

~~XXXXXXXXXX~~
A-4



THE IPSWICH RIVER IN WENHAM SWAMP.
NESTING-SITE OF LONG-BILLED MARSH WREN.

84407
Purchased
Huttall Ornith. Cl.
Museum & Birds

Bird

Memoirs of the Huttall Ornithological Club

No. V

QL
684
M37 T69
1905
Suppl.
Birds

SUPPLEMENT
TO
THE BIRDS OF ESSEX COUNTY
MASSACHUSETTS

By CHARLES WENDELL TOWNSEND, M.D.

WITH ONE PLATE AND MAP

CAMBRIDGE, MASS.
PUBLISHED BY THE CLUB
AUGUST 1920,



PRESS OF
THE NEW ERA PRINTING COMPANY
LANCASTER, PA.

CONTENTS

	PAGE
INTRODUCTION	5
CHAPTER I. CHANGES IN THE BIRD-LIFE OF ESSEX COUNTY SINCE 1905...	7
CHAPTER II. BIRDS OF LIMITED AREAS	17
CHAPTER III. ANNOTATED LIST	25
SUMMARY	182
ERRATA	183
BIBLIOGRAPHY	184
INDEX	189

INTRODUCTION

FIFTEEN years have passed since Memoir III of the Nuttall Ornithological Club, "The Birds of Essex County, Massachusetts," was published. In these fifteen years many changes have taken place in the bird-life of the County, many more observers have studied it, and many notes have been accumulated. It is the purpose of this Supplement to bring our knowledge of the birds of the County up to date, and in order that it may be complete in itself all the species are listed whether or not there are any changes or additions in the annotations.

Changes are made in the nomenclature wherever necessary to conform to the latest American Ornithologists' Union Check-list.¹ As several species new to the list have been added, the serial numbers are changed. The additions are denoted by an asterisk (*).

In the original Memoir I gave in detail the habits and field-marks of most of the water-birds and of several other birds of especial interest for the County. In this Supplement I have added to the notes on these birds, wherever possible, have increased this list by the addition of the hawks and some others, and in many cases have laid special stress on courtship habits, the study of which in the last fifteen years has especially interested me.

When the original Memoir was published, there were none living in Essex County sufficiently interested in birds to become members of the American Ornithologists' Union. At the present time there are twelve members listed from the County. In addition there is a very active club,—the Essex County Ornithological Club,—with a membership of about fifty having its headquarters and monthly meetings at the Peabody Museum in Salem. The Club was founded in 1916, but for some eight years prior many of the present members were in the habit of making an annual trip by canoe on the Ipswich River at the height of the warbler migration in May. In preparing this Memoir I have consulted the records of the Club, of which I have the honor to be a charter member. The first number of the annual Bulletin of the Club appeared in December, 1919.

The number of contributors of notes and records to this Supplement has increased to a great extent. Their names will be found in the Annotated List in connection with their contributions. To all of them I wish to express my grateful thanks.

Some of the contributors to the original Memoir who have died are: William

¹The Check-list of 1910 has changed the names of 26 genera and of 16 species of the original list.

Brewster, A. B. Clark, Julian M. Dodge, G. M. Magee, Henry A. Purdie, J. H. Sears, Bradford Torrey, M. A. Walton, George O. Welch. All of these I knew personally. To my friend William Brewster I had turned for many years for judicious advice and unfailing help. To many of us personally, and to all ornithologists in general, his death is a very great loss. Julian M. Dodge I have missed greatly. He always placed at my disposal his camp in the Topsfield Marshes, a region where with him I have made many interesting observations. Mr. Purdie and Mr. Torrey, each in his own way, were of help to me in writing the original Memoir. They are widely missed. Mr. Welch was the last of the band of older taxidermists who contributed so much to our knowledge of the bird-life of Essex County. I am glad to be able to add that Mr. Charles J. Maynard, always to be remembered as the discoverer of the Ipswich Sparrow, is still active and still visits the Ipswich dunes.

A new source of information on the birds of the County was unearthed by Dr. Glover M. Allen¹ who published an account of a hitherto unknown ornithologist, Benjamin F. Damsell of Amesbury, with notes gleaned from his records and collections. Mr. Damsell, a carriage builder by trade, was born in Amesbury, 1854, and died there in 1911. He never published anything but left note-books covering a period of thirty years from 1880 to 1911. Dr. Allen says: "The bird records seem to be made with much caution and as they are frequently substantiated by the actual specimens, may in most cases be deemed wholly trustworthy. Part of the collection was destroyed but the remainder is in good condition and consists of several hundred mounted specimens, some of the more interesting of which have been acquired by the Boston Society of Natural History for its New England collection."

As for my own work, I can state that, although most of my life is necessarily spent in Boston, I have continued my observations on the avifauna of Essex County as much as possible. I have spent a month of every summer at my house not far from the dunes at Ipswich, with the exception of the years when my vacations have been in Labrador or elsewhere. Since 1915, I have gone back and forth daily from Boston during the remainder of the summer. In winter my week-end trips to Ipswich from Saturday night to Sunday night have become increasingly more frequent, and I have visited from time to time other parts of the County.

As in the case of the original Memoir I am greatly indebted to my friend, Dr. Glover M. Allen, for his assistance in reviewing the manuscript and proof.

¹ Allen, Glover M. "An Essex County Ornithologist." *Auk*, vol. 30, p. 19-29, 1913.

CHAPTER I

CHANGES IN THE BIRD-LIFE OF ESSEX COUNTY SINCE 1905

FIFTEEN years are, of course, but a mere moment of time in the life of a species, yet, as birds are to a large extent dependent on the works and acts of mankind, many changes may take place even in that limited period.

When the original Memoir was published an increase in the gulls and terns,—then for a few years protected,—had already been noticed. The first practical work of protecting breeding bird-colonies on the Atlantic coast was begun in 1900. The wings, heads, and bodies, not only of terns but even of passerine birds, formerly so common on women's hats, are no longer seen and the influence of the National Association of Audubon Societies, incorporated in 1905, is still spreading.

Another change wrought by man, which has increased the number of these and other birds, is the establishment of reservations where shooting is forbidden. Most of these in Essex County were already in existence at the time of the publication of the original Memoir, but their influence has increased as the enforcement of laws has become more strict, and the birds have learned the value of these refuges. The peninsulas of Nahant and Marblehead Neck, the Lynn, Swampscott, and Manchester Beaches are instances. Coffin's Beach and the Ipswich dunes have been protected by private owners, and more and more large estates throughout the County are posted against shooting. At Topsfield there is a considerable reservation of private ownership.

The changes in the laws as regards shooting of birds have been very great during the last fifteen years and are destined to have a very beneficial effect in conserving them. Prior to 1906, it was lawful to shoot ducks up to May 20. Prior to 1909, the open season for Black Ducks extended from September 1 to March 1 and for other ducks until May 1, except in the case of Wood Ducks, which were then first protected at all times. In 1909, spring shooting of ducks was stopped and the close season began on January 1. In 1912, a law was passed stopping the sale of all game.

But the most important law is the Federal law protecting migratory birds throughout the United States, passed by Congress in 1913. By a treaty with Great Britain, in 1916, the jurisdiction of this law was extended to Canada, and,

in 1918, the Enabling Act for enforcing the law was passed by Congress. Insectivorous and song birds, Wood Ducks, Swans, Wild Pigeons, Mourning Doves, Herons, Bitterns, Cranes, Eagles, Fish Hawks, Marsh Hawks, small owls, gulls, and terns and all shore-birds,—with the exception of the Black-bellied and Golden Plovers, Snipe, and Greater and Lesser Yellow-legs,—are protected at all times and their feathers are not to be used for millinery purposes. Spring shooting of water-fowl throughout the country has been forbidden. In Massachusetts, the open season for water-fowl extends from September 15 to December 31. The opening of the season for shooting shore-birds, now restricted to the two species of yellow-legs and of plover mentioned above, is August 16 instead of July 15 as previously. All birds are protected on Sundays and from sunset to a half hour before sunrise. In 1918, approximately 65,000 hunting licenses were issued in Massachusetts.

Another cause for change in the bird-life of the County may be ascribed to certain insect pests. Brown-tail and gypsy moths, accidentally introduced from Europe, had begun their pernicious work long prior to 1905, but after that date they increased so in numbers and spread so universally throughout the County that many orchards and woodlands were devastated, and dead and dying trees were common. Apple trees and oaks were particularly affected. Not only directly in this manner did these pests influence the environment of the birds of the County, but indirectly the influence was still greater owing to the measures used for the control of the pests. Underbrush was cleaned up by cutting and burning, holes in trees were closed, egg-clusters were creosoted, arsenical spraying was conducted on a very extensive scale, and bands of workmen went through the country like a devouring flame.

The remedy, as far as the birds were concerned and to a considerable extent as regards the vegetation, was worse than the disease. Although spraying is often necessary to save individual trees, the great aid that can be rendered by birds is thereby to a large extent removed. The filling-up of holes in trees has a bad effect on the nesting of Flickers, Tree Swallows, Chickadees, and Bluebirds, while the cutting-down and burning of bushes and underbrush interferes with the nesting of warblers, thrashers, vireos, and many other birds. In Swamp-scott, for example, White-eyed Vireos and Chats were practically eliminated. That a large number of birds are killed by the arsenical fluid used in spraying, there can be little doubt. Birds have been seen to drink of the poisonous drops that remain on leaves, in the same way that they drink the dew. Mr. M. Abbott Frazar, the well-known Boston taxidermist, tells me that orioles and other birds, showing no signs of injury and presumably poisoned, are brought to him for mounting in considerable numbers during the spraying season.

That birds, when given a chance, are of great value in fighting these pests was well shown in an acre of mixed woodland on my own place. This I have made attractive for birds and have never sprayed, but have removed only the brown-tail nests. Several years ago gypsy moths started to devastate it and their egg-clusters were abundant in the fall. A pair of Chickadees had nested in one of my boxes there, and five or six of these birds were busily at work in this limited area all winter, with the result that the gypsy-moth eggs disappeared. Fortunately the insect and vegetable parasites have in the last five years made such inroads on these two insect pests that their influence for evil on a large scale is practically over in Essex County.

Another factor influencing the numbers of birds in Essex County is the arrival of the Starling and its considerable increase during the last ten years. All hole-breeding birds are in danger of being driven out by this alien. The English Sparrow, on the other hand, has probably diminished in numbers to some extent. Our native birds are adjusting themselves to its presence. The diminution is more marked in towns and villages, however, than in the country.

Another alien, in this case a human one, the Italian workman, has also increased in numbers in the County and has undoubtedly had a bad effect on the avifauna. Although these aliens are not allowed the possession of a gun unless they are real-estate owners to the extent of \$500, and take out an alien-hunter's license for \$15, they have secretly done much shooting of birds as well as trapping and liming. All is game that comes to their net from Chickadee to Pheasant.

The extensive and increasing use of automobiles has undoubtedly contributed to the reduction in numbers of Pheasants and Ruffed Grouse. By means of the automobile, residents of cities are enabled to visit a number of widely separated shooting-areas in the same day and shoot these birds. Many of these 'game hogs' exceed the limit allowed by law, but by distributing the bag among the passengers of the automobile the penalty, in the rare chance that they are inspected by a warden, is escaped. The electric street-railroads have also contributed in the distribution of gunners.

The rapid extension of cities and towns beyond their former limits, and the substitution of clean lawns and shade trees for natural tangles and swamps, has also had its effect on the bird population.

A change has been made in the character of some of the lamps in the light-houses during the last five years, which has apparently rendered them less destructive to birds. This is the case at Thatcher's Island where formerly, as shown in the original Memoir, a large, although decreasing, number of birds was killed. Instead of ordinary kerosene lamps with their yellow lights there is now used a spray of kerosene oil and air, which brings a Wellsbach mantle to a white heat

and produces a diffuse white light more like daylight. The keepers believe that the birds are able to see around them more easily and are not so dazzled as by the old lamps, and therefore none are killed.

Before taking up in order the various species of birds that are believed to have increased or diminished in the last fifteen years, it may be well to consider the various factors on which this belief is founded, so that we can distinguish between an actual and an apparent increase of birds. It is obvious that an apparent increase of any species without an actual increase may be due to a variety of causes which may be summed up as follows: (1) protection resulting in a greater tameness of the birds, a nearer view and therefore greater ease of identification; (2) a more general use of powerful prismatic glasses; (3) an increase in the number of observers and an increase in the area covered at all seasons of the year.

The bird reservations already referred to have made an immediate difference in the tameness or wildness of birds. A gull at King's or Fisherman's Beach will often allow an approach within fifteen yards, whereas on the unreserved beaches it flies off before the intruder has come within a distance of a hundred yards. I have lately seen a flock of two hundred Herring Gulls with three or four Great Black-backed and one Iceland Gull on Fisherman's Beach at Swampscott, and in the water at its edge, separate to allow a man to row off shore. The birds by swimming and a few by flying a short distance barely made way for the oars, and closed the gap as soon as the boat had passed. Under such circumstances one may study at ease any particular bird and compare it with others.

The second reason is of much interest and should be considered in all its bearings. When I began the study of birds in 1875, I did not use field-glasses but depended on the gun. That was the custom of the few bird-students of that day. In the ornithological books at that time very little was said of field-marks and identification except in the hand. Samuels' "Birds of New England" and Maynard's "Naturalist's Guide" were the chief books of reference owned by students in this region. Coues' "Key" and Wilson's and Audubon's histories were also consulted. At that time and for many years after,—in fact until about the time of the publication of the original Memoir,—it is doubtful if any ornithologist would have been rash enough to report a Glaucous Gull, for example, without first securing the specimen. The gun, not the glasses, was depended on and prismatic glasses, which reveal the bird almost as if it were in the hand, were not used to any extent before 1900. With these glasses a bird may be studied at leisure, and every detail of coloring and marking carefully noted even at a considerable distance. The use of a powerful telescope as described in the original Memoir is also of great value although it is seldom employed.

With glasses one can obtain a far better knowledge of habits than with the

gun. A collector is eager to take the first opportunity to secure a rare bird, thereby terminating at once all observations on habits. The discharge of the gun drives off other birds which he might otherwise have seen, and makes the record doubtful or valueless if he misses the bird sought. On this account it is better, if possible, to make a careful examination with glasses before using the gun. It is very probable that many individuals, if not molested, come back year after year to the same place and, possibly, bring others with them. In this way the records are increased.

The advantages in the use of powerful glasses are obvious but it should always be remembered that the man behind the glasses is of the most importance. Far better one indisputable record made by the gun, than dozens of records of doubtful authenticity by the glasses. Without the use of the gun our knowledge of birds would be seriously handicapped, in fact the study of birds would cease to be an exact science.

The third cause for an apparent increase without an actual increase in any species may be due to a larger number of observers and a greater area covered at all seasons of the year. That there has been in Essex County a great increase in the number of observers, the statements in the previous chapter show. Bird study has become increasingly more popular. Fifteen or more years ago visits to the seashore in winter were rarely made; now they are common. But there is a source of embarrassment in this increased number of observers. One must beware of the *enthusiastic amateur*. An observer, describing herself in these terms, wrote that she was confident she had seen a Golden-cheeked Warbler in the County, a bird not previously recorded north of Texas! Another "amateur" reported by Dr. Dwight¹ in the Auk was entirely satisfied he had seen two Scarlet Tanagers in December; another reports a Kingbird in February.

Although such erroneous records are easily discovered and discredited, there are others that are within the bounds of possibility whose erroneous nature is less easily detected. Particularly pernicious is the publication of this class of notes, which lead the ignorant and untrained amateur students into a competitive race for unusual records. Partly with the help of members of the Essex County Ornithological Club, I have endeavored to estimate the accuracy of observers in the County, and I have omitted all doubtful records and all records by observers who are known to be inaccurate. I am glad to be able to state that there is now a considerable number of observers for the County whose records are to be depended on.

In the following remarks there is no intention to consider each species or even group of birds but to call attention to some of the more striking changes.

¹ Dwight, J., Jr. Auk, vol. 25, p. 262, 1918.

There has been no marked change in the last fifteen years in the numbers of the loons, grebes, and auks. A fluctuating number of these birds visits the coast in winter. Holboell's Grebe, for example, uncommon in most years, may suddenly become abundant. This was the case in March, 1912, when I counted seventy-five of these birds off Gloucester. It has been said that the freezing-up of the inland waters drives this bird to the sea, but in the exceptionally severe winter of 1917-18 there was no increase in the numbers of this grebe on our coast. On the same day in 1912 that I found so many Holboell's Grebes, I found also a very large number of Dovekies,—several thousand of this arctic bird. As these birds do not frequent fresh water it is evident that another explanation than that for the grebe must be found. The Dovekie is more uncertain and variable in numbers than any other bird of these groups and it has been supposed that the appearance of large numbers of them on the coast is due to storms driving them in from the sea.

Among the gulls, the increase in numbers of the Herring Gull, although doubtless partly actual, is also partly apparent, due to the greater protection on the reservations. The case of the white-winged gulls,—Glaucous, Iceland, and Kumlien's Gulls,—is, however, of great interest. When the original Memoir was published, there had been no record of the last-named bird and only four for the Glaucous and one for the Iceland Gull in a period of fifty years. I, myself, had never seen any of these gulls. Since then the records have increased to such an extent that one and often several of each species are now reported every winter, and I have become familiar with all three. That there has been an actual increase of these birds on our coast coincident with the increase of Herring and other gulls, due to protection, is doubtless true, but the increase, although partly real is, I believe, largely only apparent and for the reasons already given. Fifteen years and more ago it is doubtful, as I have said, whether an ornithologist would have dared to report a white-winged gull on our coast without the bird in hand. Furthermore he would have doubted the possibility of making a sure identification without the gun. Nowadays with opportunities to study gulls with strong prismatic glasses within half a gun-shot distance, the careful observer may feel almost as sure of his identification as if the bird were dead in his hand.

In the case of the Laughing Gull there has been an actual increase as the bird has markedly increased in numbers in the protected breeding colonies of Muskeget on the south and Western Egg Rock on the Maine coast. The terns, released from the cruel tyranny of fashion, had already begun to increase fifteen years ago, and the last fifteen years have added strikingly to their numbers. In 1905, I recorded that I had never seen a Roseate Tern on the Essex County coast. Now they are actually abundant during the latter part of the summer at Ipswich

and their plover-like cries are familiar sounds. Common Terns have increased several fold and Least Terns have been seen. It is to be hoped that the various species of terns that formerly bred back of the beach at Ipswich will return to their old breeding-haunts.

Among the ducks, there has been at times a marked increase in the number of Red-breasted Mergansers. This may be partly accounted for by the protection of that part of their breeding range comprised in the Island of Anticosti, the great *domaine* of M. Meunier.

The increase in the records of the European Widgeon is probably due merely to greater skill in recognition of this bird. Birds in female or immature plumage were formerly recorded as the American form of Widgeon; now, by an examination of the axillary feathers the species can be identified with certainty.

The Wood Duck, now preserved throughout the United States and Canada, seems to have responded to the kindly treatment. Instead of being a "vanishing bird," as it was called, it has already begun to increase.

As a result of the new Federal laws there has been in the main a marked increase in the number of smaller shore-birds. At times the beaches swarm with Semipalmated Sandpipers, Sanderlings, and Semipalmated Plovers. On August 12, 1913, at Coffin's Beach, I watched a flock of fully 1500, nearly all Semipalmated Sandpipers. Piping Plovers, for a number of years absent as breeders at Ipswich, have again laid their eggs in this region. For most of the larger species, however, it would seem as if the reprieve had come too late. Hudsonian Curlews, Knots, Willets, and Godwits, far from increasing, have with difficulty held their own or are decreasing in number. Dowitchers, however, have apparently increased, due, I believe, to the fact that the opening of the shooting-season is deferred until August 15, when most of these birds have passed for the South. The Upland Plover is still at a low ebb but I have hopes that the tide has turned. Although the smaller birds are so abundant some years, seasons of scarcity occur as before.

One of the larger shore-birds, the Killdeer, now universally protected, irregular and accidental in former days in the County, has become within the last ten years a regular summer resident and its numbers appear to be on the increase.

Bob-whites have never recovered from the severe winter of 1903-04, and although numbers have since been introduced into the County, they are by no means a common bird. It is unfortunate that the introduced birds have been largely of southern races, which, by interbreeding with our Bob-white, have probably decreased its resistance and themselves easily succumb to northern winters. Many of these introduced birds, bred in confinement, show but little fear of man and fall easy victims to pot-hunters. The severe winter of 1917-18 was undoubtedly fatal to many.

Ruffed Grouse, although up to their usual numbers in the winter of 1914-15, had so diminished throughout the State in the next few years that the Fish and Game Commissioner in 1918 requested sportsmen to spare them. It is believed that the extreme cold season of 1917-18 made the raising of broods difficult or impossible as the plant-lice, on which the young depend for food, were largely destroyed. Wet springs also had their effect. Since then the bird seems to have nearly or quite returned to its usual numbers.

Notwithstanding rumors to the contrary, the Passenger Pigeon appears to be extinct. The last individual, which was in confinement in Cincinnati, died in 1914. On the other hand the Mourning Dove is more frequently reported than formerly.

Among the hawks the only noticeable change in numbers is to be remarked in the case of the Rough-legged Hawk. Since 1905, I have seen one or two and rarely as many as four of this species at Ipswich nearly every winter. It is possible that these may be the same individuals coming back every year, and it is obvious that observers would not find them if these visitors were promptly shot on their first appearance. Their recognition in the field is generally so easy that the gun in this case has not been necessary.

The Prairie Horned Lark, which reached the eastern seacoast at Ipswich and bred in 1903, has since increased in numbers and has become a regular breeder in the County. The Horned Lark or Shore Lark was much decreased in numbers in the winter of 1918-19.

The Orchard Oriole, formerly breeding regularly at Ipswich, apparently ceased to do so after 1908, although I recorded a female there in September, 1918, and it was found singing in Lynn in May, 1913. It is very probable that the extensive spraying of orchards in which it nests, has been responsible for this. The Baltimore Oriole has been for the same reason less common but is, I believe, returning to its usual numbers, now that spraying of elm trees is less universal.

The Bronzed Grackle has undoubtedly increased in numbers in the last fifteen years. In the original Memoir I stated that they had begun to build their nests in towns and cities and their numbers in these places have continued to increase. An index of this in Boston is given by Mr. Wright:¹ in 1900, there were two pairs in the Public Garden, while in 1906, thirty-two nests were built. Finding the vicinity of human habitations favorable for nesting sites, food, and safety, they have taken to building in the vines of houses in increasing numbers. In 1907, for the first time, they built in the vines of my Ipswich house although Robins had found it a favorable locality for some years. They are also fond of breeding in evergreens near houses.

¹ Wright, H. W. Birds of the Boston Public Garden, pp. 93, 94, 1909.

The Evening Grosbeak has of late years visited Essex County more frequently and in greater numbers. It has become almost a regular winter visitor. The Pine Grosbeak, on the other hand, has appeared in Essex County in only two winters in the last fifteen years. The other irregular winter visitors have been, as the Annotated List will show, as irregular as formerly, sometimes being abundant, sometimes entirely absent.

The peculiarly interesting bird of the County, the Ipswich Sparrow, has, as far as records go, lost ground in the last ten years, and during the fall and winter of 1918-19, it was extremely rare. It is to be hoped that this period of decline is only temporary as in the case of other birds and that the species will swing back to its usual numbers. Although its breeding-grounds at Sable Island, N. S., have been gradually reduced in size by the storms and ocean currents, there is still plenty of area left for this vigorous bird.

With the change from fragrant hay-barns with their open doors and windows to the ill-smelling and unpoetic garages, the number of Barn Swallows in the County is suffering a steady decline. At Ipswich, especially during the fall migrations, the number of Tree Swallows seems to be as great as ever, but it is believed that they are generally less common than fifteen years ago. Eave Swallows as breeders have certainly much diminished in the last fifteen years. This diminution can in many cases be ascribed to the English Sparrows who occupy their clay nesting-retorts, yet on some farms where this sparrow pest is excluded, the Eave Swallows have deserted eaves formerly occupied by them.

The White-eyed Vireo, formerly a regular breeder in the Swampscott region, has been largely driven out by the gypsy-moth remedies and by the building-up of the country. The other vireos suffered a period of depression in numbers about 1917, but are gradually coming back.

Among the warblers there have been several startling changes during the last fifteen years, changes, fortunately, for the most part for the better. The Tennessee Warbler, recorded in the original Memoir as a "very rare transient visitor" for which I had only three records, has in the last five years become a regular and at times a common visitor. In this connection it is interesting to note that, in 1915, I found this warbler an abundant breeder on the southern Labrador coast, while Audubon at the same place and season, in 1833, failed to find a single bird. The Cape May Warbler has also increased in numbers in the last ten years so that this formerly rare bird is at times common. The same may be said of the Bay-breasted Warbler.

The severe winter of 1917-18 either destroyed or drove south the majority of Myrtle Warblers. Probably both of these effects were produced. The following winter, which was exceptionally mild, was remarkable for the small numbers of

this bird. We might infer from this that the group or beginning-race of this warbler that formerly wintered in the North was either largely killed out in the previous winter or learned the advantages of a more southern station. I expect it to return to its usual numbers.

The Golden-crowned Kinglet, a bird that is accustomed to winter in cold regions, also appeared to have suffered very much from the severe winter of 1917-18, for it, too, came in very small numbers in the winter of 1918-19. This was clearly shown, not by general impressions which are apt to be misleading, but by actual counts made in the Bird-Lore Christmas Census of 1918. Mr. Francis H. Allen¹ found that while 500 of this species were recorded in 1917, in 1918 only 76 were recorded throughout its entire range east of the Rocky Mountains.

In the original Memoir I had collected only six records for the Mockingbird for Essex County. Four of the birds were shot. In the last dozen years the bird has become almost a resident, for individuals have been observed in various places in the County at all times of the year.

In this Supplement, one species,—the Passenger Pigeon,—has been removed from the regular list and put among the extinct species. The Belted Piping Plover is now no longer considered a distinct subspecies and is removed.

Four species,—the Ivory Gull, Brown Pelican, White-fronted Goose, and Clapper Rail,—have been removed from the doubtful list and added to the regular list.

Eleven other native and introduced species have been added to the regular list, namely: Kumlien's Gull, Western Willet, White Gyrfalcon, Yellow-headed Blackbird, Rough-winged Swallow, Prothonotary Warbler, Blue-winged Warbler, Louisiana Water-Thrush, Hooded Warbler, Labrador Chickadee, Greenland Wheatear, and Starling. This makes a total of 335 species and subspecies for the County.

¹ Allen, F. H. Bird-Lore, vol. 21, p. 361, 1919.

CHAPTER II

BIRDS OF LIMITED AREAS

IN the original Memoir there were chapters on the birds of the ocean, of the sand beaches, sand dunes, salt-marshes, fresh-water marshes, and ponds of the County,—a series of studies in ecology. In this chapter will be found several bird censuses of limited areas in the County, made for the United States Biological Survey, a census of warblers at Nahant and Ipswich in the height of the spring migration, and a brief account of the birds frequenting Sagamore and Clark's Ponds.

The Bureau of Biological Survey of the United States Department of Agriculture, in 1914, asked ornithologists and bird observers to make censuses of the birds nesting on limited areas in order to obtain some idea of the bird population of the country. It was evident that in a region of forty or fifty acres very few would have the time or skill to find all the nests therein made, and that some other method must be employed if anything like an accurate census was to be taken. It was suggested that the observer should thoroughly patrol the given area for three or more early mornings at the height of the breeding season, and note the species and number of singing males. It was assumed that the males sang within a reasonable distance of their nests and also that it was fair to assume that each singing male represented a breeding pair. The recent paper by Mr. H. Mousley on the singing-tree¹ confirms the fairness of this method. In a number of different species, mostly warblers, he found that the male almost invariably sang at some special station, generally a tree, within, on the average, seventeen yards of the nest. To one who has made a census and has found the same birds singing morning after morning the method appeals as a fairly accurate one.

In June, 1915, I made a study of about forty-seven acres at Ipswich, which included the twelve acres where my summer house stands. My report was as follows: "The area studied, about a mile from the sea, comprises some forty-seven acres of upland sloping to the east and south to a salt-marsh, its base washed by the highest tides. The north boundary is a road running east and west; the western boundary is a stone-wall grown up with bushes and rum-cherry trees.

¹ Mousley, H. *Auk*, vol. 34, p. 339, 1919.

The whole area is a glacial gravel hill with a broad flat top sixty feet above the marsh at its highest point. The eastern section, consisting of fifteen acres, contains three small summer cottages each with small flower and kitchen gardens, elm, maple, and black-locust shade-trees and bushes. A row of apple trees extends along the stone-wall by the road. The rest of the ground is a badly run-down mowing-field in which wild strawberries and roses abound. The middle area of twelve acres contains two houses and a barn, vegetable and flower gardens, fruit trees and berry bushes, mowing-fields and an acre and a half devoted to a thicket of New England trees,—about fifty species,—now averaging fifteen years old. Especial provision is made for the birds in the thick tangle of trees,—evergreen and deciduous,—in the bushes and vines, especially native berry-bearing, at the boundary walls and elsewhere. There are many old rum-cherry trees and apple trees and a very large bitternut hickory. There are thirty-two bird boxes and several bird baths. The number of birds on this middle area of twelve acres is much larger than on the remaining thirty-five acres. The western area of twenty acres contains one summer cottage with flower and vegetable garden, a few fruit and shade-trees, a small thicket of evergreens, the rest mowing-land. There are no English Sparrows, Starlings, or cats on the whole area.”

My list of the nesting birds of this area is as follows:

	Pairs		Pairs
Ring-necked Pheasant	2	Savannah Sparrow	3
Black-billed Cuckoo	2	Chipping Sparrow	4
Flicker	2	Song Sparrow	16
Kingbird	6	Barn Swallow	2
Phoebe	2	Tree Swallow	15
Crow	1	Cedar Waxwing	1
Bobolink	10	Red-eyed Vireo	1
Red-winged Blackbird	4	Yellow Warbler	11
Meadowlark	3	Maryland Yellow-throat	7
Baltimore Oriole	6	Redstart	1
Bronzed Grackle	8	Catbird	6
Purple Finch	1	Brown Thrasher	3
Goldfinch	2	Robin	15
Vesper Sparrow	4	Bluebird	1

A total of 28 species and 139 pairs.

Census made in June, 1915, by Mr. Arthur P. Stubbs at Thompson Farm in Lynn, of about 160 acres, comprising about one-half swamp, and the rest dry upland, with a few buildings:

	Pairs		Pairs
Bittern	1	Field Sparrow	2
Black-billed Cuckoo	1	Chipping Sparrow	1
Flicker	1	Song Sparrow	16
Chimney Swift	2	Barn Swallow	1
Kingbird	2	Cedar Waxwing	1
Phoebe	1	Yellow Warbler	12
Bobolink	6	Maryland Yellow-throat	12
Cowbird	1	Catbird	2
Red-winged Blackbird	20	Brown Thrasher	1
Baltimore Oriole	1	Robin	3
Goldfinch	1	Bluebird	1

A total of 22 species, 89 pairs.

Census made in June, 1915, by Mr. Charles E. Moulton at the Fay Estate in Lynn, of about forty acres, one-third woodland, the rest brush and swamp:

	Pairs		Pairs
Black-billed Cuckoo	2	Rose-breasted Grosbeak	2
Belted Kingfisher	1	Indigo Bunting	1
Downy Woodpecker	1	Scarlet Tanager	1
Flicker	4	Cedar Waxwing	2
Ruby-throated Hummingbird	4	Red-eyed Vireo	13
Crested Flycatcher	1	Golden-winged Warbler	2
Wood Pewee	2	Yellow Warbler	2
Least Flycatcher	3	Chestnut-sided Warbler	4
Crow	1	Black-throated Green Warbler	1
Cowbird	1	Oven-bird	5
Red-winged Blackbird	1	Maryland Yellow-throat	4
Baltimore Oriole	4	Redstart	12
Bronzed Grackle	2	Catbird	10
Goldfinch	1	Brown Thrasher	1
Chipping Sparrow	2	Wood Thrush	3
Song Sparrow	5	Veery	2
Chewink	3	Robin	18

A total of 34 species, 121 pairs.

Census made in June, 1916, by Mr. Homer D. Poore, of forty acres of land near Haverhill, about one-third wooded, an acre swamp, two under cultivation, the rest pasture:

	Pairs		Pairs
Flicker	1	Yellow Warbler	2
Wood Pewee	1	Prairie Warbler	1
Bobolink	1	Oven-bird	1
Baltimore Oriole	2	Maryland Yellow-throat	4
Goldfinch	1	Redstart	2
Chipping Sparrow	5	Catbird	1
Song Sparrow	3	Brown Thrasher	2
Chewink	1	Robin	3
English Sparrow	2	Bluebird	1
Purple Martin	1		

A total of 19 species, 35 pairs.

The peninsula of Nahant is practically an island connected with the main by a long narrow neck of land. Mr. Horace W. Wright, whose accuracy in observation and care and exactitude in counting are well known, has kindly furnished me with three lists and counts of warblers made at Nahant, omitting only the Bass Point section. Mr. Wright has also given me two lists from Ipswich. The lists were made at the height of warbler migration in May, and give a good idea of the relative abundance of the different warblers in the same season and in different years. These lists will in time have considerable value for comparison.

Name	Ipswich May 21, 1904	Ipswich May 24, 1905	Nahant May 17, 1912	Nahant May 19, 1913	Nahant May 25, 1916
Black and White Warbler	10	4	4	10	2
Golden-winged Warbler	2	2			1
Nashville Warbler	1	3	2	3	
Tennessee Warbler					3
Northern Parula Warbler	5	8	10	13	10
Cape May Warbler				1	
Yellow Warbler	15	20	20	19	20
Black-throated Blue Warbler	3	5	5	13	5
Myrtle Warbler	1		2		
Magnolia Warbler	4	4	5	20	28
Chestnut-sided Warbler	12	8	5	11	7
Bay-breasted Warbler			1	2	3
Black-poll Warbler	6	2	9	6	5
Blackburnian Warbler	1		4	2	1
Black-throated Green Warbler ..	8	4	1	11	6
Yellow Palm Warbler	1				
Prairie Warbler			1	4	
Oven-bird	2	2	4	6	4
Water-Thrush	2	1	4	2	2
Maryland Yellow-throat	25	10	5	7	3
Wilson's Warbler	2	11	3	5	6
Canada Warbler	3	4	10	4	4
Redstart	12	16	10	12	10
Total	115	104	105	151	120
	19 sp.	16 sp.	19 sp.	19 sp.	18 sp.

SAGAMORE POND.

A short distance to the north of my house at Ipswich, a glacial drumlin stands up to a height of 150 feet. Snuggled at its southern base at the time the original Memoir was published was a brackish, black-grass marsh intersected with ditches and bordered by alders and willows, by birches and old apple trees, by bushy pastures and mowing-lands. It was watered by three springs of sweet water nearly equidistant from each other on the periphery and by the high vernal and autumnal salt-water tides that pushed their way through an ancient ruined dyke

to the limits marked by the region of brackish vegetation. The dyke had been built to keep out the tides and the marsh thoroughly drained had once, according to tradition, been a region of fresh meadows where bountiful crops of English hay were raised from the fertile soil. With the dyke fallen into neglect and decay the land had reverted to its original brackish condition with the characteristic fauna and flora. It was a region where I was sure to find Acadian Sharp-tailed Sparrows during the migrations, and the Sharp-tailed Sparrow as a permanent summer resident. Bitterns usually nested there, and shore-birds of the marsh tarried for a while on the mud sloughs, and, for their destruction, gunners had erected blinds. It was a region abounding in stagnant ditches and mosquitoes. Partly on this latter account, and partly because a sheet of water was thought to be more beautiful than a marsh, the dyke or dam was repaired in the fall of 1904, and the waters of the springs and the wash from the hills retained. As considerable salt water had been imprisoned in the area, the resulting brackish mixture spreading over the edge of the former area of brackish vegetation killed some of the alders and willows on the borders of the artificial pond. Gradually this water seeped through the dam, and the fresh water that took its place encouraged an active growth of cat-tail rushes on the shallow edges which threatened in time to obliterate the pond itself. The small native fish, among them the pugnacious stickleback, were unable to penetrate into the innumerable pools among the cat-tails. As a consequence mosquito larvæ flourished and the last state of that region was worse than the first. An active campaign was carried out in 1916, as a result of which the cat-tails were largely dug out, the borders of the pond deepened, and its height raised by repairs on the dam and by a more plentiful rain-fall. Muskrats which had become abundant and had built their houses of and among the cat-tails, were largely eliminated, as was also the case with the mosquitoes. The almost constant breezes kept the surface of the pond so agitated that mosquito larvæ were discouraged; moreover, fish could penetrate to the edges.

The area of this artificial sheet of water which I have called Sagamore Pond (but is variously known as Goodale's or Crane's or Rantoul's Pond after its owners) is roughly three-quarters of a mile in its longest diameter by a third of a mile wide. Its shores are irregular; an interesting feature on the western side is a small circular bay surrounded, except at its outlet to the pond, by steep wooded banks forty or fifty feet high,—a typical glacial kettle-hole.

The bird fauna of this fresh-water pond and its shores is very different from that of the original brackish marsh although many of the same birds visit it. All the herons,—the Green, Great Blue, Black-crowned Night, and Bittern visit it now as before, but the Bittern which formerly bred in the marshes is forced to seek a secluded spot on the borders of the pond. In 1911, two Egrets did honor

to the place by spending three or four days there, and in 1914, a Least Bittern, I have reason to believe, nested there.

During the cat-tail period, rails, which were only rarely seen during the migration in the marsh period, became abundant and Soras and Virginia Rails bred in considerable numbers, only to dwindle with the mosquito when the cat-tails were cleared. Coot are often abundant on its waters.

Shore-birds find a less favorable spot here than in the old brackish-marsh days with its mud sloughs, and some of them, like the Pectoral Sandpiper, have largely, if not entirely, forsaken it. The two species of Yellow-legs and the Solitary and Least Sandpipers are common on the pond's shores in the migrations, and Snipe have somewhat increased.

The open water of the pond became a favorite resting and feeding place for migrating water-birds, and it would doubtless have been much more frequented had it not been for the activity of gunners. The gunners attributed the falling-off in numbers of birds to the building of a house a quarter of a mile from the pond, not realizing that in protected regions ducks come in numbers notwithstanding, as in city parks, the near vicinity of houses and many people. Ducks know too well the danger associated with the discharge of gunpowder, and a single boy with a gun soon puts a pond on the black list for all intelligent water-fowl.

One of the commonest water-birds of the pond in the late summer and until the water freezes, is the Pied-billed Grebe and, I am inclined to think, if the cat-tail period had continued longer this species would have bred. Herring Gulls visit the pond at times, but rarely. Among the ducks, the Black Duck is by far the most abundant visitor. Flocks of forty or more feed and rest there during the latter part of the summer and one or two pairs have bred nearly every season. Other birds of this group that have been seen on the pond are the Red-breasted Mergansers, Blue-winged Teal, Shoveller, Wood Duck, Redhead, Lesser Scaup Duck, and Golden-eye.

