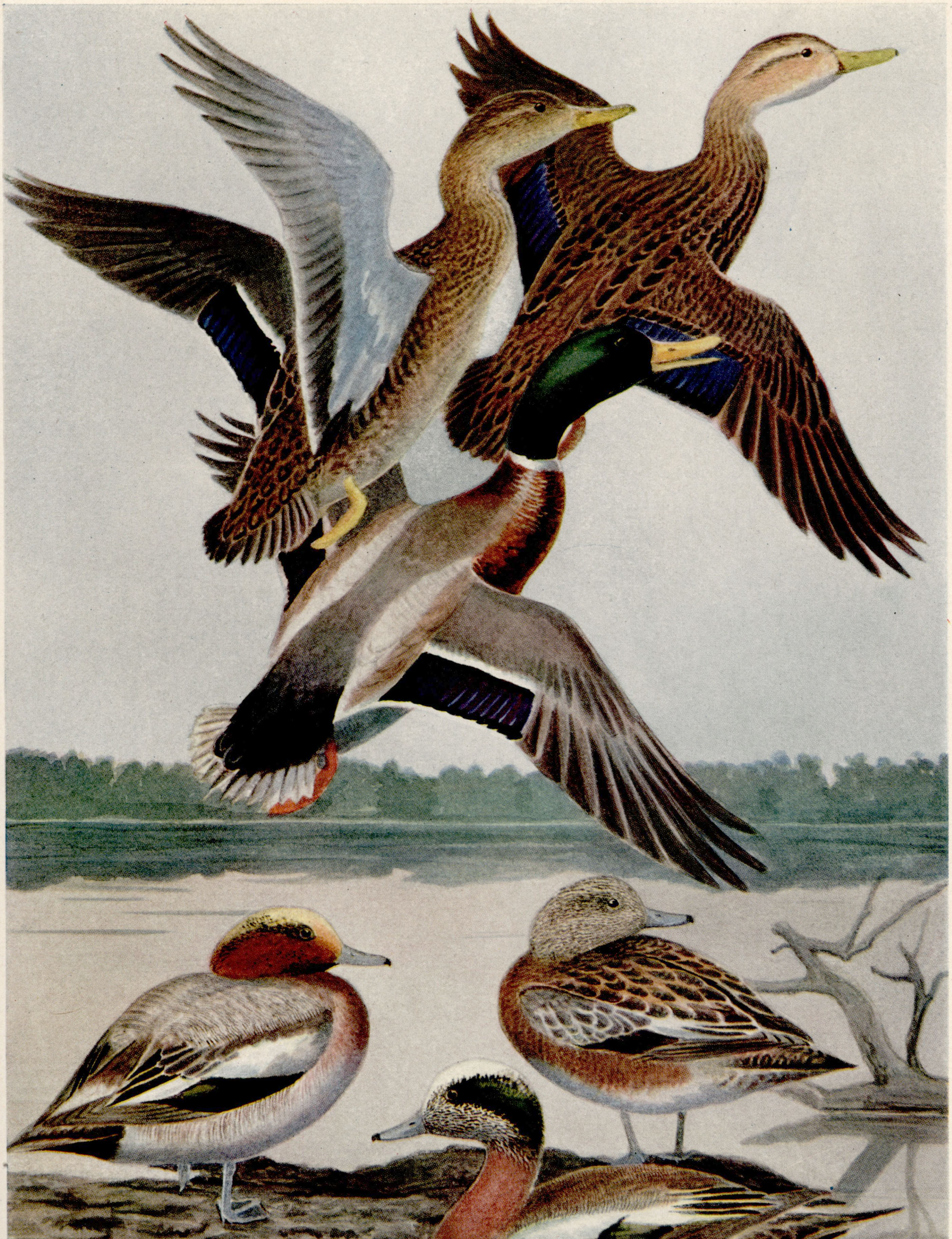
Anas rubripes (*Black Mallard*, *Dusky Duck*)

Migrants from the north arrive during December. During the winter months, the northern variety may be found in large numbers within our borders, where they can be seen and hunted mostly on brackish waters. They migrate early in February, leaving with us the following subspecies, which they rather closely resemble, and which breed commonly in the State.

While with us they feed on marine crustacea, aquatic plant, grain, and seeds, and the smaller shell fish; and, as a rule, the black ducks are generally considered good eating.

If the so-called "Red legged" subspecies migrate into our State, the writer has never seen one, nor does he recognize it as a good subspecies, after an exhaustive study and test while living in Virginia; where he raised wild ducks in captivity in great numbers, as well as seeing and hand ling thousands of specimens in Maryland, Virginia, and North Carolina.

PLATE 11



MALLARD, FEMALE FLORIDA DUCK
MALLARD, MALE
EUROPEAN WIDGEON BALDPATE, FEMALE
BALDPATE, MALE

FLORIDA DUCK. No. 134

See Plate 11

Anas fulvigula (Florida black duck, Dusky mallard)

This bird is our resident variety of the well known "Black Duck" and it breeds abundantly in suitable localities in the interior as well as East and Gulf Coasts, during April and early May. The drainage of many of its former glades and ponds is rapidly diminishing its numbers, and makes it much harder to be seen by the tourists and sportsman than formerly. Many are killed for both sport and food during the open season, and they are very good eating for a bird of such warm waters and climate.

Their food consists of small shell fish, marine crustacea, and aquatic plant life, and such seeds and grain as drop into the shallow waters which the birds frequent.

The nest is a slightly cupped depression in the ground, lined with dry grass, and placed not far distant from water. After the eggs are laid, and when the bird leaves the nest, the eggs are covered by the parent with down, the dark color of which blends with the blackish soil so well that detection is extremely difficult. Six to eight eggs are laid, the ground a light buffy or creamy white, unmarked. These soon, however, become nest stained from the damp ground and nesting material.

Fresh eggs, April 22nd to May 15th. Size 2.25″ x 1.65″. I have found it common as a breeder in the brackish waters of the East Coast, especially from Merritt's Island to Cape Sable.

GADWALL. No. 135

See Plate 13

Chaulelasmus streperus

This fine duck is found with us in numbers during the winter months, principally in the fresh water lakes, streams, and marshes. It is always fat, and considered excellent eating, and many are killed during the open season.

They arrive during early November and depart during March. They are found in company with the mallards, teal, shoveller, and other marsh loving ducks, though they may be found at times in brackish waters.

Their food consists of vegetable plant life, seeds, and grain; and some snails and aquatic insect life found in the shallow waters that they frequent.

EUROPEAN WIDGEON. No. 136

See Plate 11

Mareca penelope (Red-headed widgeon)

This duck of the Old World is rather a rare straggler to our State. Its flight, habits, food, and sporting qualities are similar to the following species. Most sportsmen think it is a cross between the American widgeon and the Red-headed duck, but this of course is incorrect.

I have a late record, the specimen which I have personally examined, a male bird shot by V. T. Worley, near Tituesville, Indian River, Brevard County, Florida, in December, 1918. This bird is mounted and was in the possession of M. S. Jones, at the time I examined it. No doubt many birds reach our State during the winter, and are overlooked or not seen, for there are many records of these European birds having been shot in most of the Atlantic Coast States.

BALDPATE. No. 137

See Plate 11

Mareca americana (American widgeon, Ballface)

Classed as a marsh and fresh water duck, this bird ofttimes strays to brackish waters, when the food taken while there, ruins its reputation as "one of the finest table ducks known." I have found them invariably fat, and fortunate, indeed, is the sportsman who can get a pair or two of these fine birds in the day's bag limit. They spend the winter with us in suitable localities,

migrating northward in early March toward their breeding grounds, having arrived during late October and early November. They are not so abundant as the other marsh ducks, and are rather rare on the Gulf Coast.

Their food while with us consists of aquatic and marine plant and insect life, together with seeds and grain. Along the Indian River they feed in company with Redheads, Scaups, and Canvas-backs, often eating the roots and stems of the vegetation pulled by these diving birds, from the bottom of the river or bay.

GREEN-WINGED TEAL. No. 139 — SEE PLATE 12

Nettion carolinense

This small duck arrives from the North early in October and is found abundantly in our inland ponds, streams, and lakes. Large numbers resort to Lake Okeechobee and are shot by gunners there. Both male and female are easily distinguished by the green feathers in the wings. They are excellent eating and unusually fat and tender, while in flight they are considered by everyone as one of the swiftest of all the water-fowl. I have seen quite a large flock in South Florida as late as April 10th, but the main body of migrants has gone northward by March 15th.

Their food consists of all varieties of grain, seeds of plants, and grasses growing in and around the waters they inhabit; vegetable matter and some snails, crustaceans, and insect matter.

BLUE-WINGED TEAL. No. 140 — SEE PLATE 12

Querquedula discors (Summer teal)

Like the former species, this is a very small duck, the majority arriving in small flocks from the north in September and early October. It mainly inhabits our fresh water streams and lakes, feeding on the various grasses and mosses and aquatic plant roots, found growing along the shores and from their bottom. Beetles, snails, flies, and crustaceans are also eaten. One may easily distinguish it from other ducks by the blue feathers in the wing of both male and female. They do not breed with us, leaving for their northern home during April, though I have seen a few stragglers in South Florida as late as the 10th of May. These are possibly birds that have come up from Central or South America and have dropped down to rest and feed; for while many winter in all our South Atlantic States, some prefer to go on farther south.

It is possible that some of these birds, seen so late in the season, really remain and breed and so would be classed as the "Southern Blue-Winged Teal."

SOUTHERN BLUE-WINGED TEAL. No. 140A — SEE PLATE 12

Querquedula discors albinucha

I have seen numerous pairs of "Blue wings" in the Cape Sable region and lower glades as late as May 12th, and always male and female together; and believe they are breeding in that vicinity, though I have not actually found nests. These birds that remain in the south during the summer have been separated into another form,* though our tourist or casual observer will find little difference between them. Their food, actions, and general habits are similar, nor is there a very great difference in the plumage of the two forms.

* Auk, vol. 36, 1910, page 455.

CINNAMON TEAL. No. 141 — SEE PLATE 12

Querquedula cyanoptera

This small duck is a rare winter straggler to our state, having been recorded from several places covering a period of several years. Probably the best record of its capture is one given by

FEMALE BLUE-WINGED TEAL MALE

MALE GREEN-WINGED TEAL FEMALE

MALE CINNAMON TEAL FEMALE

S. N. Roads.* This bird was shot by Mr. Chas. S. Hebard, on Lake Iamonia, February 18th, 1893. Other specimens have been taken on Indian River from time to time, and I have no doubt that they occur as often as do the European Widgeon.

Williams records one from Leon County, Florida on November 17th, 1906.† So far, I have not personally collected one in Florida, though I am quite familar with the birds after a lengthy sojourn in California where they are very common both as a breeder and winter resident.

They are handsome little ducks as one will see by the plate, while their food and habits are similar to the other two varieties of teal. They are a western bird, and so do not breed in Florida, southwestern Texas being their nearest breeding ground to us.

* Auk, vol. 10, page 362.
† Auk, vol. 24, page 158.

SHOVELLER. No. 142

See Plate 13

Spatula clypeata (Spoonbill)

This large handsome duck while not so common as several other varieties found within our borders during the winter months, is a fairly common winter resident. They inhabit the fresh water streams and lakes, dabbling in the ooze of the soft shallow bottoms and shorelines, as do our domesticated puddle ducks. The peculiar shape of their bill, which is lined inside with bristles and in shape resembles that of a spoon as the name implies, makes both male and female easily distinguishable from all other members of the duck family.

They arrive from the north generally in company with the mallard and baldpates during October and early November; and depart northward during March and April, many going as far south as South America to spend the winter, and I have seen them in Mexico in numbers during February. Their food consists of aquatic plants, insect matter, and crustaceans; which is sifted through their peculiar shaped bill while feeding, and the refuse being ejected in a constant stream near the base.

As an article of food, they rank with the other marsh ducks, but are much inferior to the diving ducks like the "Canvasback" or "Red-head."