CLARK'S POND.

Near the eastern shore of Great Neck at the mouth of the Ipswich River and separated from Plum Island Sound by a low sand-bar and beach lies a pond of about a hundred acres in extent, known as Clark's Pond. An artificial dam prevents its draining and holds back the tides from entering. Except on the seaward side the pond is surrounded by low rolling hills barren of trees and bushes and used only as pasture for cattle. The low, muddy shores form, especially in dry weather, extensive flats. Purple loosestrife in great thickets has occupied

much of the southern shores and grows to the height of a man's head. The varied tints of blue in the shallow waters of the pond set off by fleets of white gulls and terns, the yellow and green of the flats clothed with a velvety growth of spike-rush, the glowing purple of the loosestrife, and the patches of white sand beaches and clay banks, make a picture of singular beauty in its frame of barren moor-lands.

Originally maintained by the late Mr. A. B. Clark as a private ducking-pond, provided with underground blinds on the hillside and with numerous live Black Ducks and Canada Goose decoys, it has been, since his death, preserved nearly inviolate and frequented by birds and ornithologists. Binoculars have largely taken the place of guns.

I am indebted to a number of friends for records of birds observed at this pond, particularly to Mrs. Edmund Bridge who has sent me her lists for the last fifteen years, and from these, together with my own records, I have made the following list of water-birds that have been observed on the waters of the pond or on its muddy banks.

Of the gulls and terns the following have been observed :

Glaucous Gull	Caspian Tern
Great Black-backed Gull	Common Tern
Herring Gull	Arctic Tern
Ring-billed Gull	Roseate Tern
Laughing Gull	Least Tern
Bonaparte's Gull	Black Tern

Among the ducks the following have been observed :

Mallard	Pintail
Black Duck	Greater Scaup Duck
Green-winged Teal	Lesser Scaup Duck
Blue-winged Teal	Ring-necked Duck
Shoveller	Golden-eye

Of the herons the following :

Bittern	Green Heron
Great Blue Heron	Black-crowned Night Heron

Shore-birds in great numbers and large variety frequent the secure shores of the pond. These birds were protected even in Mr. Clark's day. The following is the list :

Northern Phalarope	Greater Yellow-legs
Wilson's Snipe	Yellow-legs
Dowitcher	Solitary Sandpiper
Stilt Sandpiper	Willet
Knot	Upland Plover
Pectoral Sandpiper	Buff-breasted Sandpiper
White-rumped Sandpiper	Spotted Sandpiper
Baird's Sandpiper	Hudsonian Curlew
Least Sandpiper	Black-bellied Plover
Red-backed Sandpiper	Golden Plover
Semipalmated Sandpiper	Killdeer
Western Sandpiper	Semipalmated Plover
Sanderling	Piping Plover
Hudsonian Godwit	Ruddy Turnstone

In addition, the Double-crested Cormorant may be put on the list.

CHAPTER III

ANNOTATED LIST

1 [2] *Colymbus holboëlli* (Reinh.).

HOLBØLL'S GREBE.

Not uncommon winter visitor. October 15 to May 24.

At times this bird is common; thus, on March 17, 1912, I saw from a fishing-steamer over seventy-five birds within a radius of eight miles of Gloucester Harbor. Mr. H. W. Wright reports eighteen seen off Marblehead Neck on April 4, 1917; thirteen of these were in one flock.

2 [3] *Colymbus auritus* Linn.

HORNED GREBE; "DEVIL-DIVER"; "HELL-DIVER."

Common winter visitor. October 1 to May 6.

The date for molting into nuptial plumage varies, but I have seen birds in this plumage as early as April 14. Their cheeks and heads look very large and their brownish-yellow ear-tufts are conspicuous and wave in the breeze. It is a very different-looking bird from the ones seen during the winter.

As an index of the occasional great abundance of this species I would cite the record of fifty-two birds seen at Nahant on February 22, 1909, by Mr. H. W. Wright.

The Horned Grebe is very silent with us. In fact, I had never heard its voice until October 18, 1919, when one swimming near the beach uttered from time to time a loud whistling, creaking note which at times suggested a shore-bird, at times a gull.

3 [6] *Podilymbus podiceps* (Linn.).

PIED-BILLED GREBE; "DABCHICK"; "HELL-DIVER"; "WATER-WITCH."

Common autumn visitor; rare spring visitor; probably rare summer resident. April 10 to June 3; July 22 to December 1.

This bird seems to be fond of diving under decoy ducks and on two occasions I have seen a Dabchick swim rapidly toward a Carolina Rail that was walking on the shore. In each case the frightened rail took wing.

I recently had an opportunity to watch a Dabchick diving repeatedly within a few feet of me. On this occasion the bird just before diving sat quietly on the water with neck and head up. It then sank slowly about an inch in the water which was so clear that the feet could be seen hanging motionless below during this action. The bird then turned its head and dove, kicking out behind vigorously with both feet. Below the surface it could be seen swimming, propelled by its feet alone, both as it went down and when it came again to the surface. The wings were in place and not moved. A few air bubbles came to the surface as the bird descended. This method of swimming under water by the use of the feet alone appears to be the normal procedure in all loons and grebes, but under certain circumstances, especially in extreme fright, the wings are also used. Grebes carry their downy young on their backs under the wing-coverts and dive with them there. Finley¹ says: "When the old birds are scared, it seems very difficult for them to hold the chicks in place when they dive." This is undoubtedly due to the fact that the bird in fright resorts also to the use of its wings.

4 [7] *Gavia immer* (Brünn.).

Loon.

Abundant transient visitor, common in winter; a few non-breeding birds pass the summer. September 1 to June 30 (July and August).

In a recent article² the statement is made that "migratory Loons fly with the bill open. Doubtless so heavy and short-winged a bird requires a great deal of oxygen for protracted flight." As this experience differs from my own and as it is well known that all birds fly with bill generally open in warm weather, it occurred to me that the observations that led to this statement may have been made in warm weather. I have seen Crows, Song Sparrows, and numerous other birds fly with their bills open in warm weather and recent studies I have made of great numbers of Double-crested Cormorants flying to and from their nesting places in the Gaspé Peninsula have demonstrated that many fly with open bills in warm weather, but on ordinary days the bill is nearly always closed. Even when the bird is startled from the water and is in great haste to escape, the bill is closed.

[9] *Gavia arctica* (Linn.). BLACK-THROATED LOON.—On the doubtful list.

¹ Finley, W. L. *Condor*, vol. 9, p. 97, 1907.

² Nichols, J. T., Murphy, R. C., and Griscom, L. "Long Island Notes." *Auk*, vol. 34, p. 437, 1917.

5 [11] *Gavia stellata* (Pont.).

RED-THROATED LOON; "CAPE RACE"; "CAPE RACER"; "SCAPE-GRACE."

Abundant transient visitor in the autumn, uncommon in late winter and spring. August 27 to April 19 (June 27).

On June 27, 1909, an adult in full plumage flew within a hundred yards of my boat at the mouth of the Essex River.

I wish to correct the statement in the original edition that "in habits and call notes they closely resemble their larger cousin." One of the striking differences in habit is the fact that the Red-throated Loon is able to leap into the air from calm water and fly off, while this is generally impossible in the case of the Loon, and it is absolutely impossible if the body of water is small. I have found the Red-throated Loon nesting in small fresh-water ponds in the bog or tundra of Labrador, and have seen them rise directly from the water, even in calm weather. Under similar circumstances a Loon would be a helpless prisoner.

While the notes of the Loon vary from a mournful wail to a diabolical laughter, the range of notes of the Red-throated Loon is more limited. Very silent during the migrations, it is a noisy bird in the breeding range. Here I have heard it utter repeatedly harsh *cacks* which sound at times like groans.

6 [13] *Fratercula arctica arctica* (Linn.).

PUFFIN; "SEA PARROT"; "PERROQUET."

Rare winter visitor. October 16 to March 19.

As the breeding colonies on the Labrador coast are rapidly dwindling under the ruthless destruction inflicted on them by the fishermen, so this bird is becoming increasingly rare on the Essex County coast.

7 [27] *Cepphus grylle* (Linn.).

BLACK GUILLEMOT; "SEA PIGEON."

Common winter visitor. September — to April 23.

As early as March some of these birds have molted or partially molted into summer plumage. Thus on March 14, 1909, I saw off Rockport, two in the full black plumage, several that were dark with white breasts, and one still in full winter plumage. On March 25, 1905, Mr. H. W. Wright reported five in full black plumage off Marblehead and three on March 28. Mrs. Edmund Bridge reported three in dark plumage off Nahant on October 10, 1907.

Saxby¹ says: "Among certain families, the divers and guillemots, for example, the extraordinary liability of certain individuals to retain the summer plumage until winter, and of others to assume it many weeks before the accustomed time in spring, has led, and still leads, to a vast amount of perplexity."

[30] *Uria troille troille* (Linn.). MURRE.—An authentic record for this bird in Essex County is still to be made, notwithstanding the fact that it breeds farther south than does Brünnich's Murre. The only authenticated breeding-place of the latter in the Gulf of St. Lawrence at the present day is Bird Rock. Although the Murre breeds in various places in the Gulf of St. Lawrence, at Gaspé, Bird Rock and southern Labrador,—the total number of Murres to the north of us is much less than of Brünnich's Murre which breeds in countless numbers in Greenland, Baffin's Land, and elsewhere.

8 [31] *Uria lomvia lomvia* (Linn.).

BRÜNNICH'S MURRE; "ICE-BIRD."

Not uncommon winter visitor. October 27 to March 14.

On October 27, 1909, Mr. J. L. Peters saw over a hundred of these birds off Plum Island; four were in Plum Island Sound. This is an unusually large number of this species to be found together, and an unusually early date. Late November is the ordinary date of arrival, although Damsel² notes them for November 9, 1901. A single bird was seen by me off Rockport on March 14, 1909. Fleming³ says there were unusually large migrations of these birds along the New England coast in the winters of 1890-91, 1896-97, 1899-1900, and 1901-02.

9 [32] *Alca torda* Linn.

RAZOR-BILLED AUK; "TINKER"; "ICE-BIRD."

Not uncommon winter visitor. October 29 to March 6.

The March 6 record is of a bird shot in 1909 at Swampscott by Dr. Charles G. Mixer. The larger tail, which is apt to be cocked up when the bird is swimming on the water, easily distinguishes this species from the Murre. In flight the tail conceals the feet which are extended below it. In the Murre the feet are extended beyond the diminutive tail and seem to take its place.

[33] *Plautus impennis* (Linn.). GREAT AUK; "PENGUIN."—Long since extinct, but formerly common on our shores.

¹ Saxby, Henry L. Birds of Shetland. Edinburgh, 1874, p. 300.

² Allen, G. M. "An Essex County Ornithologist." Auk, vol. 30, p. 19, 1913.

³ Fleming, J. H. "The Unusual Migration of Brünnich's Murre (*Uria lomvia*) in eastern North America." Proc. 4th Internat. Ornith. Congress, 1905, p. 528-543, 1906.

A note to a paper by Professor James Orton on the Great Auk,¹ signed "F. W. P." [F. W. Putnam], reads:

"That the Great Auk was once very abundant on our New England shores, is proved beyond a doubt by the large number of its bones that have been found in the ancient 'Shell-heaps' scattered along the coast from British America to Massachusetts. The 'old hunter' who told Audubon of its having been found at Nahant, was undoubtedly correct in his statement, as we have bones of the species taken from the Shell-heaps of Marblehead, Eagle Hill in Ipswich, and Plumb Island, and Mr. Elliot Cabot has informed me that an old fisherman living in Ipswich described a bird to him, that was captured by his father in Ipswich many years ago, which, from the description, Mr. Cabot was convinced was a specimen of the Great Auk."

10 [34] **Alle alle** (Linn.).

DOVEKIE; LITTLE AUK; "PINE KNOT"; "KNOTTY"; "ICE-BIRD."

Winter visitor, varying irregularly from uncommon to abundant. November 4 to April 30 (June 1).

The exceptionally late date of June 1, records a single bird seen by Mr. Charles R. Lamb off Rockport, in 1914. On March 17, 1912, in a trip in a fishing-steamer to about eight miles off Cape Ann I saw great numbers of this interesting bird, singly and in small and large flocks. Many were flying north close to the water. They dotted the calm surface for miles from the shore and even among the wharves at Gloucester to a distance of ten miles at sea. In all, several thousand must have been seen. They were so tame that they were constantly in danger of being run down by the steamer, but managed to get out of the way by flopping over the surface, or diving and flying vigorously under water. Their voices were frequently heard, in the form of a "whistling grunt" or "nasal whistle" as I have jotted it down in my notes. On another occasion when I was watching a single bird swimming at its ease within six feet of me at Rockport with its tail cocked up between its wings, I heard a low, rather soft squeak uttered from time to time. The bird dabbled at the water from time to time and shook its head. Six days after my observation of the large number of Dovekies off Gloucester Mr. H. W. Wright counted seventy-five from the shore at Nahant.

On January 7, 1905, a Dovekie was picked up by Mr. R. Larcom in the streets of Beverly, and in the spring of that same year I found the remains of one not far from my house at Ipswich.

[35] **Megalestris skua** (Brünn.). SKUA; "SEA-HEN."—I have no nearer record for the County than the one previously noted by Captain Collins some 370 miles off the mouth of the Merrimac River.

¹ Amer. Naturalist, vol. 3, p. 540, 1869.

11 [36] *Stercorarius pomarinus* (Temm.).

POMARINE JAEGER.

Not uncommon transient visitor. Spring; July 5 to September 28.

12 [37] *Stercorarius parasiticus* (Linn.).

PARASITIC JAEGER; "MARLING-SPIKE"; "BOATSWAIN."

Common transient visitor, especially in the fall. June 11 to June 25; July 4 to October 14.

This is the Richardson or Arctic Skua of British writers.

This jaeger has become more common and has come earlier in the summer coincidentally with the increase and earlier arrival in numbers of the terns. It is one of the most interesting sea-birds to watch. At the time they are most abundant, namely in August, nearly all are in the usual adult plumage, dark above and snowy white below with a partial dark ring around the neck. Occasionally one is seen in the black plumage, as black below as above,—as black as a crow. Those in the mottled brown plumage are also seen. The long, pointed middle tail feathers of the adult help to distinguish it from the Pomarine Jaeger whose central tail feathers have rounded ends. Nelson,¹ speaking of the latter bird, says: "The peculiar twist to the long tail feathers of this species renders it conspicuous and identifiable almost as far as seen."

My notes of August 11, 1910, at Ipswich, describe a common scene enacted by the Parasitic Jaeger. "Two chased a tern that twisted and turned in sharp angles and small circles over the beach, but finally secured freedom from pursuit by dropping the fish which one of the jaegers skillfully seized in mid-air before it touched the sand. Immediately afterward the two freebooters dashed into a flock of a hundred terns, pursuing them to right and left. The terns screamed loudly and darted about in great confusion, but some of them turned and chased the jaegers."

Almost always the jaeger catches the booty in the air but I have seen it settle on the water to pick up the fish dropped.

¹ Nelson, E. W. Report upon Natural History Collections made in Alaska between the years 1877 and 1881, p. 47, 1887.

13 [38] *Stercorarius longicaudus* Vieill.

LONG-TAILED JAEGER.

Rare transient visitor.

This is Buffon's Skua of British writers. Chapman¹ says: "No dark phase of this species has been described." Newton² says that this species "rarely exhibits the remarkable dimorphism to which the two preceding are subject, but one instance (Ibis, 1865, p. 217) apparently being on record."

On July 23, 1910, a female in black plumage was shot at Pigeon Cove by Mr. C. R. Lamb,³ and in the collection of the late William Brewster there are three birds of this species in the dark phase.

*14 [39] *Pagophila alba* (Gunn.).

IVORY GULL.

Accidental visitor from the North.

In the original Memoir, I gave George O. Welch's report of one of these gulls shot off Swampscott by a fisherman some fifty years before; the bird was mounted by S. Jillson, but there was no further record. Although Mr. Wm. A. Jeffries modestly declines to consider his own observation "a record" as will be seen in the following note written me by him under date of May 10, 1919, I have decided to take this bird from the doubtful list and give it full rank. I think that both Welch's and Mr. Jeffries' evidence is satisfactory.

Mr. Jeffries says: "The following I do not consider a record, as I did not take the bird, but I do not see what else the bird observed could have been.

"When I moved down [to Swampscott] some years ago,—I cannot give you the date now,—I noticed a small white gull near a number of common gulls but not going into the flock. I and my wife watched him through a telescope for some time. He then flew in toward my shore-line and alit on a rock, a stone's throw from us, where he was for half an hour moving about so we could observe him from every point. It might have been an albino Kittiwake, but not likely. I spoke to Brewster about it and his opinion agreed with mine that every probability pointed to the Ivory Gull."

¹ Chapman, F. M. Birds of Eastern North America, p. 15, 1912.

² Newton, Alfred. A Dictionary of Birds, 1893-1896, p. 870.

³ Lamb, C. R. Auk, vol. 35, p. 233, 1918.

15 [40] *Rissa tridactyla tridactyla* (Linn.).

KITTIWAKE; "PINNY OWL"; "WINTER GULL."

Common winter visitor. September 6 to April 2.

On November 1, 1914, I watched what was, for this region, an unusually large number of these birds fishing off Ipswich bar. At times there were as many as five hundred. They hovered over the breakers in a compact flock all headed to windward, constantly flickering their white wings and constantly dropping to the water, where the immersion of the head and neck appeared to be all that was necessary to secure their prey. In this way they gradually worked to the windward edge of the shoal, which evidently harbored a school of fish, when they would circle around to the leeward end and repeat the process. Later, as the bar became exposed with the ebbing tide, they alighted on the sand, but bands of a hundred or more would fly about like sandpipers, turning now this way, now that in the precise manner of military evolutions. A year later I saw a flock of fifty Kittiwakes fishing at the same place. They pursued similar tactics but as their prey was evidently deeper in the water they plunged completely below the surface at each attempt, not to emerge until after the water had closed over them.

16 [42] *Larus hyperboreus* Gunn.

GLAUCOUS GULL; BURGOMASTER.

Not uncommon winter visitor. August 15 to May 26.

Since 1905, when I stated that I had never seen this bird, I have become familiar with it, not only in Labrador but on our Massachusetts coast. In the original Memoir I was able to give only four records for Essex County for fifty years; since then I have several records for nearly every year. Many of these birds I have seen myself and I have examined specimens taken at Rockport and Gloucester by Mr. C. R. Lamb and Mr. S. P. Fay. The months when these birds are most commonly found on our coast are the winter months from January to April inclusive. On May 26, 1907, I saw one immature bird in a flock of a hundred Herring Gulls on the beach at Ipswich. For August, I have two records: one for August 21, 1913, seen at Clark's Pond, Ipswich, by Mrs. Edmund Bridge, and one immature bird seen by myself at Ipswich Beach on August 15, 1918. This surprising increase in numbers on the coast is partly real and partly apparent, a subject that is fully discussed in Chapter II.

The recognition of a white-winged gull in the field is, with a little practice, not difficult, and one may often with the naked eye alone pick one out in a flock of Herring Gulls. The more difficult thing is to distinguish between the different species of white-winged gulls. It is perfectly possible, however, if the observer is careful and accurate, to identify with certainty a Glaucous, an Iceland, or a Kumlien's Gull without resort to shooting. The limited dark tips to the wings in Kumlien's Gull may be overlooked if one is not careful, but once seen they distinguish this gull from any others. The mantle of the adult is a lighter gray blue than in the Herring Gull.

The real difficulty comes in distinguishing the Glaucous from the Iceland Gull, but once the distinguishing points are mastered, this difficulty disappears. Size alone is deceptive and is unreliable in distinguishing these two birds, especially in the absence of other birds for comparison. The Glaucous Gull is generally the size of the Great Black-backed Gull but may be somewhat smaller, and often looks no larger than a Herring Gull. It may be said here in parenthesis, that the Great Black-backed Gull, although often looking much larger than the Herring Gull with which it associates, not infrequently appears the same size. The Iceland Gull is slightly smaller than the Herring Gull, but the difference in size between the Iceland and the Glaucous Gull often disappears in the field. In fact it has been stated that the large male Iceland Gull equals in size the small female Glaucous Gull. Where the difference in size is noticeable this serves to distinguish the two species. A surer field-mark, however, is the size of the bill, head, and neck. The Iceland Gull has a small dove-like head, a small neck which is held up straight as the bird sits on the water, and a small bill. Dr. Dwight¹ gives the average length of the bill of the adult Glaucous Gull as 63 mm., of the Iceland Gull, 42 mm., a difference of 21 mm., or about three-quarters of an inch. Most of the Glaucous Gulls seen on the coast in winter are immature, occasionally pure white, the *hutchinsii* type,² but usually more or less mottled with brown or chocolate. According to Dwight the pearl-gray mantle of the adult does not as a rule appear until the third winter and coincidentally the color of the bill changes from dark to yellow. Mr. Francis H. Allen³ has given an excellent review of the white-winged gulls seen near Boston and along the Essex County coast with an account of their field-marks.

The Glaucous Gulls, although sometimes seen alone, are generally associated with Herring Gulls. At times I have seen Great Black-backed, Herring, Iceland,

¹ Dwight, J., Jr. *Auk*, vol. 23, p. 28, 1906.

² I was in error when I stated in the original Memoir that "in old age the bird is almost pure white." In this I had followed previously published statements.

³ Allen, F. H. *Auk*, vol. 25, p. 296-300, 1908.

and Glaucous Gulls in the same flock. I have seen the two first-named gulls pursue the Glaucous Gull as if it were an intruder, but the same treatment is often meted out to other members of their own race. On the Labrador coast I have heard them utter *kuk kuks* like those of the Herring Gull but here they appear to be generally silent. Their habits of flight and feeding seem the same as those of the Herring Gull.

17 [43] **Larus leucopterus** Faber.

ICELAND GULL.

Not uncommon winter visitor. December 15 to March 13.

The same change has come over the status of this species as of the Glaucous Gull and the same reasons apply. In 1905, I was able to give only one imperfect record but now I have records for nearly every year, and for every month from December to May, inclusive. There are not as many dates on which it was noted as in the case of the Glaucous Gull, but probably more birds in all have been seen, for while it has been rare to see more than one or two Glaucous Gulls at a time, as many as thirty-two Iceland Gulls were seen at Eastern Point, Gloucester, on December 24, 1917, by the late Barron Brainerd. Judge C. F. Jenney found fourteen at the same place on January 19, 1918, and Mr. C. R. Lamb¹ found twelve at Rockport on April 19 of the same year, the same flock, doubtless, in all cases. Two were taken at Gloucester by Mr. S. P. Fay on March 6 and 20, 1912, respectively, and are now in the collection of the Boston Society of Natural History.

A discussion of the field-marks will be found under Glaucous Gull.

*18 [45] **Larus kumlieni** Brewst.

KUMLIEN'S GULL.

Rare winter visitor. October 27 to March 24.

Almost the same remarks about its status apply to this bird as in the case of both the Glaucous and the Iceland Gull although it is not as common as these species. It is a very great pleasure to be able to add these three white-winged gulls to my list of acquaintances, and the Kumlien's Gull is a new bird to Essex County. As far as I know, the first Kumlien's Gull identified in Essex County was seen by Mrs. Edmund Bridge at Nahant on January 4, 1908. The same bird was seen later by Mr. F. H. Allen and by Mr. H. W. Wright. An adult

¹ Lamb, C. R. *Auk*, vol. 35, p. 299, 1918.

female was taken by Mr. C. R. Lamb¹ at Rockport on January 31, 1913. I have seen the bird only once at Ipswich Beach,—on January 19, 1913, when I was in company with Mr. J. H. Baker. The October 27 record is for the year 1909 when one was seen at Plum Island by Mr. J. L. Peters. The March 24 record is for 1912, a bird seen by Mr. S. Prescott Fay and myself from a fishing-steamer, off Gloucester. The bird came at times within fifty yards of us to pick up the fish entrails thrown from the steamer. It was in immature plumage with a white and mottled back, but was easily distinguished from a Glaucous Gull in the same flock of Herring Gulls by the gray spots on the tips of its wings. On January 26, 1919, I had an excellent opportunity to study an adult Kumlien's Gull at fairly close range at King's Beach, Swampscott. Most of the Kumlien's Gulls recorded here have been in the adult plumage.

In all I have the records of twenty different observations of Kumlien's Gull in Essex County. Several of these were doubtless of the same bird.

The field-marks of this species are discussed under Glaucous Gull.

19 [47] *Larus marinus* Linn.

GREAT BLACK-BACKED GULL; "SADDLE-BACK."

Common winter visitor (summer). July 17 to May 31 (June and July).

This magnificent bird, so vocal on its breeding-grounds in the North, is rarely heard during its sojourn in Essex County. The notes uttered here are generally limited to a hoarse *cow cow cow* and a harsh *ha ha ha*. Both have a very human quality, which may account for the fact that a bird uttering these notes while flying over a farm-house at Ipswich in February, 1916, brought the dogs out barking furiously. In walking over the bogs and hills of Labrador I have often been startled by the human quality of the many varied calls and low conversational notes of this bird on its breeding-ground. Besides the loud challenge calls, which may be set down as the nuptial song, the Great Black-backed Gull has numerous calls and cries, some of which I have syllabized as follows: besides the above mentioned *cow cow* and *ha ha* which are uttered in various tones of affection, scolding, sobbing, threatening, cursing and derision, there are high-pitched *ki kis*, croaking *cahrr cahrrs*, pig-like squeals and fox-like barks, and words like *car-cas-sonne*, *au-par-a-vant*, *ma-ma*, and cries of *help, help*.

It is true they are freebooters and highwaymen, destroy other birds' eggs and their downy callow young, but their own home life is irreproachable. I shall

¹ Lamb, C. R. Auk, vol. 35, p. 233, 1918.

always carry in my mind the picture of these splendid birds standing lovingly in couples on the barren rocks of Labrador.

20 [51] *Larus argentatus* Pont.

HERRING GULL; "GRAY GULL."

Abundant resident; does not breed.

As in 1905, when "The Birds of Essex County" was published, the Herring Gull continues to hold the center of the stage for the ornithologist along shore. In a general way there has been an increase, but the numbers vary from year to year dependent on the food supply. In the summer of 1913, I spent the month of August in camp in the Ipswich dunes and made many estimates of the Herring Gulls that resorted to the beach. In the early half of the month there were about 12,000 of these birds, but they began to migrate south by August 18, and diminish in numbers.

When sand-lances¹ (*Ammodytes americanus*) are plentiful and fill the shallows and tide-pools with blue translucent masses and line the beach in silvery windrows, then gulls and terns gather in large numbers. Larger fish,—cod, haddock, hake, and pollack,—are often stranded in shallow water probably attracted by the small fry, and are thrown up in large numbers on the beach. These larger fish in turn attract the dog-fish (*Squalus acanthias*), small sharks, which in turn meet their fate in the breakers, and the beach becomes for the gulls a table of plenty reeking with an ancient and fishy smell. This was the case in the summer of 1913 when Herring Gulls were so plentiful. It was also the case in 1910; on June 26 of that year I counted fourteen dog-fish within a dozen yards on the beach.

In the summer of 1918, food on the beach was unusually scarce, sand-lances were few, and although I estimated as many as 5,000 Herring Gulls at the beach on June 23, after a severe southeast storm, the numbers had sunk to 2,000 on July 28, 1,000 on August 11, and 200 on August 30.

As in former years these summer flocks, while mostly immature birds, contain perhaps five per cent. of birds in adult plumage. In the latter part of August small family flocks of young and old birds are often to be seen flying south along the beach. Thus on August 20, 1918, one adult and two dusky young flew by; later a flock of four adults and seven dark young; later six adults, one with a black tip to the tail, followed by a group of dark young. It is interesting to note that

¹ On page 20 of the original Memoir I have referred to young herring. Although the latter are sometimes found, the sand-lance is the important small fish in summer.

birds may be seen at Ipswich Beach in June and early July that still retain the dark plumage of the first winter.

An interesting habit of the Herring Gull not described in the original Memoir I have frequently seen at Ipswich Beach and have studied by means of the tracks. I refer to their habit of dragging dead fish to the water before eating them. This is done when the fish is dry with the object, probably, of softening it. Thus on July 2, 1905, I found a hake, eighteen inches long, that had been dragged one hundred and thirty-four yards from the upper beach to the edge of the water. The fish was dragged head first and the gull walked backward as shown by the tracks. The course at first was nearly straight but soon became very tortuous, with occasional pauses. Sometimes the gull circled on its tracks, but its apparent goal, the water, was finally reached. In walking backward, the gull dragged its middle claw and occasionally one of the side claws.

On July 30, 1905, I saw an immature Herring Gull flying slowly close to the water at Ipswich, when a large fish, possibly a shark, threw itself out of the water at the bird. The gull quickly flew up, then circled around and dipped close to the water where the fish had gone down.

I have frequently seen Herring Gulls fly at Whistlers and Red-breasted Mergansers as they were sitting on the water. This is done either in spite or in play or to obtain some of the food that the diving birds brought up. Thus in one case the gull flew at a Whistler who dove, after which the gull settled in the water where the duck had been. In a few seconds the gull would fly at another duck, perhaps a hundred yards off, and so the game went on. In this case the gull did not appear to attempt to pick up any food although this is sometimes done. The duck flown at would always dive before the gull reached it, but other ducks would often come up and swim about close to the pirate gull, without sign of fear or hostility on either part. On another occasion a Herring Gull darted down at a female or young Red-breasted Merganser who turned rapidly in the water to avoid it. For a few seconds they twisted and turned, making a considerable turmoil in the water; then the gull settled peaceably within a few yards of the Merganser.

A still more singular instance was that observed by me on March 17, 1914. This was at Chestnut Hill Reservoir, near Boston. Two female American Mergansers and one male were swimming restlessly about in courtship. A Herring Gull flew directly at one of the females and alighted on the water as she swam vigorously away. Then began an active chase on the part of the gull by short flights, while the Merganser by rapid turns and occasionally by diving managed to elude it. Finally the Merganser came up from below close to the other two Mergansers who had remained passive spectators, and, as the gull again pounced

at her, all three Mergansers took flight. They easily distanced the gull, who in the chase ejected a small fish and soon gave up the pursuit. Spite or play seemed to be the motive in this little drama.

Several observers¹ have called attention to the fact that gulls in flight sometimes bring their feet and tarsi from the usual position under the tail to the breast, where they are generally tucked away under the feathers. It is supposed to be resorted to in winter for warmth, but I have seen it rarely in midsummer. I have observed the habit in both adults and young and also in the Glaucous and the Great Black-backed Gulls. Occasionally a bird will fly with one foot concealed in front and one in plain sight under the tail behind. Sometimes, but rarely, the feet are carried in plain sight in front. I once saw a gull withdraw a foot from the front, where both were previously in sight, and stretch it out behind.

Like the Great Black-backed Gull, the Herring Gull has a loud, bugling challenge-call or nuptial song and this may frequently be heard at Ipswich in April. I have written down the challenge-call thus: *wha wha wha wha-cé-whee whee whee*. The bird begins with its bill almost touching the sand and gradually swings the head up so that the cries end with the bill pointing nearly vertically upward. Their cries are numerous and varied. At times they so closely resemble the rattling of blocks that one looks about for a schooner hoisting sail. These rattles sometimes suggest large blocks, others small squeaking blocks. There are many squeaking and hissing whistling notes, deep *car cars*, high-pitched *kec kecs*, loud *cow cows* and *co-ah co-ahs*, and numerous and varied conversational notes. Some of their notes resemble those of the Great Black-backed Gull so closely that I am unable to distinguish them.

21 [54] *Larus delawarensis* Ord.

RING-BILLED GULL.

Not uncommon autumn transient visitor; rare in winter. July 17 to November 17 (February 3); March 1.

The February record was made at Nahant, in 1909, by Mrs. Edmund Bridge;² the March 1 record in the same year and place by Mr. H. W. Wright. I have seen the bird at Moon Island, Boston Harbor, in February. Besides a harsh cry which is unlike that of the Herring Gull, they have numerous other cries which closely resemble those of this gull. Specimens obtained by me on

¹ See Townsend, C. W. *Auk*, vol. 26, p. 110, 1909.

² Bridge, Lidian E. *Bird-Lore*, vol. 12, p. 191, 1910.

their breeding-grounds in Labrador have pale greenish-yellow tarsi and feet. Taverner describes these parts as chrome yellow in breeding birds in Alberta and suggests that "it is not impossible that these prairie birds will be found to be distinguishable from the eastern race on the basis of leg coloration."¹ It would be interesting to note the color of the legs in adults seen or taken on our eastern coast, and I regret that my notes on this point are unsatisfactory.

22 [58] *Larus atricilla* Linn.

LAUGHING GULL; BLACK-HEADED GULL.

Not uncommon transient visitor. July 19 to August 16.

The only records of this bird for the County in 1905 were a statement by Mr. C. J. Maynard in the "Naturalist's Guide" published in 1870, that he had seen the bird at Ipswich, and two specimens from the County in the Peabody Academy. I referred to the record of eight Laughing Gulls at Metinic Green Island on the Maine coast, and added, "It ought, therefore, to be seen occasionally on the shores of Essex County as a migrant." In 1907, fifty Laughing Gulls nested at Western Egg Rock near Bristol, Maine, and the colony to the south at Muskeget has greatly increased in numbers. For the last six years I have seen one or more of this species at Ipswich nearly every summer. Thus on July 19, 1914, I saw three adults at the mouth of the Ipswich River, and six more on a sand bar at the mouth of the Essex River.

In flight and feeding habits the Laughing Gull resembles the Herring Gull. Its cry is distinctive and gives it its name. It is a deep *ha ha ha* followed by rapidly repeated sounds as of rippling laughter. It also emits complaining cries of *ai ai* and *kai kai*.

In all plumages, but especially in the nuptial stage, its markings are distinctive. The adult in summer wears a black hood and the wing-tips for a quarter of their length look as if they had been dipped in ink. Seen from above the wings are dark with a white posterior border. The bill and feet are dark red but look black in some lights. The adults in winter and the young lack the black hood, but their dark wings make identification simple.

¹ Taverner, P. A. *Auk*, vol. 36, p. 8, 1919.

23 [60] *Larus philadelphia* (Ord).

BONAPARTE'S GULL.

Common transient and occasional winter visitor. March 10 to June 3; July 27 to December 7; January and February.

One was seen on February 18, 1913, in Salem Harbor by Mrs. Edmund Bridge. A flock of about fifty was seen by Mr. Freeman B. Currier on December 21, 1918, and January 15 and 19, 1919, at Newburyport near the mouth of the Merrimac River. They were studied with a 22-power telescope at a distance of a hundred yards and fully identified. This was an unusually mild winter and the birds were common near Boston.

The Bonaparte's Gull appears to change to winter plumage and discard its black hood earlier in the summer than does the Laughing Gull, for black-headed birds are rarely to be seen on the Essex County coast at that season. Mrs. Bridge records one with a black hood at Ipswich Beach on August 18, 1907.

On May 28, 1905, I found a flock of twenty-five of these birds just inside the mouth of the Merrimac River; of these about a third had black hoods, a third were mottled, and a third were in winter plumage with white heads. Their small size and the entirely different appearance of the wing distinguish the Bonaparte's Gull from the Laughing Gull, though they resemble each other in the adult nuptial stage by the presence of the black hood alone. The black border of the wing both in front and behind,—the mourning border as I am apt to think of it,—is very distinctive of the Bonaparte's Gull, and serves to distinguish it in the immature and winter plumage from the same plumage in the Kittiwake. The orange-red legs and feet of the adult and the flesh-colored ones in the immature also serve to distinguish the Bonaparte's from the Kittiwake which has black legs and feet.

24 [63] *Gelochelidon nilotica* (Linn.).

GULL-BILLED TERN; MARSII TERN.

Accidental visitor from the South.

The single record remains unique as before.

25 [64] *Sterna caspia* Pallas.

CASPIAN TERN.

Not uncommon transient visitor in the autumn. August 8 to October 2.

This splendid bird—*la grande estorlette* of the Acadians of southern Labrador—continues to fly along the coast in its southern migration. I have as yet no spring records. It is rare that they alight here but on August 9, 1907, I saw two on the beach at Ipswich. They looked as large as the Herring Gulls, and twice the size of the Common Terns on the beach at the same time. Their legs were noticeably long, elevating them above the sand, while Common Terns appear to have no legs at all when on the beach. They carried their tails straight out or slightly cocked up.

On August 31, 1917, the largest number of Caspian Terns I had ever seen on the shore of the County flew by me at Ipswich.¹ There were twelve of them in a loose flock and they emitted their harsh cries as they flew by. It was indeed a noble sight.

26 [65] *Sterna maxima* Bodd.

ROYAL TERN.

Accidental from the South.

The record by Mr. Zerrahn still remains unique.

27 [69] *Sterna forsteri* Nutt.

FORSTER'S TERN.

Very rare transient visitor.

It is possible that this bird may be overlooked in the crowds of terns of other species that at times throng the beaches. It can be distinguished from the Common Tern by its notes which Chapman describes as a "long-drawn, reedy cackle and a *tweet-tweet-tweet-tweet*." Mr. A. C. Bent has described them to me as "a rasping, nasal buzzing sound, like *zrrcep* suggestive of a Nighthawk. More rarely it says *wheat wheat* somewhat like a Common Tern."

¹ Townsend, C. W. Auk, vol. 35, p. 182, 1918.

28 [70] *Sterna hirundo* Linn.

COMMON TERN; WILSON'S TERN; "MACKEREL GULL."

Abundant transient visitor, locally common summer resident. May 13 to November 4.

Eggs: June 14 to July 19.

In 1905, I said that "Common Terns very rarely visit Ipswich Beach before the first of August. . . . By the middle of the month they are common and flocks of young and old to the number of two or three hundred disport themselves about the beach." This tern has increased very much since that day and appears at Ipswich Beach earlier in the season. Thus on July 23, 1907, there were 400 at the beach and on July 11, 1914, I estimated a thousand birds in a flock there. In 1918, the first terns I saw at Ipswich were on July 14 when six or eight were fishing at the mouth of the Essex River. That afternoon about four o'clock eighty or ninety flew south over the water outside the beach. On July 15, just after sunset, I heard the distant screams of this species from my garden at Ipswich, and, looking up, I saw about seventy-five flying south very high up in the air. They were preceded by a small flock of Hudsonian Curlews. On August 14, 1908, I estimated that there were 3,000 Common Terns at Ipswich Beach. In 1909, the largest number I saw at the beach was 400. In 1913, there were fully 2,000 birds there. The number varies from year to year dependent on the food supply, which is chiefly the sand-lance at Ipswich. This fish takes the place of the capelin of more northern waters.