AMERICAN PINTAIL. No. 143

See Plate 13

Dafila acuta tzitzihoa (Sprig, Sprig-tail)

This fine table bird is a very common duck in all suitable localities in our State. It sometimes may be seen in our brackish streams and bays, but it is generally found in fresh water. It is easily shot over decoys and, when fat, is excellent eating. Both male and female are recognized by their slender neck, pointed tail feathers, and narrow bill. They do not breed with us, arriving during late September and October, and returning northward in March, though a few may remain well into April.

Their food consists principally of roots and blades of aquatic plants and their seeds, and numerous forms of insect life found in the waters they inhabit. Shrimp and crustaceans are also taken, and grain from the ponds, baited by the gunners during the hunting season, are eagerly devoured.

BAHAMA PINTAIL. No. 143a

See Plate 13

Parcilonitta bahamensis

We have this bird on our list only as a rare straggler to our shores, for up to this writing (May, 1924), only a single specimen has been recorded as having been seen or taken in the United States, and that one was taken by Mr. Gardner Perry at Cape Canaveral, Fla., in March, 1912. They are, however, very common in the Bahamas where they breed, and they may be distinguished from the regular Pintail by their white face.

Their food, habits, etc., are no doubt similar to the American Pintail.

WOOD DUCK. No. 144

Aix sponsa (*Summer duck*)

SEE PLATE 13

This handsome duck remains with us the year around, and is found breeding early in the spring in hollow trees near fresh and brackish water. I have noticed young birds about a week old following their parents the first week in May. The male, a most gorgeous-plumaged bird, was formerly shot in large numbers for the feathers, used in making artificial fish flies, but after having been almost exterminated, they are now rapidly increasing and, I am glad to say, under both wise State and Federal laws.

The nesting cavity in a stump or tree varies in height from 10′ to 30′ up, and is lined with dry grass and down, and the eggs, which are laid from March 10th to early April, number from seven to fourteen.

These eggs have a buffy-white ground, unmarked; size 2.05″ x 1.50″. The young on being hatched are carried to the ground or nearest water on the back of the parent. While many are killed for food during the open season, it is hard to realize how anyone can pluck and prepare for the oven such a gorgeous plumaged bird. Some few non-resident birds are found with us during the winter months, these generally leaving in early March.

The food of the Wood Duck, consists of acorns; seeds of both plants and shrubs found growing in the waters and on the adjacent lands; roots and stems of aquatic plants, and many varieties of insect life. Small minnows or fish fry are also taken, but not abundantly. There has been a great deal of discussion of late years as to just how the young reach the ground from the nesting cavity, some having seen the young ducklings merely tumble from the hole, while others have actually seen young carried by the bill or on the parents' back *en route* to the nearest water. All three modes are no doubt correct.

RED-HEAD. No. 146

Nyroca americana (*Pochard*)

SEE PLATE 14

This fine large duck is one of the best of wild water fowl, and eagerly sought after by gunners in all sections of the country that they inhabit. They do not care for strictly salt water, while with us, feeding on the tender plants growing in the fresh water streams and slightly brackish bodies of water. They do not breed with us in Florida, arriving from the north early in November, and leaving the last of February and early March.

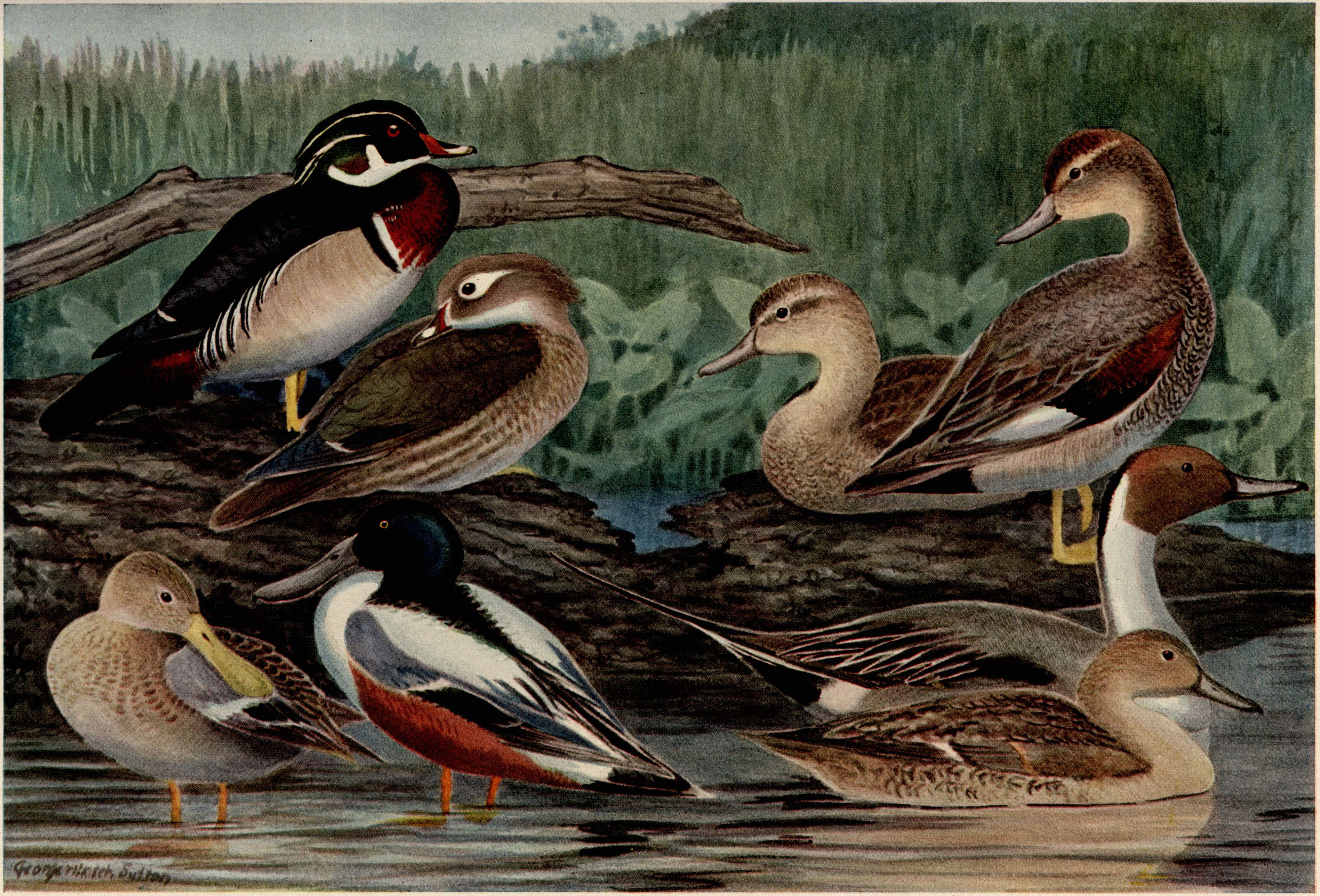
Fox-tail grass, wild celery and the roots and seeds of most of the aquatic plants are eaten, and this with the lack of fishy food, makes the flesh of the "Red-head" extremely palatable. At times the smaller crustaceans are eaten, but not as a general article of food. Large numbers resort to Lake Okeechobee and Indian River during the winter months, where they may be seen in rafts or dense flocks on the surface of the water. They dive deeply for their food, and I have often watched them from a blind, supplying the Widgeon, though unintentionally, with the roots and seeds of plants that they (Red-heads) had brought up from the bottom.

CANVAS-BACK. No. 147

Aristonetta valisinera (*White-back*)

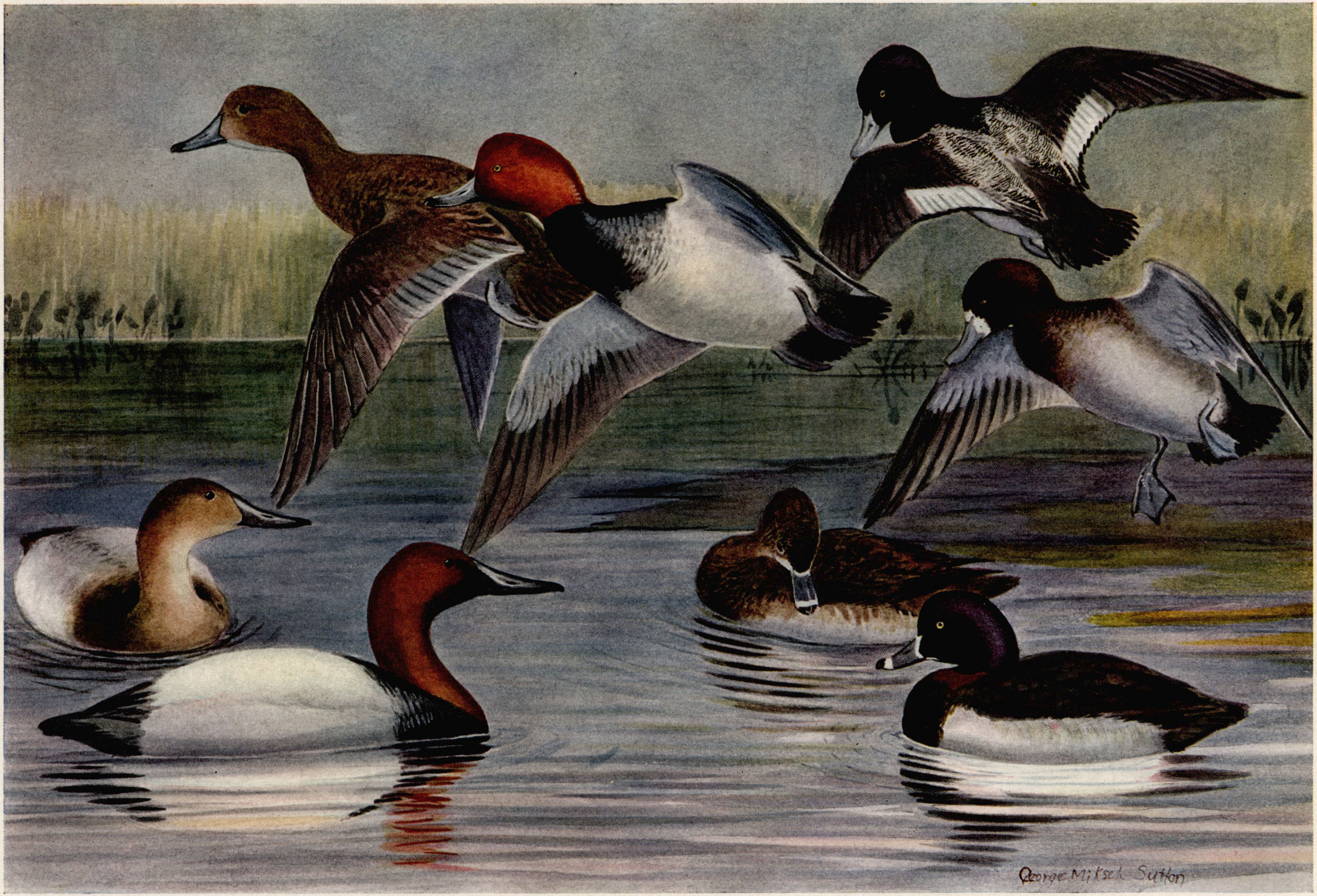
SEE PLATE 14

By the sportsman and epicurean this is considered the finest of all the wild ducks, and commanded the highest price in the markets and restaurants before the stoppage of the sale of wild water fowl. I have seen prime birds, which weighed as much as 8½ pounds to the pair; and truly lucky is the sportsman who can bag such birds. They inhabit only the brackish and fresh water bodies while with us in winter, arriving from the north the last of all the water-fowl family, during December and January, and remaining but a short while; February seeing the majority moving northward again.