At times the beach is lined in places with young but fully fledged terns screaming to be fed. The young are able to plunge and catch fish for themselves, but are not as graceful or skillful as their parents, and, like spoiled children, evidently prefer to have the work done for them. The various methods of feeding the young,—in the air, on the beach, and on the water,—are similar to those of the Roseate Tern.

I have seen Common Terns dart down and pick up sand-fleas from the beach, and Mr. F. H. Allen saw one at Ipswich dart down and pick up a sea-worm, leaving the mark of its bill on the sand. I have seen them on the Labrador coast follow whales and dart down at the water whenever the whale breached and then disappeared, in the same way they are said to follow and reveal the presence of submarines.

Common Terns sometimes drop the small fish from their bill and catch it in the air. Sometimes after plunging and bringing up a fish, they throw it up in

the air and catch it again, either in play or to get a better hold. The adults often fly threateningly to within a short distance of an intruder on Ipswich Beach as they do on the breeding-grounds, uttering sharp *kik kik* notes followed by a loud rattling of the mandibles.

In the original Memoir I gave an instance of a Common Tern chasing a Sharp-shinned Hawk. On another occasion I saw one being chased by, and in turn chasing, a Barn Swallow over the beach. On another occasion I saw six Common Terns chasing two Crows that were hurriedly flying for the shore from high over the sea at Ipswich. Occasionally a tern would dart down at a Crow who would accelerate his flight for the shore.

I visited Milk Island near Thatcher's Island off Cape Ann, on June 15, 1919, and found nine pairs of Common Terns flying about the pebbly and rocky beach on the eastern side of the island. They acted as if they were nesting, screaming and darting down at me. I found only one nest which was well made of dry grasses and weed-stalks and contained two eggs. One of these was the usual kind, olive gray with chocolate-brown markings while the other was pale blue and destitute of any markings. As far as I know this is the only place where terns breed within the limits of the County.

29 [71] *Sterna paradisæa* Brünn.

ARCTIC TERN.

Not uncommon transient visitor, formerly summer resident. Spring; July 31 to September —.

30 [72] *Sterna dougalli* Montag.

ROSEATE TERN.

Abundant transient visitor; formerly summer resident. July 11 to September 16.

The successful result of the efforts of the Audubon Society in saving terns from the slaughter and the milliner are strikingly shown in the case of the Roseate Tern. Practically unknown on the Essex County coast for nearly forty years, the bird is now abundant at times in the summer. I have recently described their abundance, habits and field-marks in the pages of the Auk.¹ In a few words it may be said that the Roseate Tern appears whiter than the Common Tern and it

¹ Townsend, C. W. Auk, vol. 35, p. 182, 1918.

has a longer tail. The bill is dark and not bright red tipped with black as in the Common Tern. Some of its cries are especially characteristic. The "cloth-tearing" cry is easily recognized and especially the rather sweet double note suggestive of the call of the Ring-neck Plover, which at times is shortened and roughened so that it sounds like *chivy*. I have tried again and again to see a roseate tint in the breast of this bird as it flies by, but have not yet succeeded.

I have great hopes that this and other species of terns will return to the upper beach and dunes at Ipswich to breed as they did fifty years ago.

31 [74] *Sterna antillarum* (Less.).

LEAST TERN.

Accidental visitor; formerly summer resident.

On July 11, 1914, I identified two individuals of this species in a large flock of terns at Ipswich Beach.

32 [75] *Sterna fuscata* Linn.

SOOTY TERN.

Accidental visitor from the South.

33 [77] *Hydrochelidon nigra surinamensis* (Gmel.)

BLACK TERN.

Not uncommon transient visitor. June 7; July 19 to September 16.

My July 19 record is of a bird at Ipswich Beach, in 1914, in full black plumage. I saw another bird in the full nuptial plumage on August 27, 1910. With these exceptions the birds seen were all in the immature winter plumage.

[86] *Fulmarus glacialis glacialis* (Linn.). FULMAR; "NODDY"; "MARBLEHEADER"; "OIL-BIRD."—As yet no definite record for this bird.

34 [89] *Puffinus gravis* (O'Reilly).

GREATER SHEARWATER; "HAGDON"; "HAGLET"; "HAG"; "GRAY HAG."

Common summer visitor off the coast. May to October 12.

Many of these birds must pass our coast on their way to and from their breeding-grounds in the southern hemisphere, but they are rarely or never seen

by the bird-watcher from the shore as they generally keep well outside. As an illustration of their great numbers it may be stated that I have seen over five thousand of these birds in one day off the eastern coast of Labrador.

[90] *Puffinus puffinus* (Brünn.). MANX SHEARWATER.—The doubtful record of 1855 may possibly refer to a similar species, the Bermuda Shearwater.

35 [95] *Puffinus griseus* (Gmel.).

SOOTY SHEARWATER; "BLACK HAG" OR "HAGDON."

Not uncommon summer visitor. March to October.

On August 19, 1913, in a strong northeast blow I was at the beach at Ipswich. The sea was high and the waves were breaking for the space of half a mile from the shore. Skimming close over the breakers was a single Sooty Shearwater. At one time he actually flew over a projecting point of the beach, over a bit of the soil of Essex County. Mr. Charles R. Lamb records the taking of a female of this species off Rockport on May 29, 1916.¹

[97] *Puffinus cinereus* (Gmel.). BLACK-TAILED SHEARWATER.—As stated before, an erroneous record.

36 [106] *Oceanodroma leucorhoa* (Vieill.).

LEACH'S PETREL.

Uncommon transient visitor. June 21; September 4 to November.

Mrs. Edmund Bridge found the dead and frozen body of a bird of this species at Nahant Beach on December 21, 1907. How long since the bird was living it is impossible to say. The following record from Nuttall² was overlooked in the original Memoir: "A few years ago Mr. Ives obtained a straggler in the vicinity of Ipswich, on the coast." Damsell³ notes that one was shot on October 16, 1887, at Kimball's Pond in Amesbury some eight miles from the coast.

37 [109] *Oceanites oceanicus* (Kuhl).

WILSON'S PETREL; "MOTHER CAREY'S CHICKEN"; "STORMY PETREL."

Abundant summer visitor off the coast. June 1 to September 23.

Mr. C. R. Lamb found this species abundant off Rockport on June 1, 1914,

¹ Lamb, C. R. Auk, vol. 35, p. 233, 1918.

² Nuttall, Thomas. A Manual of the Ornithology of the United States and of Canada. Vol. 2, The Water Birds, p. 326, 1834.

³ Allen, G. M. Auk, vol. 30, p. 3, 1913.

so it is probable that it arrives on our coast at least as early as May. William Eagle-Clarke¹ says that the date of arrival of the Wilson's Petrel at the breeding-grounds in the South Orkney Islands is a very constant one, the 11th or 12th of November. How much time is needed for this seven-thousand-mile migration from the Essex County coast to the antipodes I cannot say.

[115] *Sula leucogastra* (Bodd.). BOOBY.—Erroneous record.

38 [117] *Sula bassana* (Linn.).

GANNET.

Common transient visitor. March 26 to June 7; August 28 to December 21.

The Gannet is always well worth watching in his fishing operations. In the original Memoir I described these in detail and by comparison with the masts of schooners judged that the plunge was made from a height of from thirty to one hundred feet. Eagle-Clarke² was enabled from the top of the tower of the Eddystone Light to gauge the height from which these birds dived with a degree of accuracy not usually attainable. He witnessed many thousands of dives, but in no case did the drops exceed a height of from 130 to 140 feet. The height of the dive is so directly proportionate to the depth of the fish, that herring fishermen are guided by watching the birds and set their nets accordingly.

On October 11, 1908, I saw a flock off Ipswich Beach of about seventy-five of these birds plunging with a feeble splash from a height of only two or three feet. Their prey was evidently near the surface. On October 16, 1910, I counted 230 of these splendid birds off the beach; about two-thirds were in adult plumage. At times in the fall the proportion of immature birds is much larger.

I stated in the Memoir that the bare skin at the base of the bill is yellow. This is an error; it is blue black.

39 [119] *Phalacrocorax carbo* (Linn.).

CORMORANT; COMMON CORMORANT.

Uncommon transient and winter visitor. November 13 to April.

Even the severe winter of 1917-18 did not drive these birds from their fishing-grounds at the Salvages off Rockport. They were seen there by Mr. Charles R.

¹ Eagle-Clarke, W. "Birds of the South Orkney Islands." *Ibis*, ser. 8, vol. 6, p. 145, 1906.

² Eagle-Clarke, W. *Studies in Bird Migration*, vol. 1, p. 302-303, 1918.

Lamb. While the Double-crested Cormorant holds its own on the breeding-grounds about the Gulf of St. Lawrence and is abundant on our coast in the migrations, this bird is steadily losing ground. In 1915, at Wapitagan, in southern Labrador, I was able to identify only one Common Cormorant, whereas the Double-crested species was breeding in large numbers. In the Gaspé Peninsula in 1919, I found Double-crested Cormorants breeding abundantly, but none of this species.

On March 14, 1909, I saw on the Salvages off Rockport, six Common Cormorants,—a large number for our coast. Two were adults in full black plumage with white malar patches and white patches on the thighs. These white marks were visible both when the birds were flying and when alighted. According to Patterson¹ the fowlers sometimes call the triangular white patch on the thigh “the watch that it carries under the wing.” The four other birds were immature with dusky upper breasts, and white bellies. I heard their harsh croak. One immature bird made four attempts to alight on the spindle before it succeeded. After each unsuccessful attempt it would swing around and again fly up to the spindle. In calm weather or with but a feeble air stirring I have seen this heavy bird launch itself from the lower spindle, perhaps twenty feet above the water, descend in a gentle curve and splash the water before it had gained impetus enough to rise again.

Damsell² records the case of a “Common Cormorant that was seen to be harrassed by two Kingbirds at Amesbury on June 18, 1895. It sought refuge in an oak tree and fell to the ground when it was captured. An examination showed that one wing had been broken but had healed. The bird was a male.”

40 [120] *Phalacrocorax auritus auritus* (Less.).

DOUBLE-CRESTED CORMORANT; “SHAG.”

Common transient visitor. April 4 to June 26 (July 7); July 17 to November 24.

The June 26 record was of a single bird at the mouth of the Essex River in 1910. The July 17 record was a bird seen in 1915, on the spindle on the Brimbles off Marblehead by Robert Walcott, Esq. On July 28, 1918, I saw one sitting on a rock on the edge of the Essex River near Cross Island. It flew to the water, swam and dived.

On September 21, 1913, in a heavy southeaster with fog and rain I counted

¹ Patterson, W. L. Birds . . . frequenting Belfast Lough, p. 26, 1880.

² Allen, G. M. Auk, vol. 30, p. 22, 1913.

thirty of these curious birds on the beach at Ipswich, together with ten Great Black-backed Gulls, six Herring Gulls, six Common Terns and one Black Duck,—a very black and white company.

Interesting as this bird is to watch, on the beach, on the water, or on rocks or spindles, it is most impressive to see a large flock sweep by on the migration often in perfect V-formation. It is a good thing to bear in mind that these birds are called "Nigger Geese" in the South, else one may mistake these flocks for Canada Geese. Their black color and long tails are, however, distinctive. Some days one may see flock after flock stream along the coast. The migration in September and October, 1905, was particularly large.

41 [125] *Pelecanus erythrorhynchos* Gmel.

WHITE PELICAN.

Accidental visitor from the South or West. The specimen of 1886 still remains unique.

*42 [126] *Pelecanus occidentalis* Linn.

BROWN PELICAN.

The only record is from Maynard's "Naturalist's Guide."¹ "Mr. J. F. Le Baron is confident of having seen two of this species at Ipswich some years ago." In the original Memoir I placed this bird on the doubtful list, but since talking with Mr. Le Baron I have here given it a position among the numbered species. Mr. Le Baron is familiar with the bird in the South, and it is a bird easy to recognize.

It is of interest to note that an immature bird of this species was taken May 1, 1907, off Great Boar's Head, Hampton, N. H., was mounted by Mr. Damsell² and is now in the collection of the Boston Society of Natural History through the gift of Col. John E. Thayer.

43 [129] *Mergus americanus* Cass.

MERGANSER; GOOSANDER; "POND SHELLDRAKE."

Not uncommon transient visitor; a few winter. October 15 to April 24.

Although not often seen in salt water, I found two of this species off Rock-

¹ Maynard, C. J. The Naturalist's Guide, p. 149, 1870.

² Allen, G. M. Auk, vol. 30, p. 22, 1913.

port on March 14, 1909. Mr. A. P. Stubbs reports them as common in Walden Pond, Lynn, as soon as the ice breaks up and until well into April.

The spectacular courtship of this bird with its display of the salmon-tinted breast, the bowing, the great spurt of water made by the feet, and the purring note I have already described.¹

44 [130] *Mergus serrator* Linn.

RED-BREASTED MERGANSER; "SHELLDRAKE"; "SEA-ROBIN."

Abundant transient and winter visitor; rare summer resident. September 23 to June 6.

In 1905, I had no evidence of the breeding of this bird in Essex County; but in 1916 and 1917, I have reason to believe that one or more pairs of the Red-breasted Merganser raised broods at Ipswich. In 1916, on July 30, I found a group of eleven young birds nearly full grown with an adult female, while near at hand was an adult male in partial molt into the eclipse plumage. On July 4, 1917, a compact flock of thirty was to be seen off Ipswich Beach. One or two of these were adult females and two were adult males in molt.²

It is easy enough for Mergansers to mount into the air from the beach if the wind is favorable, but when both their enemy, man, and the wind, come from the land side the problem is difficult. Three that were resting on Ipswich Beach on November 8, 1914, thus solved the problem: they waddled rapidly to the water and flapped frantically over the surface until they were about a hundred yards off shore; then they turned about, faced the strong off-shore wind, rose easily from the water and swung around seaward.

The courtship, imperfectly observed prior to 1905, has since been carefully studied, and I have described it at length in the pages of the Auk.³

On April 14, 1918, I watched some courtship performances that were amusingly modified by the state of the tide. There were eight male and two female Red-breasted Mergansers in Castleneck River and the tide was low with exposed sand flats. The males were all actively courting, bobbing and ducking violently and sounding their love song. The two females modestly retreated into shallow water before this concerted attack, and, as the circle of admirers closed in on them, they walked up on to the flat. In the shallow water, the males were unable

¹ Townsend, C. W. Auk, vol. 33, p. 9-17, 1916.

² Townsend, C. W. Auk, vol. 35, p. 183, 1918.

³ Townsend, C. W. Auk, vol. 28, p. 341-343, 1911.

to swim, and were forced to walk, but continued their bobbing and ducking; even when some of them were actually on *terra firma*, their antics, appropriate only to the water, still continued. It was indeed a ludicrous sight. Not until the females began carelessly to preen themselves did the ardor of the males cool, and they followed suit. I was able to watch all this clearly from my house by the aid of a telescope, and the birds were of course entirely unsuspecting.

The migration and numbers of the Red-breasted Merganser, the distribution of the sexes and of the immature birds and adults, are all subjects of interest which I have studied in some detail at Ipswich since the original Memoir was published, and the results may be found in the Auk.¹

45 [131] *Lophodytes cucullatus* (Linn.).

HOODED MERGANSER; "HAIRY-CROWN."

Not uncommon transient visitor. March 18 to April 14; September 28 to December 20.

I have seen this bird's courtship performance in captivity. A pair were swimming about in a pool; both had their tails spread and flat on the water. The male elevated and depressed—opened and closed—his wonderfully spectacular crest, and at times puffed out the neck. From time to time he elevated his head, pointing his black bill straight up and rapidly opening and closing it. The female also elevated her crest at times.

46 [132] *Anas platyrhynchos* Linn.

MALLARD.

Uncommon and irregular transient visitor; very rare in winter. March 27 to May 1; September 22 to December 2 (January 1).

As illustrating the irregularity of the occurrence of this bird in Essex County, it may be noted that after the unusual flight in 1904 recorded in the original Memoir, none was seen at Wenham Lake in the four succeeding years.²

On October 13, 1913, I saw a female Mallard in company with eight or ten Surf Scoters off the beach at Ipswich.

The courtship of the Mallard I have already described.³

¹ Townsend, C. W. Auk, vol. 28, p. 343, 1911.

² Phillips, J. C. Auk, vol. 28, p. 190, 1911.

³ Townsend, C. W. Auk, vol. 33, p. 13, 1916.

47 [133] *Anas rubripes rubripes* Brewst.

RED-LEGGED BLACK DUCK; "WINTER BLACK DUCK."

Abundant transient and winter visitor. September 22 to May 1.

When the original Memoir was published there was considerable doubt as to the validity of this form then known as *Anas obscura rubripes* Brewst., and my own observations, which, however, I admitted were insufficient, lead me to think that it might be only the adult stage in the male of *Anas obscura*. Since then I have made a further study of the subject and have convinced myself of the validity of *rubripes* as a separate form, and I may add here that Mr. Brewster considered my evidence conclusive. These studies were published in the *Auk*.¹ Since then, I have been able to show that the breeding Black Ducks of southern Labrador belong to the *tristis* race.

The Red-legged Black Duck is a virile race and the evidence seems to show that it is increasing in numbers and extending its range farther south in winter. Whereas it was formerly rare in winter at Currituck Sound, North Carolina, it is now common.

The numbers of this bird in the migrations and in winter vary. On December 17, 1914, I found a large number in the estuary between Hog Island and the Ipswich dunes. It was a cold day; the thermometer in the early morning stood at 2° below zero Fahrenheit. There was no sun and no wind and snow was falling intermittently. The tide was low, and in the shallow water amid the ice and on the exposed flats were hundreds of Black Ducks. I counted 400 of these birds and estimated that there were twice as many more or 1200 in all. Many were sleeping, with their bills concealed in the feathers of their backs; others were swimming about, others feeding. A fleet of fifty came swimming rapidly around a bar. In deeper water a flock of fifty or more Whistlers were diving for food. When I discovered myself by springing up from the beach grass, the multitude rose and made off with a great whirring and whistling of wings. Mr. Charles W. Loud writes me on September 6, 1918, that the bags of Black Ducks at Chebacco Lake have been larger the past three years than for many years previous.

Dr. Phillips² says of the early flight of Black Ducks that he has record of only three typical red-legged individuals; while after October 20 they are common. The three early records for Red-legged Black Ducks were September 29, 1904, October 3, 1907, and October 9, 1906, all at Wenham Lake.

¹ Townsend, C. W. *Auk*, vol. 29, p. 176-179, 1912.

² Phillips, J. C. *Auk*, vol. 28, p. 191, 1911.

48 [133a] *Anas rubripes tristis* Brewst.

BLACK DUCK; DUSKY DUCK; "SUMMER BLACK DUCK";
"SPRING BLACK DUCK."

Resident, common in summer; abundant transient visitor; common in winter.

Eggs: April and May.

In Chapter II, I have already referred to the brood of ten downy young with their mother in the artificial Sagamore Pond at Ipswich, found on May 30, 1913. Here the mother endeavored to decoy me away from her brood hidden in the cattails, by acting like a wounded bird and beating the water with her wings as she laboriously struggled along the shore of the pond and later out into deeper water. In Labrador, where the birds were nesting in small pools, the wounded-bird act was performed not only on the water but on the land. On the land the ducks ran with trailing wings, fell down, and fluttered about in exact imitation of birds sore wounded.

Dr. Phillips has published an interesting resumé of his observations on this bird in Essex County.¹ I have described the courtship elsewhere.²

49 [135] *Chaulelasmus streperus* (Linn.).

GADWALL; GRAY DUCK.

Rare transient visitor. October 2 to November 1.

I have no records of this bird since the publication of the original Memoir.

50 [136] *Mareca penelope* (Linn.).

EUROPEAN WIDGEON.

Uncommon transient visitor. October 17 to December 29.

The change of the characterization above from "accidental" on a single record to "uncommon" is due, I believe, not to any increase of this bird but to the fact of its more easy identification of late years. The adult drakes are

¹ Phillips, J. C. *Auk*, vol. 28, p. 191, 1911.

² Townsend, C. W. *Auk*, vol. 33, p. 13-15, 1916.

distinguished from our Widgeon or Baldpate drakes by their rufous-brown heads which lack the glossy green patch and by the cream-colored crown which does not stare out so strikingly as does the whiter crown of the Baldpate. In young and female plumage the two species are distinguished in the field with greater difficulty, although the richer and more rufous brown of the head and throat, and the less amount of white in the greater wing-coverts of the European species are noticeable points of difference.

An exact method of recognizing the two species is by an examination of the axillary feathers. These characters are fully described by Dr. J. C. Phillips.¹ In a few words it may be stated that the axillary feathers of the American bird are white while those of the European bird are dusky and finely patterned.

The call-note of the European bird is a distinctive *whee-you*, while that of the American bird is a single whistling *whew* rapidly repeated. Dr. J. C. Phillips states that one European Widgeon was shot at Wenham Lake in 1912, two in 1914, and four in 1916.

51 [137] **Mareca americana** (Gmel.).

BALDPATE; AMERICAN WIDGEON.

Not uncommon transient visitor. March 22 to 27; September 6 to November 27.

My description of the courtship of this bird is to be found in the Auk.²

52 [139] **Nettion carolinense** (Gmel.).

GREEN-WINGED TEAL.

Not uncommon transient, rare winter visitor. March 23 to April; September 12 to December 9 (winter).

The early record of March 23 is of a bird taken at Amesbury, in 1889, by Damsell.³ Mr. A. P. Stubbs observed one from January 8 to March 26, 1916, at Hall's Brook, Lynn, in the same place that Wilson's Snipe winter.

¹ Phillips, J. C. Auk, vol. 28, pp. 192, 193, 1911.

² Townsend, C. W. Auk, vol. 33, p. 15, 1916.

³ Allen, G. M. Auk, vol. 30, p. 22, 1913.

53 [140] *Querquedula discors* (Linn.).

BLUE-WINGED TEAL.

Rare spring, common autumn transient visitor. March 21 to April 25 (July 27); August 16 to November 25.

The March 21 record was for 1898 by Damsell; another spring specimen by the same authority is for April 24, 1897, both at Amesbury. On April 11, 1909, Mr. S. Prescott Fay¹ observed a pair in full plumage in a pond near Wenham Swamp, Topsfield. The unusually early autumnal migrant was seen in Clark's Pond, Ipswich, on July 27, 1911, by Mrs. Edmund Bridge.

54 [142] *Spatula clypeata* (Linn.).

SHOVELLER; "SPOONBILL."

Rare transient visitor. April 6; September 3 to November 7.

The spring record is made by Damsell for the year 1893; he also has a record for September 3, 1894. Mr. Charles R. Lamb shot a female in Plum Island River on September 4, 1908, and Mr. Geoffrey Goodale a male in Sagamore Pond near my house at Ipswich on October 7, 1916.

Dr. J. C. Phillips² finds from the records of Chebacco Lake that in the ten years from 1900 to 1909 this species was noted on four occasions and five birds were taken. On October 15, 1910, three of this species, all males, were taken by Dr. Phillips³ at Wenham Lake.

In the field the brilliant and varied coloration of the adult drake is distinctive; the female or young or the adult male in eclipse plumage look in a general way like a Mallard in similar plumage although much smaller. The bill, however, is the distinguishing mark; this looks not only broad but long.

55 [143] *Dafila acuta* (Linn.).

PINTAIL; "SPRIGTAIL"; "GRAY DUCK."

Uncommon transient visitor, especially in the spring. March 8 to 14; September 6 to November 25.

In the fair, calm afternoon of October 12, 1917, an unusually large flock of

¹ Fay, S. P. Auk, vol. 27, p. 219, 1910.

² Phillips, J. C. Auk, vol. 28, p. 198, 1911.

³ Phillips, J. C. Auk, vol. 28, p. 119, 1911.

twenty-five birds of this species came in to Chebacco Lake and were watched for several minutes by Mr. Warren E. Freeman. An automobile startled them, and as they flew, Mr. Freeman brought down five with a single-barrelled eight-gauge gun. Dr. J. C. Phillips saw six Pintails at Clark's Pond, Ipswich, on September 6, 1914.

I have watched the Pintail courting in partial confinement. The drake cocks up his tail and extends and lowers his head until the bill almost or quite touches the water, uttering at the same time a short *wat wat* note. He then lifts his head and elevates his breast like a horse backing, and presses his bill against his pure white shirt-front. He frequently shakes his head nervously. At times the motions are limited to an alternate lifting of the head and an elevation of the stern. The duck in the meanwhile swims near uttering a rattling note and dabbling sidewise at the water in nervous trepidation.

56 [144] *Aix sponsa* (Linn.).

WOOD DUCK; "SUMMER DUCK."

Uncommon summer resident and transient visitor. March 20 to November 24 (December).

Eggs: May.

A second December record for this duck is that of Damsell, at Amesbury, for December 16, 1903.

The Wood Duck has responded to the protection it now receives at all seasons, and it appears not only to be holding its own but to be increasing in numbers in Essex County. On August 2, 1916, Dr. J. C. Phillips saw a brood of eight young at Wenham Lake, the first Wood Duck he had ever seen there. The courtship I have described.¹

57 [146] *Marila americana* (Eyt.).

REDHEAD.

Rare transient visitor, not uncommon at times in autumn. March 6 to April 3; October 4 to December 9.

From 1905 to 1909 inclusive, 26 of these birds were shot at Dr. Phillips's stand at Wenham Lake against 56 in the five years preceding. On October 12, 1915, five came in to decoys at Sagamore Pond, Ipswich, and four were shot by the Goodale brothers.

¹ Townsend, C. W. *Auk*, vol. 33, pp. 15, 16, 1916.

I have but a short note to add to my former notes on field-marks, namely, that the slate-blue speculum on the wing under usual circumstances can be seen only when the wing is opened.

58 [147] *Marila valisineria* (Wils.).

CANVAS-BACK.

Rare transient visitor. October 6 to November 13.

The October 6 record is of a bird shot at Newburyport in 1905. On November 4, 1905, five came in to Wenham Lake and two on November 3, 1909, as reported by Dr. Phillips.¹

59 [148] *Marila marila* (Linn.).

SCAUP DUCK; GREATER SCAUP; "BLUEBILL"; "BLUEBILL WIDGEON";
"WIDGEON"; "BLACKHEAD."

Common transient visitor in the autumn, rare in the spring and winter. March 1 to May 12 (August 2); September 18 to December 26; January and February.

During January and February from a hundred to two hundred Greater Scaup have frequented Lynn Outer Harbor. As far as I know this is the only place within the limits of the County where this bird regularly winters, although, as noted on page 321 of the original Memoir, one was taken at Ipswich on February 14, 1905. On December 28, 1919, I saw eight off Ipswich Beach. From two to three thousand Scaup Ducks winter near Moon Island at the opening of the metropolitan sewer in Boston Harbor. I have been to this latter station a number of times in the spring with the hopes of seeing the full courtship performance of this species. Only once was I at all successful. On this occasion, in mid-April, a band of twenty-five or thirty Scaups, a third males and two-thirds females, were swimming about in close ranks. The males elevated their heads and necks and continually opened and shut the bills. I was unable to hear any sound. According to J. G. Millais,² the "call of pairing Scaup are very low in tone, and the spectator must be within a few yards of the birds to hear them."

¹ Phillips, J. C. *Auk*, vol. 28, p. 194, 1911.

² Millais, J. G. *British Diving Ducks*, vol. 1, p. 75, 1913.

60 [149] *Marila affinis* (Eyt.).

LESSER SCAUP DUCK; "LITTLE BLUEBILL."

Common transient visitor in the autumn, rare in the spring. March 2 to April 21; October 8 to November 27.

Dr. J. C. Phillips states¹ that a study of the Scaups taken at Wenham Lake in 1904 and in 1908, 1909, and 1910, shows that about eighty per cent. are of the Lesser species and twenty per cent. the Greater. For ten years the two species combined represented thirteen per cent. of the entire bag. "The Lesser appears at times in flocks of 12 to 25, while the large Scaup are often single, or three or four together. Nearly every flock of Redheads has had at least one or two Scaup among them."

On November 11, 1906, I saw twenty Lesser Scaup in Sagamore Pond.

61 [150] *Marila collaris* (Donov.).

RING-NECKED DUCK.

Rare transient visitor.

I have five definite records to be added to the one in the original Memoir, as well as the statement previously overlooked:² "it has been taken in several instances in the Merrimack just below Haverhill." On April 7, 1889, one is recorded by Damsell³ at Amesbury; one was shot at Newburyport on October 13, 1906, and is now in my collection, No. 1227; three were shot at Wenham Lake,¹—one each on October 9 and 26, 1907, and one on October 13, 1908.

I have had several excellent opportunities to study this bird in the Back Bay Basin and in Leverett and Jamaica Ponds, in Boston. The ring is not a striking feature as the brown does not contrast sharply with the blue-purple head and neck and it may be covered by these feathers unless the neck is stretched. It may easily escape notice. The markings on the bill are very noticeable: the body of the bill is slate blue with a narrow white line at the base and at the end which divides it from the black nail. Another good field-mark is the white triangle in front of the bend of the wing, a marking that is lacking in the Lesser Scaup. The back of the Ring-necked Duck is darker than that of the Lesser Scaup. The latter bird has a white speculum while the Ring-necked Duck has a blue-gray one

¹ Phillips, J. C. Auk, vol. 28, p. 194, 1911.

² Baird, S. F., Brewer, T. M., and Ridgway, R. Water Birds, vol. 2, p. 27, 1884.

³ Allen, G. M. Auk, vol. 30, p. 22, 1913.

which distinguishes it in any plumage except from the Redhead which also has a blue-gray speculum. Here, in the case of the female or immature plumage, size alone distinguishes the two species in the field. The amount of white at the base of the bill in this plumage varies greatly from almost none at all to a noticeable patch.

62 [151] *Clangula clangula americana* Bonap.

AMERICAN GOLDEN-EYE; WHISTLER.

Abundant winter visitor. September 27 to May 2 (August).

The September 27 record is of a bird shot in 1905 at Sagamore Pond by Mr. J. L. Saltonstall. On August 27, 1911, I saw three Whistlers in immature or female plumage flying over the Ipswich dunes from the Essex estuary to the ocean.

Dr. J. C. Phillips¹ says of this species at Wenham Lake: "A very common bird in the pond late in November, and always tending to become local at that time of the year, moving back and forth to the salt-water with the regularity of clock-work, but never, so far as I am aware, spending the night on fresh water."

In the original Memoir I gave but a hint of the courtship of this bird. Since then it has become a familiar sight and I have described it in the Auk.²

The "love-song" is the only sound I have heard this species utter in Essex County. On the breeding-ground in Labrador I have heard the female utter harsh croaks which appeared to be alarm notes for the guidance of the downy young. The young utter plaintive peeping notes.

63 [152] *Clangula islandica* (Gmel.).

BARROW'S GOLDEN-EYE.

Accidental winter visitor.

The late William Brewster informed me that the specimen in the Boston Society of Natural History, labeled "Ipswich, January 27, 1879," reported in the original Memoir, was prepared by the "Ornithological Swindler"³ and is therefore to be ruled out as a record.

On January 26, 1919, while in company with Mr. Francis H. Allen, I saw a fine adult male of this species off the rocks at Lynn. A male Whistler was not far off and it was thus possible to study the different field-marks of the two

¹ Phillips, J. C. Auk, vol. 28, p. 194, 1911.

² Townsend, C. W. Auk, vol. 27, p. 177-179, 1910.

³ Brewster, William. "An Ornithological Swindler," Auk, vol. 1, p. 295-297, 1884.

species. I was at first attracted to the Barrow's Golden-eye by its lack of white on the sides. In place of the great white patch on the wings and flanks of the Whistler,—a field-mark noticeable at a great distance,—a horizontal row of four or five white dots or squares marks the wing-coverts of the Barrow's Golden-eye. The elongated crescentic white marks on the head of the latter species also distinguish it from the Whistler with its round marks. These marks are well seen when the bird faces the observer. As the bird swam I got a glimpse of the pale yellow feet, so different from the orange-colored feet of the Whistler. The bill is noticeably small. In the male it is black. In the female with the exception of the base and the nail, which are black, the bill is yellow. I have been able to identify two female Barrow's Golden-eyes among some Whistlers in the Back Bay Basin by their small and yellow bills.

64 [153] *Charitonetta albeola* (Linn.).

BUFFLE-HEAD; "DIPPER"; "BUTTER-BALL."

Not uncommon transient and winter visitor. October 9 to May 2.

I am indebted to Mr. H. W. Wright for a census of this bird at Little Nahant for the twelve years from 1906 to 1918 inclusive, during December, January, and February. The numbers varied from 25 to 72. I do not know any other place on the coast of the County where the Bufflehead regularly spends the winter.

I have watched the courtship of this species off Lynn Beach and elsewhere.¹

65 [154] *Harelda hyemalis* (Linn.).

OLD-SQUAW.

Abundant winter visitor. October 14 to May 22.

The rarity of this species in ponds is shown by the fact that Dr. J. C. Phillips² has taken it four times at Wenham Lake.

On November 18, 1917, among a large number of Old-squaws off the beach at Ipswich, all but two were in the immature, female, or eclipse plumage. These two were in full adult winter male plumage. On April 23, 1905, off Marblehead Neck, I watched four of this species in summer plumage.

The call-notes, some of which are doubtless courtship songs, are variously syllabized. The Scotch call it "Coal an' can'le licht." Preble³ says, "The Crees

¹ Townsend, C. W. *Auk*, vol. 33, pp. 16, 17, 1916.

² Phillips, J. C. *Auk*, vol. 28, p. 195, 1911.

³ Preble, E. A. *North Amer. Fauna*, no. 27, p. 290, 1908.

along the Athabaska call it *ca ca wee'*; the Chipewyans and related tribes of the Slave and Mackenzie rivers refer to it as *a-ha-lik'*; while the Eskimo are said to give it the name *a-hau-liu'*." The name Hounds, used in Labrador by Cartwright, is also very expressive. Syllables I have written down from time to time are: *ung ung a-ung hic*, and *a-ou a-ou a-oudlic*. When these longer notes are emitted the birds are often bunched together and are undoubtedly courting. Each male carries his long tail erect.

I have timed the Old-squaw diving at Nahant. The birds were under water from 34 to 39 seconds. In another place where the water was probably deeper, the time under water varied from 40 to 50 seconds.

66 [155] *Histrionicus histrionicus* (Linn.).

HARLEQUIN DUCK; LORD AND LADY.

Very rare winter visitor. November 11, November 20.

The three records for the County have not been added to in the last fifteen years.

I have seen the bird in Labrador and was impressed with the fact that it is a small duck with a small bill. The brown feathers of the flanks are conspicuous as are also the white spots and patches which suggest the clown,—otherwise the bird looks black. The white "false eye" is very noticeable and this with other white patches on the head are good marks in the otherwise dark female. The tail is sometimes cocked up and in diving the bird opens its wings. In flight there are no markings noticeable on the wings.

[156] *Camptorhynchus labradorius* (Gmel.). LABRADOR DUCK; PIED DUCK.—As a sidelight on the extinction of this species, the following note by Elliott Coues¹ is of considerable interest: "It is known by the peculiar appellation of 'Fool-bird,' a name given on account of its remarkable unsuspecting nature which renders it easy to approach."

[159] *Somateria mollissima borealis* (Brehm). NORTHERN EIDER.—There are still no definite records for this species for Essex County.

67 [160] *Somateria mollissima dresseri* Sharpe.

EIDER; "SEA DUCK"; "CANVASBACK."

Uncommon winter visitor. September 20 to April 19.

The early record of September 20 was made by B. F. Damsell in 1903.

The abundance of this bird in former years off Cape Ann is plainly shown in

¹ Coues, Elliott. Proc. Acad. Nat. Sci., Philadelphia, 1861, p. 239.

the following passages which were overlooked in the publication of the original Memoir. Mackay¹ says: "My friends Messrs. Nickerson and Phillips, with only one barrel each, shot eighteen young drakes dead out of a flock of twenty-three on the Salvages off Cape Ann, in the winter of 1860. These same gentlemen also shot eighty-seven one day in December, 1859, on the same rock."

Charles Hallock² says: "Towards the last of October, the Eiders begin to appear along the Massachusetts coast, forming in large bodies off the rocky capes. Good sport is had by gunners from Cape Ann in the winter months. A good boat, with a man to sail it, can be hired at Rockport or Gloucester, and if the day is pleasant, with wind to westward, and a trifle rough, the sportsman may expect shooting."

On March 14, 1909, when in company with Ralph Hoffmann and Glover M. Allen, I saw a flock of seventeen Eiders outside the Salvages at Rockport. All but two were in the plumage of the female. These two had partially molted into the adult male plumage. One had a black belly and white breast and the neck was brown behind and white in front.

I have had excellent opportunities to study the courtship of this duck in Labrador and I have described it in the Auk.³

In diving the Eider spreads out its wings for use under water.

The male Eider is a striking bird and easily seen and recognized when in the full nuptial plumage. Seen from the side when he swims on the water the black crown, wings, and tail contrast strongly with the general whiteness of the rest of the plumage. Viewed from behind, the black crown is seen to be parted by a white line, while the black wings and tail, separated by a white division, make a striking pattern. In flight the black belly and creamy-white breast are very conspicuous.

The female and young and the male in eclipse plumage, which he hastens to don after the nuptial season, are singularly inconspicuous either on water or on land.

As there are all degrees between the narrow horny processes that extend backward from the bill in *S. mollissima borealis* and the long broad ones of *dresseri*, as shown by M. Johann Beetz,⁴ I have in this case departed from the Check-list of 1910 and entered this bird as a subspecies of *mollissima* as explained in my notes in M. Beetz's article.

¹ Mackay, G. H. Auk, vol. 7, p. 317, 1890.

² Hallock, C. The Sportsman's Gazetteer, p. 228, 1877.

³ Townsend, C. W. Auk, vol. 27, pp. 180, 181, 1910.

⁴ Beetz, J. Auk, vol. 33, p. 286-292, 1916.

68 [162] *Somateria spectabilis* (Linn.).

KING EIDER.

Very rare winter visitor. November 24 to ———.

Damsell adds another record for Essex County, that of a bird taken on November 29, 1889, within five days of the previous record.

69 [163] *Oidemia americana* Swains.

SCOTER; BLACK SCOTER; "BUTTERBILL"; "BLACK COOT."

Common transient and winter visitor (summer). September 8 to May 24.

70 [165] *Oidemia deglandi* Bonap.

WHITE-WINGED SCOTER; "WHITE-WINGED COOT."

Abundant transient visitor, common in winter (summer). August 20 to June 4.

On August 20, 1913, I saw forty-three of these birds flying south off Ipswich Beach and concluded they must be the vanguard of the migrating throng.

Dr. J. C. Phillips¹ says: "The White-winged Scoter is by far the most common [of the three Scoters] in the [Wenham] pond and represents about 4 per cent. of the total score."

71 [166] *Oidemia perspicillata* (Linn.).

SURF SCOTER; "SKUNK-HEAD"; "GRAY COOT."

Very abundant transient visitor, common in winter; summer. September 4 to June 4.

72 [167] *Erismatura jamaicensis* (Gmel.).