WOOD DUCK, MALE
WOOD DUCK, FEMALE
SHOVELLER, FEMALE
SHOVELLER, MALE

GADWALL, FEMALE AND MALE
PINTAIL, MALE
PINTAIL, FEMALE



REDHEAD, FEMALE AND MALE
LESSER SCAUP OR BLUEBILL, MALE
LESSER SCAUP, FEMALE
CANVASBACK, FEMALE
RING-NECKED DUCK, FEMALE
CANVASBACK, MALE
RING-NECKED DUCK, MALE

Its food consists of aquatic plants; the roots and blades all being eaten, which it dives for and pulls up from the bottom of the river, bay or stream and devours whole. Seeds of these aquatic plants are also taken, but the common eel and fox-tail grass of our semibrackish waters is the principal food taken all along the Atlantic Coast.

SCAUP. No. 148

SEE PLATE 14

Fulix marila nearctica (Black-head, Blue-bill, Raft duck)

This small duck at times is fairly common on both the Atlantic and Gulf Coasts of our State, but not nearly so common as the following species which it closely resembles, though larger. We find them mostly in the brackish streams, though occasionally in the fresh bodies of water, though they are not as good eating after having fed on the salt-water shell fish, crustacea, and plant food, as those that have fed entirely in fresh water. As a rule they are always fat. They arrive in small numbers during December, staying sometimes as late in the Spring as March before migrating northward. They are expert divers and procure most of their food from the bottom of the bodies of water they inhabit, often at a depth of 6 feet. Roots of plants found growing on the bottom are eagerly eaten, after having been pulled up by these ducks, similar to the Canvasback.

The gunners make little distinction between this variety and the Lesser Scaup or Little-black head.

LESSER SCAUP. No. 149

SEE PLATE 14

Fulix affinis (Blue-bill, Raft duck, Little black-head)

This fine little fellow is the most common duck in Florida during the winter months, arriving early in November, and remaining until late Spring. I have found them in numbers still with us in early May, along the Indian River; and my last record is May 10th, for the Cape Sable region. They inhabit our brackish waters almost as extensively as they do the fresh water ponds and streams, and if not molested, soon learn to feed in proximity to the shores, as well as feeding sometimes from a person's hand.

Their antics are watched with pleasure by our tourists, and those towns having water frontage do not allow them to be killed or molested within their corporate limits.

They travel in great numbers and are known locally, in many places as "Raft ducks," on account of their dense formation when upon the water. I have seen quite a number in the Indian River during July, August, and September and believe these remained through the year, though all are non-breeders. Their food consists of all manner of marine insect and vegetable aquatic life, and when around the townships having sewers emptying into adjacent waters, these birds become scavengers, and large numbers may be seen feeding near by. Many go farther south, even to Central America, to spend their winters, and these are probably the ones that we see in our waters during April, or later.

RING-NECKED DUCK. No. 150

SEE PLATE 14

Perissonetta collaris (Blue-bill, Raft duck)

So closely is this fine little duck related to the former species that it is generally mistaken for it. Their food and habits are also similar to the preceding species and often they travel in company with the "Scaups." They are, however, not so common in Florida as either of the "Scaups," though more common along the Indian River than farther south or on the Gulf Coast.

They arrive during November and depart in March. Those studying our waterfowl during the winter season, will have to look closely to discern the dark chestnut-band on the neck of the male bird of this species, especially when in company with a flock of Scaups; or the bluish-white band across the base of the bill of both male and female.

I have seen "rafts," or flocks of these birds when in company with "Scaups" so dense on both the Indian River and Lake Okeechobee, that they covered acres and acres of water, and the amount of aquatic plants and seeds taken by such large numbers of birds can hardly be estimated. As an article of food they are not classed as "the best," but, if fricasseed, are fair eating.

GOLDEN-EYE. No. 151 — SEE PLATE 15

Glaucionetta clangula americana (Iron-head, Whistler, Whistle-wing)

The Golden Eye, is not a very common winter migrant to our salt and brackish waters, where it feeds on marine crustacea and small shell fish. A few may, however, be seen in Indian River and Biscayne Bay, while on the Gulf Coast, they are rare visitors.

At times they eat quite a quantity of the marine grasses and their roots, but prefer animal matter. In our western area, we have records of its occurrence at De Funiak Springs, on December 5th, 1907, and again on November 20th, 1909. I have also seen several on Lake Ockeechobee, during early Spring, in March. They are not a good table duck, and the gunner who can recognize them had best save his charge for some more toothsome bird, like the Teal or Scaup, for the character of their food makes them a very strong or highly flavored bird.

BUFFLE-HEAD. No. 153 — SEE PLATE 15

Charitonetta albeola (Wolley crown, Butter-ball)

This small duck is not an abundant species within our borders, and is often mistaken for the Teal, by the gunner, on account of its size. In years past, it was killed in great numbers for market, further north, being served on the menu by the restaurants and hotels as individual orders of teal and butter duck, being about enough for one person. They are usually found alone or in single pairs, inhabiting some small stream or pond, and prefer fresh to brackish, or semi-salt water. They are not common in South Florida, and are seldom seen in the Gulf Coast area.

Their food consists of aquatic plant life and seeds, together with the smaller marine animal life, such as snails, shrimp, crabs, fry, and crayfish.

They arrive during November and depart northward in March and early April. Williams reports one from Lake Jackson, Leon County, December 7th, 1908.

OLD-SQUAW. No. 154 — SEE PLATE 15

Claugula hyemalis (Long-tail, South southerly, Old-wife)

This species does not often occur with us in numbers, depending much on the weather conditions farther north. They prefer the salt waters, feeding upon the grasses and marine crustacea found therein, in preference to fresh water. They associate little with other varieties of duck, except when migrating with and inhabiting the same waters as the "Scoters." Judging from seeing them nearly always in pairs during the winter, the majority remain mated throughout the year, and migrate northward together in the spring.

As an edible duck they are not a success, the flesh being tough, stringy, and fishy. They remain with us only during the extreme cold weather farther north; arriving late, and migrating early. They have been seen as far south as Lake Worth,* and also have been noted in the Gulf. Their food consists of shell-fish, marine plant life, fish, and insect life, while in the Chesapeake Bay and waters between the mainland and islands off the East coast of Virginia, I found they ate a large amount of eel grass, or wide blade celery.

* Cory, Auk, vol. 12, page 188.

BUFFLEHEAD, FEMALE
BUFFLEHEAD, MALE
AM. GOLDEN-EYE
OLD SQUAW, FEMALE
FEMALE
MALE
OLD SQUAW, MALE
HARLEQUIN DUCK, MALE

HARLEQUIN DUCK. No. 155 See Plate 15

Histrionicus histrionicus

This handsome duck prefers the more northern waters, and a colder climate in which to winter than our southern shores offer, and so a record of its occurrence in this State is of special interest.

It has been taken but once,* to my knowledge; at Pensacola, on March 20th, 1886, so our tourists and residents are not likely to meet with it.

* A. O. U. Check List, 1910, page 78.

SCOTER. No. 163 See Plate 16

Melanitta americana (Sea duck, Sea coot)

This large duck is found within our borders only on the deep salt water, and is, therefore, seldom seen by the tourists other than the fisherman. They procure their food of marine crustacea, sea kelp, and grasses; both from the surface of the water, and by diving. Their flesh is very dark colored, usually very tough, and always fishy; so they are killed but little by the gunners for sport or food.

Those fishing out in the Gulf Stream during the winter months, or coming south on the steamer, may see this large black duck riding the waves in a most contented manner, or flying back and forth from one kelp bed to another in small flocks of from six to eight, or even in single pairs.

They arrive during late November and depart during early March, for they go north as far as Hudson Bay before breeding.

WHITE-WINGED SCOTER. No. 165 See Plate 16

Melanitta deglandi (Sea coot)

Like the former species this fine large sea duck inhabits only the briny deep while with us; its food and habits being similar to that bird also. They are, however, much more common, and they can be distinguished at some distance by the white patch on the wing, and at close range by a small white spot above the eye.

They arrive during November, and depart in March. Visitors coming down from the north on the steamers during the winter, may see many of these birds in the open ocean, while occasionally scattered flocks may be seen all down our coast line near the surf line and beach. Thousands of these birds are being killed annually by coming in contact with the crude oil, which has been pumped overboard by the steamers; which saturates their feathers and renders the birds unable to secure food.

SURF SCOTER. No. 166 See Plate 16

Melanitta perspicillata (Sea coot)

This duck like the two former species, is a bird of the deep salt waters. Its food and habits are also similar, and unless seen by the tourists *en route* to Florida by boat from some northern port or while fishing in the Gulf Stream, they are not likely to be seen. Like the other Scoters, their flesh is unfit for table use on account of the salt water food they consume. As they are an extremely large duck, with no white on either head, wings, or body, identification is, therefore, rather easy. They arrive during November, and depart in March. A few birds have been seen in the Gulf, but they are not abundant there.

They have been seen in large flocks in Lake Worth, off the East Coast, and during severe cold weather farther north, which no doubt greatly helped in driving them farther south than they would otherwise have migrated. Their food is similar to that of the other "Scoters," consisting of marine crustacea and vegetable matters.

RUDDY DUCK. No. 167

SEE PLATE 16

Erismatura jamaicensis (Wire tail)

This fine little fellow inhabits the fresh waters almost entirely while with us, feeding on the aquatic plants and their seeds and roots found growing therein, which make them especially fine as a table delicacy. They are one of the fastest of the ducks when in flight, and a truly good shot is the gunner who can bag one when it is flying with the wind.

They arrive during October and remain until late March, and are fairly common in the Gulf Coast area; Lake Okeechobee; and the Indian River marshes.

I have always marveled at the size of the egg this small bird lays, and wondered how the female can cover and hatch from seven to nine such large eggs. I have found, while collecting in California, sets of seven Ruddy and six Cinnamon teal eggs in a nest belonging to the Ruddy, and there have been other cases where Ruddy eggs and other species of duck eggs have been found together.

GREATER SNOW GOOSE. No. 169A

SEE PLATE 17

Chen hyperboreus hyperboreus

This fine large goose is found only as a rare straggler along our coast line, feeding upon the marine sea weeds and grasses, as well as seeds (including sandspurs) and roots of grasses growing on the ocean beaches. It is truly a salt-water bird, and as its flesh is both tough and stringy and has a musty odor, it is seldom eaten. I am more familiar with this bird on the Virginia Coast, where it is common each year during the cold weather of January and February.

No doubt those that visit the Gulf area have flocked, or have been in company with the Blue Geese, which are common on the Louisiana and Texas coasts and marshes during the winter months.

They remain only a short time within our boundaries, generally from November to February, returning to the artic circles to breed.

Pennock records a bird from the Gulf, secured by him from some duck hunters, that was taken on the coast south of St. Marks, Wakulla County, November 23, 1918.* Four birds were seen in a flock at Ponta Rassa, Florida, and one taken by Mr. J. W. Atkins of Key West.†

* Wilson Bull., No. 109, page 114.
† Auk, vol. 5, page 183, April, 1885.

BLUE GOOSE. No. 169.1

SEE PLATE 17

Chen caerulescens

Countless numbers of these fine, large geese pass skyward Spring and Fall across our State, *en route* to the Louisiana and Texas marshes, where they remain during the winter, feeding upon the marine grasses and seeds of the coastal streams and bayous. Occasionally, one becomes lost, tired, or hungry, and stops within our borders to rest or feed, but he is a rare straggler and the taking of specimens is seldom recorded.

An early record was one taken at Fort Jefferson, Tortugas, April 5th, 1859, by Capt. Woodbury, and this specimen is now in the National Museum collection, No. 11897.

Mr. W. L. McAtte took a specimen at St. Vincent Island on November 1st, 1910.*

They repass northward again in March, for their breeding grounds in the Artic circle. As the waterfowl becomes more numerous on the big Louisiana game reservation, no doubt records of the Blue Geese on our Gulf Coast will become common.

* Auk, vol. 28, page 273.