RUDDY DUCK.

Common transient visitor in the fall, rare in the spring. September 30 to December 1; April 20.

The spring record is of five seen off Nahant Beach by Mr. H. W. Wright on April 20, 1906. As stated in the original Memoir this bird prefers fresh-water ponds, but Mr. Wright has given me another record for salt water,—at Nahant on October 14, 1905, where three were seen.

¹ Phillips, J. C. Auk, vol. 28, p. 195, 1911.

73 [169] *Chen hyperboreus hyperboreus* (Pall.).

SNOW GOOSE.

Very rare transient visitor in the autumn.

The records of this goose by Damsell are thus given by Allen:¹ "A Snow Goose, shot October 7, 1888, is among the birds whose measurements are entered in one of the notebooks. The wing length is there recorded as 14½ inches, which indicates the Lesser Snow Goose. In the notebook for 1902, is the entry: 'Albert Shaw shot a Snow Goose,' but the exact date, if known, was not recorded. A further entry records, February 18, 1902, 'Saw a flock of Snow Geese.'" On October 20, 1913, Mr. J. F. Le Baron saw three Snow Geese alight on the spit at the mouth of the Essex River.

A recent record, at Eagle Hill, I have already published.²

[169a] *Chen hyperboreus nivalis* (J. R. Forst.) GREATER SNOW GOOSE.—Extirpated.

74 [169] *Chen caerulescens* (Linn.).

BLUE GOOSE.

Accidental visitor.

The specimen representing the only record for the County and the State has since been presented by Mr. W. A. Jeffries to the Boston Society of Natural History.

*75 [171] *Anser albifrons gambeli* Hartl.

WHITE-FRONTED GOOSE.

Accidental visitor.

Damsell notes two birds of this species that were killed on the Salisbury marshes on October 8, 1888.

An adult was found winged and one leg injured by shot near Eagle Hill at Great Neck, in August, 1907, by A. B. Clark. The bird was captured alive and placed in a yard with tame geese where I saw it on August 25. It was an adult male in good plumage.³

These are the first definite records of this goose in Essex County.

¹ Allen, G. M. *Auk*, vol. 33, p. 22, 1913.

² Townsend, C. W. *Auk*, vol. 33, p. 197, 1916.

³ Townsend, C. W. *Auk*, vol. 25, pp. 80, 81, 1908.

76 [172] *Branta canadensis canadensis* (Linn.).

CANADA GOOSE; "WILD GOOSE."

Common transient visitor. March 9 to May 25 (June 2, June 5); September 17 to January 11.

Dr. J. C. Phillips¹ states that the western edge of the flight of this species crosses Cape Ann near Essex. He also finds that the greatest flights are made in calm weather or with light airs from the northwest.

A large flock of semi-wild geese was kept during Mr. Clark's lifetime at Great Neck, and they nested on the hillside near the pond. Their nests were made of dried moss and grasses lined with feathers and down like one I found in Labrador. The down is used as a covering for the three to five eggs when the female is not sitting. The gander, easily recognized by his large size and thicker neck, seemed always to be in the neighborhood, ready to repel the intruder. This he does by advancing in a threatening manner with head down but drawing it up and back at frequent intervals and calling *woo-oup* with repeated grunting sounds between. On my speedy departure he returned toward the nest, calling triumphantly.

The young, even when two-thirds grown, emit a plaintive whistling sound, and are able to make off over the water by the use of both wings and feet with great speed. They also dive awkwardly.

[172a] *Branta canadensis hutchinsi* (Rich.). HUTCHINS'S GOOSE; LESSER CANADA GOOSE.—There are still no specimens to authenticate this subspecies in Essex County.

77 [173a] *Branta bernicla glaucogastra* (Brehm).

BRANT.

Common transient visitor. April 7 to May 12 (June 15); September 2 to December 26.

The June 15 date is of a record for 1890 overlooked in the original Memoir. The bird was seen by William Brewster, William A. Jeffries and Dr. John A. Jeffries near Swampscott. The following is the note kindly given me by Mr. Brewster from his Journal: "On the way back we sailed close to Pig Rock. The top of the larger rock was literally covered with Herring Gulls. . . . Near them on a rock, at the water's edge, sat a Brant Goose preening its feathers. I had a good view of it through my glass at a distance of about one hundred yards. It

¹ Phillips, J. C. Auk, vol. 27, p. 263-271, 1910.

flew when the gulls rose and circled off over the ocean in the direction of Marblehead."

The December 26 record was reported in Bird-Lore by Edmund and Lidian E. Bridge.¹ Twenty were seen. In a letter to me Mrs. Bridge writes: "The Brant were first seen in flight; they alighted not very far out but were frightened and flew off toward Rockport."

Brant are sufficiently uncommon at Ipswich, nowadays, to make it worth while recording any visitation of these birds. On October 26, 1913, in an easterly storm with rain, six Brant scudding before the gale passed within long gunshot over my head as I stood on a point of the beach. Later three more flew by outside and again two more over the dunes. Mr. J. F. Le Baron writes in his notes for 1878: "My father tells me that in his youth Brant were very plenty along the beach in stormy weather, and many were shot from the spits by lying flat on the back and shooting as they flew over."

While feeding in shallow water on eel-grass they tip up and show the white triangle of the lower tail-coverts edged with black. In flight they look black from in front but show the white belly from the side or rear. Their wings are black and the distinctive white marks on the neck can be made out with a good glass.

Their call resembles somewhat that of the Canada Goose, but has a roll to it.

[175] **Branta leucopsis** (Bechst.). BARNACLE GOOSE.—Still on the doubtful list.

78 [180] **Olor columbianus** (Ord).

WHISTLING SWAN.

Accidental visitor.

[181] **Olor buccinator** (Rich.). TRUMPETER SWAN.—Believed to have occurred in the County in the early days of the settlement; now almost if not quite extinct.

[188] **Mycteria americana** Linn. WOOD IBIS.—Still on the doubtful list.

79 [190] **Botaurus lentiginosus** (Montag.).

BITTERN.

Common summer resident. March 29 to October 23; (December 16).

In the severe winter of 1917-18, on December 16, I flushed a Bittern from the salt-marsh near my house at Ipswich. It flew several hundred yards and alighted in a clump of tall grasses where I found it and again flushed it. There was snow on the ground and the temperature that morning was 2° Fahrenheit.

¹ Bridge, E., and L. E. Bird-Lore, vol. 18, p. 20, 1916.

Mr. William Brewster¹ was first to call attention to the display of white plumes by this bird in courtship. These are soft, fluffy creamy-white feathers attached to the skin on each side of the breast near the shoulder joint. They are ordinarily concealed beneath the wing but are elevated and spread to the size of the hand in courtship display. I had a very good opportunity on May 30, 1913, to watch this display from the side of Sagamore Hill, Ipswich. A Bittern, probably a female, had alighted near another, a male, who had been "pumping" in an open field near the pond. The female at once disappeared in the cat-tail rushes and the male displayed the white nuptial plumes at the shoulder. These were visible at all times as he walked about just outside of the cat-tails with his head on a level with his shoulders. Between the "pumpings," which I have described in the original Memoir, he assumed at times the "frozen" pose with bill pointing upward. Even at this time the white nuptial plumes were in plain sight.

The Bittern, except in flight, is rarely seen off the ground, but on July 23, 1916, in a rain storm, I watched one standing on a low hay-cock on the hillside near my house. His color matched well the water-soaked hay.

It is possible for a careless observer to mistake an immature Night Heron for a Bittern, so it is well to bear in mind the distinguishing points. The Bittern is buffy yellow with darker stripes, while a young Night Heron looks gray. In flight the dark edging of the wings of the Bittern at once distinguishes this bird from the Night Heron which lacks the black border. The neck, bill, and legs of the Bittern look longer in comparison with those of the Night Heron, which appear stumpy.

80 [191] *Ixobrychus exilis* (Gmel.).

LEAST BITTERN.

Rare summer resident. May 11 to September 21.

Eggs: June.

Since the original Memoir was published, I have made the acquaintance of this bird, but to much less extent than I could wish. On two occasions I heard its curious frog-like love song and searched in vain for the performer. I have written down the song as *coo-coo, whoo-who* and as *cuk-cuk-cuk-cuk*. Both birds were heard in May, one in the Topsfield Marshes, the other near Sagamore Pond at Ipswich. Mr. Damsell's² notebooks record it twice in the fall: September 21, 1887, and September 1, 1888.

Mr. J. A. Farley found a nest and eggs of this species at Lynnfield.

¹ Brewster, W. *Auk*, vol. 28, p. 90-100, 1911.

² Allen, G. M. *Auk*, vol. 30, p. 23, 1913.

81 [194] *Ardea herodias herodias* Linn.

GREAT BLUE HERON; "CRANE."

Common transient visitor. March 15 to June 11 (summer); July 15 to November 23; December 2, 3 and 13.

I still have no record of this bird breeding in the County although I have seen it a number of times throughout June and July. On December 13, 1911, Mr. A. P. Stubbs found three of these birds on the shores of Forest River, Salem.

Occasionally one may see these birds in migration. Thus on April 5, 1913, at 4.30 P.M., I saw four near Lynn rise from the salt-marsh and circle upward by slow wing-beats. When they had attained a considerable height, they made off in a straight line toward the north. At Ipswich, on October 28, 1917, at 5 P.M., a flock of twenty of these great birds flew south high up over the marshes in a loose V- or U-formation.

On August 7, 1907, at Ipswich, a fine adult Great Blue Heron flying high in the air was pursued by a screaming Common Tern who darted at it from behind and from above. The heron screamed hoarsely, stretched out and around its long neck and partly dropped its legs. The feathers of its head were erected. The tern attacked again and the scene was repeated. It reminded one of an old hawking picture.

The Great Blue Heron, like all of his tribe, walks with long strides, but even such a stately bird may at times act in a strange and undignified manner. Thus on April 27, 1919, I saw two of these herons on the beach at Ipswich and later, on examining their tracks, I found that one had interrupted his walk by hopping with both feet together three or four feet at a hop for five hops.

82 [196] *Herodias egretta* (Gmel.).

EGRET.

Accidental visitor from the South. July 30 to November 22.

There have been a number of visits of this interesting bird to Essex County in the last fifteen years, and, as it is now not allowed to be shot, birds have been seen by a number of people. A record, overlooked in the original Memoir, is of one shot at Ipswich on November 22, 1892, and mounted by Vickary.¹ Damsell

¹ Ornithologist and Oölogist, vol. 17, p. 165, 1892.

records one shot September 19, 1887, and another seen at Salisbury on August 5, 1907. In the summer of 1911, there occurred a small incursion of these white birds,—a reverse migration or wandering,—following the breeding season. Two were seen by Mr. J. Loring Woodbury near his dune farm at Ipswich in July; one or two were seen at Great Neck in late July and early August, and two were seen from August 7 to 10 on the shores of Sagamore Pond. On August 10, 1913, three were seen in the Topsfield Marshes of the Ipswich River by Dr. J. C. Phillips, and one on July 29, 1917. On August 14, 1918, one was seen in a small marsh in the Salem pastures by Mr. Ralph Lawson. Mr. Lawson wrote me: "I first saw the bird from my morning train, and as it was still in the same locality when my evening train home passed, I organized a small party and we made a fine, long, close-up observation at daylight on the 15th. I again saw the bird when on my way to Boston on the 15th but not since."

This incident illustrates the great change in bird study that has taken place in the last fifteen years. Prior to that time the bird would have been shot at sight. To my great regret, notwithstanding all my efforts, I failed to see any of these splendid white herons, but on October 13, 1919, while walking through the Ipswich dunes, I was unexpectedly treated to a sight of one. It arose from a bog on great white wings, slowly doubled up its long neck, extended behind its black legs, and flew off over the marshes. An hour later from my house I discovered it wading about in the marshes. It looked fully as large as a Great Blue Heron, and was pure white in color with the exception of the black tarsi and yellow bill.

[197] *Egretta candidissima candidissima* (Gmel.). SNOWY EGRET.—Still no definite records for the County. This bird is but little larger than a Little Green Heron, while the Egret is nearly as large as a Great Blue Heron.

83 [200] *Florida cærulea* (Linn.).

LITTLE BLUE HERON.

Accidental visitor from the South. April 27 to September 10.

In addition to the 1881 record in the original Memoir, I have to record one seen near the Floating Bridge in Lynn by Messrs. A. P. Stubbs and G. M. Bubier on April 29 and 30, 1913. This bird was seen at this place from April 27 to April 30 by Mr. Charles E. Moulton, who was then living within sight of the pond. The bird was collected by Mr. James Goodrich. Another record is of an adult seen by Mr. Ralph Lawson in the Topsfield meadows on September 10, 1916.

84 [201] *Butorides virescens virescens* (Linn.).

GREEN HERON; "SHITE-POKE."

Common summer resident. April 20 to October 8.

Eggs: May 28 to June 2.

A common posture assumed by this heron on the sand- and mud-flats in the creeks at low tide is with the back and neck horizontal and the tarsi so nearly flat on the ground that the body is close to the sand and the bird resembles a log of wood. In this position it waits patiently near the water ready to pounce on the little fish that swim its way.

Their common note resembles very closely the sound made by blowing a blade of grass stretched tightly between the thumbs side by side, and is emitted as they fly off from the intruder. When much startled I have heard them croak hoarsely as they fly away.

85 [202] *Nycticorax nycticorax naevius* (Bodd.).

BLACK-CROWNED NIGHT HERON; "QUAWK."

Abundant summer resident; very rare in winter. March 27 to November 4; December, January, February.

Eggs: April 20 to July 1.

I have records for December 3, 1913, January 1, 1914, and February 22, 1907, all from Ipswich.

Although migration of this bird often takes place by day as described in the original Memoir, it also takes place at night. Thus on October 6, 1918, I heard a great outcry among the Night Herons in the marshes of the Castleneck River at Ipswich after dark. They all seemed to be talking together. That same night both Mr. R. Nichols and Mr. Ralph Lawson in Salem were surprised by the large numbers of Night Herons they heard flying over toward the south.

In the original Memoir I described a heronry of these birds at Hamilton visited in 1904. In 1908, the heronry was apparently of the same size. In 1911, it was somewhat diminished as many of the white and red maples had been killed by the brown-tail moth and cut out. On June 3, 1915, Dr. J. C. Phillips counted 150 nests there, nearly all with eggs. He found it at least twelve days behind the North Beverly colony in development.

Mr. J. F. Le Baron told me that Night Herons used to breed in large numbers

on Pine Island, back of the beach at Ipswich. This island, probably once covered with pines, is now densely filled with red oaks. In these trees the herons nested in 1871 and 1872. I quote from Mr. Le Baron's notes: "Unprincipalled and low-lived would-be gunners come from town and other places, and shoot wagon-loads of them. They tear down their nests and kill the callow young. The island reeks with the stench from their dead bodies. . . . 1875. These birds are all gone. Not over a dozen pair can be found on any of the islands in a circuit of six miles. So much for indiscriminate slaughter." This is an interesting commentary on the customs of former days. In consequence of the protection afforded these birds at the present day, they are undoubtedly increasing in numbers.

There is a heronry not far from the southern end of Plum Island. In 1914, it was about an acre and a half in extent in a hollow in the dunes. There were several hundred nests built in wild cherry, poplar, gray birch and pitch pine.

The heronry that has especially interested me of late years is one that I have watched from its beginnings in the large grove in the Ipswich dunes lying to the east of Wigwam Hill. This grove, which is extending rapidly to the south, is composed almost entirely of pitch pines. There are a few gray birches and white maples. The grove had always been a favorite roost for Night Herons during the day, and several hundred of these birds often rose up to greet the intruder but they did not nest there. In the summer of 1916, I found that several pairs had nested and counted 25 nests. In 1917, I counted 167 nests and believed from the number of birds that there were many more I had overlooked. The numbers had again increased in 1918 and I decided to make a census in the winter when the birds had flown.

On December 29, 1918, I began to take the census, with the help of Messrs. H. G. Balch and Charles Townsend, by counting the nests in a tree, recording them and tying a white string around the trunk so as to avoid counting the same tree over again. This we soon found was slow work and very cold for the fingers. There was a light snow on the ground and we found that it was much simpler and fully as effectual to mark the tree by stamping the snow at the foot of the trunk. In this way the count was accurate as far as it went. It is probable we overlooked a few trees on the periphery of the roost, but on the other hand we may have counted some old nests that were not used the previous season. I believe that the census is therefore nearly accurate. There were 761 nests in all, from one to eight in a tree, and 492 nesting trees. The nests vary in size from thin flimsy affairs to thick bulky masses of twigs. These twigs and small branches are so completely interwoven that the nest stands a good deal of rough handling without coming to pieces. Nests blown from the trees are often found intact on the ground. The construction of the nest must call for considerable skill in weaving on the part of the birds.

Dr. J. C. Phillips's notes on a small breeding colony at North Beverly are as follows:

1913. Birds arrived on April 13. On June 7, 33 nests found; young birds mostly able to fly; 41 caught and banded.

1914. Only three nests.

1915. Twenty-three nests; 75 birds banded on June 3.

1916. Twelve nests; a few banded on June 27.

86 [203] *Nyctanassa violacea* (Linn.).

YELLOW-CROWNED NIGHT HERON.

Accidental visitor from the South. The single record of 1862 is still unique.

[206] *Grus mexicana* (Müll.). SANDHILL CRANE.—Extirpated.

87 [208] *Rallus elegans* Aud.

KING RAIL.

Accidental visitor from the South.

In the original Memoir there were three definite records of this bird from the County. I can now add two more: a specimen is noted, at Amesbury, on August 14, 1902, by Damsell,¹ and in 1905, on October 5, one was seen at Prankle's Pond, North Saugus, by Mr. G. M. Bubier who had an excellent opportunity to watch the bird.

*88 [211] *Rallus crepitans crepitans* Gmel.

CLAPPER RAIL.

Accidental visitor from the South.

This bird is now moved from the doubtful to the regular list on the strength of the three following records:

On September 15, 1908, Mr. William P. Wharton² picked up on the beach at Plum Island, near the mouth of the Ipswich River, a dead Clapper Rail in good condition. There were no indications of its having been shot, but it had probably died in the water. Taking into consideration the direction of the winds, etc., Mr. Wharton thinks it very unlikely that the rail could have drifted from farther south. The mounted bird was presented to the Peabody Museum at Salem.

¹ Allen, G. M. Auk, vol. 30, p. 33, 1913.

² Wharton, W. P. Auk, vol. 26, pp. 76, 77, 1909.

On September 12, 1909, I saw a large rail on the flats of the Castleneck River at Ipswich, which I believe was a Clapper Rail. It ran with its head down to some thatch where it disappeared. I at once landed from my canoe and walked into the grass, whereupon the rail rose silently within a few feet of me, with legs dangling. It had a long curved bill and was the size of a Clapper or a King Rail. The light was good and its gray rather than rich brown color showed that it was a Clapper Rail.

The third record, by Dr. J. C. Phillips,¹ is as follows: "On October 20, 1910, Mr. T. C. Wilson, of Ipswich, brought me a young male Clapper Rail (*Rallus crepitans crepitans*). It was shot in the salt marshes of that town near the Poor Farm, and was a young bird of this season."

89 [212] *Rallus virginianus* Linn.

VIRGINIA RAIL.

Common summer resident. April 11 to October 13.

Eggs: May 12 to July 10.

This bird welcomed the cat-tails that for a few years nearly filled the southern end of Sagamore Pond near my house at Ipswich, and on July 10, 1910, I found a nest there with eight white eggs speckled with brown. The nest was swung in a clump of coarse grass a foot above the water among the cat-tails. It was made of coarse grass-stalks. I had hoped to see the curious downy young but on my next visit, a few days later, they had emerged from their shells and departed.

On another occasion, while concealed near the cat-tails, I heard an ear-piercing *spee* or *sce* from near at hand and saw a Virginia Rail threading its way in and out among the rushes, thrusting continually its long curved bill into the water and mud. It ran within ten feet of me up on to the bank, so near that I could see its dark-red eyes, and, as it disappeared in the cat-tails, another one appeared. Their frequently emitted notes were as sharp as those of the red squirrel, at times suggestive of the squeak made by the grass-blade stretched between the thumbs, at times a low guttural chattering or grunting or moaning; now a mild *cut-ta, cut-ta*, then a loud and disdainful *ch ch*. The one that had passed me soon popped out of the cat-tails with a long worm hanging from its bill, but, disturbed by my presence, turned back to reappear a little farther off and returned to the rushes as before. It then flew out over the pond with weak feeble

¹ Phillips, J. C. Auk, vol. 28, p. 119, 1911.

wing-beats, legs dangling close to the water, and the worm still in its bill. It landed feebly and awkwardly, sitting down in the water before scrambling to its feet and elevating and depressing its short tail.

What I take to be the full nuptial song is delivered with great vigor and rapidly repeated. It may be written down as *ki'd-ick, ki'd-ick, ki'd-ick*. At a little distance this reminds one of the metallic sound made by the striking of an anvil when the hammer rebounds once or occasionally twice. Near at hand it suggests a telegraphic ticker.

90 [214] **Porzana carolina** (Linn.).

SORA; CAROLINA RAIL.

Common summer resident. March 20 to November 8.

Eggs: June 9 to 11.

The Sora is a dainty walker, choosing its steps with nicety in the intricate passages among the cat-tails, nervously twitching its head and neck and jerking its erect tail. Seen from the front this tail is a dark triangle with a white edge; from behind it is a conspicuous triangle, buffy white in color, matching the blown downy seeds of the cat-tails. It is conspicuous in the dark aisles among the rushes when the rest of the bird is invisible, and spring and fall this flag is displayed. Occasionally, however, a Sora may be seen to lower the triangle and quit its jerking, and I have seen a bird stand still on the mud with head drawn in and tail down apparently for concealment. The yellow bill is a noticeable feature.

In flight for a short distance the legs are allowed to dangle, but for a longer flight these are drawn up and extended behind. Alighting on the water, it swims like a miniature duck.

While the love song of the Virginia Rail is a telegraphic or anvil-like sound, the Sora sings a whistling *ker-wée*, with a very plaintive and human tone. It is repeated at frequent intervals in the height of the breeding season.

But the Sora, like the Virginia Rail, has a great variety of other notes expressive, doubtless, of varying emotions. A stone thrown into the cat-tails evokes a great variety of grunts and squeaks and squeals, many doubtless from the Virginia Rails, but some can be distinguished as belonging to the Sora. The sounds extend on all sides like the concentric ripples in the water from the impact of a stone. An alarmed or curious Sora begins often with a sharp *ee* or *ah* soon to change to the characteristic whinny. The whinny is at first loud and clear, the notes following one another with great rapidity, descending in the scale, and becoming fainter and fainter till they cease. At times the sound is musical and

pleasing, and other voices, all of whose owners are invisible among the cat-tails, take up the refrain. One is tempted to consider this the nuptial song, but I am inclined to think the one previously described is the real one, and the whinny is an alarm or complaining or perhaps a gossip call.

Since the cat-tails have been largely drowned and cut out at Sagamore Pond the rails, like the mosquitoes, have greatly diminished in numbers.

91 [215] *Coturnicops noveboracensis* (Gmel.).

YELLOW RAIL.

Rare transient visitor. September 30 to October 13.

[216] *Creciscus jamaicensis* (Gmel.). BLACK RAIL.—This is still "*vox præterea nihil*," as in the original Memoir.

92 [218] *Ionornis martinicus* (Linn.).

PURPLE GALLINULE.

Accidental visitor from the South.

There have been no additions to the six original records.

93 [219] *Gallinula galeata* (Licht.).

FLORIDA GALLINULE.

Rare summer resident. March 20 to October 12.

In the original Memoir I suspected that this bird might be a summer resident, and am now inclined to believe that that is the case although I have no definite records of breeding.

Damsell¹ has two records confirmed by specimens of birds taken near Amesbury, September 14, 1887, and October 3, 1903, respectively. Another was shot in the Topsfield meadows by Mr. Julian M. Dodge in September, 1906. One was shot at Sagamore Pond, Ipswich, on September 16, 1914, by Mr. David L. Richardson; this is now in my collection. A second was shot at the same place on October 3, 1914, and a third was seen by me there on October 12, 1914. It is a small bird as compared with a Coot, but it swims in the same way with nodding head. A capital distinguishing point in the fall is the slaty-blue bill of the gallinule; the Coot has an ivory-white bill.

¹ Allen, G. M. Auk, vol. 30, p. 23, 1913.

On March 20, 1919, a male Florida Gallinule was caught alive by some boys at Essex. The specimen is now in the collection of the Boston Society of Natural History.

94 [221] **Fulica americana** Gmel.

COOT; "MUD-HEN"; "POND CROW"; "BLUE PETER."

Transient visitor; rare in spring, common in the autumn. March 31 to April 15; September 3 to November 7.

Sagamore Pond has furnished me with a good field of observation for these as for the other rails. Although they are expert divers they also feed in shallow water by dipping like river ducks. While Black Ducks and Baldpates often make use of the Coots' diving capacity, by stealing the weeds brought by them to the surface, I have also noticed the Coots getting good feeding without any work by stealing the weeds brought up from below by the diving Lesser Scaup.

Before alighting on the water they often run for several yards on the surface, using the wings at the same time, and when startled from the water, they sometimes run on the surface in a similar manner for a hundred yards and then alight again.

95 [222] **Phalaropus fulicarius** (Linn.).

RED PHALAROPE.

Rare and irregular transient visitor. May 15; July 11 to November 24.

Mrs. Edmund Bridge was so fortunate as to see one of these birds in full nuptial plumage off Nahant on July 11, 1913. I have not seen the bird in this plumage in Essex County, but I had an excellent chance to observe one at No Man's Land off Martha's Vineyard, on June 15, 1913. The bird was swimming in a small pond back of the beach, riding lightly on the water and nodding its head in a dove-like manner as it advanced. The chestnut red of its throat and breast were very conspicuous; its back appeared light brown with white and black streaks and it had a broad white edging to the secondaries. When it flew, this white band was more conspicuous. It alighted on the shore of the little pond and ran along the beach. It emitted a whistle which was clear and pleasant at times, and again sharp and grating; at times the note could be expressed as a *creak*.

96 [223] *Lobipes lobatus* (Linn.).

NORTHERN PHALAROPE; "SEA GOOSE"; "WEB-FOOTED PEEP."

Irregular, but at times common transient visitor. May 18 to 30; July 31 to October 11.

As an example of the very large flocks of this phalarope that are at times seen off our coast, resting and feeding on the surface of the water, the one reported by Mr. George H. Mackay¹ easily takes first place. From May 25 to May 30, 1894, he observed a flock near the "Pigs" off Swampscott of "10,000."

In the fall migrations it is unusual to see this bird in anything but the immature and winter plumage. One in full plumage, apparently a female, was seen in the water off Lakeman's Beach, Ipswich, on August 13, 1918.

Both the Red and the Northern Phalarope are charmingly unsuspecting and allow of close approach. The latter bird has a variety of notes. At times it twitters like a Barn Swallow, at times it emits a single harsh note like that of the Eave Swallow. Again a gentle *ee-ep* is emitted, or a sharp *quip*. Although it may alight on the land it seems to prefer to alight on the water, which it does gracefully with feet thrust out in front, and afterward walks up on the shore. It swims with a graceful nodding of the head and often whirls about in circles.

The adults in nuptial plumage look dark above with two yellow stripes on the back, a white line over the eye and on the wings, white below with a rufous patch on each side of the neck. The females are larger and are more richly colored than the males. The delicate needle bill is a good field-mark.

97 [224] *Steganopus tricolor* Vieill.

WILSON'S PHALAROPE.

Accidental visitor from the West.

In addition to the 1874 specimen entered in the original Memoir I am able to give another record for the County: a female shot at Salisbury on August 18, 1907, and obtained for me by Mr. John H. Hardy, Jr. It is now in my collection, No. 1260.

¹ Mackay, G. H. Auk, vol. 11, p. 226, 1894.

98 [225] *Recurvirostra americana* Gmel.

AMERICAN AVOCET.

Accidental visitor from the West.

The collection of Mr. B. F. Damsell contained "a fine adult of this species, taken May 23, 1887, doubtless on the Salisbury marshes. That it was a locally obtained specimen there can be no doubt, as it was skinned, sexed and measured by Mr. Damsell. His notebook simply makes record of it as the first of its kind observed, for in these earlier days of his collecting he seems not to have been aware of the rarity of his capture. The specimen has been acquired by the Boston Society of Natural History for its New England Collection."¹

99 [226] *Himantopus mexicanus* (Müll.).

BLACK-NECKED STILT.

Accidental visitor from the South.

The single specimen recorded in the original Memoir is still the only record.

100 [228] *Philohela minor* (Gmel.).

WOODCOCK.

Not uncommon summer resident, more common in the migrations. March 4 to December 11.

Eggs: May.

Damsell's notebooks contain a number of records of late-fall birds, as follows: "November 20, 1886; December 10, 1887; November 21, 1880; November 18, December 6, 1890; November 30, 1893; December 5, 1903."¹

On June 25, 1917, while walking through a boggy place in my "forest" at Ipswich I almost stepped on two young Woodcock that flew for about twenty yards close to the ground. Their tails were not fully grown and it is probable they were hatched out in the vicinity. A few days later I flushed an adult in the same locality and the birds remained there until July 16. The next spring I looked forward to watching the courtship performance of this interesting bird in

¹ Allen, G. M. Auk, vol. 30, p. 23, 1913.

my forest, but was disappointed. The birds did not come back. I have had, however, excellent opportunities to study this performance elsewhere. It is worth seeing and has often been described.

101 [230] *Gallinago delicata* (Ord).

WILSON'S SNIPE; "ENGLISH SNIPE"; "JACK SNIPE."

Common transient visitor, very rare in summer and winter. March 2 to May 5 (summer); August 27 to November 14 (winter).

An unusually early autumn flight of this bird occurred in the last week of August, 1916. Dr. J. C. Phillips¹ reports twenty-five seen on August 27 in the Topsfield marshes and flocks were seen elsewhere in the State. Messrs. A. P. Stubbs and G. M. Bubier have found this bird spending the winter for the last fifteen years at Hall's Brook in Lynn. Damsell records a bird shot at Newburyport on February 8, 1889.

The courtship of the Snipe is expressed by a flight-song, but the song is believed to be made by the stiff wing-primaries and not to be vocal. It may be heard in April on the borders of flooded meadows frequented by this bird. Soon after sunset, as it is beginning to grow dark, one may hear overhead, a quavering note, soft and mellow, repeated on all sides at frequent intervals. It is a sweet, wierd, musical sound, one that increases in intensity only to die out and lasting but two or three seconds. It has been described as a bleating sound, or like a distant Indian war-whoop made by striking the mouth at frequent intervals during the expulsion of air from the lungs. It is an all-pervading sound and its author is difficult to locate. In fact in the dusk one rarely or never sees the performers which appear to be at a considerable height above the ground. I have caught a glimpse of a bird which appeared as a speck in the sky. The song begins at sunset and may continue for forty-five minutes.

Early in the evening I have heard from a bird on the ground a clear, rapidly repeated whistling note which was evidently vocal.

On May 22, 1907, Mr. Geo. M. Bubier reported that a snipe at the fresh marshes in Lynnfield "flew up and alighted on a telegraph pole beside the railroad tracks. As we got too near it would fly to the next pole, now and then fluttering about our heads uttering a *peank*. It very likely had a nest."

When disturbed with its young the adults perform the wounded-bird act. They fly slowly a few yards with dangling legs, drop on the ground as if wounded,

¹ Phillips, J. C. Auk, vol. 33, p. 434, 1916.

lie on the side, or flutter off making themselves very conspicuous, with wings and tail spread.

Mr. A. P. Stubbs on October 13, 1915, saw a Wilson's Snipe kill itself by flying against a trolley-wire in Lynn.

102 [231] *Macrorhamphus griseus griseus* (Gmel.).

DOWITCHER; RED-BREASTED SNIPE; "ROBIN SNIPE"; "BROWN-BACK."

Not uncommon transient visitor, rare in spring. May 20 to June 7; July 6 to September 25.

The September 25 record was of a bird at Eagle Hill in 1909, seen by Mr. S. P. Fay.

In the original Memoir I said I had never seen this bird on a beach. On August 5, 1916, I saw one on Ipswich Beach at dead-low tide.

The Dowitcher has probably increased slightly in numbers since the Federal Law went into effect. This increase, I am inclined to think, is due not so much to the law that protects it at all times, but to the fact that shooting is not allowed at all until August 15 instead of, as formerly, on July 15. Most of the Dowitchers have passed by August 15. With the best intentions of observing the law, many gunners shoot these birds under the impression they are shooting Summer Yellow-legs.

As the Dowitcher is especially fond of shallow, brackish water and of mud-flats devoid of vegetation, the shores of Clark's Pond at Great Neck, Ipswich, are their favorite resort. On July 26, 1914, I watched at that place a flock of nineteen of these birds. They waded in water up to their bellies and their long bills and heads were partially or wholly immersed in the water. A chopping motion with head and neck is made, and the bill is rarely withdrawn entirely from the water.

In feeding and in flight the Dowitcher forms compact flocks. The long straight bill, out of all proportion to the size of the bird, is the most noticeable field-mark. The legs are yellowish green. In flight the white-barred tail-feathers and the gray triangle on the rump with its apex on the back between the wings are noticeable features.

103 [232] *Macrorhamphus griseus scolopaceus* (Say).

LONG-BILLED DOWITCHER; WESTERN DOWITCHER.

Accidental visitor from the West.

104 [233] *Micropalama himantopus* (Bonap.).

STILT SANDPIPER; "BASTARD YELLOW-LEG."

Irregular, and at times not uncommon transient visitor. July 22 to October 2.

I have seen the Stilt Sandpiper at Clark's Pond. It is a diligent feeder on mud-flats and probes the mud with bill slightly opened. Although its body is not larger than that of a Ring-neck, its long legs make it look as big as a Dowitcher. The legs are yellow, but not as bright as those of the Yellow-legs. Its bill is long and slightly decurved. There is a light line through the eye. In flight it shows a grayish-white tail but lacks the gray rump-triangle of the Dowitcher and the white rump of the Yellow-leg. The note I have heard is a single whistle.

105 [234] *Tringa canutus* Linn.

KNOT; "RED-BREASTED PLOVER"; "BLUE PLOVER";

Common transient visitor. May 20 to June 12 (June 25); July 17 to November 8.

On June 11 and 12, 1910, during an easterly storm I found four full-plumaged Knots on the beach at Ipswich. In wading in a tidal pool one went beyond its depth and swam across to the other side.

While the tarsi of the young are greenish yellow, as stated in the original Memoir, those of the adult are dark, almost black.

106 [235] *Arquatella maritima maritima* (Brünn.).

PURPLE SANDPIPER; "ROCK SNIPE"; "WINTER SNIPE."

Common winter visitor. (July 30); November 1 to May 30.

On the late date of May 30, 1918, Mr. C. R. Lamb¹ found a flock of forty of these birds on the Salvages off Rockport. He shot six for his collection.

On March 14, 1909, at the Salvages and at Thatcher's Island, I saw three flocks of Purple Sandpipers, one of ten, another of twenty-four, and a third of twenty-eight individuals. In feeding at low tide among the rock-weed they are

¹Lamb, C. R. Auk, vol. 35, p. 233, 1918.

frequently washed by the waves which they follow as eagerly as Sanderlings, but instead of retreating by running as the latter bird generally does on the beach, they flutter up the steep rocks partly in and partly out of the water.

On the wing they resemble other sandpipers, flying in compact flocks, often close to the water and turning swiftly from side to side.

No mention was made in the original Memoir of the call of this bird. I have since recorded it as a sweet but rather squeaky *chip*, and in a huddled flock low conversational chippings are frequently heard.

I have also noticed that the bill is slightly decurved. The yellow base of the bill is a noticeable feature either in profile or in front view.

107 [239] *Pisobia maculata* (Vieill.).

PECTORAL SANDPIPER; "GRASS-BIRD"; "BROWN-BACK."

Very rare spring, common and at times abundant autumn transient visitor. May 23, 24; July 15 to November 6.

On May 23, 1908, Mr. C. J. Maynard saw several Pectoral Sandpipers at Clark's Pond; on May 24, 1912, Mrs. Edmund Bridge found two at Eagle Hill. These are the only spring records I have for this bird.

On September 29, 1918, I made a careful study of a flock of fifteen or twenty of these birds in the salt-marshes near my house. Their behavior was characteristic. Flying in a compact bunch they swung in response to my whistle within easy gunshot of me, as I stood unconcealed. Alighting suddenly, they became invisible in the short grass, through and under which they ran, spreading out in all directions. Occasionally several would stand still and stretch their necks above the grass and look about, but it required close attention to see them. They kept to the cover of the grass and avoided the bare muddy sloughs preferred by other shore-birds of the marsh. The name "Grass-bird" fits them well. They did not flush until I was within a few yards of them and they rose a few at a time uttering either the alarm note, a rasping *kriek*, or the sweet rolling or trilling whistle much like that of the Least Sandpiper. After flushing some of the flock I nearly stepped on others before they rose.

That the Grass-bird looks like "a large Least Sandpiper" is carried out even to the slight decurving of the bill as in that species. Although not a brilliantly colored or marked bird, its well-shaded and spotted neck and breast, and delicately pencilled back, with feathers bordered with white and buff, make it very attractive. While the tarsi of the adult males are straw-colored, those of the females and young have a greenish-yellow hue.

As I was watching this flock a male Duck Hawk suddenly appeared and, striking down a Grass-bird within thirty yards of me, passed on in its impetuous flight but swung around, picked the dead bird up in its talons and was off.

The Pectoral Sandpiper is rarely seen away from salt water in the County. On October 13, 1916, Dr. J. C. Phillips saw seventy-five or a hundred on the Topsfield meadows of the Ipswich River. About the same time several flocks were seen near Wenham Lake.

108 [240] *Pisobia fuscicollis* (Vieill.).

WHITE-RUMPED SANDPIPER; BONAPARTE'S SANDPIPER; "BULL-PEEP."

Rare spring and common autumn transient visitor. May 23 to June 9; July 10 to November 10.

109 [241] *Pisobia bairdi* (Coues).

BAIRD'S SANDPIPER; "BULL-PEEP."

Rare transient visitor. July 28 to October 1.

In the last fifteen years I have seen several Baird's Sandpipers at Ipswich, both on the beach and at Clark's Pond. When alone it does not seem much larger than a Semipalmated Sandpiper, but when with this latter species it looks at times noticeably larger. I have noted it as about the size of a Sanderling, but standing rather higher. The bright, almost golden pattern on the back is noticeable, and the buffy wash on the sides of the neck. The tarsi are greenish and there is a rather broad but indistinct white line seen on the wings in flight.

110 [242] *Pisobia minutilla* (Vieill.).

LEAST SANDPIPER; "PEEP"; "MUD-PEEP."

Abundant transient visitor. May 5 to June 7 (summer); July 3 to September 13 (October 13).

The increase in numbers of this species is at times very striking. On May 23, 1915, Dr. J. C. Phillips saw on the beach at Great Neck, Ipswich, a number of flocks of 500 or more each, totalling many thousands in all.

A surprisingly large number of early migrants from the north appeared at Ipswich on July 3, 1911. A flock of at least fifty whirled about and alighted near me on the marsh. All went off but a few and I counted ten of these that remained.

The courtship flight-song of this bird I have observed on the breeding-grounds in the North. The bird rises like a mechanical toy and flies in irregular circles from twenty to fifty yards above the bog with wings set down and quivering rapidly. In the flight it emits a short fine trill suggestive of a cricket, rapidly repeated. On one occasion the bird remained in the air five minutes and continued to trill after it had reached the ground. Immediately it was up again, trilling, and, as I left the bog it followed after me, still trilling. On the ground the colors matched so well those of the bog that the bird at once became invisible if not carefully noted down.

In the original Memoir I referred to the resemblance of the Least to the Pectoral Sandpiper and have since come across the following by Coues:¹ "This diminutive species in form, color and general habits, is very closely allied to the preceding [Pectoral Sandpiper] of which it is in fact a perfect miniature."

In the original Memoir I discussed at some length the field-marks of this species, and have to add here only the facts that the bill is slightly decurved and that the white line on the wings is more clearly defined than in the Semipalmated species.

111 [243a] *Pelidna alpina sakhalina* (Vieill.).

RED-BACKED SANDPIPER; DUNLIN; "BRANT-BIRD."

Rare spring and common autumn transient visitor. May 20 to June 18; September 1 to November 8 (December 13).

The December 13 record is of one seen at Ipswich in 1913 by Dr. G. M. Allen. In a large flock of Sanderlings at Ipswich on May 31, 1915, I saw a single full-plumaged Dunlin, and another single bird on May 28, 1916.

112 [244] *Erolia ferruginea* (Brünn.).

CURLEW SANDPIPER.

Accidental visitor from Europe.

There are no additions to the three previous records.

¹ Coues, Elliott. Proc. Acad. Nat. Sci. Phila., p. 230, 1861.

113 [246] *Ereunetes pusillus* (Linn.).

SEMIPALMATED SANDPIPER; "SAND-PEEP."

Abundant transient visitor. May 13 to June 14; summer; July 10 to October 30.

The Semipalmated Sandpiper appears to have responded to the protection afforded by the Federal Law for Migratory Birds. On August 8, 1913, I counted a flock of 380 of these birds on Ipswich Beach. On August 12, 1913, I found an immense flock on Coffin's Beach, composed entirely of these birds with the exception of twenty Semipalmated Plovers and two Sanderlings. Partly by counting and partly by estimation I found there were at least 1500 birds in the flock.

In the protection of Clark's Pond at Great Neck, Ipswich, this species is very abundant, especially when the water is low and large flats are exposed. The birds are so scattered I have not been able to estimate the numbers at these times. Several times in August I have been much interested in the actions and notes of the Semipalmated Sandpipers here collected,—actions and notes that are not heard when the birds are busily feeding on the beach. I have noticed that the birds were nearly all young and were frequently fighting, probably in play. Two would face each other, crouching almost flat on the mud or in the water and suddenly spring at each other with wings outspread. Sometimes they would slowly walk toward each other with neck and body almost touching the ground and with head up. This would be repeated again and again. Nearly all the birds appeared to be emitting a rapidly repeated rolling note. I have sometimes described it as a *whinny* in my notes, and have tried to reduce it to the syllables *ch ch ch* or *what-er, what-er*. This rolling note was constantly heard from all over the mud-flats, and produced a considerable volume of sound. It was entirely unlike the familiar whistle of the migrating flocks on the beaches. It suggests to me a modification of the nuptial song which I described in the original Memoir. This, besides the succession of sweet notes that recall a Goldfinch or a Canary, has a rolling or whinnying character. One was heard in the nuptial song in the marshes by my son Charles in the darkness of the evening and of a fog at 8 P.M. on May 22, 1915.

I have noticed that this species in walking on the beach sometimes pauses with the rear foot slightly lifted showing plainly the semipalmation.

114 [247] *Ereunetes mauri* Cabanis.

WESTERN SANDPIPER.

Rare autumn transient visitor. July 30 to September 20.

115 [248] *Calidris leucophæa* (Pallas).

SANDERLING; "BEACH-BIRD"; "WHITEY"; "BEACH PLOVER."

Abundant transient visitor. May 20 to June 8; July 10 to November 25 (December 6, 12).

The December 12 record is of several birds seen by Mr. A. C. Stubbs near the Nahant Coast Guard Station. In June 8, 1919, I saw a flock of six Sanderlings on Ipswich Beach.

The Sanderling has held its own and may possibly have increased in numbers since the Federal Law went into effect, but the increase is not so noticeable as in the case of the Semipalmated Sandpiper.

On the hard wet sand of the beaches one may see in places the characteristic probings of the Sanderling without a trace of their foot marks, and these may be the cause of considerable mystery to the uninitiated. While the Semipalmated Sandpiper runs about with his head down dabbling irregularly here and there, the Sanderling vigorously probes the sand in a series of holes a quarter of an inch to an inch apart in straight or curving lines a foot to two feet long. Sometimes the probings are so near together that the line is almost a continuous one like the furrow of a miniature plough. The sand is thrown up in advance so that one can tell in which direction the bird is going. A close inspection of the probings often reveals their double character, showing that the bill was introduced partly open. The probings are for the minute sand fleas and other crustaceans in the sand, their principal food. I have seen Sanderlings running about nimbly on the beach, catching the sand fleas which were hopping on the surface. I have also seen them catching flies. I have the record of one I shot in 1884, whose stomach was stuffed with small specimens of the common mussel, *Mytilus edulis*.

116 [249] *Limosa fedoa* (Linn.).

MARBLED GODWIT; BROWN MARLIN.

Accidental transient visitor.

Besides the four records of this bird given in the original Memoir two are to be added from Mr. Damsell's records.¹ Both of these birds were shot, one on July 28 and another on July 30, 1888.

¹ Auk, vol. 30, p. 24, 1913.

117 [251] *Limosa hœmastica* (Linn.).

HUDSONIAN GODWIT; "BLACK-TAIL."

Rare autumn transient visitor. July 20 to November 12.

"Large flocks" of this bird are recorded by Mr. Damsell on September 7, 1891; and on August 26, 1908, Mr. T. C. Wilson and others reported a flock of seventy on the great marshes of Plum Island River.

It is my great regret that I have never yet seen this bird alive.

118 [254] *Totanus melanoleucus* (Gmel.).

GREATER YELLOW-LEGS; GREATER TATTLER; "WINTER YELLOW-LEGS"; "WINTER."

Common transient visitor. (March 27) April 19 to June 14 (June 28, July 6); July 20 to November 10.

On May 20, 1905, I counted 145 of these birds in a scattered flock on the marsh at Ipswich.

The courtship song of the Greater Yellow-legs comes up from the marshes of Essex County throughout the month of May, but is heard in greater volume during the two middle weeks. It has a sweet and pleading character and seems to say *wull yer? wull yer?* Although it differs from the Flicker-like call described in the original Memoir, which may be heard at the same time, it too has a decided Flicker-like flavor. It is heard throughout the day, but in the evening until it is nearly dark, the marshes often resound with the plaintive callings.

In walking in the shallow water of a pond these long-legged birds kick out their legs behind as if to rid them of weeds or grass. They dab at the mud or water like a plover instead of deliberately probing it like a sandpiper with head down. They often pick off insects from the grass or the surface of the water, and I have found small fish in their stomachs.

119 [255] *Totanus flavipes* (Gmel.).

YELLOW-LEGS; LESSER YELLOW-LEGS; "SUMMER YELLOW-LEGS"; "SUMMER."

Common autumn transient visitor, accidental in spring. April 30, May 3; July 3 to September 15 (October 11, 30).

120 [256] *Helodromas solitarius solitarius* (Wils.).

SOLITARY SANDPIPER.

Not uncommon transient visitor. April 30 to May 30; July 9 to October 14.

My record for April 30 is of a bird seen by me in Ipswich, in 1905. The May 30 record was of a bird seen in Wenham by Mr. Ralph Hoffmann in 1907. The early July records are by Mr. A. P. Stubbs of several birds seen in Lynn in 1916.

121 [258] *Catoptrophorus semipalmatus semipalmatus* (Gmel.).

WILLET; "HUMILITY."

Uncommon transient visitor. May 13 to June 4 (June 17); August 4 to September 1.

The striking black-and-white wing feathers make it easy to recognize this bird even when it flies over at a considerable height. It is probable that the notes on occurrence given above should now be transferred to the Western Willet as will be stated under that subspecies.

*122 [258a] *Catoptrophorus semipalmatus inornatus* (Brewst.).

WESTERN WILLET.

It is believed that most, if not all, of the Willets of the Essex County coast belong to this western subspecies, as the eastern form may not now breed north of Virginia, although, within a few years, a summer resident of Nova Scotia. It is possible, of course, for Virginia birds to wander north after the breeding season.

In the winter plumage, which is assumed in summer, this form can be distinguished from the eastern form only by its slightly larger size. In nuptial plumage it is paler above, the breast less heavily streaked and more suffused with buffy, and the middle tail-feathers lack black bars.

123 [260] *Machetes pugnax* (Linn.).

RUFF.

Accidental visitor from the Old World.

The single record of 1871 remains unique.

124 [261] *Bartramia longicauda* (Bechst.).

UPLAND PLOVER; "PASTURE PLOVER."

Very rare spring, uncommon autumn transient visitor (summer). April 3 to May 7 (June 24, 25, July 2, 3, 9); July 16 to October 26.

I have several more spring records for this bird. One was seen by me in a field at Ipswich on April 29, 1906; Mr. A. P. Stubbs saw two near Lynn on June 25, 1916; three were seen at Newburyport on June 24, 1916, by Mr. S. W. Bailey.¹ The June and early July records suggest breeding birds. I saw one of the birds found by Mr. Stubbs near Lynn on July 3, 1913, and two had been seen there by Mr. Stubbs in July, 1912. This splendid bird is certainly less common than it was fifteen or twenty years ago.

When an Upland Plover alights, it may hold its wings stretched vertically up over the back for a second, motionless, before slowly folding them. When standing still, it often nods its head nervously by drawing it first backward; it may or may not jerk its tail at the same time. In walking, its head and neck are thrust out and back in a dove-like manner, and the tail is held parallel with the ground. When flushed both sexes emit the mournful, tremulous alarm or call-note described in the original Memoir, often several times in rapid succession.

At No Man's Land, off Martha's Vineyard, on June 15, 1913, I had an opportunity to study four or five pairs that were probably nesting on the island. Several of these birds were flying in irregular circles, sometimes at a considerable height, alternately soaring or on tremulous wings. From time to time they gave forth a wierd song, wild and sad, suggestive of rushing winds in desolate regions. This aeolian wailing melody was undoubtedly the courtship song, and although usually given from the air, it was at times emitted from the ground. Very inadequately I have endeavored to express this song by the syllables *oh-whoee-oup, whoee you.*

125 [262] *Tryngites subruficollis* (Vieill.).

BUFF-BREADED SANDPIPER; "HILL GRASS-BIRD."

Rare transient visitor. July 28 to September 14.

The September 14 record was made by Dr. Walter Faxon at Ipswich in 1916.

¹ Bailey, S. W. Auk, vol. 34, p. 207, 1917.

126 [263] **Actitis macularia** (Linn.).

SPOTTED SANDPIPER; "TEETER-PEEP."

Common summer resident. April 20 to November 14.

Eggs: May 30 to July 4.

It is an interesting fact that the downy young of this species only three or four days out of the egg, before a sign of a tail appears, teeters the posterior extremity of its body up and down as do its parents.

In Labrador I caught a nearly full grown young still unable to fly and put it in a small river. It at once dove and swam under water for the distance of three or four feet using for propulsion its wings and probably its feet although I could not be sure of the latter point. It then rose to the surface and swam to the opposite side like a little duck and walked out on the sand where the mother was anxiously calling.

I have seen adults, who evidently had young near, alternately fly at Esquimaux dogs and lead them away by flying low and slowly before them.

In the spring and early summer they frequently give voice to what may be called a song: *trru-whcet* rapidly repeated several times very sweetly and suggestive of the end of the song of the Ruby-crowned Kinglet. This may be given from the ground or on the wing and I have heard it in the evening when it was too dark to see the bird.

127 [264] **Numenius americanus** Bechst.

LONG-BILLED CURLEW; "SICKLE-BILL"; "HEN CURLEW."

Accidental transient visitor.

The latest authentic record given in the original Memoir was for 1884. Damsell¹ left two records in his notebooks of birds shot on the Salisbury marshes, namely for July 21, 1887, and July 25, 1891.

128 [265] **Numenius hudsonicus** Lath.

HUDSONIAN CURLEW; "JACK CURLEW."

Rare spring, uncommon autumn transient visitor. May 24 to May 30; July 5 to September 17.

The early date of July 5 records three birds flying south over the Essex marshes in 1912.

¹ Allen, G. M. *Auk*, vol. 30, p. 24, 1913.

This splendid bird has, I am afraid, diminished in numbers in the last fifteen years. In the original Memoir I said it was "an apparent, but I am inclined to think, only an apparent, exception to the rule that the shore birds are all decreasing in numbers," and went on to explain that the Long-billed species was so much more common in proportion to the Hudsonian in former days up to the seventies, that the latter species was considered rare. The following quotations from Wayne's¹ "Birds of South Carolina" put a different light on the subject and are of great interest. They confirm the statements of Maynard who found the Long-billed Curlew "not uncommon" at Ipswich between 1867 and 1872, and the Hudsonian Curlew "very rare." Wayne says of the Hudsonian Curlew: "This species supplanted the Long-billed Curlew between the years 1883 and 1885, for previous to these dates the former species was rare, but it gradually became more abundant each year until it established itself firmly in great numbers. The result was that the Long-billed Curlew was driven from its accustomed range by a smaller species, in the struggle for existence."

He says that the Long-billed Curlew "is now almost extinct on the South Carolina Coast, while it once swarmed in countless multitudes. Since 1885 it has been supplanted by the Hudsonian Curlew (*N. hudsonicus*), which is still exceedingly abundant during the spring and autumn migrations. . . . I do not think that *americanus* has been exterminated by being shot, but that it has changed its route of migration."

I once watched a large bird of this species, probably a female, feeding on the mud-flats of Clark's Pond. It probed with the bill partly open sometimes forcing it half its length into the mud. Later the bird flew up into the pasture on the hills and pursued and ate grasshoppers and other insects.

129 [266] *Numenius borealis* (J. R. Forst.).

ESKIMO CURLEW; "DOUGH-BIRD."

Transient visitor, accidental in the spring, very rare in the autumn. August 24 to September 15.

An extraordinary record is the following: "*Eskimo Curlew in Massachusetts*.—I am informed by Mr. E. H. Ives, of Boston, that a flock of about fifty Eskimo Curlew (*Numenius borealis*) was seen last spring (May 17, 1916) at Chut-Head Sands, near the mouth of the Rowley River between the towns of Ipswich and Rowley, Mass.

¹ Wayne, A. T. "Birds of South Carolina." Contrib. Charleston Mus., no. 1, pp. 55, 57, 1910.

"A letter to Mr. Ives from J. E. Short (not dated) says, 'I should say there were fifty of them—they stayed around two days. Charles Bartlett saw them (also) and he said he hadn't seen any for 15 years.'

"Both Short and Bartlett are 'clammers' and have been experienced shore-bird gunners in the past. Mr. Ives has talked with both these men and others at Rowley and feels certain that there was no mistake in identification.—JOHN C. PHILLIPS,¹ *Wenham, Mass.*"

Of historical interest is the following quotation from Audubon overlooked in the original Memoir: "Previous to my voyage to Labrador I had seen only a single bird of this species, which was kindly given me by my learned friend, William Oakes, Esq., of Ipswich, Massachusetts, who had procured it in his immediate neighborhood, where, as I have since ascertained, the Esquimaux Curlew spends a few days in early autumn while on its way southward."²

The only other definite record for Essex County in the last fifteen years I am able to give is the following: "I purchased of Mr. John Hardy of the Boston Market, a male Eskimo Curlew (*Numenius borealis*) taken at Newburyport, Mass., by A. B. Thomas, August 27, 1908. He shot two, but the other bird had its head so badly shot that it could not be made into a skin.—JOHN E. THAYER,³ *Lancaster, Mass.*"

130 [270] *Squatarola squatarola* (Linn.).

BLACK-BELLIED PLOVER; "BEETLE-HEAD"; "BLACK-HEART";
"BULL-HEAD"; "CHUCKLE-HEAD."

Common transient visitor. May 8 to June 10 (June 25, 27); July 5 to November 20.

On June 10, 1906, there were five on Ipswich Beach, two in full black-bellied plumage, three with pale bellies. On June 27, 1909, I found three on the beach, one in full plumage, two mottled.

Besides the counts of the various stages of plumage seen in the spring, given in the original Memoir, the following of a flock of sixty-six that passed by me within a hundred yards as I lay concealed on the beach at Ipswich, may be added. This was on May 21, 1905. Nineteen were in full nuptial plumage, twenty-seven in various stages of molt from the pale-belly winter plumage to the summer plumage, and twenty were apparently still in winter plumage, but nearly all showed on close scrutiny with a telescope a few black feathers coming in on the

¹ Phillips, J. C. *Auk*, vol. 33, p. 434, 1916.

² Audubon, J. J. *The Birds of America*, vol. 6, p. 45, 1843.

³ Thayer, J. E. *Auk*, vol. 26, p. 77, 1909.

lower breast. Dr. J. C. Phillips records a Black-bellied Plover shot at Wenham Lake on October 21, 1914, the only one he ever shot there.

I have little to add to my former notes on this splendid bird. One of the very few times I have seen it in the salt-marshes was on May 20, 1906, when a flock of almost fifty swung around and alighted in the marsh near my house at Ipswich. On May 30, 1907, about four in the afternoon a flock of over twenty flew north over my house in perfect V-formation. Their calls came down in a shower of sweet yet mournful whistles. Mr. R. M. Marble at Ipswich on the morning of May 15, 1912, saw a flock of about two hundred of these birds fly up until nearly out of sight and then strike out for the north.

A study of the wet sand where Black-bellied Plover have been feeding shows that the hole made by the bill is often double, indicating that the bill is open when the bird dabs at the sand.

131 [272] *Charadrius dominicus dominicus* (Müll.).

GOLDEN PLOVER; "PALE-BELLY"; "GREEN-BACK"; "GREEN PLOVER."

Accidental spring, rare autumn transient visitor. April 8 to May 18; August 23 to November 14.

The April 8 record was made in 1911, at Plum Island by Mr. J. L. Peters¹ in company with Dr. J. B. Brainerd, Barron Brainerd, and Richard M. Marble. Mr. Peters shot the bird which is now in his collection. The bird proved to be a male with a single black feather near the middle of the breast. "The bird had not been seen by members of the Plum Island life-saving station near which it was shot, neither were there any traces of old wounds. His body was entirely free from fat. Whether he was a straggling migrant or a bird that had been forced to winter is a question open to discussion." Damsell records that this species was abundant in 1891. In 1908, following a storm on August 26, there was a large flight of these birds on the Essex County coast and individuals remained until September 29. Mr. G. M. Bubier estimates there were 270 birds and that 28 were shot at Eagle Hill. Mr. George Patterson reported "a large bunch" crossing over the Ipswich dunes on August 26, 1918.

132 [273] *Oxyechus vociferus* (Linn.).

KILLDEER.

Not uncommon summer resident (winter). March 13 to December 15 (winter).

¹ Peters, J. L. Auk, vol. 28, p. 368, 1911.

This species has changed in the last seven years from a very rare and somewhat accidental visitor to a summer resident. It is to be hoped that it has become a regular breeder in the County.

Mr. Arthur P. Stubbs¹ on June 25, 1913, while exploring the borders of the Lynn marshes near Revere, discovered three Killdeer. Each year since, during the breeding season, he has found Killdeer in this locality, his dates ranging from April 25 to September 27. Although he has never found the eggs or young, their continued presence during the season seems to indicate their breeding. Mr. Stubbs kindly notified me of his discovery and I visited the region on July 3 and 12, 1913.

On the former date I found the largest number of Killdeer I have ever seen together in the County. As I entered the marsh, nine birds got up together from several places, united, and flew off in one flock, all crying out noisily.

Mrs. Lidian E. Bridge² reported from one to five Killdeer at Clark's Pond, Ipswich, on July 24 to August 28, 1912. These were probably migrants, but may have nested in the County. I have seen from one to four there in other years. On May 18, 1918, Mr. G. M. Bubier saw one Killdeer at Ipswich.

Mr. S. W. Bailey³ reported a Killdeer at West Newbury on May 24, 1915, in a pasture and three flying over on September 6 and others on October 18, 1915. Throughout May and June, 1916, he found two to four adults frequently in ploughed fields and pastures. It is probable these birds were breeding.

On October 18, 1917, fourteen birds were reported at Peabody by Mr. R. B. Mackintosh and in May, 1918, a pair undoubtedly nested there. In 1919, Mr. A. B. Fowler found a pair evidently nesting at this place. On March 30, 1919, Judge Robert Walcott saw a Killdeer at Gloucester. It is a great satisfaction to be able to report such an increase in the numbers of this interesting bird in the County.

Dr. Allen⁴ gives some earlier records by Damsell. He says: "The memorable winter flight of these birds in 1888 [referred to in the original Memoir] was noticed at Amesbury, where on December 4, four were shot, and two the following day. In 1884 a bird was shot on the marsh in August, and in 1895 one is recorded November 25."

The Killdeer is a noticeable bird in the field both on account of its markings and on account of its voice. It says *kill-dee kill-dee* very plainly. Its cries resound through the marsh and are often varied by piercing *tee-ars* rapidly repeated or by cries of *ker ker ker* or *ect ect ect*. It is a noisy bird.

In flight the white bar on the wings is very noticeable. Alighted, its long,

¹ Stubbs, Arthur P. *Bird-Lore*, vol. 18, p. 364, 1916.

² Bridge, Lidian E. *Auk*, vol. 29, p. 537, 1912.

³ Bailey, S. W. *Auk*, vol. 34, pp. 207, 208, 1917.

⁴ Allen, G. M. *Auk*, vol. 30, p. 24, 1913.

straw-colored legs, its long tail with buff-colored upper coverts, and the two black bars on the breast are all good field-marks. It is rather a tall bird in proportion to the size of the body and it bobs occasionally, the head going up, the tail down. It dabs at the water or mud in the regular plover style.

133 [274] *Ægialitis semipalmata* (Bonap.).

SEMIPALMATED PLOVER; "RING-NECK."

Abundant transient visitor in the autumn, not common in the spring. May 7 to June 14 (June 26, 30); July 12 to October 26 (November 10).

The June 30 record is for 1918, when I saw three in full cry flying north over the Castleneck River. The November 10 record is of a single bird seen on Ipswich Beach, in 1913, by Dr. Walter Faxon and Dr. W. M. Tyler.

On the breeding-grounds I have watched this species flying about in irregular circles calling frequently. These repeated calls, which are not very unlike the Flicker's call are also given from the ground. I have also heard this courtship song, for so it may be regarded, at Ipswich in September. At the same time the birds, which were adults, were crouched low and chasing each other with tails spread and slightly cocked up, the wings partly open and the feathers of the flanks puffed out. Occasionally two birds walked slowly in this manner side by side.

134 [277] *Ægialitis meloda* (Ord).

PIPING PLOVER.

Rare summer resident, not uncommon transient visitor. March 29 to October 28.

Eggs: May 20.

In the 'sixties and 'seventies, Mr. C. J. Maynard described this bird as "breeding very plentifully on the Ipswich sandhills." It continued to breed there in fast diminishing numbers until about the publication of the original Memoir. Between 1905 and 1915, I doubt if it laid its eggs in that region, but in the latter year and since, one and possibly more pairs have bred every summer. I have found them in June nervously flying about and acting like wounded birds fluttering along the sand. The eggs are deposited in depressions in the sand under a tuft of grass or in the open. Sometimes the nest is lined or decorated with bits of white shell which makes the sandy-colored eggs conspicuous.

Since the original Memoir was published the subspecies, *circumcincta*, or Belted Piping Plover, has very properly been dropped from the Check-List. On August 6, 1907, of a flock of six Piping Plover on Ipswich Beach two were beautifully belted, and on May 3, 1914, out of five all but one were belted.

135 [280] *Ochthodromus wilsonius* (Ord).

WILSON'S PLOVER.

Accidental visitor from the South.

The record from the County for May 8, 1904, still remains unique. The bird was shot by Mr. Charles W. Loud, and I trust he will pardon me for not having given him the credit in the original Memoir. He was the "gunner" mentioned, and to his generosity I owe both the record and the specimen.

136 [283a] *Arenaria interpres morinella* (Linn.).

RUDDY TURNSTONE; "CHICKEN PLOVER"; "CHICKEN"; "CALICO-BIRD."

Common transient visitor. May 10 to June 3; July 25 to October 16.

I have nothing to add to my account in the original Memoir of this interesting bird, except that I find in my notes the expression "bald head" and "the markings on the back of the bird in flight suggest a zebra." These may serve to impress on the mind some of the field-marks of the bird.

137 [289] *Colinus virginianus virginianus* (Linn.).

BOB-WHITE; "QUAIL."

Rare resident.

Eggs: May to September.

The Bob-white has never recovered from the winter of 1903-4. As stated in Chapter II, the introduction of southern forms of this bird has not sufficed to reestablish it and has probably done harm by weakening the little remaining native stock by interbreeding.

Dr. Allen¹ has found in his examination of the notebooks of Mr. B. F. Damsell that this bird is entered nearly every year among the birds seen about Ames-

¹ Allen, G. M. Auk, vol. 30, p. 24. 1913.

bury, but after 1905, it appears no more. The severe winter of 1917-18 was also disastrous to this species.

On September 8, 1918, I released eight Bob-whites at my place at Ipswich sent me by the Fish and Game Commission. They were seen about the place for two days only. I doubt if they survived the severe winter which followed.

Numerous birds were reared and released at Wenham in 1915 and 1916 by Dr. J. C. Phillips,—as many as seventy-five birds in one group. He has never learned what became of them. He states that the southern Bob-white lays about ten days earlier than our native bird.

138 [298c] **Canachites canadensis canace** (Linn.).

CANADIAN SPRUCE GROUSE; "SPRUCE PARTRIDGE."

Accidental visitor from the North.

The record of 1851 remains unique.

139 [300] **Bonasa umbellus umbellus** (Linn.).

RUFFED GROUSE; "PARTRIDGE."

Common permanent resident.

Eggs: May 7 to June 2.

Dr. J. C. Phillips, who has made a careful study of the relative abundance of Ruffed Grouse, has written his conclusions as follows: "In the winter of 1914-1915 Grouse were very plentiful indeed. I started twenty-five at Wenham in a short morning's walk on February 13, 1915. The floods of July 1 to 10, 1915, seemed to start the decline in the Grouse of Essex County. During this period—nearly ten inches fell in July—I picked up nearly full-grown Pheasants, dead, many times. In the fall of 1915 there were less than for the past several years and fewer young birds. Still they were perhaps 75 to 90 per cent. normal. In 1916, Grouse fell to about 30 per cent. normal and Pheasants to 10 per cent. normal. In 1917, I was away, but from all reports and from what I saw in one day's hunting, they were down to 20 or 25 per cent. In 1918, from all accounts, they were not over 15 or 20 per cent.

"Thus far in 1919 there is without doubt a very marked increase, which I should estimate might be up to 50 or 60 per cent. normal."

The tracks of Ruffed Grouse in the snow are somewhat smaller than those of the Pheasant, the marks are thicker and the three toes are more nearly at right angles to each other.

140 [301] *Lagopus lagopus lagopus* (Linn.).

WILLOW PTARMIGAN.

Accidental visitor from the North. The record for 1859 remains unique.

[306] *Tympanuchus cupido* (Linn.). HEATH HEN; "PHEASANT."—Extirpated.

It is to be hoped that the remnant of this species, guarded so zealously by the State at Martha's Vineyard, may so increase in numbers under wise care that in time the old haunts of this bird may be restocked, and that even at the northern limits of its range in Essex County it may come to its own again. How interesting it would be if the spectacular courtship performance of this bird could be seen on the bare hills of Essex County!

[310a] *Meleagris gallopavo silvestris* Vieill. WILD TURKEY.—Extinct.

[315] *Ectopistes migratorius* (Linn.). PASSENGER PIGEON; "WILD PIGEON."—Probably extinct.

Dr. Allen,¹ in his "Essex County Ornithologist," says: "Mr. Damsell was quite familiar with this species and the Mourning Dove, and his collection contains specimens of both, locally obtained. Of the Pigeon, a male and a female were shot on August 24, 1886. In 1887, the species is entered twice, on April 23 and November 29. The year 1888 is the last year in which the Passenger Pigeon was observed, a flock of five on May 6. This was about the year when the bird practically disappeared from New England."

141 [316] *Zenaidura macroura carolinensis* (Linn.).

MOURNING DOVE.

Rare summer resident. March 24 to November 21; winter.

Eggs: — to July 28.

Damsell has records for February 24, 1890, and January 9, 1892, for this bird. Dr. J. C. Phillips observed twelve of this species on the Rice estate in Ipswich on August 24, 1914.

A note in the *Auk*² gives the interesting stomach-contents of a nestling taken by me at Boxford on August 12, 1905.

142 [325] *Cathartes aura septentrionalis* Wied.

TURKEY VULTURE.

Accidental visitor from the South.

There have been no records as far as I know added to the three already published.

¹ Allen, G. M. *Auk*, vol. 30, p. 24, 1913.

² Townsend, C. W. *Auk*, vol. 23, pp. 336, 337, 1906.

143 [326] *Catharista urubu* (Vieill.).

BLACK VULTURE.

Accidental visitor from the South.

There are three more records for this bird, and, curiously enough, one was taken at Pigeon Cove, where the 1863 record was obtained, and one at Nahant near the 1850 record at Swampscott. The Nahant record is of a bird shot on April 1, 1913, by Mr. Albert Richards. The Pigeon Cove record is of a bird taken on May 12, 1916, now in the collection of Mr. C. R. Lamb. In 1917, one was taken at Wenham on August 18, by Archer L. Pierce.

144 [327] *Elanoides forficatus* (Linn.).

SWALLOW-TAILED KITE.

Accidental visitor from the West.

The one record for 1882 remains unique.

145 [331] *Circus hudsonius* (Linn.).

MARSH HAWK.

Common summer resident, very rare in winter. March 21 to November 22 (January 1, 21, February 9).

Eggs: May 27 to June 1.

The January 1 record is for 1917, a single bird seen by me at Ipswich. On February 9, 1912, Mr. R. M. Marble saw a Marsh Hawk at Ipswich.

The courtship flight of the Marsh Hawk is a spectacular performance. I have been favored with it on two occasions. On June 1, 1919, at Ipswich two birds were soaring high in the air. One rose in circles higher and higher without apparent movement of the wings. At a great height it suddenly dove down head foremost and then "looped the loop." This was repeated several times. Once it appeared to turn a somersault sidewise; it screamed at the same time.

I am afraid this hawk does not always live up to his reputation as a hunter of mice alone, for certain individuals appear to be fonder of birds. The experience of those in charge of the Heath Hen Reservation at Martha's Vineyard shows this to be the case. In the original Memoir I gave an account of a nest of the

Marsh Hawk at Ipswich with its tell-tale bird pellets and two other instances of bird-hunting by Marsh Hawks. On a number of occasions I have observed a Marsh Hawk bird-hunting at Ipswich. In the latter part of June and early July, in 1917, and again in 1918, I have been awakened from my bed in the "forest" on my farm by a great outcry among Robins and Bronzed Grackles, and I have seen a male Marsh Hawk circling over the trees, diving down among them and making off pursued by angry birds. This has happened day after day not only in the early morning but at other times of day. Several times I have found the feathers and other remains of Grackles and Robins in the "forest." Mr. R. A. Nichols, of Salem, reported at a meeting of the Essex County Ornithological Club on April 28, 1919, that a Marsh Hawk had struck with its talons several of his pullets weighing over a pound, but was unable to carry them off. The pullets soon died of the injuries. The hawk succeeded in carrying off a small pullet weighing about three-quarters of a pound. It is a pity that a few individuals should disgrace the species, for the majority are undoubtedly mouse-hunters and helpful to the farmers.

The Marsh Hawk has a great variety of cries. A large brown bird, probably a female, was constantly to be seen near a pine grove in the dunes in June and July, 1917. On my approach she would circle above the trees and emit a loud Flicker-like call which sounded like *pe'-ter pe'-ter pe'-ter*. Another bird in Boxford I heard call *stee-whit-a-whit-a-whit*. A third, a female who probably had young concealed near, several times flew straight at me to within thirty yards and then sheared up and around. She screamed constantly *pee pee pee* repeated fifteen or twenty times, and *swit, wat, wat, wat*; at times the notes were run together so that they sounded like a whinny.

Like all hawks this species is frequently set upon by Crows. As a rule the Marsh Hawk circles upward and makes no effort to retaliate when the Crows endeavor to pounce from above on their victim; but, on one occasion at Ipswich, a Marsh Hawk, thus annoyed, while it was peacefully quartering a meadow, turned and struck at one of the Crows with its talons, but failed to hit it.

The long pointed wings and long tail, the customary manner of flight by quartering the ground, and especially the white rump make the recognition of this bird easy in the field. The adult male is sometimes a beautiful gray blue, while the young and females are brown. Like all hawks they carry the legs extended behind under the tail in flight. When carrying prey in the talons hawks carry it suspended below or at an angle behind toward the tail. They seem to tow it along through the air.

146 [332] *Accipiter velox* (Wils.).

SHARP-SHINNED HAWK.

Common transient visitor, rare summer resident; very rare in winter. March 10 to November 9 (December 7, January 5).

Eggs: May 27 to June 10.

All the Accipiters appear to be unafraid, and do not hesitate to dash at their quarry in the close proximity of man. One at Ipswich flew into an apple tree within twenty feet of me and did not leave until it had looked me over. I have seen them on two occasions attack Red-tailed Hawks with great fury and once a Marsh Hawk.

A pair soaring and playing together high in the air gave me a beautiful exhibition. The smaller one, the male, would dart at the larger one, the female, who would shake or tip the wings to spill the air and fall down only to glide up again without movement of the wings to a great height. Again they would dart down with great speed, and turn and glide up again.

Although the Sharp-shinned Hawk is capable of soaring as just described, their usual and characteristic flight is a succession of flutters and sails, of wing flappings and glidings.

Their alarm cry is a sharp *ki ki ki* and at times they whinny like a Hairy Woodpecker. The young have a squealing whistle.

The short rounded wings and long tail are characteristics of the Accipiters. The tail of the Sharp-shinned Hawk which is frequently spread in flight has a straight edge which distinguishes it from the Cooper's Hawk with its rounded tail. It must be remembered that the female Sharp-shinned Hawk is about as large as the male Cooper's Hawk.

147 [333] *Accipiter cooperi* (Bonap.).

COOPER'S HAWK.

Permanent resident, common in summer, very rare in winter. April 22 to October 28 (January, February 10).

Eggs: May 8 to June 11.

I have heard a loud single whistle emitted by one of these birds circling in August over the dunes in small circles and occasionally advancing by flapping its wings. At the nest it has a loud cackling *ka ka ka*.

I watched one at Ipswich that alighted in the salt-marsh and stayed there for five minutes.

One that visited my place at Ipswich on September 3, 1915, killed in a short time a Robin and a half-grown chicken. I flushed the hawk who was feasting on the remains of the chicken within ten feet of me.

The recognition of this bird in the field is given under the Sharp-shinned Hawk.

148 [334] *Astur atricapillus atricapillus* (Wils.).

GOSHAWK.

Rare and irregular winter visitor; at times common. September 28 to April 22.

A large flight from the North of this splendid but destructive hawk occurred during the winter of 1906-07, and these birds were reported from all over the County. A female Goshawk seized a live Black Duck decoy in the Topsfield Marshes of the Ipswich River in November, 1906, and was shot by Mr. Julian M. Dodge. On December 16 of that year, an adult alighted in the top of an apple tree on my place at Ipswich. Another flight occurred in the winter of 1917-18.

The Goshawk has the same characteristics as the Accipiters in its flight, boldness, and general appearance. It is about twice as large as a Sharp-shinned Hawk but has similar short rounded wings and long tail which is rounded or graduated like that of the Cooper's Hawk. The adult is bluish slate-color above with a dark crown and patch on cheek, but the immature is brown above and lighter below like a Buteo. Its characteristic shape and manner of flying easily distinguish it.

149 [337] *Buteo borealis borealis* (Gmel.).

RED-TAILED HAWK; "HEN HAWK."

Very rare summer resident, more common transient visitor; rare in winter.

Eggs: April 27.

The cry of this hawk is a piercing whistle strongly suggestive, as Chapman says, of the sound made by escaping steam.

All the Buteos are distinguished by their broad wings and short tails and their habit of soaring in circles. The Red-tailed Hawk is slightly larger than the Red-shouldered Hawk and the adult can be recognized by its rich rufous or terra-cotta red tail as seen in a good light either from above or below; immature birds lack this tail coloring.

150 [339] *Buteo lineatus lineatus* (Gmel.).

RED-SHOULDERED HAWK; "HEN HAWK."

Permanent resident, common in summer, uncommon in winter.

Eggs: April 3 to June 6.

At times this hawk, like the other hawks, migrates in large companies. One such was recorded by Damsell¹ at Amesbury on September 18, 1886, when a "flock of about 300" passed.

The scream of this bird is so exactly imitated by the Blue Jay that one is often uncertain which species is present. The hawk sailing in circles is constantly changing the locality from which the sounds come, while the Blue Jay often screams from the same point in the woods. The latter bird is very apt to betray its identity by lapsing into its customary *jay jay* cry.

A Red-shouldered Hawk, sailing in circles, lowered its legs until they hung straight down, voided, and then drew the legs back again under the tail.

An adult female of this species was caught by a farmer at Ipswich on January 20, 1913, in a trap baited with a dead hen. Although this confirmed the farmer's contention that the hawk was a veritable "Hen Hawk," there is reason to believe that it was attracted by carrion and the case does not prove that it would attack living poultry.

The large size of this hawk, its broad wings, and short tail (which is *not* rufous in color), its habit of soaring in circles, as well as its cry so often imitated by the Blue Jay, serve to identify it. It is to be remembered, however, that the immature Red-tailed Hawk lacks the rufous tail color. Only under very favorable circumstances can the red shoulders of *lineatus* be distinguished.

151 [342] *Buteo swainsoni* Bonap.

SWAINSON'S HAWK.

Accidental visitor from the West.

I am glad to be able to report here a fourth record of this hawk for Essex County. On October 28, 1917, my son and I while motoring near Candlewood Corner, Ipswich, saw a bird flying across the fields toward us that we at first thought was a Crow. It crossed the road within seventy-five yards and although it was nearly black it was evident from its form that it was not a Crow but a small

¹ Allen, G. M. *Auk*, vol. 30, p. 25, 1913.