SURF SCOTER, FEMALE, MALE
SCOTER, FEMALE, MALE

WHITE-WINGED SCOTER, MALE, FEMALE
RUDDY DUCK, WINTER

WHITE FRONTED GOOSE. No. 171A SEE PLATE 17

Anser albifrons gambeli (Hypothetical list)

Few of these fine birds stay within our borders, being found mostly on our Gulf Coast, and then only as stragglers of the main band which have passed on to the Louisiana and Texas marshes and bayous. There they arrive in November and pass the winter months, feeding upon the berries, seeds, acorns, grain, and water grasses; while sprouting-grain in the field is well liked. They pass northward again during March and no doubt are at times quite common on the Gulf Coast. Cory* records, "Specimens having been taken in northwest Florida, but never took them in person." Nor do I know of a skin of this bird having been taken in the State, and being preserved.

* Cory, Chas. B., "Hunting and Fishing in Florida," page 236.

CANADA GOOSE. No. 172 SEE PLATE 17

Branta canadensis canadensis (Honker, Wild goose)

This bird is the most common and best known of all our wild geese. It feeds while with us mostly in the brackish and salt waters, though I have found it at times feeding in fresh water lakes during migration.

They feed upon the roots and stems of water grasses and seeds found growing therein, and often take to the fields for the farmers grain while still in the shock, and more often at night than during the day time.

I have raised numbers fairly easily in captivity, and farther north they are raised in large numbers by and for the gun clubs, where they are used as decoys. They make nice pets, are good watch dogs and resent intrusion by anyone or anything within their nesting area during breeding time. Young geese are excellent eating, but an old one is a tough proposition. When crossed with the tame goose, they become sterile, though excellent for food.

Few remain permanently with us during the winter, the majority passing over to the Gulf Coast and down to Texas and Mexico. Occasionally I have heard them passing over *en route* southward on a moonlight night during the winter; and the "honk-honk" slowly repeated until they have passed beyond hearing distance, carried me back to nights spent on the Virginia and Carolina Coasts where the noise made by thousands of these birds on their feeding grounds, made sleep almost impossible.

The majority pass southward in November, and return northward again during late February and March. They are rather common on our Gulf Coast at times as far north as Dickerson Bay, while Pennock reports them as common in the bays and shallow rivers on the coast southeast of Tallahassee, in Wakulla, Jefferson, and Taylor Counties.

HUTCHINS GOOSE. No. 172A SEE PLATE 17

Branta canadensis hutchinsi

It is more than probable that these birds occasionally visit the State with the flocks of Canada geese, and their presence is unnoticed—for this often happens in the large areas of Back Bay, Virginia, and Currituck Sound, N. C.; as the birds pass northward in the Spring, after their sojourn in our southern waters.

They feed, as do the Canada geese, and by many would be mistaken for them; for they are only of smaller size and little difference in the plumage.

They are found abundantly in the Louisiana bayous and marshes, as well as in Texas; but the majority migrate by the Mississippi Valley route to and from their summer home in Alaska, and territory adjacent to Hudson Bay.

From actual records however, we know it in Florida only as a rare straggler, one having been found dead near St. Marks on March 12th, 1918 by C. J. Pennock.*

* Wilson Bull., No. 109, page 114.

BRANT. No. 173A — SEE PLATE 17

Branta bernicla glaucogastra

The brant is a bird of the cold waters, wintering regularly south to the North Carolina Coast, and occasionally straggling farther south. It feeds on marine grasses and crustaceans; eel-grass in particular forming the greater part of its food.

Baird, Brewer and Ridgway* give the southern limit of these birds' winter migration range as Florida, but there is no actual records or definite information as to any being secured, and the records kept of their capture. Cory† mentions, "several killed on the Florida Coast," but dates of capture—or specimens were not preserved. It is no doubt probable that some of these fine little geese find their way as far south as our eastern area, for our larger bays on the east coast offer an abundance of the food they like so well; while there is also plenty of food in the shape of kelp and sea grasses in the ocean off our coast line; and the birds often feed out in the open sea, for I have seen them by the thousands off the Virginia coast.

* "Water Birds," vol. I, page 470.

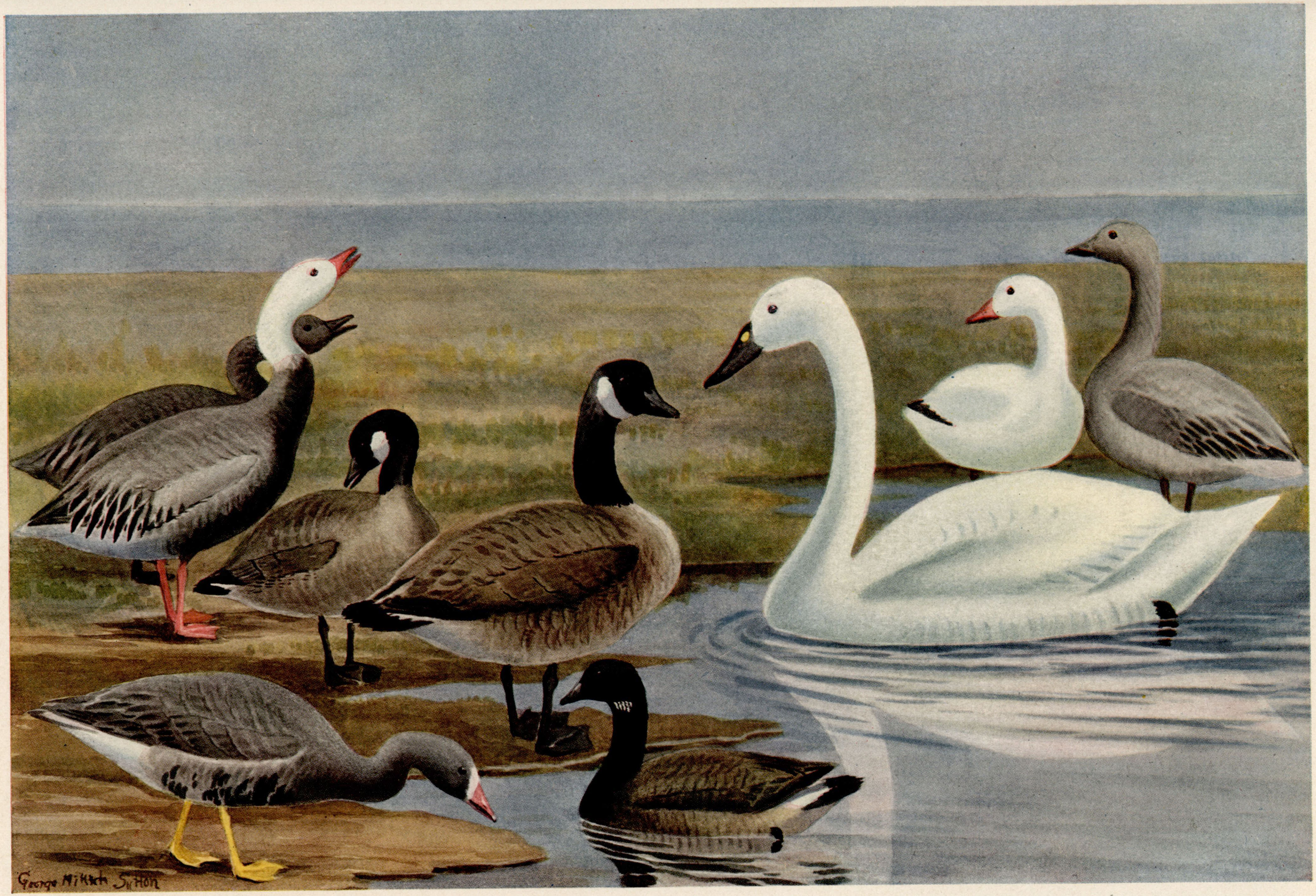
† Cory, Chas. B., "Hunting and Fishing in Florida," page 240.

WHISTLING SWAN. No. 180 — SEE PLATE 17

Cygnus columbianus (Wild swan)

This handsome large bird was no doubt much more abundant in the state in years gone by, but it is now restricted to stragglers within our borders, principally on the Gulf Coast. I have in other states, however, seen large flocks of these magnificent birds feeding upon the roots and the grasses growing from the bottom of the brackish water, rivers and bays. They feed in shallow water, either by reaching down their long necks and pulling off the tops of the grasses, or by treading out the soil from around the roots of the plants and then reaching down and pulling up the entire plant. The writer while working among the water fowl in Back Bay, Va. and Currituck Sound, N. C. some years ago,—discovered that the so-called goose and swan disease known as the "Cukes" (derived from the noise made by the sick bird) was really caused by lead poisoning. So much lead shot had been discharged into those bodies of waters by the gunners,—and such countless numbers of birds had exhausted the gravel from the bottom of the bays, that the birds then picked up the lead shot thinking them gravel. These shot had been ground up in the birds gizzards, passed on into their system and been absorbed, and this had so weakened them, that digestion of further food was impossible. As a rule they then died from stoppage of the oesophagus, between throat and gizzard. I have taken as high as a 117 separate pellets of lead shot from a single swan's gizzard and there was no way of telling how many previous shot had become triturated and been absorbed by the bird, previous to capturing it.

At times a few birds pass over us during December bound for the Gulf Coast farther south; returning northward again in February; but their main winter habitats on the Atlantic Coast are in Chesapeake and Back Bays, and Currituck Sound, where our winter tourists while coming southward in their yachts should see them.



BLUE GOOSE, IMMATURE AND ADULT
WHITE-FRONTED GOOSE
HUTCHIN'S GOOSE
CANADA GOOSE
BRANT
GREATER SNOW GOOSE, ADULT AND IMMATURE
WHISTLING SWAN

FLAMINGOES

Family Phoenicpteridae: Flamingoes

FLAMINGO. No. 182 SEE PLATE 18

Phoenicpteridae ruber (Flamingo)

This bird formerly bred in the state, near Cape Sable, but has been driven out by the hunters and plumers. The last records of breeding birds being killed was in 1907 when five were shot near Cape Sable, and their skins, together with many heron plumes were shipped to Cuba, *en route* to France.

They may still be seen alive in their wild state on several of the islands of the Bahama Group and in Cuba, where they still breed in colonies; though they are a mere remnant of the countless numbers of former years. The natives still gather their eggs and young as an article of food, also the old birds after they have moulted their flight feathers; but with decreasing numbers, and with the Bahaman Government now protecting them to a certain extent they are not on the bill-of-fare as commonly as in former years.

The latest record of its capture on the upper East Coast was at Lake Worth, Palm Beach County, May 1905,* and two specimens killed as late as 1921 at Cape Sable, South Florida. They lay but a single egg in the slight depression on top of the marl mound made by the birds each season; and if undisturbed will return to the same nesting ground another year, provided the surrounding waters are high enough, and their favorite food is abundant. Their food consists mainly of a small marine shell or mollusk taken from the bottom of the shallow lagoons; as well as other small crustacea, but when reared in captivity they grow well on grits, corn-meal, rice and later whole grains, shrimp and chopped fish or conch. The writer has spent considerable time and money, and at great risk at times, studying these handsome birds in the Bahamas. I fear we shall never hear of a record of a bird in its wild state being found again within the borders of Florida or even the United States unless some tropical storm should blow it to our shores.

Fresh eggs may be found from May 10th to June 15th, a full set usually being a single egg, and which has a rough and heavily pitted creamy-white surface; which is partly covered with a white, chalky layer of lime. The eggs soon become nest stained, giving them a yellowish tinge. Size 3.50″ x 2.25″.

They were still quite common and bred in vicinity of Cape Sable during March or April, 1890,† and were taken on the Gulf Coast at Warrington as late as 1881.‡

* Auk, vol. 25, page 313.
† Scott, Auk, vol. 7, page 221.
‡ O. and O., vol. 10, page 158.

Family Plataleidae: Spoonbills

ROSEATE SPOONBILL. No. 183 SEE PLATE 19

Ajaia ajaja (Pink curlew)

The end of this beautiful and peculiar shaped bird in Florida is not many years distant, though a small colony or two still exist in the East and Gulf Coast areas. They have been shot by the natives for food, as well as by the "plumers" for the millinery trade, until few remain of a countless number which might have been seen by the tourist in the ponds, lakes, and rivers of

our state. The majority of visitors to Florida, remark on the scarcity of bird-life seen, and when it is too late, we will realize what an asset it would have been to us to have had such beautiful birds still remaining in our waters. Their food consists of small fish, snails, and other marine life found on the bottom of the shallow bodies of water, in which they feed, and while not a beneficial bird, they are not injurious.

They nest in colonies, placing them in the Mangrove trees or bushes from ten, to thirty feet up, and constructing them of dry-sticks and twigs, well placed and woven together. The eggs number two or three; a beautiful grayish-white ground color, spotted and blotched with reddish-brown and sepia. Size 1.75″ x 2.55″.

Fresh eggs may be found from January 20th to February 15th, and by April the majority of the young are able to care for themselves.

It is a great pity that such a wonderfully made and colored bird as this, and the Flamingo should be sacrificed for the few dollars gained by the plume hunters, who send their skins abroad by way of Cuba.

Family Threskiornithidae: Ibises

WHITE IBIS. No. 184 — See Plate 19

Guara alba (*White curlew*)

The White Curlew, as it is usually called, is still abundant throughout our State in suitable localities, notwithstanding it is classed as a game bird and shot all winter by gunners; and during the summer by the Indians and many natives. It may be seen stalking along the shores of the shallow streams and marshes, its head and neck outstretched to its full length in search of its food; or standing motionless like a heron, on one leg, with neck crooked and drawn down upon its back. The peculiar rapid wing beats, white wings tipped with black, the crooked neck and bill; make it a bird easily recognized in flight. Its food consists of all manner of marine insect life, both fresh and brackish as well as crawfish and frogs. A small snail about the size of a pea or a buck-shot is also abundantly taken from the ooze in the bottom of the glade ponds and streams.

They nest in colonies, in the tall myrtle, mangrove, or lower clumps of cypress; in hammocks out in the glades, or on the edge of a stream or lake. The nest is a well made slightly cupped structure of dry sticks and twigs, and lined with fresh leaves placed from ten to thirty feet from the ground as a rule. The eggs number two or three to a full setting. The ground-color of the eggs varies from a grayish to greenish or bluish white, heavily blotched and sparingly specked with reddish-brown and umber. Fresh eggs, March 25th to April 20th. Size 2.35″ x 1.55″

SCARLET IBIS. Nos 185 — See Plate 19

Guara rubra (*Red curlew*)

Like the Flamingo, this bird if ever seen alive again in the State would constitute a remarkable record. They were never as abundant as the other ibises, occurring more as stragglers than regular migrants or residents; though in Audubon's time they were quite numerous.

The last State record that I know of, was a specimen seen by one T. E. Hart, during the month of (April or May) 1888; presumably on the Gulf Coast between Fort Meyer and Cape Sable.* While I have heard of much later records, they cannot be verified by actual specimens, so I am therefore refraining from giving them. I do believe, however, that this beautiful bird has been a migrant within our boundaries many times since 1888.

* See Auk, vol. 8, 1889, page 15.

WHITE IBIS, YOUNG
WHITE IBIS, ADULT
GLOSSY IBIS
WHITE-FACED GLOSSY IBIS
WOOD IBIS
ROSEATE SPOONBILL
SCARLET IBIS

GLOSSY IBIS. No. 186 — SEE PLATE 19

Plegadis falcinellus

This handsome bird is now one of the scarcest water birds found in Florida, and found only along the inland streams, swamps, and glades, where they feed upon various forms of insect life, as well as snails and snail eggs, small fish, turtle, crawfish, lizards, and frogs.

Formerly abundant in the State, birds now seen should be recorded. On March 3rd, 1921, I saw a small flock in the glades near the end of the Tamiami Trail, about 30 miles west of Miami, Dade County.

My friend, Gilbert R. Rossignol collected on March 5th, 1909, a set of eggs from a nest on an island in Lake Kissimmee, and secured the parent birds. The nests are made of small sticks, slightly cupped to receive the two or three eggs laid; the ground-color of which is a greenish blue; unmarked. Size 2.10″ x 1.55″.

On account of the territory inhabited, generally the most wild and impenetrable, our tourists are not apt to see them, as they motor along the roads bordering our inland waters.

Oscar E. Baynard reported them in Orange Lake, Alachua County, as being still common in 1909.

WHITE-FACED GLOSSY IBIS. No. 187 — SEE PLATE 19

Plegadis guarauna

In former years these fine birds bred rather abundantly in suitable locations within the State, but with the clearing of land and through drainage, and the net work of roads carrying the gunners to their feeding and breeding places, they are now a rare bird with us. They inhabit the inland waters,—feeding in the shallow places as do the other members of the ibis family, and on similar food.

They make their nests of grass and twigs, near the surface of the water, on some matted-down vegetation; or attaching them to the upright growing stalks of grass and weed stems; and lay from three to four dark greenish-blue eggs, unmarked. Size 2.00″ x 1.50″. Fresh eggs, April 25th to May 15th.

A set of eggs was taken at Lake Washington, St. John's River by a Mr. Lapham on April 18th, 1886.*

* Auk, vol. 3, page 481.

Family Ciconiidae: Storks and Wood Ibises

WOOD IBIS. No. 188 — SEE PLATE 19

Mycteria americana (*Iron-head*, *Flint-head*)

This large and easily identified bird is still very abundant throughout the State, notwithstanding it is shot for food in large numbers the year round by the Indians and local inhabitants. It breeds in large colonies in the cypress or mangroves growing along the edge of lakes, streams, and in the "Glades;" and builds its large bulky platform nest of dead sticks from twenty to forty feet above the ground or water.

Two or three eggs are a full setting; size 2.75″ x 1.70″, and fresh eggs may be found from March 1st to 20th. The ground is a dull white, unmarked, and of rough texture.

Their food consists of many varieties of small fish, snakes, crawfish, snails, lizards, and frogs, taken from the shallow waters they inhabit.

Family Ardeidae: Herons, Egrets, Bitterns, Etc.

BITTERN. No. 190 — See Plate 20

Botaurus lentiginosus (*Great bittern, Stake driver*)

While not an abundant bird, this seclusive inhabitant of the marsh and glade may be found the year round in every locality where there is an abundance of cover around the water, even though it be only a large "gator" hole. They are seldom seen except in the early morning and late evenings, when they come out of the rank vegetation to feed along the water's edge. Their color, which blends so well with the vegetation of their habitat, and their habit of remaining motionless when in the open and exposed to view, protects them well from their natural enemies. In winter, many migrants from farther north, come south and remain with us. Their food consists of snails, small snakes, lizards, mice, crawfish, frogs, and other marine life gathered under the dense marsh foliage, in and along the edges of the water. They build their flat platform nests of dry marsh grass and stems, on some matted-down marsh foliage near the edge of or out over the water. The loud, peculiar noise given by these birds, has given them the local name of "stake driver," for it is not dissimilar. A full setting of eggs numbers four or five; the ground a glossy olive drab, unmarked. Size 1.95″ x 1.50″.

Fresh eggs can be found from April 25th to May 15th. Like many other marsh birds, the young leave the nest as soon as hatched, and can almost care for themselves from that time on. They breed as far south as Munroe County. As they destroy no beneficial matter, and doubtless take many small snakes, mice, and young rats that later in life would become injurious, we must consider them beneficial birds.

LEAST BITTERN. No. 191 — See Plate 20

Ixobrychus exilis exilis (*Little bittern*)

A resident the year round, this bird like its cousin, the "great bittern," remains in the thick foliage of the marshes or glade and is seldom seen. Large numbers coming from farther north during October, added to our local birds which are also numerous make them during the time, very abundant. During the migration northward in April, I have seen as many as fifty feeding around one small fresh water pond, so they greatly help in keeping down our abundant marine insect life. They also consume small snakes, lizards, frogs, crawfish, and mice. Many go on southward to winter—even as far as South America. Their nests are placed in some tussock of grass or small hammock out in, or along the edge of the water, and are composed of dry saw grass, rushes, or weed-stems, and are well concealed by over-hanging vegetation.

Four to five eggs are a full set; laid from April 25 to May 15th; the ground color of which is a pale greenish-white, unmarked. Size 1.20″ x 0.90″.

CORY LEAST BITTERN. No. 191.1 — See Plate 20

Ixobrychus neoxenus

This subspecies of the former bird resembles it in size and actions; as well as feeding habits; and the remarks under that heading are therefore applicable to this bird. It is, however, a much darker bird than the one shown on the plate. It is also found more abundantly in the interior than near the coast; the majority of the specimens taken, coming from mid-state and the Caloosahatchee River regions. Nesting habits and eggs are also similar and cannot be distinguished from those of the former species. Baynard gives their nesting date, "around April 20th."

For the advanced bird student, a full description of this bird may be found in the Auk, vol. 13, page 11.

ANHINGA OR SNAKE-BIRD, MALE, FEMALE

LIMPKIN

SANDHILL CRANE — LEAST BITTERN — AMERICAN BITTERN

GREAT WHITE HERON. No. 192 — See Plate 22

Ardea occidentalis (Great white crane)

This magnificent bird is fast disappearing throughout our State, and there is left a mere handful or remnant of the vast multitude that formerly were here. The few remaining, breed in little scattered colonies of six to a dozen pairs, on some outlying key below Cape Sable and off the Gulf Coast. The young on attaining full growth, wander all along the coast and up through the interior, and most of them are killed owing to their tameness and awkardness when young. They remain on the nest or close by until practically fully grown, being fed by the parents regularly with small fish, shrimp, and crabs, and are generally very fat. The Spongers and Conchers visiting their breeding waters kill many, for they still consider the young as fine food; so the species has little or no chance to increase in numbers.

They are the earliest of the water birds to lay, (fresh eggs from December 15th to January 15th) though eggs may be found well into March, owing to nests being robbed, or from other natural causes. The nests are bulky platforms of dry sticks, which, with the surrounding vegetation, is covered white with excrement before eggs are laid. Three, rarely four, eggs are a full set, the ground-color a pale blue—often partly covered with a white chalky substance so common with many varieties of water-bird eggs. Size 2.35″ x 1.45″.

Some years ago the blue phase of this heron was supposed to be a subspecies, and was called "Wordermanii," and by some is still considered so, although not recognized by the A. O. U. Committee of nomenclature.

I have occasionally seen in their rookeries, a large blue heron as a mate to a great white, and have also seen both white and blue phase young in the same nest. I attribute this, not to two forms pairing, but believe that there is a blue phase in the "Great-whites," just as there is a white phase of the Little-blue-Heron and Reddish Egrets. The more I see of color "phases" in the Little-blue and Great-white, the more I'm inclined to think that they do not reach the natural color with age, as many suppose; and that many "Little blue" retain the white plumage for all time. And *vice versa.*

GREAT BLUE HERON. No. 194 — See Plate 21

Ardea herodias herodias (Great blue crane)

While not so abundant as in former years, this fine, large water-bird is still about holding its own within our State. On nearly every glade, marsh, "gator hole," lake and river bank; as well as the salt water shores, one sees this fellow or its subspecies. "Wardi" wading along in water up to its body, searching for food; or standing motionless with head drawn back, ready to spear some luckless fish, crab, shrimp, frog, snake, or lizard, which forms the daily bill-of-fare. At times small marsh rats and mice are also taken. They build their nests in the tall cypress trees along the water's edge or on the hammocks, and at times on the mangrove trees adjacent to salt water.

Three to five eggs are usually laid in a slightly cupped platform of dead sticks, the nest ranging in height from twenty-five to seventy-five feet above ground. These are laid from February 1st until March 1st, and have a beautiful greenish-blue ground, unmarked, though often partly covered with a white chalky substance. Size 2.45″ x 1.45″.