Buteo. I could distinctly see the shape of its bill and a shade of chestnut-brown on the flanks. After talking with Mr. Brewster and examining his specimens I have little doubt but that this was a Swainson's Hawk.

152 [343] **Buteo platypterus** (Vieill.).

BROAD-WINGED HAWK.

Not uncommon transient visitor, very rare summer resident. May 3 to May 21; July; September 11 to November 30.

This is one of the easiest hawks to study as it generally allows of close approach. Its characteristic Buteo shape,—short tail and broad wings, whose tips reach nearly to the end of the tail when the bird is on a perch,—and its small size, about that of a Crow, make its recognition in the field easy. On careful scrutiny one can often see a light buff line over the eye, the brown markings on the side, the buff middle breast and belly, and the yellow cere and tarsi. Its characteristic cry, which it frequently emits, also helps identify it. This is heard both when the bird is perched and when it is soaring in circles. It is a mournful double whistle suggestive of the call of the Wood Pewee. I have written it down as *te-whe'e* or *tswa-ee'* and again as *pss-whee'e*.

153 [347a] **Archibuteo lagopus sancti-johannis** (Gmel.).

ROUGH-LEGGED HAWK.

Not uncommon winter visitor. October 25 to May 14.

In the original Memoir I recorded only six instances of this bird. Only once had I seen it. Since then I have become familiar with it not only in Labrador but at Ipswich and it has even alighted on my windmill within a couple of hundred yards of my house. In fact the regularity with which I have seen one or two, and once four of these birds within a short distance of my house every winter with one or two exceptions since 1905, makes me think that this part of Ipswich near the dunes is a regular winter station or at least a stopping-place during the migrations. Mr. H. W. Wright saw one at Marblehead on January 22, 1907, and one at Nahant on December 17 of the same year.

The Rough-legged Hawk is a noble bird. It may be known by its large size, broad wings, and long tail. Shaped like a Buteo, its longer tail marks it out, but its distinguishing mark in all but the black phase is its white rump, or rather base to its tail. The only other hawk with this distinguishing mark is the Marsh Hawk, but the much smaller size, slenderer form, narrow wings, and longer tail in proportion make the distinction an easy one.

All phases of plumage are described in my notes of the Ipswich birds. A light phase is nearly white below with a black bar across the upper belly, and a black square patch in the middle of the white of the lower surface of the wing near the wrist joint. The tips of the primaries are dark. I have also noted individuals that lacked the black bar on the upper belly. In the light phase the upper brownish surface is relieved by the strikingly white rump or base of the tail. In one the tail was white above to within a short distance of the tip so as to give the effect of a white tail with a black terminal band. In the dark phase the bird is as black as a Crow both above and below and lacks any sign of white rump patch. Intermediates occur, dark brown in color, with or without an obscure white rump.

My notes describe a dark bird seen several times at Ipswich during the spring of 1905. In the winter and spring of 1908-09, four birds were seen; one in the dark, two in the light phase, and one was intermediate. In 1912, a bird in the light phase was seen. In the winter of 1913-14, two birds were at Ipswich, one dark, the other light. In the winter of 1916-17, a bird in the light phase was seen several times. In the fall of 1918, a bird in intermediate plumage, and in the spring of 1919, two in light plumage were seen. I have other records but they lack the descriptions of plumage.

Perched, the Rough-legged Hawk sits very erect. One bird that I watched seemed to have a special liking for windmills. On one occasion he visited and perched on three in succession.

The flight of the Rough-legged Hawk is graceful and indicative of skill and power. In soaring, the wings and tail are spread to their full extent; the first half-dozen primaries are spread out separately like fingers and curve upward at their tips. On motionless wings, if the wind be favorable, this bird may often be seen soaring high up over the land. In April and May, I have several times seen two of them, probably a pair, rising up higher and higher as they circled, and, arrived at a considerable elevation, striking out in flight for the northeast.

When soaring they may be seen looking down, and I have several times seen them partially close their wings, lower their long feathered tarsi and drop like a plummet. On one occasion the bird secured a large mouse with which it flew to the marsh and perched on an ice cake. On another occasion a fine Rough-leg pounced successfully on a cotton-tail rabbit and bore it off.

In searching the ground for game of this sort they often fly slowly, alternately flapping and sailing, from fifty to a hundred yards up in the air. Occasionally they hang over one place by hovering, and often drop their legs preparatory to pouncing on the prey and draw them up behind when they change their minds. If the wind be favorable, they hang suspended in the air as motionless as a kite. The wind needed for this is an up-current over the brow of a steep hill or cliff.

In this case gravitation acts like the kite-string, and by skillful disposition of the plane of the wings to the up-current, the bird remains motionless if the wind is steady. When the wind is irregular and flawy, the bird swings about more or less, just as a kite acts under similar circumstances. When the wind drops for a moment the bird hovers.

When two birds soar upward together they are apt to whistle. It is a loud peeping and rather plaintive whistle suggestive somewhat of the whistle of the Red-tailed Hawk, but lacking the sound of escaping steam.

I have examined the stomach of one of these birds that was shot at the Heath Hen Reservation in Martha's Vineyard. It was believed by the keeper to have been harassing the Heath Hens. The stomach was stuffed with mice fur and bones; not a feather was to be found. I believe it is one of the most beneficial of our hawks.

154 [349] *Aquila chrysaëtos* (Linn.).

GOLDEN EAGLE.

Very rare visitor.

Besides the four specimens from the County mentioned in the original Memoir I can add the following: a Golden Eagle was shot at Peach's Point, Marblehead, on November 5, 1915. The specimen is now in the Museum of the Peabody Academy at Salem.

155 [352] *Haliaëetus leucocephalus leucocephalus* (Linn.).

BALD EAGLE.

Not uncommon visitor at all seasons.

Damsell's¹ records for this bird are as follows: "In 1890, 'one dark and two white-headed birds' were seen March 1, and a single bird May 30. In 1891, there are records for February 7, July 15, August 3 and 11, December 20." On July 16, 1905, I saw an immature Bald Eagle sitting bolt upright on Eagle Dune, at Ipswich, with its tail pressed into the sand. As it flew off it was attacked by Crows that seemed small in comparison. On January 31, 1909, Mr. G. M. Bubier saw one at Nahant, and Mr. H. W. Wright saw probably the same bird on February 2, 1909, on the thin ice of Lynn Harbor. On February 3, 1912, Mr. J. D. Sornborger saw one at Rowley and on March 5 of the same year Mr. G. M. Bubier saw one near Lawrence. Mrs. Martha E. Ward saw one at Birch Pond, Lynn,

¹ Allen, G. M. Auk, vol. 30, p. 25, 1913.

on December 17, 1913. On June 22, 1913, I saw a Bald Eagle at Ipswich. Mr. G. M. Bubier has seen two and sometimes three of these birds near Groveland in the winters of 1915, 1916, and 1917. On January 28, 1916, he saw two in full plumage at Groveland.

In the last week of August, 1916, I several times saw an immature Bald Eagle at Ipswich Beach where it fed on dead fish. This bird showed by its tracks on the beach that it walked with short steps dragging its toes. From the tip of the hind toe to the tip of the middle toe the distance was six and a half inches.

The flight of this splendid bird is strong and vigorous. I have seen them soar in a strong breeze to a great height, at first in large and then in small circles, without a perceptible movement of the wings. The secondary feathers of the great wings appeared almost as long as the primaries which are spread so that each feather is distinct by itself and bent up at the ends. Arrived at a great height they sometimes volplane down with amazing speed.

In the adults the snowy white head and tail flash out alternately in the sunlight as they soar, and they present a magnificent sight.

The cry of this bird is a piercing whistle. I have also heard them emit a grunting noise.

*156 [353] **Falco islandus** Brünn.

WHITE GYRFALCON.

Very rare winter visitor.

I am glad to be able to add this bird to the list on the authority of Mr. Jewell D. Sornborger. He writes me under date of March 7, 1912, that "on January 20, 1912, in the 'far division' of the Rowley woods I saw a white hawk flying along Mud Creek towards its mouth . . . this bird seemed so white that I think it must have been *islandus*."

I once had the great privilege of seeing this bird at Henley Harbor, Labrador. It was flying about the great cliff, alighted on a shelf and fluttered and hopped a few paces. It was one of a pair that had been observed there for several years by Dr. Grenfell.

[354a] **Falco rusticolus gyrfalco** (Linn.). GYRFALCON.—An erroneous record.

157 [354b] **Falco rusticolus obsoletus** Gmel.

BLACK GYRFALCON.

Very rare winter visitor.

In addition to the three records given before I have the following note to offer. On January 6, 1918, after a week of zero and below-zero weather, a large

hawk as black as a Crow and with long pointed wings was seen by me flying over the dunes at Ipswich. At one point over a pine grove it poised for a moment like a Sparrow Hawk with rapidly moving wings. It disappeared behind the dunes and I did not see it again. It could have been none other than a Black Gyrfalcon.

158 [356a] *Falco peregrinus anatum* Bonap.

DUCK HAWK.

Not uncommon transient visitor (winter). May 12 to 24; August 17 to October 20 (December 16, January 19).

The January 19 record is of a bird seen in 1913, at Ipswich Beach by Mr. J. H. Baker and myself. The December 16 record is an interesting one. I was at the beach at Ipswich on this date, in 1906, and saw a Duck Hawk fly out from the dunes and scale over a flock of Scoters on the ocean. It then turned about and disappeared among the dunes. The Scoters appeared not a whit disturbed and paid no attention to their very transient visitor. On relating the incident to Mr. Brewster and expressing my surprise at the action or rather lack of action on the part of the Scoters, he assured me that ducks on the water were not afraid of a Duck Hawk as this bird strikes them only in the air, while the reverse is the case with the Bald Eagle.

The May 12 record is for 1907, at Essex, and as it is of interest I copy my notes as written at the time: "Noticed a commotion among some Grackles and a fine blue Duck Hawk, apparently a female from its size, appeared. It flew over at a considerable height and then tipped quickly from side to side and fell down behind some trees soon to reappear with another hawk which I saw was a Marsh Hawk. The two circled about high up, the upper one frequently falling rapidly as if to strike the lower who would then turn over to grapple, although as far as I could see they never actually touched each other. This was repeated again and again, sometimes one and sometimes the other the aggressor. The white rump and long tail of the Marsh Hawk easily distinguished it from the Duck Hawk with its blue back and peculiar head-markings. They finally disappeared from sight, still circling and striking." This was apparently a case of play between individuals of two species.

Under the Pectoral Sandpiper I have described the killing of one of these birds by a Duck Hawk in the marsh at Ipswich. As the hawk flew off, the victim was carried in the talons below and then extended out behind. The whole thing was done in the twinkling of an eye so that it was difficult to realize what had happened.

The Duck Hawk may be distinguished by its falcon characteristics,—the narrow pointed wings which are long enough to reach nearly to the end of the tail when the bird is perched, and by the plainly marked black cheek-patch or “mustachio.”

159 [357] *Falco columbarius* Linn.

PIGEON HAWK.

Common transient visitor. March 12 to May 8; September 7 to October 9.

The Pigeon Hawk, like all the falcons, is distinguished by its long pointed wings and long tail. The difference in size between a male Pigeon Hawk and a female Sparrow Hawk is not great, the latter being somewhat smaller, but the broader shoulders and dark blue rather than brown color of the back serve to distinguish the Pigeon Hawk. The cry is a rapidly repeated *wheet wheet wheet* varied to a *ki ki ki*, harsher in the female than in the male. On the breeding-grounds both parents boldly launch themselves at the intruder with great energy and scold him with their quavering cries.

160 [360] *Falco sparverius sparverius* Linn.

SPARROW HAWK.

Common permanent resident, locally.

Eggs: April 27.

The pretty little Sparrow Hawk is a permanent resident in the County and has, I am inclined to think, slightly increased in numbers. In winter I have found it roosting at nights under the piazza roofs of summer cottages at Ipswich. It may often be seen alighted on telegraph poles or wires gently wagging its tail, and it sometimes keeps ahead of the foot traveller on a road by flying from pole to pole. It is often seen in thickly settled regions and appears to enjoy the neighborhood of mankind. Mr. H. W. Wright has given me numerous winter records for this bird since 1907 at Nahant, Lynn, and Marblehead.

Its long, pointed wings, long tail and small size make its recognition easy. The only hawk with which it can be confused is the Pigeon Hawk which is larger and broader-shouldered. The adults of the two species are easily distinguished if the colors can be seen. The Sparrow Hawk is chestnut-brown above and beautifully marked on the head; the Pigeon Hawk is dark bluish black above.

The flight of the Sparrow Hawk is graceful and swallow-like. It has a habit of hovering at various heights from a few yards to sixty or more feet above the

ground, remaining stationary in one spot by the rapid vibration of its wings while it scans the ground below for game. Now and again it drops quickly down and bears off a mouse or a grasshopper in its talons, but often its swoops are failures and turn to upward glides before it reaches the ground. If the wind is blowing strongly over the brow of a hill it will remain motionless for several minutes at a time like a kite, supported by the upward currents.

Its call is suggestive of the call of the Lesser Yellow-legs, but sharper. It may be written as *ker wee, ker wee*, or *killy, killy*, and at times resembles a whinny.

161 [364] *Pandion haliaëtus carolinensis* (Gmel.).

OSPREY; FISH HAWK.

Common transient visitor. April 4 to May 31 (July 11); July 31 to October 21 (December 15).

The Fish Hawk is now only a migrant through Essex County. Whether it could be induced to tarry and nest by the erection of suitable nesting-sites is open to doubt, but it would be an interesting experiment to try, and well worth the trouble if successful. In Bristol, R. I., old cart-wheels are placed at the top of tall poles, often close to farmhouses, and upon these the birds build huge nests. The use of these platforms is, however, secondary to the use of trees for this purpose as there is a considerable colony of Fish Hawks there. In a visit to this region I counted thirty nests, five of which were on cartwheels. The community-nesting instinct is evidently strong, although in many places the bird nests singly. Two or three cartwheels on long poles near the shore might be a sufficient inducement to start a summer colony of this splendid bird at Ipswich.

The Fish Hawk is easily recognized by its large size, its dark color above with a noticeable white line through the eye, and its light color below.

Its manner of fishing is characteristic. Hovering at a considerable height,—a hundred feet or more,—above the water with its head pointing to windward, it lowers its feet, which have been held extended below the tail, and drops with a great splash into the water. In the plunge it may become partially or wholly immersed; sometimes the tips of the wings alone are to be seen. I watched one hover eleven times before the final plunge which after all was unsuccessful. The fish, sometimes of considerable size, is carried in the talons, with the head pointing forward, below and slightly behind. I have seen a Fish Hawk that was carrying a fish well out behind lower it down and forward, void, and then bring the fish back again.

Their cry is a *whou whou whou* frequently repeated, at times low, soft, and

inquiring, at times sharp and even rasping and grating. A whistling note and sharp *ki kis* are also heard.

162 [365] *Aluco pratincola* (Bonap.).

BARN OWL.

Accidental visitor from the South.

On October 21, 1915, Dr. J. C. Phillips caught a Barn Owl in a trap at Wenham. This is the only addition to the former scanty records.

163 [366] *Asio wilsonianus* (Less.).

LONG-EARED OWL.

Uncommon permanent resident, rather common autumn transient visitor.

Eggs: April and May.

One was shot by Dr. J. L. Goodale in his orchard at Ipswich on November 19, 1905.

In May and June, 1917, a pair nested in an old Crow's nest in a pitch pine in the Ipswich dunes as has been already recorded by me in the Auk.¹ An examination of the pellets and upper layers of the nest by the U. S. Biological Survey, in Washington, showed that this pair had eaten some thirteen different species of birds and twenty-three individuals; also four species of mammals and twenty-five individuals.

The notes of these birds suggested at times the barking of a small puppy, at times the notes *ud-hunk*.

164 [367] *Asio flammeus* (Pont.).

SHORT-EARED OWL.

Not uncommon transient visitor, rare in winter. March 11 to May 4; September 27 to November 16 (December, January, February).

This owl does not seem to me to be as common as in former years. The May 4 record is of a bird seen by me at Ipswich, in 1913. I have two more winter records to add to those in the original Memoir, each of birds seen by me at Ips-

¹ Townsend, C. W. Auk, vol. 35. p. 183, 1918.

wich: one on December 16, 1906, and one on February 18, 1917. On the occasion of the excursion of the American Ornithologists' Union to the Ipswich dunes on November 16, 1917, one Short-eared Owl was good enough to show himself.

On March 11, 1917, I took Dr. A. A. Allen, of Ithaca, to the Ipswich dunes and we were treated with the unusual sight for Essex County of five and possibly six Short-eared Owls. They were seen flying about the dunes or sitting in elevated positions in the beach-grass back of the beach. In the latter position their colors and shape made them very difficult to see and they were easily mistaken for stumps or posts with patches of white sand, lichen, or snow on them. After being deceived several times, Dr. Allen and I both were willing to consider a certain obvious stump to be an owl, but after deciding that it was not one, the "stump" opened its wings and flew away!

Although the ground seems to be their usual perch, I have seen one on a post as related in the original Memoir, and once in a tree, very erect.

The flight is by alternate flapping and sailing with tail spread.

I have yet to hear it utter a sound.

165 [368] *Strix varia varia* Barton.

BARRED OWL.

Uncommon permanent resident, at times common in the autumn.

This bird of the wise and benevolent countenance has of late years occasionally taken up its residence in winter in Boston, where it subsists on the English Sparrows whose populous roosts are at once broken up, and each sparrow shifts for itself at night. Whether this has occurred in any of the cities of Essex County I do not know.

166 [370] *Scotiaptex nebulosa nebulosa* (J. R. Forst.).

GREAT GRAY OWL.

Very rare and irregular winter visitor.

I have one more record to add to the previous list for the County, making eight records in all. This was a bird shot on January 6, 1894, in the Great Swamp at Amesbury. The specimen, found in Mr. Damsell's collection, has been acquired by the Boston Society of Natural History.¹

¹ Allen, G. M. Auk, vol. 30, p. 25, 1913.

167 [371] *Cryptoglaux funerea richardsoni* (Bonap.).

RICHARDSON'S OWL.

Irregular and very rare winter visitor.

Mr. Damsell¹ has added two more records to the previous seven for this owl for the County. One was taken February 25, 1889, the other on January 5, 1903, both in the vicinity of Amesbury.

168 [372] *Cryptoglaux acadica acadica* (Gmel.).

SAW-WHET OWL; ACADIAN OWL.

Rare winter visitor, possibly resident. September 20 to April 4.

A note, overlooked in the original Memoir, from Baird, Brewer and Ridgway² is as follows: "On one occasion I found one of these birds in April, at Nahant. It was apparently migrating, and had sought shelter in the rocky cliffs of that peninsula. It was greatly bewildered by the light, and was several times almost on the point of being captured by hand."

On April 20, 1912, Mrs. Edmund Bridge found the wings and tail of this bird in the Ipswich dunes.

Mr. H. W. Wright saw an Acadian Owl at Pine Grove Cemetery, Lynn, on December 20, 1905, and another on April 4, 1906, in the center of Marblehead Neck.

169 [373] *Otus asio asio* (Linn.).

SCREECH OWL.

Common permanent resident.

Eggs: April 15 to May 5.

170 [375] *Bubo virginianus virginianus* (Gmel.).

GREAT HORNED OWL.

Not uncommon permanent resident.

Eggs: March to April 20.

In the latter part of December, 1918, the great Crow roost at Castle Hill, Ipswich, temporarily ceased to be, the Crows going elsewhere. On February 16,

¹ Allen, G. M. *Auk*, vol. 30, p. 25, 1913.

² *Land Birds*, vol. 3, p. 46, 1874.

1919, I started a Great Horned Owl from the roosting-woods. On March 2, a band of two hundred or more Crows was heard making a great outcry there, and from their actions I concluded they were evidently mobbing and chasing a Great Horned Owl, the disrupter of the roost. I had previously found Crows' feathers in various places where these birds had been killed.

171 [376] *Nyctea nyctea* (Linn.).

SNOWY OWL.

Irregular, but at times common visitor in the late autumn, less common in winter and early spring. October 18 to April 18.

In the winter of 1905-06 occurred a very large flight of the Snowy Owl, larger probably than the great flight in the fall of 1876. For that flight, and the smaller one of 1901-02, the Owls were fortunate in having Mr. Ruthven Deane¹ as their historian. Mr. Deane "received records of some eight hundred specimens from localities scattered from Nova Scotia west to Nebraska and from Manitoba south to Missouri, showing that in this territory, at least, the flight had been quite general."

The records for Essex County I was able to collect of this flight and send to Mr. Deane he enters as follows: "Two seen by himself in the Ipswich dunes, on Nov. 5, 1905, and Feb. 11, 1906; five shot in the Ipswich dunes, November 25, 1905; one seen near Salem, Jan. 1, 1906. At different dates during November and December, 1905, and January, 1906, a gunner from Newburyport shot nineteen specimens, most of them being taken on Plum Island." Mr. Everett Gordon, taxidermist of Lynn, reported one taken at Nahant on November 22, 1905, and one at Gloucester on November 23.

Mr. Damsell's² records are for 1886, Nov. 26, Dec. 10; 1887, Feb. 10; 1889, Nov. 8; 1890, Jan. 23, Nov. 28, Dec. 6, 11, 20, 24; 1891, Dec. 16; 1893, Nov. 7; 1896, Nov. 16; 1901, Dec. 26, two, Dec. 28; 1902, Jan. 3, 11, 18, 25, Feb. 3, 4, Apr. 3, Oct. 18, 23; 1903, Mch. 12; 1905, Nov. 21.

Besides my own observations shortly to be related, I have also to record a Snowy Owl seen at Ipswich by Mr. R. G. Vickery on April 18, 1907, one on November 4, 1911, at Plum Island by Mr. James L. Peters, and one on February 9, 1912, at Ipswich, by Mr. R. M. Marble.

Since the manuscript for the original Memoir was handed to the printers, I

¹ Deane, R. Auk, vol. 23, p. 289-298, 1906, also p. 100.

² Allen, G. M. Auk, vol. 30, p. 25, 1913.

myself have had the privilege of seeing Snowy Owls five times at Ipswich and once at Milk Island off Cape Ann.

On November 5, 1905, Dr. G. M. Allen and I saw a Snowy Owl sitting on a sand dune at Ipswich with body inclined at the usual angle of about 45 degrees. It was a handsomely marked bird with white face, dark gray crown and nape and with diagonal rows of black spots on its back. By walking diagonally toward it we were able to approach within seventy yards. Its eyes were narrow slits and after watching us for a few minutes with one eye it would quickly turn its head and watch us with the other eye. Horned Larks fed undisturbed within thirty yards of it. When we crouched and attempted to crawl straight toward the owl it at once rose and flew off with broad slow sweeps of its wings and with feet stretched out behind. After sailing for a distance it again alighted, throwing out its feet in front. This time by stalking behind dunes we were able to approach within twenty-two yards.

A dark bird seen on February 11, 1906, looked like a gray stump on the top of a dune at a distance of nearly a mile. This bird flew away alternately sailing and flapping close to the ground.

A very white bird was seen on March 14, 1909, sitting on a rock on Milk Island. There were several Crows about it on the rocks, some within three or four yards. The owl was evidently on the alert and at times sat nearly erect. As we approached it flew off toward the mainland pursued by Crows who occasionally flew down on it from above. The owl pursued its way undisturbed, flying directly with steady slow flappings of its great wings. The island was full of the signs of rats.

The bird seen on January 17, 1913, at Ipswich, was a dark bird, that, disturbed from a dune-top, rose in the strong wind and poised motionless like a kite, with the tips of its primaries bent up. As it sailed about, it would occasionally stretch its neck and lift its great round head above the level of the back and look about. Later it skirmished for prey low over the beach-grass where it alternately sailed and flapped.

On December 21, 1913, I watched a dark Snowy Owl in the dunes that was being mobbed by a large flock of Snow Buntings that swirled about it and darted down toward it, as it sat on a dune-top. On March 9, 1918, my son Charles saw a Snowy Owl at Ipswich.

On November 17, 1918, I found a dead Snowy Owl in rather dark plumage thrown up by the waves at Ipswich Beach. The bird had been shot and the skin is now in the collection of the Boston Society of Natural History.

On December 16 of the same year, I saw from my house a dark Snowy Owl flying by alternate flappings and sailings high over the salt-marsh. The bird

alighted in the top of a tree on one of the islands. On December 26, my son Charles saw a Snowy Owl alight on the roof of an outbuilding of a farm at Ipswich.

172 [377] *Surnia ulula caparoch* (Müll.).

HAWK OWL.

Very rare and irregular winter visitor.

Mr. C. E. Moulton¹ in March, 1900, caught one of these owls in his hand at Lynn. The bird was hiding in a fallen pine tree in a swamp.

Mr. Everett W. Ricker, of Andover, wrote me on September 12, 1914, that on November 22, 1913, he saw a Hawk Owl at dusk near his chicken coops. After wounding it slightly he kept it for three months, during which time it became quite tame. At the end of three months it died and the body was sent to Mr. C. J. Maynard. It was a female.

173 [378] *Speotyto cunicularia hypogæa* (Bonap.).

BURROWING OWL.

Accidental visitor from the West.

The record of 1875 remains unique.

174 [387] *Coccyzus americanus americanus* (Linn.).

YELLOW-BILLED CUCKOO.

Not uncommon irregular and local summer resident. May 10 to September.

Eggs: May 20 to June 30.

I can now add Topsfield and Amesbury to the towns where this bird has been found. In the latter town at the northern limit of the County the bird was found by Damsell² in 1884, 1901, 1903, and 1906. In 1901, on June 24, a nest and eggs were found.

¹ Moulton, C. E. Bull. Essex County Orn. Club, p. 38, 1919.

² Allen, G. M. Auk, vol. 30, p. 25, 1913.

175 [388] *Coccyzus erythrophthalmus* (Wils.).

BLACK-BILLED CUCKOO.

Common summer resident. May 10 to September 25 (October 21).

Eggs: May 30 to July 4.

On October 8, 1919, Mr. Ralph Hoffmann saw this species at Andover.

In the spring and early summer the curious song of the Black-billed Cuckoo may be heard not only by day, but occasionally in the dusk of the evening and at night. It may be delivered on the wing as a flight song. The full song may be described as a preliminary harsh clearing of the throat followed by from six to twelve short coughs which in turn are succeeded by the more pleasing doublets and triplets of *cows*. The Yellow-billed Cuckoo repeats his *cows* or *cowks* in regular order without dividing them into sets and they sound as woodeny as if he were striking a plank with a mallet.

176 [390] *Ceryle alcyon* (Linn.).

BELTED KINGFISHER.

Common summer resident (winter). March 28 to October (December 11, 15, 29, January 31, February 16, 22).

In August, 1917, a Kingfisher was detected at Ipswich by Mr. R. T. Crane's gamekeeper pouncing on young Bob-whites hatched in captivity. He shot the bird, a female, and, on opening its crop, found the legs and feathers of the young Bob-whites.¹

177 [393] *Dryobates villosus villosus* (Linn.).

HAIRY WOODPECKER.

Not uncommon permanent resident, more common autumn transient visitor.

Eggs: May 30.

Mr. Damsell's² note-books "bring out very strongly the fact that on the coast in the vicinity of Amesbury, at all events, the Hairy Woodpecker appears very regularly during October and November in small numbers, but only rarely in the winter and spring months."

As an indication of the extent to which this bird breeds in certain parts of the County I may instance the fact that in a two days' canoe trip on the Ipswich

¹ Townsend, C. W. *Auk*, vol. 35, pp. 184, 185, 1918.

² Allen, G. M. *Auk*, vol. 30, p. 25, 1913.

River from Danvers to Ipswich with the annual bird trip of the Essex County Ornithological Club, I observed three pairs of this bird. One pair was seen going in and out of a hole in a dead tree, and the female carried something in her bill.

In the winter of 1918-19, there occurred a large flight of Hairy Woodpeckers in eastern Massachusetts and I found them common at Ipswich. They looked larger than usual and I secured two specimens, whose measurements are as follows:

C. W. T. Coll. 1483. January 12, 1919, ♂; wing 136 mm.; tail 86 mm.; bill 32 mm.; tarsus 17 mm.

C. W. T. Coll. 1486. February 1, 1919, ♂; wing 125 mm.; tail 77 mm.; bill 31 mm.; tarsus 20 mm.

One, if not both, of these appears by the measurements to be referable to the northern race, *septentrionalis*, but the plumage is that of *villosus*.

Ridgway in his key to the species and subspecies of *Dryobates*¹ characterizes *D. villosus septentrionalis*, the Northern Hairy Woodpecker, as "averaging: wing more than 130, tail more than 83, exposed culmen more than 31 mm.," and *D. villosus villosus* as "averaging: wing less than 121, tail less than 75, exposed culmen less than 30."

Of course they may have been unusually large specimens of *villosus*. Unfortunately, we do not know where they were reared. These birds as well as some Downy Woodpeckers were feeding on the flaming, furry fruit of the staghorn sumach.

On one occasion I startled a female or young male Hairy Woodpecker that rattled like a red squirrel as it flew from tree to tree with the feathers on the nape erected in anger. The rattles, at times suggestive of those of the Kingfisher, were also given on the wing and were interspersed with sharp *clicks*. As the bird flew from tree to tree the fluttering of the wings could be distinctly heard. On the limb of a tree the bird kept up a vigorous up-and-down bobbing of the head. This performance continued for nearly ten minutes during all the time I stayed near.

The ordinary whinny of the Hairy Woodpecker is lower in tone, more mellow, and lacks the sharpness of the whinny of the Downy Woodpecker.

178 [394c] *Dryobates pubescens medianus* (Swains.).

DOWNY WOODPECKER.

Common permanent resident.

Eggs: May 22 to June 21.

In October and November, 1918, there was a considerable migration of

¹Ridgway, R. *Birds of North and Middle America*, pt. 6, p. 196, 1914.

Downy Woodpeckers, some of which were so much larger than the usual breeding bird that they may have been of a northern race.

179 [400] *Picoides arcticus* (Swains.).

ARCTIC THREE-TOED WOODPECKER.

Irregular but on rare occasions a common winter visitor.

Dr. G. M. Allen¹ found in Damsell's notebooks the measurements of a bird taken November 24, 1883. "Another specimen is entered October 28, 1887, both no doubt from Amesbury."

180 [401] *Picoides americanus americanus* Brehm.

THREE-TOED WOODPECKER.

Irregular and very rare winter visitor.

There are no additions to the three previous records.

181 [402] *Sphyrapicus varius varius* (Linn.).

YELLOW-BELLIED SAPSUCKER.

Uncommon and irregular transient visitor (summer). April 19 to May 21; June 12, July, August 9; September 23 to October 19 (November 4).

The November 4 record is for 1890 by Damsell¹ at Amesbury.

Nearly every fall I find fresh rings or bands of holes on one at least of my apple trees at Ipswich, and on one occasion I saw a Sapsucker flying away from the tree. Whether these holes are made for practice or to obtain the inner bark I do not know. They are dry and free from sap. It has been stated that these rings or holes are made by Downy Woodpeckers. That this species makes single holes I do not doubt, but it hardly seems possible to me that it would make rings of holes so characteristic of the Yellow-bellied Sapsucker.

¹ Allen, G. M. Auk, vol. 30, p. 26, 1913.

182 [405a] *Phlœotomus pileatus abieticola* (Bangs).

NORTHERN PILEATED WOODPECKER.

Accidental visitor.

In the original Memoir I was unable to give the source of the record of the Manchester, 1885, bird. It is as follows: "Salem, Mass., Dec. 28 [1885]. A pileated woodpecker was shot last week at Manchester, Mass. This is a rare Essex County bird. . . . X. Y. Z."¹ Mr. Damsell's notes supply two more instances, namely, "a young male shot July 8, 1886; and a bird shot by one Moses Tewkesbury at Kimball's Pond, October 4, 1895. Both of these were mounted, and the measurements of the former are entered in one of the notebooks."

In the fall of the year about 1907 or 1908, Mr. Arthur B. Fuller, now taxidermist for the Boston Society of Natural History, saw one of these birds at Hatfield's Corner near Essex.

Several oblong mortised holes, characteristic of the work of this bird, were found by Mr. R. Nichols in a small white oak near his camp at Boxford in the spring of 1919. They were evidently freshly made in the living tree. The tree was cut down and borers found at the heart.

On May 18, 1919, I found an old stub in the Topsfield Marshes that had a number of the same characteristic holes of this bird.

183 [406] *Melanerpes erythrocephalus* (Linn.).

RED-HEADED WOODPECKER.

Rare and irregular visitor; rare summer resident.

Damsell² records one shot at East Salisbury on August 30, 1884. On April 14, 1911, one was seen at Hamilton by Miss M. E. Ward. Another, or perhaps the same bird, was seen on June 3 of the same year at Lynn by Miss Ward and Mr. George Bubier.

Mr. S. Waldo Bailey³ reported seeing one at Newburyport on July 13, 1912. The bird had been seen by others earlier in the season. He also says, "Some twenty years ago a pair of these birds were found nesting in an old orchard in the southern end of the town. Just at the time that the four young were ready

¹ Forest and Stream, vol. 25, p. 443, 1885.

² Allen, G. M. Auk, vol. 30, p. 26, 1913.

³ Bailey, S. W. Auk, vol. 29, p. 541, 1912.

to fly, the whole family were taken, and now graces the private collection of a resident of the town."

On October 18, 1913, an immature bird was seen at Swampscott by Mr. J. D. Sornborger.

On September 2, 1917, a Red-headed Woodpecker was reported at Salem, and during the summer of 1918, from June to September 8, one was frequently to be seen at the Salem Golf Links.

184 [412a] **Colaptes auratus luteus** Bangs.

NORTHERN FLICKER; "GOLDEN-WINGED WOODPECKER";
"PIGEON WOODPECKER."

Resident, very common in summer, not uncommon in winter.

Eggs: May 20 to June 20.

The mellow rolling song of the Flicker varies much in length, in time, and in expression. It is sometimes given on the wing. Each song or series of rolls lasting from four to nine seconds may be given four times a minute. The time is sometimes so slow that the notes in a series may be counted. The bill is only slightly elevated and slightly opened at this time. The direction of the head is often changed during a series of songs and this gives a ventriloquial effect as if the song were coming from different places. The drumming with the bill on posts, dead limbs, tin roofs, and chimney pots indulged in by the Flicker may be classed as instrumental music. I have observed a bird abruptly stop in the vocal performance and change to the mechanical drumming.

The actual courtship attitudinizing and dance is well known and has often been described.

The habit of boring holes in wooden structures mentioned in the original Memoir was illustrated in rather an amazing way in the spring of 1913 at Ipswich, when the water was pumped by my windmill into the tank. It spouted out through two holes evidently made by Flickers during the winter.

Although the Flicker spends much of its time on the ground it has not learned to walk but hops on its short legs. Tracks in the sand in the dunes show this. One foot is generally a little ahead of the other and the toes awkwardly turned out.

The feet are so small and the flight of the Flicker so swift that I have been unable to determine the position of the feet in flight, but from the investigations of Finn¹ it may be inferred that all woodpeckers carry their feet in front.

¹ Finn, F. Proc. Asiatic Soc. Bengal, p. 105, March, 1898.

185 [417] *Antrostomus vociferus vociferus* (Wils.).

WHIP-POOR-WILL.

Common summer resident. April 27 to October 3.

Eggs: May 29 to June 12.

The April 27 record is of a bird in Swampscott, in 1906, noted by Mr. W. A. Jeffries. Mr. Damsell¹ has a record for April 28, 1902, and Mr. R. Eustis recorded one at Middleton on April 28, 1906. The late date of October 3 in Amesbury is recorded by Damsell¹ in 1891.

The largest number of *whip-poor-will* repetitions recorded in the original Memoir was 296. On May 10, 1905, in the Topsfield Marshes of the Ipswich River I listened to a bird that repeated this song 664 times, then paused for a few seconds and began again.

186 [420] *Chordeiles virginianus virginianus* (Gmel.).

NIGHTHAWK.

Not uncommon summer resident, common transient visitor. May 15 to October 6.

Mr. Damsell¹ records "flocks" of Nighthawks migrating on May 30, 1890. On August 29, 1917, at Ipswich just before a thunderstorm I saw twenty Nighthawks flying south in a straggling flock high over the marshes. The largest migrating flock of these birds I ever saw was in the valley of the Connecticut River at Cornish, N. H., on August 30, 1914. Here, between five and six in the afternoon, the air was filled with these birds in beautiful noiseless flight. They looked like a flock of gigantic swallows winnowing the air. Their feet were apparently bestowed beneath their tails. There must have been many hundreds if not thousands of these birds.

The loud rasping call-note of this bird, so familiar in cities where the birds breed on flat roofs, is commonly written down as *peent* or *speke*, but a careful study within a reasonably near distance shows that the call is double and I have written it down *bee'-ak* or *spee'-yah*. Richard King in his "Narrative of a Journey to the shores of the Arctic Ocean in 1833, 1834 and 1835" (vol. 2, p. 215) says that this bird utters "a sharp sound resembling the dissyllable *pēsqūāw*,

¹ Allen, G. M. Auk, vol. 30, p. 26, 1913.

which is its Cree name." This cry is emitted by both sexes and I have heard it given from 16 to 36 times a minute. The bird flutters its wings quickly as it emits the cry. Although Nighthawks are most active in the morning from the crack of dawn to sunrise, and in the evening, I have heard the cry at every hour of the day and night. When feeding the young, the adults may be seen hawking at mid-day, and may be heard at midnight at time of a full moon. If the night is dark they are not often heard. The hawking flight for insects is generally high up in the air and the birds may sometimes be seen sailing with wings held up at an angle. I have also seen them soar in circles, like a hawk, with wings fully extended.

The courtship performance of the male is a spectacular one and may be seen from the day of arrival from the South until early in August. The bird sets its wings held up at an angle, and plunges with great speed obliquely downward for the distance of a hundred feet or more, ending its plunge with an abrupt upward curve and glide for about half the distance of the descent. During the downward plunge and part of the upward glide a loud whirring or booming noise is heard, which is probably made by the passage of the air through the stiff wing feathers, a sound resembling that produced by the vibration of tense cords in violent gusts of wind.

During migrations the birds sometimes alight but are very difficult to see. On September 9, 1917, one alighted in the driveway of my Ipswich house and allowed a close approach. On May 30, 1913, at four o'clock of a sunny afternoon I noticed on a small boulder on the side of Sagamore Hill what I first took to be a lichen-covered bump, but on examining it with binoculars saw that it was a Nighthawk. The bird, facing the wind and the sun, was flat on the rock with wings and tail slightly projecting. The white spots on the rump and under the chin, which helped to give the lichen-like appearance, were plainly visible with the naked eye at fifty yards. I approached cautiously by zig-zags,—never walking directly toward the bird,—five paces at a time until I was within fifteen feet. The bird was evidently watching me through nearly closed eyes. At fifteen feet the bird could stand it no longer and sprang into the air, joining another bird that was flying about.