Around private fish ponds or small lakes, these birds are not generally liked by the fisherman, for they do consume many small fish that would later become fit for the sportsman's skill and basket. I do believe, however, that in this State the damage they do fish, is more than offset by their destruction of injurious matter.

WARD HERON. No. 194B

SEE PLATE 21

Ardea herodias wardi (Big blue crane, Cranky)

This is a subspecies of the former bird, differing little in size (trifle larger) and with more white on breast and with neck darker.

The habits, food, and general remarks applied to the former bird refer equally as well to this bird. It is more plentiful around Lake Okeechobee and its tributaries and inland waters, than in the coastal areas. Nests and eggs are also indistinguishable from those of the Great blue Heron. (See 194.)

EGRET. No. 196

SEE PLATE 22

Casmerodius alba egretta (Big plume bird)

This large, white water bird is quite easily distinguished by its size, being about midway between the Great white Heron, and the following species—or Snowy Egret. Tourists motoring over the state, or those coming down along the inland waterway in their yachts are quite apt to see them, for we find them quite often on the salt water bodies as well as inland; often in company with the Great white and Great blue Herons. As with those birds, many old are killed for plumes, and young are eaten by the spongers and other water men and natives, and so with no increase, they are rapidly disappearing from our state.

Their food consists of small fish—crabs, shrimp, and other shell fish taken when in salt water; and fish, frogs, small turtles, snakes, and crawfish when in fresh water.

Their nests, which are placed in cypress, mangrove, or other trees, from six to ten feet up; are composed of dead sticks; slightly cupped to hold the three or four light bluish-green eggs; size 2.30″ x 1.45″.

On the coast they lay early, as do the Great white Herons, often by December 10th to 15th; when a full setting may be found; and by March 20th I have seen the young well able to leave the nest and care for themselves.

SNOWY EGRET. No. 197

SEE PLATE 22

Egretta thula thula (Little plume bird)

Once one of the most common of water birds in Florida, this beautiful bird is shortly doomed to extinction within the state, owing to its handsome nuptial plumes being sought after for the millinery trade by Indian and native plume hunters.

While we have laws enough, it is almost impossible to enforce them, so widely distributed are the birds' breeding areas in Florida, and the few remaining rookeries are robbed each year and the old birds slaughtered for their plumes which are sold to tourists, or shipped to Cuba; whence they are reshipped to France. We must educate the people and stop the wearing of plumes in foreign countries, if we are to save the birds from total extinction.

They nest in colonies in the mangrove swamps or cypress and myrtle hammocks, in or adjacent to both fresh or brackish water, building their nests of dry sticks or twigs; and placing them from fifteen to fifty feet above ground or water.

Three to four eggs constitute a full set, which are laid from March 25 to April 20. The ground color is a light bluish green; unmarked. Size, 1.80″ x 1.20″.

Their food consists of marsh snails and their eggs, lizards, eels, crawfish, frogs, small turtles, and often small snakes; which places them in the class of our beneficial birds.

LOUISIANA HERON
GREAT BLUE HERON
GREEN HERON
LITTLE BLUE HERON, LIGHT PHASE
REDDISH EGRET
LITTLE BLUE HERON, ADULT

REDDISH EGRET. No. 198

SEE PLATE 21

Dichromanassa rufescens (Plume bird)

Formerly an abundant bird throughout the state, this beautiful bird is now confined to a few pairs, which breed in company with the "Little blue," "Snowy Egret," and "Louisiana Herons."

Like the former species, they have nuptial plumes during the breeding season, and so have been slaughtered for them until a mere remnant remains.

Plume birds are shot during the height of the breeding season—when a full complement of eggs has been laid—or when the young are small; and before the fine plumes have become broken or damaged. The skin on the back with the plumes attached is cut from the old birds (though some hunters skin the whole bird) and the carcass left, which soon attracts the raccoons, crows, opossums, and vultures. The young soon die, or are devoured by these miscreants, and so the whole family is wiped out. This is the common practice with all the heron family having plumes, and has been carried on for many years and wherever any are still found; though most countries prohibit it.

Their food is similar to the other small herons and egrets, and the nests and eggs, when placed within a colony of other herons, cannot with a certainty be distinguished from them, unless one sees the bird on its nest.

The eggs are unmarked—the ground a greenish blue—and are 1.90″ x 1.40″ in size. Fresh eggs, March 15th to April 5th.

LOUISIANA HERON. No. 199

SEE PLATE 21

Hydranassa tricolor ruficollis

Of the water birds found in Florida this is without doubt the most common of all. One sees them along every stream, both salt and fresh; in ponds, marshes, "gator holes," drainage ditches and canals, and in the Glades.

Their abundance today is largely due to their somber coat of feathers, and lack of nuptial plumes used by the millinery trade; and, being rather small of body, they are not eaten extensively by other than the Indians.

They nest in large colonies—over or adjacent to water—in mangrove, myrtle or cypress trees; constructing their nests of dry twigs, slightly cupped; and laying from three to five bluish-green eggs. Size 1.75″ x 1.30″. Fresh eggs may be found April 5th to May 15th, and young are out of the nest by June 20th.

Their food is similar to that of the other small herons, and when breeding in company with the Reddish Egret, Little blue, and Snowy, their nests and eggs cannot be distinguished with a certainty.

LITTLE BLUE HERON. No. 200

SEE PLATE 21

Florida caerulea caerulea (Little blue crane)

While not quite so plentiful as the Louisiana, this beautiful small heron is still abundant in suitable localities nearly all over Florida. They were not shot to any great extent for the millinery trade when that craze swept our country, nor are they molested much now, except by the Indians,—when hunting for food.

They nest in large rookeries, mostly adjacent to fresh water, placing their nests which are made of dry twigs, from fifteen to thirty feet up in myrtle or cypress trees growing in or near the water. At times I have found them nesting in company with Louisiana, Reddish Egret, and Snowy Herons; and adjacent to brackish water. Three to four eggs are usually laid—March

25th to April 20th—and by June 10th the young leave the nest, if the colony has been unmolested. The ground-color of the eggs is a pale bluish-green; unmarked. Size 1.65″ x 1.30″.

Their food consists of small snails and their eggs, lizards, frogs, small turtles, snakes, and marsh crustacea.

GREEN HERON. No. 201 — See Plate 21

Butorides virescens virescens (*Poke*, *Fly up the creek*, *Scout*, *Skow*)

We may see these birds extensively all over the state—singly and in pairs—flying along some small stream; irrigation or drainage ditch or canal, or standing in the shallow waters edge fishing for their daily food of small fish, eels, crabs, small snakes, turtles and other forms of aquatic life.

They remain throughout the year, though their numbers are augmented by the migrants from the north during the winter months. Next to the Louisiana Heron, they are the most common of the heron family, and on account of their small size and pronounced green color, they are easily distinguished by the tourist and layman.

They build their nests of small dry sticks or twigs in the lower foliage along the streams, lakes, salt waters, and glades; and lay from four to six rich bluish-green eggs. Size 1.48″ x 1.12″. First settings of eggs may be found from April 15th to May 10th. Often second sets are laid, as late as July 23rd I have found them, though incubation was well advanced.

BLACK-CROWNED NIGHT HERON. No. 202 — See Plate 22

Nycticorax nycticorax naevius (*Squak*, *Gallding*)

Throughout the winter months especially, when joined by countless numbers from farther north, we may hear the Night Herons passing over after dark, as we sit upon our porches enjoying the tropical moonlight. As they pass to and fro from one feeding ground to another, their shadowy forms may be discerned against the ligher sky and their hoarse 'squak," quickly warns one of their approach. During the greater part of the day they sit motionless in the thicker foliage, feeding mostly by night, except when they have young to feed.

They are quite a beneficial bird with us, destroying many small snakes, toads, frogs, lizards, crawfish, minnows, turtles, and other aquatic life, which form their daily diet. They are eaten considerably by natives and Indians,—especially the young birds.

They build their large bulky platform nests of dry sticks, placing them from fifteen to sixty feet up in mangrove, myrtle, cypress, or other suitable trees, and laying from four to five, pale greenish eggs. Fresh eggs—March 10th to 22nd. Size 2.00″ x 1.40″. Second broods are often reared; young still being in the nests during late July. I have been in rookeries both within this state and California, that numbered several hundred pairs, and though occasionally a few pairs of great blue herons nest with them, I think that they prefer to nest alone.

YELLOW-CROWNED NIGHT HERON. No. 203 — See Plate 22

Nyctanassa violacea (*Squak*, *Gallding*)

This heron while differing from the former species in color, is nearly similar in size, habits, food, and actions. It is, however, not quite so abundant throughout Florida as the former species, and it is more abundant on the Gulf Coast than the East Coast. The majority migrate farther south during the winter months, though many remain with us. They may be seen along the streams, marshes, and bodies of salt and brackish water procuring their food of small fish, shrimp, snakes or frogs, which are caught by spearing them with their powerful beaks and which are then swallowed whole.

AMERICAN EGRET
GREAT WHITE HERON, WHITE PHASE
GREAT WHITE HERON, BLUE PHASE
SNOWY HERON, OR LITTLE EGRET
BLACK-CROWNED NIGHT HERON, ADULT AND YOUNG
YELLOW-CROWNED NIGHT HERON

They build for a nest, a compact though bulky platform of dead sticks, from fifteen to sixty feet up in some tree, beside or not far from water; and lay from four to five pale-greenish eggs; size 2.00″ x 1.40″, which cannot be distinguished from those of the preceding species. Fresh eggs may be found from April 5th to 25th. I believe some seasons two broods are reared.

There is little distinction between the "Yellow crowned," and "Black crowned" Night Herons given in Florida by local inhabitants, and the name "gallding" has no doubt come in from the Bahamas, where they, as well as the young of nearly all other water birds, are still eaten extensively by the inhabitants of all the islands.

Family Gruidae: Cranes

WHOOPING CRANE. No. 204

SEE PLATE 20

Limnogeranus americanus (*White crane*)

HYPOTHETICAL LIST

Early writers such as Audubon and Wilson and even Baird, Brewer and Ridgway as late as 1884, record this fine bird as being abundant in the interior of Florida during the winters. It now appears as though these records were erroneous, and that it was the Sandhill Crane that was seen. The natives still designate the Sandhill Crane by the name of "hooper" on account of its call; though this is misleading. They did not breed within the state, but in the upper Canadian Provinces northward to the Arctic regions.

It is probable that a few came into the state many years ago, but we have no authentic records, such as skins, of any actually having been taken in Florida.

They are not unlike the "Sandhill Crane" in size, actions, food, and general appearance, though much whiter in plumage; often being called the "White crane."

We must therefore consider it as another member of the feathered tribe that has passed from our state forever, as well as now nearing extinction elsewhere.

SANDHILL CRANE. No. 206

SEE PLATE 20

Megalornis canadensis mexicana (*Whooper*, *Whooping crane*)

I am glad to say that this fine bird is still abundant within our borders—remaining throughout the year. While the majority are found north and west of Lake Okeechobee, there are still quite a number along the east coast in suitable localities. They are shot and eaten by natives and Indians alike, and considered quite a delicacy, and the young birds are eagerly sought after; as well as the eggs.

The young birds when taken about half grown make excellent pets, and when kept around the grove or yard keep it free of nearly all insect life, as well as small reptiles. I have been told that a young bird thus raised "would kill a rattlesnake, and would by 'hoopings' inform his owner of any snake in the grove." This I did not see personally, so cannot state it as a fact, though it seems probable enough that they kill both the cotton mouth moccasin and rattlesnake out in the wilds in their daily search for food, and during the nesting period. A few are seen as far south as Monroe County, though they are more numerous farther north.

Their nest is placed out in the marsh, glade, or stream on some hammock or other point of

vantage above high water, where they construct it of dry sedge, weeds, grass, and other trashy material. Two eggs are a full set, a beautiful olive-buff ground; blotched and spotted with brown, and fainter markings of gray.

Fresh eggs, February 19th to March 15th, and second settings are often laid during the latter part of June and early July. Size of eggs 3.70″ x 2.45″.

For food the "sandhill" consumes beetles, spiders, grubs, grasshoppers, ants, frogs, small snakes, lizards, flies, and many varieties of insects, while a pet bird I had in confinement for some time always answered to his name of John, and would eat live mice, scorpions, and raw Hamburg steak.

Family Aramidae: Courlans

LIMPKIN. No. 207 — See Plate 20

Aramus vociferus (Florida courlan)

This peculiar water bird, often called a cross between a crane and rail, as one would judge by its anatomy, still remains fairly abundant with us. It should, however, with the former species, be amply protected during the closed season at least, if we are to continue it on the list of game birds. One seldom sees it along the brackish marshes, but along the inland fresh water bodies and glades, standing in, or flying well off shore, over the saw grass. They are shy during the winter, but are easily approached during the breeding season, when they build their nests on trees or bushes—overhanging the streams or glades; and from six to twenty feet up. Their food consists of snails, lizards, frogs, snail eggs, small snakes, and aquatic insect life.

They lay from six to eight handsome eggs—the ground a creamy buff—spotted, lined and blotched with several shades of brown; and underlaid with faint markings of lilac. Size 2.28″ x 1.68″. Fresh eggs may be found from March 10th to April 5th. I believe they sometimes rear two broods a season.

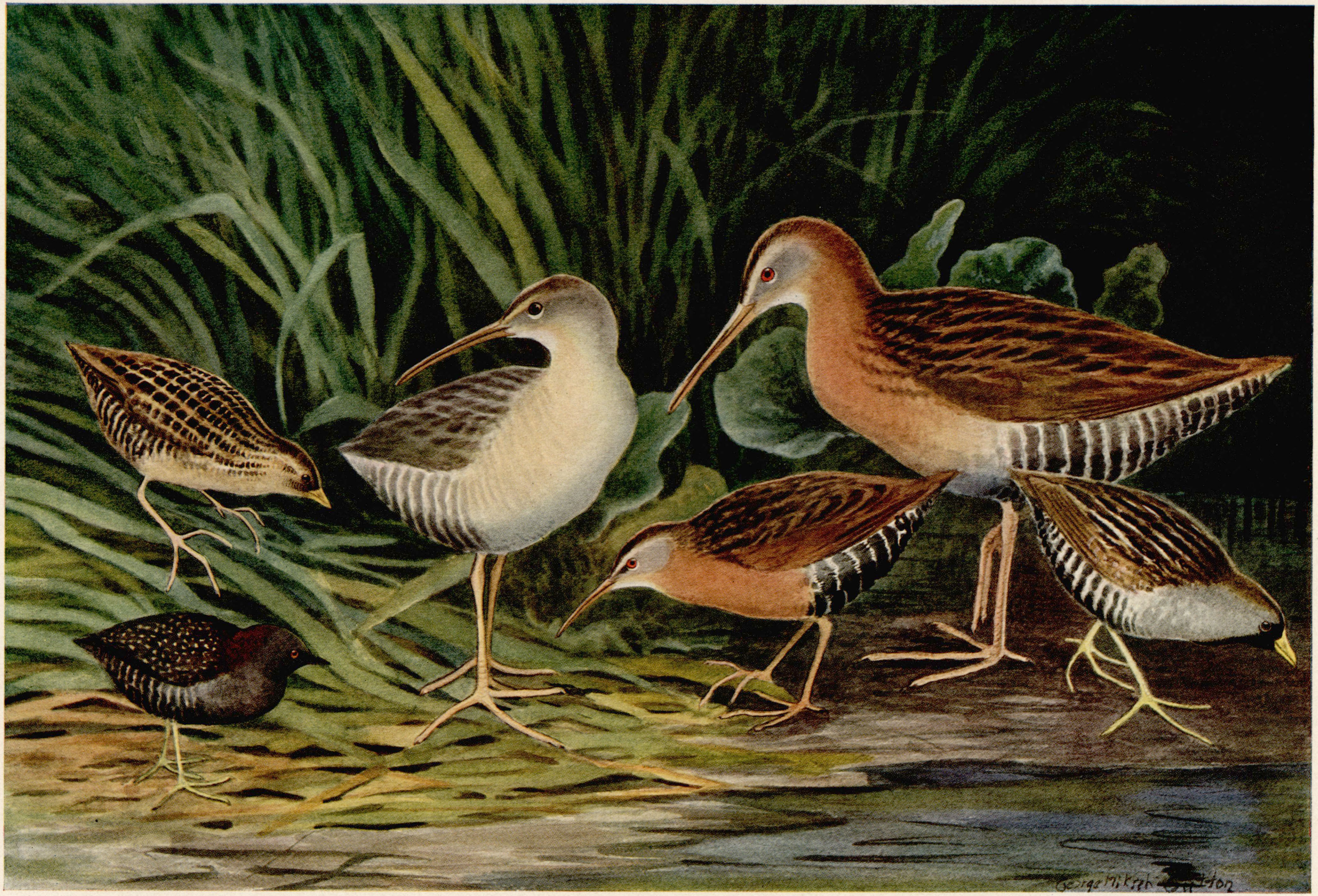
I have seen them as far south as Monroe County, and not far from the Dade County line, though they are not so abundant there as farther up the state in central Florida. As a game bird they are excellent eating, the flesh being dark, and not unlike that of the rail family in flavor.

Family Rallidae: Rails, Gallinules, Coots, Etc.

KING RAIL. No. 208 — See Plate 20

Rallus elegans elegans (Marsh-hen)

Members of the rail family, as a rule are more often heard than seen—except by the gunners during the hunting season. Here in Florida though, one may often see them when driving along our fine roads passing across the road from one piece of prairie to the other, or along some drainage-ditch, canal, or lake that the road skirts. They will not stand and let one have a good look at



YELLOW RAIL

BLACK RAIL

CLAPPER RAIL

VIRGINIA RAIL

KING RAIL

SORA RAIL

them as do many other water birds, but hastily disappear in the nearest vegetation. Many remain throughout the year, but the migrants swell our numbers arriving from farther north during September and October. These migrants move northward again in late March. The "King Rail" is truly a fresh-water bird, and seldom found in even a brackish marsh.

They build their nests of dry marsh grass and stems, on the edge of, or out over, the water on matted-down clumps of vegetation, or attaching the nest to grasses growing in the water. It is a well made, slightly cupped platform, and a full setting of eggs numbers from eight to twelve. These are laid from April 10th to May 5th. The ground-color of the eggs is a rich glossy cream; blotched and specked with reddish brown, and fainter markings of lilac. Size 1.60″ x 1.20″.

The food of the King rail consists of all classes of grains dropping from the marsh foliage above; as well as aquatic insect life.

The young of this—as well as all the following species of rail—leave the nest almost as soon as hatched, and follow the parents in search of food. They are jet black on emerging from the egg, with orange colored beak, and are truly cute little fellows, but, as feathers take the place of down, this color soon disappears. They are considered excellent eating by all classes of gunners.

LOUISIANA CLAPPER RAIL. No. 211A — SEE PLATE 23

Rallus longirostris saturatus (*Sage hen*, *Marsh hen*)

The resident clapper rail along the east coast is "*Waynei*," but in Dade and Monroe Counties both "*Waynei* and *Scotti*" undoubtedly breed, and with "*Scotti*" along the gulf, and a few of "*Saturatus*" touching our borders on the extreme west coast. The different subspecies are of little importance to our tourist or layman, for their general appearance, size, food, and habits are similar. They inhabit the salt and brackish marshes of our coast line, feeding during the low tide out on the flats a little way from shore line, and amongst the thick marsh foliage when the tide is high. They are hard birds to flush, preferring to trust to their long legs, and to skulk away through the rank foliage, rather than fly. As an edible game bird, they are quite a success and are considered fine for the table.

They build their nests of dry marsh grass and stems, on or near the ground; or out on the marsh above high water, attaching their nests when thus located to the rank marsh foliage. Six to ten eggs are laid from April 20th to May 15th, seven to eight being the average; the ground-color being a rich glossy buff, specked and blotched with different shades of reddish brown, and fainter markings of lavender, or gray. Size 1.70″ x 1.20″. Their food consists of seeds and marine insect life, gathered from the shore-line and flats they inhabit; while snails, crabs, shrimp, and minnows are eaten extensively.

FLORIDA CLAPPER RAIL. No. 211B — SEE PLATE 23

Rallus longirostris Scotti

A form of the clapper rail inhabiting the Gulf and West coast of Florida. (See remarks under 211A.) They differ from the common clapper rail in being much darker, both on back and underparts.

WAYNE CLAPPER RAIL. No. 211C — SEE PLATE 23

Rallus longirostris waynei

This rail is found all along the Atlantic Coast from North Carolina to South Eastern Florida, where it overlaps with the Louisiana Clapper Rail. They differ little from the other salt-water clapper rails, and could not be distinguished from them by other than an advanced Ornithologist. (See remarks under 211A.)

MANGROVE RAIL. No. 211.3 SEE PLATE 23

Rallus longirostris insularum

Brooks* described the type specimen from Big Pine Key, Monroe County, Florida (June 24, 1920).

And Oberholser† described another from one of the keys between Cape Sable and Key West, calling it, *Rallus longirostris helius*.

Both of these rails turned out to be the same, and are a form of the Caribbean Clapper Rail, and as yet have not been passed by the A. O. U. Committee.‡

Their food and habits are no doubt similar to the other rails of the lower Florida coast. I have examined the type specimen in the collection of the United States National Museum—and find it differs mostly from our other Florida clapper rails in being much more gray on the back.

* Proc. N. E. Zool. Society, Bull. VII.
† Proc. Bio. Society of Wash., D. C., No. 33.
‡ Auk, vol. 38, page 265.

VIRGINIA RAIL. No. 212 SEE PLATE 23

Rallus virginianus (*Queen sora*)

Large numbers of this little rail from farther north arrive during September and October, and many remain with us until spring—though some go farther south. We do, however, have a large number that remain and breed within our state, for Florida offers abundant nesting grounds in its numerous fresh-water streams, ponds, lakes, and glades.

It is a secretive bird—keeping within the foliage bordering the waters; seldom flying; and uttering a low call not loud enough to easily attract one's attention. If one is to study the fresh-water rails in Florida, the best place is a half dry "gator hole" surrounded by high grass, and filled with bonnet lilies. Here, if one remains quiet long enough in the early morning or late evening, there can be seen besides rails, most of the other marsh birds, such as heron, gallinule, anhinga, bittern, and possibly a Limpkin.

The food of the Virginia Rail consists of seeds, worms, beetles, snails, and aquatic insect life.

While they build their nests of dry marsh grass on some tussock of grass in or near the water, occasionally it is out over the water.

Fresh eggs may be found from April 20th to May 10th, and a full setting numbers from seven to twelve; the ground-color a fine creamy white, spotted with reddish brown; and with fainter markings of lavender more profusely on the larger end. Size 1.25″ x 90″.

SORA. No. 214 SEE PLATE 23

Porzana carolina (*Reed-bird, Carolina rail*)

Large numbers of these small birds of the marshland, reach us from the north in September and October, coming through mostly by night migration; and resting and feeding in the marshes during the daytime. They do not breed with us, but return northward during March and April. Farther north, in the salt and brackish marshes of Georgia, Carolinas, and Virginia, many are shot during the high fall tides, which leave little cover for the birds to hide in. During these tides, the birds are hunted by pushing a shallow flat bottomed boat over the tops of the rushes or sedge, and are shot as they rise from the scanty foliage. As a game bird they are considered a great delicacy, as they are always fat.

They feed upon the wild oat and other small marsh seeds, as well as many forms of aquatic insect life.

Notwithstanding this enlightened age, for many years they were thought by many persons to turn to frogs in the marshes, so quickly and silently did they disappear. As they often appeared

AVOCET WOODCOCK MEXICAN JACANA BLACK-NECKED STILT COOT PURPLE GALLINULE FLORIDA GALLINULE

in large numbers one day on a marsh, and then entirely disappeared over night and were not seen again; this general impression held good for many years until the ornithologists commenced to gather migration data all along the coast, showing positively how they migrated southward. There are, however, many who still believe that they turn to tadpoles and frogs, especially members of the colored race. The upper marshes of the Potomac river are their nearest breeding ground to us.