187 [423] *Chætura pelagica* (Linn.).

CHIMNEY SWIFT.

Common summer resident. April 28 to October 4; average date of arrival for nine years, May 4.

Eggs: June.

The late date of October 4 is recorded at Amesbury by Damsell¹ for 1898.

¹ Allen, G. M. *Auk*, vol. 30, p. 27, 1913.

In that year these birds remained unusually late and are entered in his notebook almost daily until that date. Dr. Walter G. Fanning saw five Chimney Swifts on September 29, 1918, at Danvers.

The Chimney Swift has returned to normal numbers since its decimation in 1903 and 1904.

The courtship of the Chimney Swift is performed on the wing to the accompaniment of loud staccato *chips* frequently repeated, and often so run together that they become a squeal. At these times the birds sail in twos or threes or more with wings decurved or elevated, and rival males chase each other with loud chipperings.

Mr. C. A. Clark has reported a roost of Chimney Swifts in the chimney of a school building in Lynn. On August 31, 1919, about a thousand Swifts occupied it, but none were seen after September 6.

188 [428] **Archilochus colubris** (Linn.).

RUBY-THROATED HUMMINGBIRD.

Common summer resident. May 6 to September 27.

Eggs: May 30 to June 15.

In August, 1916, I found that a Hummingbird had slit the long tubular flowers of a trumpet creeper on my house at Ipswich, apparently as a short cut to the nectar. Hardly a flower or even a large unopened bud was left intact. This habit has since been continued.

189 [444] **Tyrannus tyrannus** (Linn.).

KINGBIRD.

Abundant summer resident. May 3 to September 28; average date of arrival for eight years, May 9.

Eggs: June 10 to July 4.

I have seen a Kingbird swoop down and pick up an insect from the calm surface of a pond without wetting a feather. I have also seen one flying and picking off berries from a shad-bush without alighting. It is not uncommon to see a Kingbird plunge several times into the water from a post or tree, evidently for a bath, and afterward preen itself. I have also seen this method of bathing in a small shallow birds' bath on my place at Ipswich. In this case the bird flew

repeatedly from an overhanging birch tree, fluttered in the shallow water and at once returned to the tree. On another occasion a Kingbird flew into the shallow bath from the edge several times in succession.

At Wenham on May 21, 1916, I saw a Kingbird pounce at a Solitary Sandpiper that was flying over the Ipswich River. The latter bird was driven down to the water where it sat for a moment in a bewildered way, then rose and flew to the marshy shore where it was again set upon by the Kingbird.

190 [445] **Tyrannus dominicensis** (Gmel.).

GRAY KINGBIRD.

Accidental visitor from the South.

The record of 1869 remains the only one.

191 [452] **Myiarchus crinitus** (Linn.).

CRESTED FLYCATCHER.

Not uncommon summer resident. May 5 to September 20.

Eggs: June 13.

Besides breeding in the towns mentioned in the original Memoir, it also breeds at Boxford and Ipswich. In the latter town I have found a pair on the side of Heartbreak Hill.

192 [456] **Sayornis phœbe** (Lath.).

PHOEBE.

Common summer resident. March 17 to October 31 (December 19).

Eggs: April 27 to July 3.

The December record is for 1911 by Mr. J. D. Sornborger at Rowley.

193 [459] **Nuttallornis borealis** (Swains.).

OLIVE-SIDED FLYCATCHER.

Very rare summer resident. May 10 to September 23.

The following breeding record, overlooked in the original Memoir, is of

interest:¹ "A nest of this Flycatcher was found in Lynn, Mass., by Mr. George O. Welch, in June, 1858. It was built on the top of a dead cedar, and contained three eggs."

194 [461] *Myiochanes virens* (Linn.).

WOOD PEWEE.

Common summer resident. May 7 to September 21.

Eggs: June 10 to July 10.

195 [463] *Empidonax flaviventris* (Baird).

YELLOW-BELLIED FLYCATCHER.

Uncommon transient visitor. May 24 to June 3; August 25 to September.

[465] *Empidonax virescens* (Vieill.). ACADIAN FLYCATCHER; SMALL GREEN-CRESTED FLYCATCHER.—An erroneous record.

196 [466a] *Empidonax trailli alnorum* Brewst.

ALDER FLYCATCHER.

Rare summer resident. May 20 to August.

Eggs: June 8 to July 3.

On June 8, 1890, Mr. Damsell² found a nest and four eggs of this species near Amesbury.

197 [467] *Empidonax minimus* (Baird).

LEAST FLYCATCHER; CHEBEC.

Common summer resident. April 22 to August 26 (September 29).

Eggs: May 25 to July 1.

The September 29 record is of a bird seen at Salem by Mr. R. A. Nichols in 1918.

¹ Baird, Brewer and Ridgway. Land Birds, vol. 2, p. 355, 1874.

² Allen, G. M. Auk, vol. 30, p. 27, 1913.

198 [474] *Otocoris alpestris alpestris* (Linn.).

HORNED LARK; SHORE LARK.

Winter visitor, abundant in the autumn and early winter, not uncommon in late winter; common in spring. September 28 to April 10.

During the winter of 1918-19 which was an exceptionally mild one following one of unusual severity, this bird was found in greatly reduced numbers.

The courtship and flight song of this bird I have never observed in Essex County but I am very familiar with it from my studies in Labrador.¹ It is very similar to that of the Prairie Horned Lark which can now be observed in Essex County. On the breeding-grounds the "horns" in the males can be easily seen. They project backward and do not turn forward as they are sometimes portrayed.

The tracks of the Horned Lark in sand or snow may be distinguished from those of the Snow Bunting by the longer hind toe and the longer stride. The Bunting takes shorter steps and not infrequently hops, which the Lark rarely or never does.

199 [474b] *Otocoris alpestris praticola* Hensh.

PRAIRIE HORNED LARK.

Not uncommon transient visitor and summer resident locally. March 19 to November 9.

This bird breeds regularly at Great Neck, Ipswich. It is a lover of golf-links country and probably breeds on some of the golf-links of the County. The young, beautifully spotted with yellow above and striped on the breast, may occasionally be seen.

The courtship song of this bird appears to be identical with that of the Horned Lark.

200 [477] *Cyanocitta cristata cristata* (Linn.).

BLUE JAY.

Common permanent resident.

Eggs: May 24 to June 15.

¹ Townsend, C. W. Along the Labrador Coast, pp. 54, 55, 1907.

201 [484] *Perisoreus canadensis canadensis* (Linn.).

CANADA JAY.

Accidental visitor from the North.

The record of 1878 remains unique.

[486a] *Corvus corax principalis* Ridgw. NORTHERN AMERICAN RAVEN.—Extirpated.

202 [488] *Corvus brachyrhynchos brachyrhynchos* Brehm.

CROW.

Abundant permanent resident, most numerous in winter on the coast.

Eggs: April 15 to June 13.

Much could be said about the Crow. One always finds something new in this interesting and original bird. The endless variety of its notes and calls, its tracks in the sand, and its pellets telling the tale of its diet are all of great interest.

The courtship song is undoubtedly the hoarse rattling sound which is sometimes likened to the gritting of teeth. This is uttered from a perch with the bill pointed downward and also on the wing like an orthodox flight-song. On July 1, 1919, a Crow at Ipswich regaled me by repeating this song seven times in quick succession, and afterward at irregular intervals for half an hour. A good deal of fighting goes on in the spring courting. Sometimes it occurs in the air and the birds try to rise above one another, or one flies after another in hot pursuit. Suddenly the two set their wings and dash down toward the earth only to rise again and repeat the game. One April day I saw two Crows, cawing loudly, tumble all over each other on the ground, then fly up in the air and repeat the fight until they fell nearly to the ground again.

On a day in May four or five Crows flew about high over my head at Ipswich, scolding in the way they do when one approaches their nests. Every now and then one would nearly close his wings and dive down toward me at an angle of 45° for several hundred feet, making at the same time a whirring noise. When within a short distance of me, the Crow would turn sharply and glide upward. The performance was spectacular and rather alarming.

Since the original Memoir was published, there have occurred great changes in the winter roosts of the Crows and I have made studies of a new roost initiated in 1916 at Ipswich, the account¹ of which I published at length in the *Auk*.

¹ Townsend, C. W. *Auk*, vol. 35, p. 405-416, 1918.

This roost was on the southerly side of Castle Hill and I estimated it contained at times 12,000 birds. A large number of pellets collected from this roost and examined by the Biological Survey at Washington proved especially interesting and the results are tabulated in the article referred to.

In January, 1919, the great Crow roost on Castle Hill dwindled and apparently ceased to be. Crows were to be seen flying toward the Essex Woods as previously and a moderate-sized roost was found on a pine island in the marshes near Labor-in-vain Creek and the Ipswich River. The cause of this break-up of the roost was, I believe, a Great Horned Owl as explained in the annotations under that bird. Early in April the Crows were again to be seen flying to the roost on Castle Hill. The owl had undoubtedly departed to its breeding-ground inland.

All passerine birds hold their feet up in front as they fly, and this point can best be observed in the Crow, our largest passerine bird.¹

203 [494] *Dolichonyx oryzivorus* (Linn.).

BOBOLINK.

Abundant summer resident. April 30 to September 30.

Eggs: June 3 to 14.

The courtship song of this bird bubbles over with joy and merriment. Not only from the air but from the tops of trees and from the ground the song is given, but its ardor almost always carries the bird through the air. Especially is this the case when the courting season is in full sway. When the birds first come, before the arrival of the females, they often sing in trees, sometimes as many as a dozen together, making a splendid chorus. One may see a male courting a female on the ground. He spreads his tail and forcibly drags it like a Pigeon. He erects his buff nape feathers, points his bill downward and partly opens his wings, gurgling meanwhile a few of his song notes. The female indifferently walks away.

On the wing his song is at the best. He rises in irregular circles or progresses in a horizontal plane on rapidly vibrated down-curved wings. His flight often concludes by a descent with wings pointing obliquely upward.

¹ Townsend, C. W. Auk, vol. 26, p. 115, 1909.

204 [495] *Molothrus ater ater* (Bodd.).

COWBIRD.

Common summer resident (winter). March 22 to November 26 (December 20, 30, January 15).

Eggs: May 18 to June 8.

In the winter of 1915-16 a Cowbird was seen by Messrs. G. M. Bubier and A. P. Stubbs at Lynn a number of times consorting with English Sparrows.

The courtship of the Cowbird is an interesting performance. The male puffs out his feathers, spreads his wings slightly, and his tail to the full extent, and bows low first raising his head. At the same time he utters a low gurgling *chuck* rapidly repeated followed sometimes by a squeaking hiss, rarely by a rattle. The gurgling *chuck chuck* or *gluck gluck* is so low that it cannot be heard fifty yards away. It is a pleasing, liquid note. This is evidently the courtship song, and is sometimes performed on the wing. I have seen three males chasing a female uttering these notes as they flew. She took refuge in a tree and the males alighting near, performed in turn, all puffing out their feathers and bowing low. She sidled out to the end of a branch and attempted to escape their attention by flight, but they were soon in hot pursuit.

The partially whistled call-note *phce de de* commonly emitted as the bird flies bears a distinct resemblance to the song of the Meadowlark and suggests relationship. It may be the ancient call-note of the group from which the Meadowlark developed its song.

*205 [497] *Xanthocephalus xanthocephalus* (Bonap.).

YELLOW-HEADED BLACKBIRD.

Accidental visitor from the West.

The observation of Mr. Francis Beach White¹ puts this bird on the list. "At Ipswich, Mass., September 17, 1917, I had under observation for about half an hour, a Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*). It was in the plumage of the female."

According to Howe and Allen² there are only three other records for the State.

¹ White, F. B. Auk, vol. 35, p. 224, 1918.

² Howe, R. H., Jr., and Allen, G. M. The Birds of Massachusetts, p. 116, 1901.

206 [498] *Agelaius phœniceus phœniceus* (Linn.).

RED-WINGED BLACKBIRD.

Abundant summer resident (winter). March 3 to August 21, October (November 28, February 14); average date of arrival for eight years, March 17.

Eggs: May 23 to June 18.

Two were seen in the Topsfield Marshes by Mr. Ralph Lawson on November 28, 1918. On February 14, 1912, Mr. A. P. Stubbs found one in Palmer's Bog, Swampscott.

The courtship of the Red-winged Blackbird centers as distinctly about the display of the scarlet epaulettes as does the courtship of the Peacock about the display of his train. The adult male Red-wing when absorbed in feeding is a plain blackbird with a pale yellow stripe on his shoulder or one with a narrow band of red. The color may even be entirely covered up by the prevailing blackness of his costume. When, however, his love passions are excited he spreads his tail, slightly opens his wings, puffs out all his feathers, and sings his *quonk-qucr-ee*, or his still more watery and gurgling song, appropriate to an oozing bog, his *ōgle-ōggle-ycr*. Now when he puffs out his body feathers he especially puffs out, erects, and otherwise displays to their best advantage the gorgeous scarlet epaulettes. These patches become actually dazzling in their effect as he slowly flies toward the object of his affections, for these beauty spots are most effective when seen from in front.

In the nesting season, if an intruder approaches the family home, he is met by the male who flies about and flutters overhead uttering most piercing shrill whistles that suggest the drawing in of the breath and by loud *chuck, chucks*. The feet are drawn up in front so that they show as knobs on the breast. Occasionally he lets them hang down, and setting his wings and extending the bastard wings he slowly drops down and settles in a thicket of grass.

The female in her protests does not include this ear-splitting whistle, but *chucks* and rattles. The rattle takes on at times a trilling, vibrating character, which is almost Veery-like.

207 [501] *Sturnella magna magna* (Linn.).

MEADOWLARK; "MARSH QUAIL."

Very common summer resident, sometimes not uncommon in winter. March 1 to November 31 (December, January and February).

Eggs: May 11 to June 28.

In the original Memoir I had only one winter record, that for January 2, 1889. Since then one or more have spent every winter at Ipswich until the severe one of 1917-18, so that the bird may be called a resident. On January 28, 1912, I counted a flock of 22 in the marshes of the Castleneck River. On January 19, 1913, I saw 13 and on January 11, 1914, 24. Mr. H. W. Wright has given me records for February, 1912, of two Meadowlarks at Nahant, for January 3, 1910, January 25, 1916, and December 14, 1916, for these birds at Marblehead. On the last-named date he counted 19 birds. On February 21, 1910, six or eight Meadowlarks were singing continuously nearly their full song near my house at Ipswich. On December 1, 1912, I counted fully fifty of these birds in the marsh near my house, many of them in full song.

On February 13, 1916, as I was walking over the marsh in a driving snow storm on snowshoes, a Meadowlark whirled out of the snow within three inches of the tip of one of my shoes. He had been snugly settled in a cavity in the grass and had been nearly or entirely snowed in. In another part of the marsh, about a mile away, on the same day another Meadowlark suddenly emerged from the snow leaving a small round hole of exit. Into this I could insert my hand as into a cavity.

On December 30, 1917, when the Fahrenheit thermometer stood at 20° below zero at 6.30 A.M., and the highest temperature reached during the day was 2° below zero, I found two Meadowlarks at Ipswich. They were seen again after prolonged cold weather on January 13, but no more until the spring migrations in March.

In the winter of 1918-19, which was exceptionally mild, I saw no Meadowlarks in my visits to Ipswich from November 16, when I saw one, until March 16. The previous cold winter had either killed or frightened south all the north-loving Meadowlarks!

The beautiful song with a tinge of sadness in it, is one of the most familiar songs of the Ipswich region. It is given from the ground, from a fence-post or from a tree-top, and rarely in flight. The real ecstatic flight-song of this bird must be extremely rare, at least in Essex County, for I have never heard it. It is described by Forbush¹ as follows: "Rarely a talented individual soars aloft, uttering an ecstatic flight-song, which compares favorably with that of the most celebrated songsters. I have heard this in full volume but once, and then found it difficult to believe that it came from the throat of a common Meadowlark. It was not at all suggestive of that bird's ordinary song, except in some of the last notes, nor did it in the least resemble that of the Western Meadowlark; it more resembled the music of the Bobolink, but was louder and not so hurriedly given."

¹ Forbush, E. H. *Useful Birds and their Protection*, p. 318, 1907.

On July 15, 1917, I heard one singing in the broad marshes of the Castle-neck River a song rendered unusually beautiful by the interpolation between the two long notes of a silvery strain suggestive of a Hermit Thrush. It was a song that gave me the greatest pleasure.

208 [506] *Icterus spurius* (Linn.).

ORCHARD ORIOLE.

Rare and local summer resident. May 7 to September 28.

Eggs: May 28 to June 25.

The September 28 record was of a female bird seen by me near my house at Ipswich, in 1918.

Orchard Orioles bred at Ipswich near my house in 1905, 1906, 1907, and 1908. From that date until June 4, 1916, I have no record of this bird in Ipswich. In 1906, on May 20, I saw as many as six Orchard Orioles at Ipswich.

Mr. A. P. Stubbs found a young male singing in Lynn on May 13, 1913. Mr. Damsell¹ has extended the range to the northern part of the County. In twenty-six years he noted it three times as follows: July 4, 1883, at Newburyport; May 12, 1891, and May 21, 1900, at Amesbury.

The full song of the Orchard Oriole is given with great abandon from a perch and especially on the wing. I have heard one sing six times in a minute and have tried to express his song by the words *Look here, what cheer, what cheer, whip yo, what cheer, wee yo*. Sometimes it ends with *sit-e-wee*, and occasionally a rattle is introduced. July 1st is the latest date I have heard the song.

In making the nest the bird apparently prefers to hang it from two branches. I once found the nest suspended from two apple trees whose branches interlaced.

209 [507] *Icterus galbula* (Linn.).

BALTIMORE ORIOLE; "GOLDEN ROBIN."

Abundant summer resident. April 29 to September 25; average date of arrival for eleven years, May 7.

Eggs: May 24 to July 4.

¹ Allen, G. M. Auk, vol. 30, p. 27, 1913.

210 [509] *Euphagus carolinus* (Müll.).

RUSTY BLACKBIRD.

Common transient visitor; winter. March 7 to April 30; September 23 to November 3; January and February.

Dr. J. C. Phillips¹ found a flock of eight to eighteen of this species that spent the winter of 1911-12 at Danvers. He observed a single bird at Wenham on January 7, 1917.

The courtship of this bird, if such it may be called, is produced with apparently great effort, wide open bill and spread tail, resulting in a series of squeaking notes suggestive of an unholed windmill—*wat-chee'ee*. At times a sweet lower note, often double, is heard.

[511] *Quiscalus quiscula quiscula* (Linn.). PURPLE GRACKLE.—No specimens from the County although it undoubtedly wanders from the South.

211 [511b] *Quiscalus quiscalus æneus* Ridgw.

BRONZED GRACKLE; CROW BLACKBIRD.

Abundant summer resident, occasionally winters. March 6 to November 6 (winter); average date of arrival for nine years, March 17.

Eggs: May 7 to June.

On November 25, 1917, I saw one Bronzed Grackle at Ipswich. Damsell² records "a large flock" at Amesbury on November 6, 1890, and he shot one there on January 10, 1885. Dr. J. C. Phillips saw several at Wenham on February 22, 1909, and Dr. W. G. Fanning reported the bird at Danvers on February 12, 1917. In the original Memoir I recorded the fact that three birds spent the winter of 1903-04 at Wenham.

The courtship of the Bronzed Grackle is not inspiring. The male puffs out his feathers to twice his natural size, partly opens his wings, spreads his tail and, if he is on the ground, drags it rigidly as he walks. At the same time he sings his song—such as it is—with great vigor and abandon. That this vocal performance should be classed as a song from a scientific point of view there is no doubt, but such it would not seem to the ordinary observer. It is harsh and disagreeable, a squeaking, saw-filing explosion of notes. It varies considerably and

¹ Phillips, J. C. *Auk*, vol. 29, p. 395, 1912.

² Allen, G. M. *Auk*, vol. 30, p. 27, 1913.

sometimes suggests the sound of a jet of escaping steam. I have written it down *er whcet, dam that*, but my interpretation may have been influenced by my mental attitude induced by the performance.

During the period of courtship the male in flight depresses the central feathers of its tail forming a V-shaped keel. I was at first inclined to think that this was of use in flight like a rudder, but I am inclined to think that it is in the nature of courtship display, for this arrangement of tail feathers is not seen when a bird is actively engaged in flight for the purpose of obtaining food. Under these circumstances the tail is spread in the ordinary manner.

Although the Bronzed Grackle is an undesirable bird to have about one's house on account of its disagreeable song, harsh cries, and the incessant calls the nestlings make for food, and on account of its habit of driving out other nesting birds and robbing their nests of eggs and young, there are many interesting points about it for study. Since 1906, it has taken to nesting in the vines on my house at Ipswich, and, in general, as stated in Chapter II, it has frequented the neighborhood of man in an increasing degree since 1902. Robins' nests in the vines of my house have been despoiled of their eggs and young by this bird, and I have known it to kill adult birds of moderate size. I once found a Grackle holding down the freshly killed body of a Bicknell's Thrush while it picked out the brains. I have seen one with its foot firmly planted on a living male English Sparrow while it pecked repeatedly at the Sparrow's head. The Grackle's value in keeping down the English Sparrow nuisance in our towns and cities is probably considerable.

The early pea-pods in my garden have been systematically slashed and split open by the Grackle's powerful bill and all the peas eaten. Later peas, protected by more foliage and with no room to walk between the rows, have escaped. On the other hand the systematic way in which Grackles destroy grubs in grass-fields in the early spring is to their credit.

After having put up with Grackles nesting in the vines of my house for several years and learning that it was a choice between them and Robins and Chipping Sparrows, I have naturally chosen the last two. On May 3, 1914, I pulled down a Grackle's nest with its contents of five eggs from a side porch of my house. A week later I found the nest rebuilt and containing one egg. I again pulled it down. On May 17, I again destroyed a nest and one egg in the same place and again on May 24 and on May 31. On the last two dates, the newly built nests contained no eggs. On May 24, I found two other nests of Grackles on my house each containing five eggs and destroyed them. These were not rebuilt, and the first one which had been rebuilt four times, or a total of five nests built by the same pair, was not renewed.

At the suggestion of my friend Mr. H. Mousley, instead of destroying the nests, I merely took the eggs in the following year and found that this at once discouraged the birds and they went elsewhere. An omelette of thirty-two Bronzed Grackles' eggs taken from nests on my own house and two of my neighbors I found excellent eating. Robins now nest undisturbed on our houses and their delightful manners and voices form an agreeable change from those of Bronzed Grackles.

The Bronzed Grackle is, however, a most interesting bird to study, and is very well in its place. Its habit of dipping like a gull and picking up morsels of food and even small living fish from the surface of the water shows a most progressive nature.¹ It also alights on floating drift-wood and picks food from the water. I once saw one fly with a piece of bread in its bill to the side of a pond, put the bread in the water, and after it was softened, pick it to pieces and eat it.

More than once I have heard Bronzed Grackles scream so much like a Common Tern that I was for a while deceived.

The Bronzed Grackle is a terror to the English Sparrow and the Robin. What its relations with the Starling will be remains to be seen. A few years ago I observed six or eight Grackles peacefully feeding side by side in a grass-field with four Starlings. No enmity was shown by either side and no stealing occurred. When war begins the Starling will find a match in the Yankee bird.

212 [514] *Hesperiphona vespertina vespertina* (W. Coop.).

EVENING GROSBEEK.

Irregular but, during and since the winter of 1915-16, a not uncommon winter visitor. December 8 to May 19.

In the original Memoir an account is given of a remarkable invasion of these birds from their regular range in the northwest in 1890, from January to April. In March, 1904, five of this species were found in Beverly. These were the only records. Mr. Damsell, in his careful records covering the period from 1880 to 1911 at Amesbury, has no note of this bird.

The winter of 1915-16 saw a migration of Evening Grosbeaks of considerable magnitude into New England, and every winter since there has been a return of these birds. As they are particularly fond of the seeds of the box elder or ash-leaved maple (*Acer negundo*), and as this tree has been extensively planted over the Great Plains, it has been thought that they were led to the East by this

¹ Townsend, C. W. Sand Dunes and Salt Marshes, 1913; also Auk, vol. 36, p. 627, 1919.

favorable food supply. It is to be hoped that this handsome bird, one that always arouses interest by its tameness, large size, and beauty of plumage, will continue to visit us. Miss Viola E. Crittenden watched a flock of nine Evening Grosbeaks in Beverly from December 26, 1915, to April 16, 1916. Mr. Ralph Lawson found two in Salem on March 10, 1916; Mr. Willard Porter two in Boxford on March 16 of the same year. Miss S. E. Lakeman found several on the Turkey Shore at Ipswich, in March, and three were seen on Dr. Crockett's farm at Ipswich on March 23 by Miss Cutter. Marion H. Bayley reported¹ twenty to thirty at Newburyport on March 22 to 24 in a hedge between a school and a church, feeding undisturbed on the buds of the hedge and dropping the bud-scales on the ground beneath.

Mr. A. P. Stubbs found two flocks of twelve each at East Lynn on April 5 of the same year and some of them stayed until April 19.

A flock of Evening Grosbeaks variously estimated from forty to sixty in numbers spent the winter of 1916-17 in Beverly from December 27 to May 13. That same winter fifteen stayed in Lynn, and some were seen at Peach's Point, Marblehead. In the winter of 1917-18, the bird was reported from North Saugus, Lynnfield, and Topsfield.

In the winter of 1918-19, a flock of twenty was seen at Methuen on January 14 by Mr. Thomas Smith, president of the Lawrence Natural History Society. Eight were seen on February 23, 1919, at Ipswich, by Mr. Wayne Henderson; three at Essex on April 8 by Mr. A. B. Fuller and one at Rowley on April 28 by Mr. J. D. Sornborger. Dr. Thomas Barbour reported a flock of 75 to 100 at Beverly Farms from March 10 to May 19, 1919.

Birds in the female and immature plumage have always largely outnumbered the brilliant yellow-and-black-plumaged adult males. The recognition of the bird even by laymen is easy. They have a loud clear call-note besides several low conversational notes, some of which are slightly trilled. They are very tame and flocks feeding in bushes in suburban regions are often surrounded by a large audience and by waiting automobiles. Besides the seeds of the box-elder, Evening Grosbeaks are fond of various berries and particularly of small Parkman crab-apples. From these they extract the seed, sometimes without detaching the fruit from the tree.

¹ Bayley, M. H. *Bird-Lore*, vol. 18, pp. 182, 183, 1916.

213 [515] *Pinicola enucleator leucura* (Müll.).

PINE GROSBEAK.

Irregular and at times abundant winter visitor. October 27 to March.

In the last fifteen years I have few records of this bird in Essex County, namely, in the winters of 1906-07 and 1918-19, and in November, 1910.

214 [517] *Carpodacus purpureus purpureus* (Gmel.).

PURPLE FINCH.

Permanent resident, common in summer, rare in winter. April 1 to November 5; winter.

Eggs: June 8 to June 19.

The flight song of this bird is a delightful performance. On slightly quivering wings he sails about in wide circles pouring out his most rapturous song, and then with wings stretched up at an angle of 45° he floats slowly down still singing and continues to sing for several minutes from his perch on the top of a tree.

Dr. J. C. Phillips described to me, in a letter of May 23, 1915, the courtship display of this bird which "stood on the ground before the female very upright with extended wings waving back and forth over the back very fast." Olive Thorne Miller¹ says: "Even the charming Purple Finch expands his plumage and executes a dainty and exquisite graceful dance."

215 [521] *Loxia curvirostra minor* (Brehm).

CROSSBILL; RED CROSSBILL.

Irregular visitor at all seasons, generally in winter; very rare summer resident. October 24 to May 25 (July 12).

The Red Crossbill visited Essex County in the years 1905, 1906-07, 1908, 1908-09, 1911, 1912, 1914, 1916, 1916-17, 1918-19, and 1919-20.

Mr. William Brewster² reported the nesting of this bird in Marblehead, a unique instance for eastern Massachusetts. The discovery was made by two

¹ Miller, O. T. *The Bird Our Brother*, Boston, p. 185, 1908.

² Brewster, W. *Auk*, vol. 35, p. 225, 1918.

Cambridge boys, Lovell Thompson and Charles F. Walcott. These boys on their visit to Marblehead in the winter of 1916-17 had seen a flock of Red Crossbills, and on April 22, 1917, they noticed two in pitch pines near a house. "Looking closer we found their nest on a pine branch about eighteen feet above the ground. The male Crossbill flew from the tree but when I [Thompson] climbed it the female was on the nest and I got my hand within two feet of her before she left it to fly away. There were two eggs in it, both whitish with some dark markings. About a month later we visited the place again. There was then nothing to be seen of the Crossbills and only one broken egg-shell remained in the nest which we took and have since given to Mr. Brewster." Mr. Brewster says: "The nest above mentioned somewhat resembles that of a Song Sparrow, being similarly bulky and deep-cupped, with thick walls mostly composed of bleached grass-blades and weed stalks. But it has also a bristling outer fringe of stiff twigs six to ten inches long, such as no Song Sparrow would be likely to employ. Moreover its nest lining of fine, soft grasses includes a few Crossbill feathers at least one of which, brick red in color, must have come from an adult male bird. Their presence affords, of course, convincing evidence as to the original ownership of the nest, thereby, indeed, it is '*self-identified*.'"

The song of this bird which I have heard in the month of April in Ipswich, is a pleasant, rather rambling warble suggestive at times by its repetitions of the song of the Brown Thrasher.

One may often discover these birds among pines by the noise made by their bills in picking the seeds from the cones. They often hang by the feet, head downward, extract the seed from between the rough scales, swallow the seed, and let the light wing blow away. The pitch-pine thickets in the Ipswich dunes are favorite resorts of Crossbills.

216 [522] *Loxia leucoptera* Gmel.

WHITE-WINGED CROSSBILL.

Irregular but at times common winter visitor. October 24 to April.

In 1906, I had observed a failure in the cone-crop of the spruces and firs in Cape Breton, Newfoundland, and Labrador and inferred that there would be an incursion of Crossbills and Grosbeaks into New England in the following winter. My inference was justified. On October 24, 1906, I heard from a flock of these birds at Wenham parts of the beautiful courtship song that I have heard on their breeding-grounds. The song here is delivered with great vigor and abandon and usually as the bird flies in large circles.¹

¹ Townsend, C. W. Auk, vol. 23, p. 177, 1906.

I have records for this bird in the County only in the winter of 1906-07, in 1918-19, and in the early winter of 1919-20.

217 [527a] **Acanthis hornemanni exilipes** (Coues).

HOARY REDPOLL.

Very rare winter visitor.

The record of 1878 remains unique.

218 [528] **Acanthis linaria linaria** (Linn.).

REDPOLL.

Irregular and at times abundant winter visitor. October 24 to April 25.

I have records of this bird in the County in the winters of 1906-07, 1908-09, 1911-12, 1913-14, 1919-20.

The courtship song is delivered by the bird flying in irregular circles and consists of a series of *chees* and *chugs* and fine rattling trills interspersed with sweet *dee ahs* like those of a Goldfinch. They often descend precipitately to their perch still singing.

The stomach of a Redpoll I shot at Ipswich on March 10, 1912, and sent to Washington was reported on by Mr. W. L. McAtee as follows: "The stomach of the Redpoll contained the remains of many small cocoons of Microlepidoptera, probably of the family Tineidæ. These made up 96 per cent. of the contents and are no doubt what the birds were getting from the bark of the larch trees. The remainder of this bird's stomach-contents was bits of the shell of ragweed seeds." A flock of a dozen Redpolls together with a few Pine Siskins, some Myrtle Warblers, Tree Sparrows, and Chickadees were always to be found gleaning the branches in a grove of larches on the side of Castle Hill that winter and doubtless saved this grove from destruction by these pests.

219 [528a] **Acanthis linaria holbœlli** (Brehm).

HOLBÆLL'S REDPOLL.

Very rare winter visitor.

There are no other records besides that of Mr. Brewster for 1883.

220 [528b] *Acanthis linaria rostrata* (Coes).

GREATER REDPOLL.

Irregular and at times common winter visitor.

Among a flock of Redpolls in an orchard at Ipswich on January 29, 1907, I noticed two or three distinctly larger and darker birds. One of these I collected and it proved to belong to this subspecies.

221 [529] *Astragalinus tristis tristis* (Linn.).

GOLDFINCH; YELLOW-BIRD.

Permanent resident, abundant in summer, not uncommon in winter.

Eggs: July to September 13.

The courtship season of this bird is of long duration. In May it is common to hear a jingling melodious concert from a number, all singing together in a tree. In June, July, and August the courtship ecstasy appears to be at its height and the delightful and cheerful song is poured out by birds flying in irregular circles as well as from perches.

As late as October, I found in a small apple tree a nest of a Goldfinch with four young but a few days old. A high wind on the third of the month upset the nest, throwing out two of the birds. I set the nest on the ground at the foot of the tree and replaced the young, and they were cared for there by the parents in the new location.

222 [533] *Spinus pinus* (Wils.).

PINE SISKIN; PINE FINCH.

Irregular and at times abundant winter visitor. October 3 to May 31.

A reference by Nuttall¹ omitted in the original Memoir is this: "My friend, Mr. Oakes, of Ipswich, has seen them in large flocks in that vicinity in winter."

I have records for this bird in winter in Essex County for every year in the last fifteen but one, namely 1915, so that it may almost be called a regular winter visitor. They have appeared again this last fall, coming first on October 13.

¹ Nuttall, T. Manual of the Ornithology of the United States and Canada, Land Birds, p. 512, 1832.

Although their bills are not specialized like those of the Crossbill or Grosbeak the birds are very skillful at extracting the seeds from the cones of pitch pines. They hang from the cones, insert their bills between the hard scales, pull out the seed, eat off the kernel and drop the wing. They are also fond of gleaning the delicate branches of larch trees for insect pests.

Their song is a high-pitched rapid trill or rattle interspersed with a variety of squeaky notes. It may often be heard here in April and May. For a plain bird they have a rather surprising courtship display. I refer to the bright yellow color at the base and sides of the tail and on the wing feathers. This yellow becomes very prominent when the wings and tail are spread at the proper angle.

223 [534] *Plectrophenax nivalis nivalis* (Linn.).

SNOW BUNTING; SNOWFLAKE.

Abundant winter visitor; most common in November, December, and January, less common in February and March. October 12 to April 19.

The full nuptial song of the breeding-grounds which is often given in the air and as the bird descends rapidly to the ground, I have not heard in Essex County. During March one may often hear a rather feeble warbling song with introduced sibilant notes and trills, as if the bird were practicing for the full song.

224 [536] *Calcarius lapponicus lapponicus* (Linn.).

LAPLAND LONGSPUR.

Winter visitor, common in the autumn and early winter, very rare in late winter and spring. October 5 to May 1.

Late winter and spring records of this bird are so rare they are worth recording. My brother, Mr. W. S. Townsend, found a male in full plumage on Ipswich Beach on April 19, 1905. In 1907, Mr. H. W. Wright saw four Longspurs at Little Nahant on February 26 and 28, and March 4 and 8. On March 10, I visited the place and found one Longspur there. In 1909, on January 31, at Ipswich, I found about a hundred Longspurs with an equal number of Snow Buntings in the Ipswich dunes. I saw one on February 7 of that year and five on April 18. The last-named birds were seen at Great Neck.

225 [538] *Calcarius ornatus* (J. K. Towns.).

CHESTNUT-COLLARED LONGSPUR.

Accidental visitor from the West.

As far as I know no bird of this species has visited the County since one was so inhospitably received by me in 1876.

[539] *Rhynchophanes mccowni* (Lawr.). McCOWN'S LONGSPUR.—An erroneous record.

226 [540] *Poœcetes gramineus gramineus* (Gmel.).

VESPER SPARROW; BAY-WINGED BUNTING; GRASS FINCH.

Abundant summer resident. March 26 to November 10.

Eggs: May 14 to June 10 (August 11).

The courtship song on the wing is performed while the bird flies slowly notwithstanding the rapid vibration of the wings, with feet hanging down, tail and head elevated. In display, the male walks or runs with widely spread tail, and wings spread upward from time to time. Sharp chipping notes are uttered and fighting by rival males is common.

227 [541] *Passerculus princeps* Maynard.

IPSWICH SPARROW.

Winter visitor, locally common and at times abundant in autumn and early winter, very rare in late winter, uncommon in the spring. October 5 to April 20 (May 11).

The October 5 record is of a single bird seen at Great Neck, Ipswich, in 1913, by Dr. Walter Faxon. The April 20 record is of a bird seen at Plum Island, in 1914, by Judge Charles F. Jenney. The unusual record of May 11 was of a bird seen at the same place by the same observer, in 1918. My own latest spring record is for April 16, 1916, a single bird seen in the Ipswich dunes. On March 27, 1910, I saw as many as twenty Ipswich Sparrows in the brack on Ipswich Beach.

On March 8, 1908, I heard one sing repeatedly a feeble rather scraping warble. It was not loud, not musical and not the true song. I have heard a similar performance by a Savanna Sparrow in the early spring.

228 [542a] *Passerculus sandwichensis savanna* (Wils.).

SAVANNAH SPARROW.

Abundant summer resident (winter). March 26 to November 12 (December 6, January 1).

Eggs: May 26 to June 20.

Unlike the Song and Vesper and other sparrows which sing on arrival from the South, this bird is at first silent or emits a feeble warble or an imperfect song.

In courtship the male stands on the ground and vibrates his wings rapidly above his back. He also flies slowly a short distance above the ground with head and tail up and rapidly vibrating wings. Two males often chase each other in this way making a rasping, buzzing sound. I have heard the song given on the wing.

[545] *Ammodramus bairdi* (Aud.). BAIRD'S SPARROW.—The Ipswich Sparrow was first believed to be this species and published as such.

229 [546] *Ammodramus savannarum australis* Maynard.

GRASSHOPPER SPARROW; YELLOW-WINGED SPARROW.

Not uncommon summer resident, locally. May 10 to August 1.

In the original Memoir I mentioned Ipswich as the only known locality in the County for this bird. It has also been found near Salem and at Boxford and in Peabody¹ and is probably a summer resident elsewhere, but its retiring ways make its observation difficult.

230 [547] *Passerherbulus henslowi henslowi* (Aud.).

HENSLOW'S SPARROW.

Rare and local summer resident. May to September.

Eggs: May 25.

On May 31, 1918, instead of riding in a motor to the train at Ipswich, I was so fortunate as to walk. At a turn of the road near a fresh marsh that bordered on a region of salt-marsh I heard the distinctive song of the Henslow's Sparrow, which I wrote down on this occasion as *cu-sick*. It was repeated several times

¹ Mackintosh, R. B. Bull. Essex County Ornith. Club, p. 40, 1919.

and I climbed the stone-wall and walked through the high grass in the direction of the sound which soon ceased. I went back to the road as I feared I might lose my train, but was again enticed to return by the sound. This time I walked straight to the spot and succeeded in flushing the bird which flew up from under my feet, alighted on a dead weed-stalk within a few yards of me, and continued to sing.