YELLOW RAIL. No. 215 — SEE PLATE 23

Coturnicops noveboracensis

This small rail may be more abundant with us than we know of owing to its retiring nature and small size. The birds inhabit the dense foliage adjoining the fresh water ponds and glades, while the bonnets and water hyacinths in some sluggish stream or "gator hole" offer favorite feeding places for them while with us during the migration period, or as habitats during the winter; for some undoubtedly remain until time to migrate northward again.

They do not remain to breed, arriving from the north during late September and early October, and leaving us for their northern breeding grounds during April.

Their food consists of seeds and aquatic insect life, gleaned from the low and swampy ground they inhabit, and unless it be some sportsman with his dog, out shooting jack snipe on the glade, I do not believe any other person will see one of these small and seclusive birds.

BLACK RAIL. No. 216 — SEE PLATE 23

Creciscus jamaicensis jamaicensis

This is the smallest of the rail family, and, with its dark plumage and retiring ways, especially when inhabiting our blackish prairie and glade lands, it is almost impossible to find one.

Many arrive from the north during early September and October; migrating only during the night with the Sora, Yellow, and Virginia Rails; and resting and feeding during the daytime in the marsh that they may be nearest to, as daylight approaches.

Our flooded prairies during late fall and early winter, afford splendid cover and feeding grounds for all the rail family, and as these areas dry up, the birds resort to our glade marshes and fresh water streams and ponds.

Their food consists of all the smaller marsh seeds and grains; while aquatic insect life is also taken extensively. They have not as yet been found breeding within our state, but the efforts of hunting over many suitable places, may some day result in the finding of a nest. They depart for the north, with those coming up from farther south, about the first week in April.

From birds taken early in the spring, I am quite positive that they breed in this state, but until an actual nest and eggs have been found, I hesitate in adding it to our list of "breeding birds." Birds have been seen in late May, and a "dropped" egg found in the marsh the same day.

O. E. Baynard records having seen an adult with young, in Alachua County some years ago, but as no birds were taken it is possible that they may have been the Virginia Rail.

"Coale* names the eastern form *Creciscus-j-stoddardi;* a subspecies of the Jamaica Little Black Rail, but it remains to be seen if it will pass the Committee on nomenclature.

* Auk, vol. 40, page 88.

PURPLE GALLINULE. No. 218 — SEE PLATE 24

Inornis martinicus

This is a very abundant marsh bird, no real glade pond, "gator hole," canal, or drainage ditch being complete without a pair. One desiring to study this handsome bird may easily do so by remaining quiet on the outskirts of any of the above named places of late afternoon when the birds

repair to the borders or out on the bonnets and water hyacinths to feed. They remain throughout the year, though many go on farther south to winter. Like all the rail family they are hard to flush, even with a good hunting dog.

Large numbers of larvae and aquatic insect life of the glades are destroyed by these birds, and mosquitoes form a large part of their food during the summer months. Tender shoots of vegetable matter are at times eaten extensively; while seeds of marsh grasses and worms are also gathered for food.

They build their nests in the rank foliage bordering the water, or on some tussock or hammock out in the water, of dry marsh grass and stems three to ten inches above ground or water; and lay from eight to ten eggs. These have a beautiful buffy or creamy ground-color, blotched and specked with chestnut and lilac. Size of eggs 1.62″ x 1.18″.

Those coming in from the north arrive during September, and return from farther south the first week in April.

I have found them breeding as far north as the Eastern Shore of Virginia, which is far beyond their regular breeding area.

FLORIDA GALLINULE. No. 219

SEE PLATE 24

Gallinula chloropus cachinnans

Like its close relative, this bird is also a very abundant resident of our marshes the year round. Many more from farther north join the local birds during October and November, remaining all winter; while some continue farther south, passing through again in spring migration the first part of April. Like the rails, they migrate by night only.

Their food consists of tender vegetable matter, seeds and aquatic insects and any such bird that destroys the fresh water mosquitoes should be well protected during the summer and encouraged to breed within our borders. They may be found around the edges of our ponds, sluggish streams, "gator holes" and irrigation canals and ditches, but are hard to flush or see.

Their nests are somewhat similar to the Purple Gallinules and are constructed of dry marsh grass and stems, near to or over the bodies of water which they inhabit.

They lay from seven to ten buffy or creamy colored eggs, which are spotted and blotched over the entire surface with reddish brown, and with milder markings of lavender. These are deposited from May 5th to June 1st. Size 1.65″ x 1.15″.

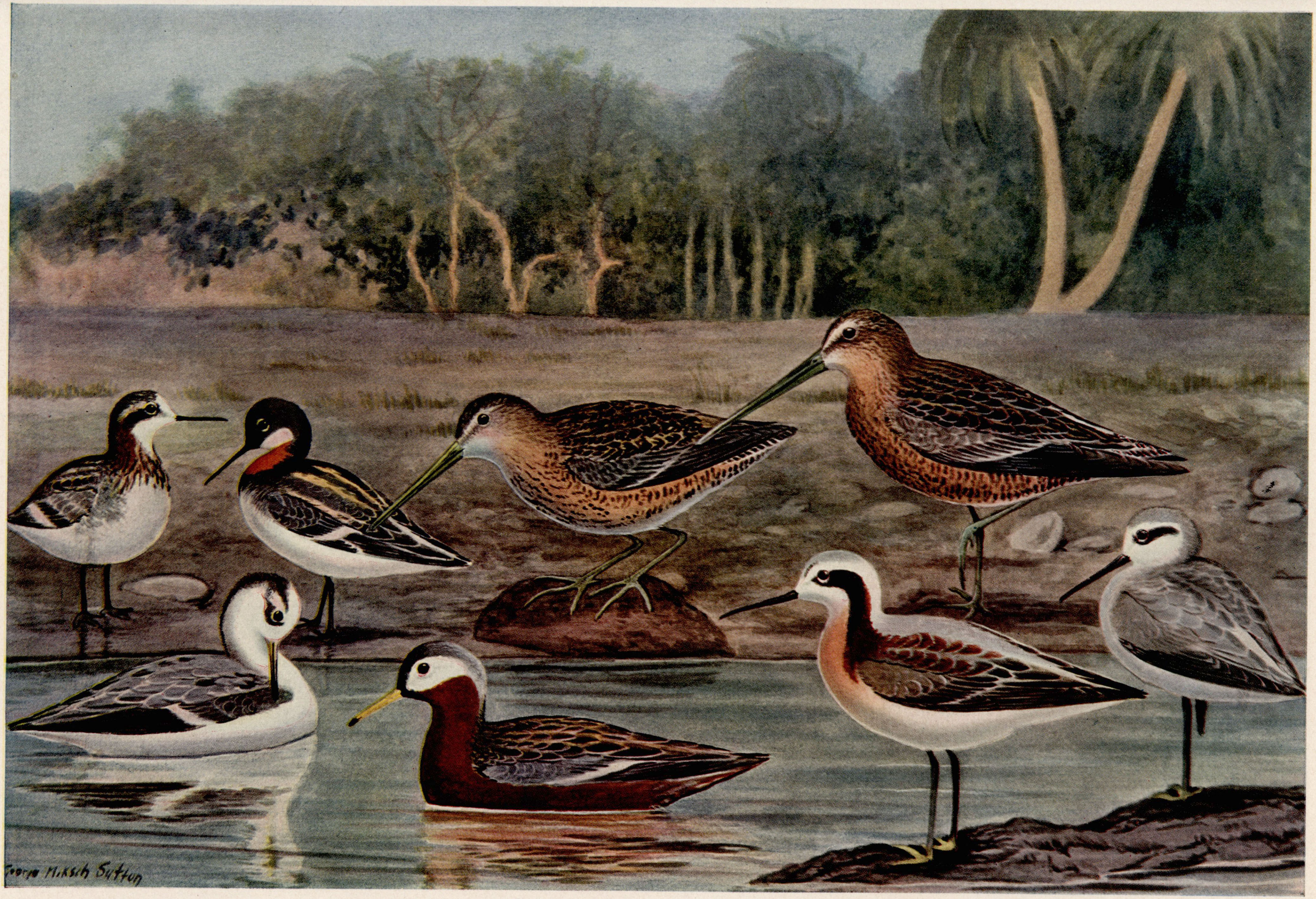
COOT. No. 221

SEE PLATE 24

Fulica americana (Mudhen, Blue peter, Blue pullet)

This rather peculiar water bird, with its large scalloped feet and white pointed beak, is often classed with the duck family, owing to its way of flocking in large numbers and feeding out in the open shallow lakes, streams, and even brackish bays on the marine plants so well liked by the ducks. The sharp pointed beak makes it readily identified when close by, and unlike the ducks, it runs and flutters along on top of the water for some distance before it can rise clear. As an article of food the birds are fairly good eating, especially when having fed on fresh water plant food. Countless numbers are killed during the winter each season in our state, all along the coast and also in the interior. The majority, however, go farther north to breed, leaving us during April and returning in November. Those remaining to breed, do so in May—building their nests out over the water in the thick cattails or other marine foliage—and attaching them to the upright stems, or placing them on some matted-down, or dead vegetation.

They lay from seven to ten eggs—the ground color a peculiar gray; sparingly spotted and heavily specked with black over the entire surface. Size of eggs 1.82″ x 1.35″.



NORTHERN PHALAROPE
WINTER SUMMER
RED PHALAROPE, WINTER

DOWITCHER

RED PHALAROPE, SUMMER

LONG-BILLED DOWITCHER
WILSON'S PHALAROPE
SUMMER WINTER

Family Phalaropodidae: Phalaropes

RED PHALAROPE. No. 222 See Plate 25

Phaloropus fulicarius

The order of "Shore Birds" to which this and the following forty odd species belong, is seen by the tourist and layman, principally when sitting on our coastal beaches during the winter months, enjoying the balmy breezes; or while driving along some road bordering an irrigation canal, lake, stream, or brackish body of water. Here they may be found flying in small flocks, or feeding along the tide line and mud flat at low tide; or wading in the shallow waters in search of their food, which consists of minute marine crustacea and insect life.

The flats around the Cape Sable region and keys off the southern end, offer splendid feeding grounds for these birds. They arrive from the north during October and early November, *en route* to South America; for none remain throughout the winter. The majority pass northward again in April.

NORTHERN PHALAROPE. No. 223 See Plate 25

Lobides lobatus

Notwithstanding our large coastal lines, our state does not offer a very choice area for the shore birds to inhabit while with us; owing to the small area of brackish semitidal mud flats. The Indian River territory on the east coast, probably offers the best area for them in our state, and is in their direct migration line of flight north and southward.

These handsome little phalaropes arrive early in October, feeding mostly in our tidal waters as they go southward to Antarctic waters, and returning north again during April, *en route* to their breeding grounds in the far north, none stopping much short of James or Hudson Bays.

Their food consists of the smaller marine crustacea and insects.

WILSON PHALAROPE. No. 224 See Plate 25

Steganopus tricolor

The summer habitat of this phalarope is much farther south than that of the preceding species, though none remain to breed in the east, south of the Canadian border. Their habits are similar to those of the other species, as well as their food. They do not remain with us during the winter, passing through from farther north during September, and returning in April from South America; feeding as they migrate along the tide lines of our beaches and mud flats, on all manner of marine insect life and small crustacea.

Their semi-webbed feet make them expert swimmers, and when wounded, or feeding out in the open waters as they often do, they ride or float high up, and as light as corks.

Family Recurvirostridae: Avocets and Stilts

AVOCET. No. 225 See Plate 24

Recurvirostra americana

This rather striking long-legged "shore bird," is easily distinguished by the upward curve of its long beak. It is not a regular migrant through our state, only a few stragglers having