231 [549] *Passerherbulus caudacutus* (Gmel.).

SHARP-TAILED SPARROW.

Common summer resident locally. May 24 to November 8.

Eggs: June 8 to July 12.

232 [549-1] *Passerherbulus nelsoni nelsoni* (Allen).

NELSON'S SHARP-TAILED SPARROW.

Rare transient visitor, exceptionally rare in the spring. September 25 to October 13.

Two sharp-tails which I believe to be of this species I found fluttering against the window in a boat-house on the marsh at Ipswich on October 8, 1905. I was struck with their small size, dark brown backs and breasts and very faint stripes.

233 [549-1a] *Passerherbulus nelsoni subvirgatus* (Dwight).

ACADIAN SHARP-TAILED SPARROW.

Common transient visitor. May 23 to June 11; September 2 to November 5.

I have not seen this species give a flight song in Essex County, but observed it on the breeding-grounds in New Brunswick. The bird rises on fluttering wings to a height sometimes of forty feet, and gushes forth its oozy song several times in the descent and continues it from its perch on the grass. On one occasion the bird uttered repeatedly short clear notes which I wrote down *wt wt* on the ascent, but he gave the regular song on the downward plunge.

234 [550] *Passerherbulus maritimus maritimus* (Wils.).

SEASIDE SPARROW.

Accidental visitor from the South.

The record of 1877 remains unique.

I have seen this bird in the southern part of the State at Westport. It is a larger and much darker bird than the Sharp-tail but has similar habits. Its song may be divided into two parts: the first a gurgling trill, followed by an insect-like high-pitched trill. The first part sounds as if the bird were breathing out, the last, as if it were drawing in its breath.

235 [552] *Chondestes grammacus grammacus* (Say).

LARK SPARROW; LARK FINCH.

Accidental visitor from the West.

I am able to add four more records of this bird for the County all of which, I believe, are certain, although all, unlike the first three, are merely sight records. I transcribe the note of the first from my report in the *Auk*:¹ "On August 12, 1905, at Ipswich, Massachusetts, I observed at close range a Lark Sparrow (*Chondestes grammacus*). This makes the sixth record of this species for the State, and the fourth for Essex County. Nearly a year before this, on August 21, 1904, I took at Ipswich an adult male Lark Sparrow (*Birds of Essex County*, p. 268). It has occurred to me that stragglers in the migrations along our eastern coast may not be so very rare, but that they are overlooked, being mistaken for Vesper Sparrows, owing to the white outer tail-feathers. In both of the above instances, however, the slightly fan-shaped tail, and the fact that the white was not confined to the two outer feathers, as in the Vesper Sparrow, attracted my eye. The characteristic markings on the side of the head in the Lark Sparrow, seen with a glass within thirty feet, made the diagnosis in the second case absolutely certain."

The next record is by Mrs. Lidian E. Bridge:² "I wish to record that on August 28, 1908, Miss E. D. Boardman and I saw in a newly planted field at Ipswich, a fine Lark Sparrow. The bird was associated with Chipping, Vesper and Song Sparrows. We were attracted at once by the curious face markings, the unstreaked breast with a small black spot, the rounded tail tipped with white, the outer feathers with much white. These details were all carefully noted at a distance of fifteen feet, as the bird was feeding. Having seen them in the West I knew it was a Lark Sparrow, the second record, I believe, for Ipswich."

On August 23 and again on September 27, 1910, Miss E. D. Boardman saw at close range a Lark Sparrow at Manchester. As this may have been the same

¹ Townsend, C. W. *Auk*, vol. 23, pp. 103, 104, 1906.

² Bridge, L. E. *Auk*, vol. 25, p. 476, 1908.

bird on both occasions I have considered this as one record only although of course there may have been two different individuals.

On September 15, 1911, Miss Boardman again observed a Lark Sparrow at Manchester.

236 [554] *Zonotrichia leucophrys leucophrys* (J. R. Forst.).

WHITE-CROWNED SPARROW.

Uncommon transient visitor. May 10 to May 28; October 3 to October 18 (November 30, December 17).

The December 17 record is for 1910, at Gloucester where a bird of this species was seen by Messrs. Barron Brainerd and J. L. Peters. The November 30 record is for 1919, a bird seen at Ipswich by Mr. Ralph Lawson.

At least three White-crowned Sparrows were singing near my house at Ipswich on May 24, 1913. It was a cold wet day with a sea fog driving by, and this, together with the sad song—*more wet wetter wet che zee*—reminded me very strongly of the Labrador coast.

237 [558] *Zonotrichia albicollis* (Gmel.).

WHITE-THROATED SPARROW; PEABODY-BIRD.

Common transient visitor, occasional summer resident; rare in winter. April 11 to May 30; summer; September 10 to November 14; winter.

The winter records are as follows: January 17, 1905, Nahant, Mr. H. W. Wright; February 21, 1915, and February 5, 1916, Lynn, Mr. A. P. Stubbs; January 24, 1919, Beverly, Miss V. E. Crittenden.

In the summer of 1905, Mr. F. H. Allen¹ found evidence of the breeding of this species in Boxford.

238 [559] *Spizella monticola monticola* (Gmel.).

TREE SPARROW.

Abundant winter visitor. October 7 to April 23.

The numbers of these birds that visit us in winter vary greatly. One of the largest flocks I ever saw was one of at least a hundred and fifty birds feeding on the seeds of the beach-grass at Ipswich on January 6, 1918.

¹ Allen, F. H. Auk, vol. 22, pp. 415, 416, 1905.

239 [560] *Spizella passerina passerina* (Bechst.).

CHIPPING SPARROW; CHIPPY.

Abundant summer resident. (March 24) April 9 to November 12; average date of arrival for ten years, April 7.

Eggs: May 23 to June 26.

Mr. R. C. Robbins reports that an albino Chipping Sparrow was reared at Hamilton in the summer of 1911.

240 [563] *Spizella pusilla pusilla* (Wils.).

FIELD SPARROW.

Common summer resident. March 18 to October 27.

Eggs: May 21 to June 12.

241 [567] *Junco hyemalis hyemalis* (Linn.).

SLATE-COLORED JUNCO; SNOWBIRD.

Abundant transient visitor, not uncommon in winter (summer). September 3 to November 30; winter; March 8 to May 26 (July 26).

The July 26 record is for 1913, at Manchester, of a bird seen by Miss E. D. Boardman. On September 2, 1905, Mr. F. H. Allen¹ saw a bird in Boxford in juvenal plumage which suggests that it was reared there. For the latter half of May I have a record for May 16, 1915, one for May 18, 1919, and one for May 26, 1918. On September 10, 1916, Juncos were abundant at Ipswich, evident migrants.

242 [581] *Melospiza melodia melodia* (Wils.).

SONG SPARROW.

Abundant summer resident, a few winter. March 10 to November 4; winter; average date of arrival for five years, March 10.

Eggs: May 10 to July 29.

The abundance of the Song Sparrow during the migrations along the coast-

¹ Allen, F. H. *Auk*, vol. 23, p. 103, 1906.

line is at times very striking. On March 30, 1919, in a walk during a snow storm from Rockport along the shore to the south as far as Gloucester, I found these birds in great numbers just back of the rocks and beaches. On March 19, 1905, following a warm day, during which very few Song Sparrows were to be seen, they became abundant at Ipswich. I counted fifty-eight flying out from a single clump of bushes.

Perhaps no other bird has a greater variation in its songs. The birds of each locality differ. If one is familiar with the songs of the residents about one's place, he is struck with the difference in the songs of birds a few miles away. No two birds sing exactly alike, and one bird may sing several songs. During the migrations the variety in the songs is very striking. Some songs are clear, delightful, and varied, others are short and far from musical. Every summer since 1908, I have listened to the simple song of a bird near my house at Ipswich that I have called the Russian Song Sparrow, as he sings *twice twice sweetsky*. Either the same bird has returned every year or a descendant or friend has acquired his song. On June 6, 1908, I heard and saw at Ipswich a Song Sparrow singing the clear, sweet song of the Field Sparrow with an ending which suggested that of his own species. I found him again on June 26 in the same place performing as before. On several occasions he sang the ordinary song of the Song Sparrow with variations.

The courtship of the Song Sparrow is true to the bird's name, for it is one chiefly of song. The song contests of the males in the early spring are one of the most delightful features of the country-side at that season. These peaceful contests sometimes begin with great display of wrath by one bird chasing another in the air on quivering wings, dodging about through the bushes and circling irregularly but never far, I suspect, from the waiting female. Each bird emits sharp mouse-like chips. Notwithstanding the rapid vibration of their wings, their speed is not great, and one never catches up with the other. Soon one bursts into song and is answered by the other, sometimes from a perch, sometimes in the air. I have seen a Song Sparrow on the top of a small spruce flutter or whirl his wings for several seconds before he burst into a song which was shorter than the wing vibrations. On another occasion I saw the flight-song performed with the song left out: the bird flew up and down on a curve on rapidly fluttering wings, but no sound escaped its bill.

243 [583] *Melospiza lincolni lincolni* (Aud.).

LINCOLN'S SPARROW.

Uncommon transient visitor. May 13 to May 31; August 30 to October 14.

244 [584] *Melospiza georgiana* (Lath.).

SWAMP SPARROW.

Abundant summer resident, a few winter. (March 13) April 2 to November 16 (winter).

Eggs: May 17 to July 14.

The March 13 record was of a bird seen at Marblehead, in 1909, by Mr. H. W. Wright. Messrs. A. P. Stubbs and G. M. Bubier have found it wintering several times at Hall's Brook, Lynn.

Figure 9 of Plate 46 in volume 2 of Baird, Brewer and Ridgway's History of North American Land Birds, is labelled "*Passerculus Caboti*. Nahant, 62373." There is no mention of this species in the text. Elliott Coues¹ called attention to this fact and states that the specimen which was in the Smithsonian Institute was a juvenal Swamp Sparrow. This erroneous species was overlooked in the original Memoir.

245 [585] *Passerella iliaca iliaca* (Merrem).

FOX SPARROW.

Abundant transient visitor (winter). March 12 to April 28 (May 2); October 14 to November 16 (December, January); average date of spring arrival for five years, March 20.

I have to record four December dates as follows: December 6, 1908, Ipswich; December 26, 1908, Marblehead; December 23, 1910, Magnolia; December 8, 1918, Newburyport; and one January date: January 15, 1911, Ipswich.

Illustrative of the abundance of this bird at times is the count made by Mr. H. W. Wright at Nahant on April 10, 1907, namely of two hundred birds. Sometimes their songs seem almost as full as on the breeding-grounds. They often sing in cold, foggy, easterly weather, conditions which probably remind them of Labrador.

246 [587] *Pipilo erythrophthalmus erythrophthalmus* (Linn.).

TOWHEE; CHEWINK.

Common summer resident. April 21 to October 17 (December 4); average date of arrival for nine years, April 27.

Eggs: May 17 to June.

¹ Coues, E. Bull. Nuttall Ornith. Club, vol. 8, p. 58, 1883.

The average for nine years given above was made at Lynn from 1905 to 1913 inclusive, by Mr. A. P. Stubbs; the limits were April 21, 1905, and May 2, 1910.

247 [593] *Cardinalis cardinalis cardinalis* (Linn.).

CARDINAL.

Accidental visitor from the South.

Damsell¹ records that one was shot at True's Pond, Amesbury, on September 27, 1899.

From August 7 to November 15, 1905, Mr. A. P. Stubbs observed from time to time a Cardinal at Swampscott. From September 15 to November 9 the bird was not seen. Early in September he was molting and his tail was ragged. On November 9, the plumage was in good condition.

On January 31, 1909, I found a Cardinal in the thick spruces close to the farmhouse on Castle Hill, Ipswich, and I was told he had been there three weeks. I found him in the same place from time to time up to April 4. This bird was reported by Mr. Frank A. Brown.²

248 [595] *Zamelodia ludoviciana* (Linn.).

ROSE-BREADED GROSBEAK.

Common summer resident. May 8 to September 26.

249 [598] *Passerina cyanea* (Linn.).

INDIGO BUNTING; INDIGO-BIRD.

Not uncommon summer resident. May 9 to October 2.

Eggs: June 2 to June 22.

250 [604] *Spiza americana* (Gmel.).

DICKCISSEL; BLACK-THROATED BUNTING.

Formerly not uncommon summer resident, now accidental from the West.

The last record for this bird for the County is that for 1879, previously reported.

¹ Allen, G. M. *Auk*, vol. 30, p. 27, 1913.

² Brown, F. A. *Auk*, vol. 26, pp. 194, 195, 1909; also (identical note) *Bird-Lore*, vol. 11, pp. 85, 86, 1909.

251 [605] *Calamospiza melanocorys* Stejn.

LARK BUNTING.

Accidental visitor from the West.

The record of 1877 remains unique.

252 [607] *Piranga ludoviciana* (Wils.).

WESTERN TANAGER; LOUISIANA TANAGER.

Accidental visitor from the West.

The record of 1878 remains unique.

253 [608] *Piranga erythromelas* Vieill.

SCARLET TANAGER.

Not uncommon summer resident. (April 30) May 10 to October 16.

Eggs: June 5.

254 [610] *Piranga rubra* (Linn.).

SUMMER TANAGER.

Accidental visitor from the South.

In addition to the four previous records, Miss Viola E. Crittenden of Beverly, reports the following from that locality: "April 23, 1916, Easter Sunday. We had a cold storm, and the bird beat against the window of a house on Essex St. It was brought in but soon died. School children had it mounted and refused to part with it when the Salem Museum offered them inducements."

255 [611] *Progne subis* (Linn.).

PURPLE MARTIN.

Rare and local summer resident. March 31 to September 16.

Eggs: June 18.

The early record of March 31 was for 1917, reported to me by Mr. Freeman B. Currier, of Newburyport. He writes: "A male, March 31, 1917, was around

one of my bird-houses for three hours. Saw it twice the next day on bird-house and around my garden."

This beautiful, useful, and interesting bird is now rarely seen in Essex County. A martin-house erected for their special use at my place at Ipswich, has never been even inspected by this bird as far as I know. A single pair of Tree Swallows have occupied one apartment every summer.

Mr. R. B. Mackintosh wrote me under date of June 30, 1919, that "Mr. Bushby reports that Purple Martins built at his camp in Rowley last year and his sister-in-law reports the same birds built there again this year and had young three weeks ago." Mr. Forbush reports that there are now no colonies in Essex County.

256 [612] *Petrochelidon lunifrons lunifrons* (Say).

CLIFF SWALLOW; EAVE SWALLOW.

Uncommon summer resident, locally. April 25 to September 14.

Eggs: May 25 to July 20.

This bird has rapidly decreased in numbers in the last fifteen years in the County. The history of the bird on my own barn in Ipswich, to which I endeavored to attract them by artificial nests as related in the original Memoir, is as follows: I took down the sham nests in 1904. In 1905, Cliff Swallows built and occupied one nest; in 1906, there were four nests; in 1908, eight nests; in 1910, only one nest; in 1913, one nest, and none thereafter. No English Sparrows interfered with them.

The barn of my neighbor, Dr. E. A. Crockett, where I counted 58 nests, in 1903, as reported in the original Memoir, held 50 nests in 1905. One of these was occupied by an English Sparrow who must have driven out the owners, for the nests are all destroyed by storms in winter and rebuilt every spring. In 1906, there were 30 nests and two were occupied by English Sparrows. In 1909, the barn was moved back from the road about a hundred yards. The Eave Swallows built their nests in small numbers, but many were occupied by English Sparrows that had increased greatly. In 1910, the Eave Swallows deserted the place and the noisy English Sparrow held full sway.

At Great Neck, Ipswich, large numbers of Eave Swallows used to nest under the eaves of an ice-house near Clark's Pond. In 1914, I counted 68 nests there. In 1919, there were no birds to be seen.

257 [613] *Hirundo erythrogastra* Bodd.

BARN SWALLOW.

Abundant summer resident. April 10 to September 23; average date of arrival for five years, May 2.

Eggs: May 24 to July 12.

In five years of the last fifteen, I have a record for the arrival of this bird earlier than April 28; the earliest date, April 10, was in 1909.

An interesting reference to the Barn Swallow in Essex County, overlooked in the original Memoir, is as follows: "The natural breeding places of these birds, before the settlement of the country, were caves, overhanging rocky cliffs, and similar localities. Swallow Cave, at Nahant, was once a favorite place of resort."¹

Although the Barn Swallow is still abundant in the County, its numbers are decreasing, as already stated, owing to the decreasing numbers of old-fashioned barns with their inviting open windows and doors. In June, 1908, I counted fifty-five nests of this bird in a large barn at Ipswich, nearly all of which were occupied. At times the air was filled with the music of their beautiful song, which they delight to give in chorus; at times all was silent except for the twittering of the young in the nests begging to be fed. In the acre of "forest" on my place at Ipswich this bird roosts to the number of fifty or more, and in July their early morning chorus is very delightful. The larger roosts in the groves of the sand dunes I have described at length elsewhere.²

The courtship song, besides being given on the wing in rapid flight or with fluttering decurved wings, is also given from a perch. A group of forty or fifty of these birds all singing together on the sunny side of a barn roof is very pleasing.

Like other swallows and many other birds, Barn Swallows are fond of play. They like to chase each other and I have seen one chasing a Sea Swallow or Common Tern each twisting and turning with much grace and agility. Like the Tree Swallow they are fond of dipping into the smooth surface of a pond, sometimes nearly if not quite submerging themselves.

¹ Baird, Brewer and Ridgway. History of North American Birds; Land Birds, vol. 1, p. 342, 1874.

² Townsend, C. W. Sand Dunes and Salt Marshes, p. 111-122, 1913.

258 [614] *Iridoprocne bicolor* (Vieill.).

TREE SWALLOW; WHITE-BELLIED SWALLOW; "MARTIN."

Abundant summer resident. March 15 to November 2; average date of arrival for ten years, March 28.

Eggs: May 14 to June 15.

Although I had much to say of this interesting bird in the original Memoir I have since made many notes about it, a few of which, only, can be given.

In courtship, besides the song previously described, the birds sometimes fly upward on vigorously decurved wings. The female at such times makes a gritting sound very much like the gritting song of the Bank Swallow.

On April 19, 1909, I discovered two male Tree Swallows fighting in the grass at Ipswich, rolling over each other and pecking at each other's heads. At last they broke apart and flew up into the air still fighting. Here others flew about and between them as if trying to separate them.

In 1914, I had fifteen bird-boxes on my farm at Ipswich occupied by this bird.

259 [616] *Riparia riparia* (Linn.).

BANK SWALLOW.

Common summer resident. May 2 to September 16 (November 2); average date of arrival for five years, May 4.

Eggs: June 4 to June 17.

The following is from the notes of Mr. C. J. Maynard for June 11 to 18, 1868, at Ipswich, in referring to this bird:

"There were 'thousands' breeding in the sea walls¹ that were composed of sand. The burrows extended in from 18 to 36 inches. Nests composed of grass lined with gulls' feathers. The eggs were from 4 to 6, generally 5 in a nest. The greater part were fresh, although a few were somewhat advanced in incubation. In some cases the nests were only just begun. Out of four or five birds captured in the nests, two proved to be males on dissection."

The Bank Swallow has decreased in numbers since this time and I have never found more than a half-dozen holes in the wind cuttings in the Ipswich dunes.

I have wondered whether the gritting note which has sometimes a gentle

¹ About 15 feet high, about 500 yards southeast of Lighthouse.—C. J. M.

rattling quality may not be in the nature of a song. When disturbed at the nesting-holes the birds fly about uttering a complaining or scolding double note, the first loud and rasping.

*260 [617] *Stelgidopteryx serripennis* (Aud.).

ROUGH-WINGED SWALLOW.

For this addition to the County I have two good records. Dr. John B. May,¹ with Mr. Charles Floyd and the late Mr. Barron Brainerd, saw two birds of this species at Clark's Pond on May 21, 1916. He says of them: "The even brown of the birds' backs first attracted Mr. Brainerd's attention, he being familiar with the birds at Williamstown, Mass., at the opposite end of the State. The wings of the Bank Swallows are darker than the back, when seen in flight with a good light, while the Rough-wing shows all one shade of brown. As the birds flew over, the brownish throat was also plainly seen, shading off over the breast into the white of the belly, while the white throat of the Bank Swallows was very conspicuous in comparison. The birds hunted together and probably were mated, but no nest was found."

The second record is that of Mr. A. P. Stubbs who on May 27, 1917, watched for some time a Rough-winged Swallow on a telegraph wire at Flax Pond, Lynn.

261 [618] *Bombycilla garrula* (Linn.).

BOHEMIAN WAXWING.

Accidental visitor from the North.

The record of 1877 remains unique.

262 [619] *Bombycilla cedrorum* Vieill.

CEDAR WAXWING; CEDAR-BIRD; "CHERRY-BIRD."

Permanent resident, common in summer, uncommon in winter.

Eggs: May 30 to July.

I have observed the courtship of this bird as follows. Of three birds in the top of a tree one, evidently a male, was very active. He flapped his wings

¹ May, J. B. Bird-Lore, vol. 18, p. 371, 1916.

repeatedly, standing meanwhile on his tip-toes, with crest erected and with mouth opened to its fullest capacity from which issued in quick succession the trilling, hissing notes. The other two birds remained passive and suddenly all three flew off together.

263 [621] *Lanius borealis* Vieill.

NORTHERN SHRIKE; BUTCHER-BIRD.

Not uncommon winter visitor, most common in the autumn. October 14 to May.

On April 3, 1910, at Ipswich, I saw a female Shrike fly with a Chickadee in her bill to an apple tree where she fixed her prey in a crotch by the neck. Here she picked it, making the feathers fly, but, disturbed by my presence, seized the bird again in her bill and departed.

On December 10, 1916, at Ipswich, I saw a Shrike chasing a Myrtle Warbler in irregular circles, mounting higher and higher meanwhile. At last when the warbler was nearly caught it eluded its pursuer by darting diagonally downward and turning sharply near the ground just as the Shrike was upon it. The chase still continued and both birds disappeared behind trees.

A more pleasing observation was one I made on March 31, 1918. A male Northern Shrike was occupied in the pursuit of insects from a station on the top of a hickory at Ipswich. He would fly directly up, turn and double and then descend to his perch with the captured insect. After catching an especially large one he descended into some bushes and sang a medley of notes, some sweet and musical, suggesting the song of a Robin or a Vireo, others harsh and scraping, suggestive of comb-music or the harsh notes of a Vireo or a Catbird. The performance was interesting and often beautiful. Dr. J. C. Phillips found a Shrike in full song at Wenham on February 12, 1917.

264 [622e] *Lanius ludovicianus migrans* W. Palmer.

MIGRANT SHRIKE.

Rare transient visitor. March 28 to April 17; August 21 to November.

In addition to the six records given in the original Memoir I have the following: Mr. G. M. Bubier saw the bird at Lynn on March 31 and April 6, 1907, March 28, April 2, 3, 17, 1910, and April 7, 1912. Mr. A. P. Stubbs watched a bird at close range at Palmer's Bog, Swampscott, on August 25, 1910, and again at Flax Pond, Lynn, on September 2, 1917. Mr. S. W. Bailey¹ states that he saw

¹ Bailey, S. W. Auk, vol. 34, p. 214, 1917.

a Migrant Shrike a short distance outside of the city limits of Newburyport on August 28, 1915, and again in the same region on August 21, 1916. On October 7, 1917, Mr. A. B. Fowler saw a bird of this species at Plum Island.

265 [624] *Vireosylva olivacea* (Linn.).

RED-EYED VIREO.

Abundant summer resident. May 5 to September 22 (October 4, 6, 14, 26, 27, November 4).

Eggs: May 25 to July 20.

The unusually late dates of October 27 and November 4, record birds seen by me at Ipswich in 1907 and 1917 respectively.

266 [626] *Vireosylva philadelphia* Cassin.

PHILADELPHIA VIREO.

Very rare transient visitor.

I would repeat what I said in the original Memoir that this bird, which breeds over a wide area to the north, is probably less rare than it appears to be. During the spring migrations if one should follow up all songs that appear to be given by Red-eyed Vireos, he might discover a Philadelphia Vireo.

On May 23, 1907, I had an excellent view of a Philadelphia Vireo in an island in the Topsfield Marshes. The smaller size, the distinctly yellow tinge of the entire under parts, and the whitish line over the eye make the recognition of this bird easy. The scolding note is less harsh than that of the Red-eyed species and the song, although very similar, is not so continuous.

267 [627] *Vireosylva gilva gilva* (Vieill.).

WARBLING VIREO.

Common summer resident. May 5 to September 14.

Eggs: July 11.

268 [628] *Lanivireo flavifrons* (Vieill.).

YELLOW-THROATED VIREO.

Common summer resident. May 6 to September 12.

On May 18, 1919, a bird that sang the wild clear song of the Blue-headed Vireo so that there seemed to be no mistake about its identity turned out to be a Yellow-throated Vireo.

269 [629] *Lanivireo solitarius solitarius* (Wils.).

BLUE-HEADED VIREO.

Uncommon summer resident, rather common transient visitor. April 23 to October 10.

Eggs: May 19 to May 21.

While I have heard the Yellow-throated Vireo sing like a Blue-headed Vireo, so also I have heard the latter bird sing like the former.

Twice I have been favored with a sight of the courtship performance. The male puffs out his yellow flank feathers very conspicuously and bobs and bows to the female, very slim in contrast, and sings repeatedly meanwhile with many variations to his song.

On July 9, 1905, Mr. F. H. Allen found this bird at Boxford where it probably was breeding.

270 [631] *Vireo griseus griseus* (Bodd.).

WHITE-EYED VIREO.

Rare summer resident, locally. May 5 to September 29; average date of arrival for nine years, May 15 (A. P. Stubbs).

Eggs: May 22 to June 18.

In addition to the one locality, Swampscott, given for this bird in the original Memoir, I have records from Lynn, Salem, Peabody, and one from the northern part of the County from Amesbury. This last record is one of Mr. B. F. Damsell¹ who records that on July 1, 1890, he shot one at Amesbury.

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

271 [636] **Mniotilta varia** (Linn.).

BLACK AND WHITE WARBLER.

Very common summer resident. April 24 to September 25 (November 11); average date of arrival for seven years, May 3.

Eggs: May 17 to June 18.

As this warbler does not breed in the Ipswich dunes, the presence of two there on August 4, 1910, probably indicated migration.

The November 11 record was of a bird seen at Flax Pond, Lynn, in 1914, by Mr. A. P. Stubbs.

*272 [637] **Protonotaria citrea** (Bodd.).

PROTHONOTARY WARBLER.

Accidental visitor from the South.

An individual of this species, new to the list, was seen near the Pine Swamp Road, Ipswich, on September 13, 1913, by Dr. W. M. Tyler.

A female Prothonotary Warbler was picked up dead after it had killed itself on one of the windows of the Beverly High School on May 26, 1914. It was given by Miss Viola E. Crittenden to Mr. C. J. Maynard.

273 [639] **Helmitheros vermivorus** (Gmel.).

WORM-EATING WARBLER.

Accidental visitor from the South.

The 1902 record remains unique.

*274 [641] **Vermivora pinus** (Linn.).

BLUE-WINGED WARBLER.

Accidental visitor from the South.

I am fortunate in being able to add this warbler to the list. A single bird was watched by Miss E. D. Boardman on September 1, 1913, and again on September 15, bathing and on the ground in front of her bird-bath at Manchester. The bird-bath is forty feet from the window of her house from which she watched.

275 [642] *Vermivora chrysoptera* (Linn.).

GOLDEN-WINGED WARBLER.

Not uncommon summer resident, locally. May 3 to September 1 (October 8).

While the common song of this bird is a lazily given *tsee, tsee, tsee, tsee*, it occasionally or rarely sings *sit, sit, sit, sit, tsllll*, the last a drawing-in of the breath resembling the explosive trill of a Parula Warbler.

On July 17, 1907, I shot a female Golden-winged Warbler at Heartbreak Hill, Ipswich, with plumage so worn and faded that it suggested a Brewster's Warbler with its white throat. Three yellow breast-feathers suggested Blue-winged Warbler blood.¹

Mr. Ralph Lawson has told me that the late Mrs. William Perry, who was a very careful observer, had several excellent opportunities to observe an example of the so-called Brewster's Warbler at North Andover in the spring of 1907. Brewster's Warbler, *Vermivora leucobronchialis* is now no longer thought of as a possible species, but is considered a hybrid of the Golden-winged and the Blue-winged Warblers, or as a color-phase of these species.

276 [645] *Vermivora rubricapilla rubricapilla* (Wils.).

NASHVILLE WARBLER.

Not uncommon summer resident, common transient visitor. May 2 to October 14 (January).

Eggs: May 21 to June 21.

277 [646] *Vermivora celata celata* (Say).

ORANGE-CROWNED WARBLER.

Very rare transient or accidental visitor.

There has been no other record than the one for 1875.

¹ Townsend, C. W. "On the Status of Brewster's Warbler." *Auk*, vol. 25, p. 65-68, 1908.

278 [647] *Vermivora peregrina* (Wils.).

TENNESSEE WARBLER.

Common transient visitor. May 17 to June 3; September 5 to October 1.

From a "very rare" migrant, with only three records for the County, this bird has become actually common in the last five years. One may see several in the course of a day in the latter part of May. Mr. H. W. Wright saw eight at Nahant on May 26, 1917.

279 [648a] *Compsothlypis americana usneæ* Brewst.

NORTHERN PARULA WARBLER.

Abundant transient visitor, rare summer resident. April 26 to June 4; June, July; September 2 to October 20 (November 6 to 10).

The unusual November dates are of a bird seen at Manchester by Miss E. D. Boardman.

280 [650] *Dendroica tigrina* (Gmel.).

CAPE MAY WARBLER.

Not uncommon transient visitor. May 7 to May 28; August 18 to September 29.

In the original Memoir I was able to collect only three records for the County. On May 18, 1905, a male Cape May Warbler killed itself against Thatcher's Island Lighthouse and was sent to me. On May 10, 1906, Mr. R. B. Mackintosh recorded this species at Peabody and in 1910, and every year since the species has been not uncommon in both the spring and the fall.

281 [652] *Dendroica æstiva æstiva* (Gmel.).

YELLOW WARBLER.

Abundant summer resident. April 30 to September 26; average date of arrival for six years, May 3 to 4.

Eggs: May 27 to June 13.

It is probable that most of the Yellow Warblers seen here in September are migrants passing through from the North. I spent the month of August, 1913,

in camp in a grove in the Ipswich dunes. This species which bred in the grove left it by August 8.

I have watched two flying up and fighting in the air and then tumbling down together in the tall grass. On another occasion four birds chased each other in and out among the branches of oaks and birches, for the most part silently, occasionally emitting sharp chips or all scolding together and snapping their bills.

282 [654] *Dendroica cærulescens cærulescens* (Gmel.).

BLACK-THROATED BLUE WARBLER.

Common transient visitor. May 4 to June 1; September 10 to October 8.

283 [655] *Dendroica coronata* (Linn.).

MYRTLE WARBLER; YELLOW-RUMPED WARBLER.

Abundant transient visitor, common winter resident locally. August 19 to May 21; average dates of migration, April 17 to May 15; September 10 to November 1.

In the original Memoir I have recorded this bird as wintering in Magnolia in 1878, and also that it wintered at Swampscott and Ipswich. The following are some records for another part of the County:¹ "At East Salisbury, Mr. Damsell shot one on January 23, 1884, and in several of the succeeding years he records it at Amesbury, namely, February 10, 1887, a flock of five or ten; December 17, 1887; December 28, 1891; December 30, 1893; February 10, 1894; January 1, 1901."

The unusually severe winter of 1917-18 seemed to play havoc with the wintering Myrtle Warblers at Ipswich. On January 6, after a long spell of cold,—the thermometer registering on one occasion 22° below zero Fahrenheit,—I could find only six of this species. After that I did not see any until May 5, a late date for the spring migrants. The year before I had seen fifty Myrtle Warblers in the Ipswich dunes on January 7. Dr. W. M. Tyler, who stayed at Ipswich from April 21 to 24, 1918, saw the first migrants on April 24 in the woods inland.

Much farther south in the State, at Wareham, where these birds are common in the winter, they also disappeared in the early months of 1918. Mr. C. A. Robbins wrote that he found only one in January, none in February, none in March, and none in April until the 16th when the migrants began to arrive.

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

The winter of 1918-19 was unusually mild, with scarcely any snow, and myrtle berries were abundant, yet these warblers were much less common than in normal winters.

These observed facts might show that the very cold weather killed off the wintering birds so that there were but few of the northern-wintering clan to occupy the ground in the succeeding favorable winter. Or it might show that the birds were driven south the first winter and many of them preferred to go south the next winter.

It seems to me very possible that these northern-wintering birds may in time develop certain characters by which they can be distinguished from those that winter in the South and that a subspecies is in process of evolution.

In the early part of the winter of 1919-20 Myrtle Warblers were especially abundant.

The feeding habits of the Myrtle Warbler in winter at Ipswich are interesting. Besides feeding on their favorite winter food, the bay-berry or myrtle berry, they are often to be seen hopping on the snow in fields eating the seeds of the grasses and weeds that extend above the surface. They also visit the upper edges of the marshes, hopping about over the windrows of thatch, picking up seeds and perhaps insects and spiders. They also glean the small branches of trees like Kinglets and hover like them on rapidly vibrating wings below a branch to pick off pupæ. They also cling to the bark of the trunk of a tree, resting on the tail like a woodpecker, and hop up and down searching for insects. In the spring they become active fly-catchers and often fly up into the air from the tops of bushes or trees after insect prey.

While still molting and very ragged in appearance, they begin to sing in a feeble way. I have specimens from April 7 to 21 that show molt.

On May 11, 1906, at Wenham, I saw a fine male give a courtship display. The wings were dropped so that the yellow rump became very prominent, and the yellow and black of the sides and breast became very noticeable by reason of the puffing-out of the feathers.

On October 12, 1917, at Ipswich I watched a Myrtle Warbler chasing a Bluebird, flying sometimes above and sometimes below it. Another Bluebird flew near and the warbler transferred its attention to him. It appeared to be an instance of play.

284 [657] *Dendroica magnolia* (Wils.).

MAGNOLIA WARBLER.

Common transient visitor. May 4 to May 31 (June 8); (August 24) September 11 to October 8 (October 28).

The August 24th bird I saw in the Ipswich dunes in 1916.

[658] *Dendroica cerulea* (Wils.). CERULEAN WARBLER.—An erroneous record.

285 [659] *Dendroica pensylvanica* (Linn.).

CHESTNUT-SIDED WARBLER.

Very common summer resident. May 4 to September 17; average date of arrival for seven years, May 10.

Eggs: May 29 to June 15.

286 [660] *Dendroica castanea* (Wils.).

BAY-BREASTED WARBLER.

Not uncommon transient visitor. May 15 to June 3; September 10 to October 6.

From a rare transient visitor this species has become not uncommon in the last five years.

287 [661] *Dendroica striata* (J. R. Forst.).

BLACK-POLL WARBLER.

Abundant transient visitor. May 8 to June 13; August 24 to October 31.

The Black-poll Warbler is not rarely to be found with us during the first week of June. I have a record for June 12, 1910, at Salisbury. The June 13 record is of a bird seen at Ipswich, in 1907, by Dr. G. M. Allen.

288 [662] *Dendroica fusca* (Müll.).

BLACKBURNIAN WARBLER.

Rare summer resident, not uncommon transient visitor. May 5 to September 30.

Eggs: June 21.

The earliest record is by Damsell,¹ two males in 1886.

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

289 [667] *Dendroica virens* (Gmel.).

BLACK-THROATED GREEN WARBLER.

Very common summer resident. April 22 to October 27; average date of arrival for eight years, May 4.

Eggs: May 30 to June 17.

290 [671] *Dendroica vigorsii* (Aud.).

PINE WARBLER.

Common summer resident. March 29 to October 31.

Eggs: May 15 to June 16.

291 [672] *Dendroica palmarum palmarum* (Gmel.).

PALM WARBLER; RED-POLL WARBLER.

Rare autumn transient visitor. September 3 to October 12.

Mr. Ralph Hoffmann saw one in Ipswich on October 8, 1919; Dr. W. M. Tyler picked one up dead on the Newburyport turnpike near Ipswich a few days later.

292 [672a] *Dendroica palmarum hypochrysea* Ridgw.

YELLOW PALM WARBLER; YELLOW RED-POLL.

Abundant transient visitor. April 5 to May 16 (May 21); October 1 to October 26 (November 2, 4); average date of arrival in the spring for eight years, April 19.

The November 2 record is of a bird seen at Plum Island, in 1918, by Judge C. F. Jenney and the November 4 record is of a bird seen in Danvers, in 1917, by Dr. W. G. Fanning.

293 [673] *Dendroica discolor* (Vieill.).

PRAIRIE WARBLER.

Common summer resident, locally. May 5 to September 25.

Eggs: May 29 to June 12.

Swampscott has been so built up and its bushy lands destroyed that it is doubtful if the Prairie Warbler still breeds there to any extent. It does breed in the pastures about Salem, but I know of no other breeding locality in the County.

294 [674] *Seiurus aurocapillus* (Linn.).

OVEN-BIRD.

Common summer resident. May 1 to September 14 (October 6); average date of arrival for ten years, May 9.

Eggs: May 17 to July 8.

The October 6 record is of a bird seen by me in the dunes, in 1918.

295 [675] *Seiurus noveboracensis noveboracensis* (Gmel.).

WATER-THRUSH.

Common transient visitor. (April 22) May 10 to 31; August 11 to October 11.

The April 22 record is of a bird seen in Nahant by Mr. C. E. Moulton, in 1918.

*296 [676] *Seiurus motacilla* (Vieill.).

LOUISIANA WATER-THRUSH.

Accidental visitor from the South.

On July 24, 1919, Judge Robert Walcott saw at a distance of ten feet and clearly identified a Louisiana Water-thrush at Marblehead. It was in the Small-pox Pastures, standing on a board across a water-course among alders and other bushes.

[677] *Oporornis formosus* (Wils.). KENTUCKY WARBLER.—On the doubtful list.

297 [678] *Oporornis agilis* (Wils.).

CONNECTICUT WARBLER.

Rare autumnal transient visitor. September 7 to October 2.

“Mr. Damsell’s notes make mention of a specimen shot September 27, and another September 28, 1893, while a third was killed October 2 of the same year.”¹

Mr. George M. Bubier saw a Connecticut Warbler in Lynn on September 25, 1910, and on the same date in 1911; and on the 22d of the same month, in 1912, he picked one up dead by the roadside.

One was reported as seen on May 17, 1919, near the Ipswich River.²

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

² F[owler], A. B. Bull. Essex Co. Ornith. Club, p. 42, 1919.

298 [679] *Oporornis philadelphia* (Wils.).

MOURNING WARBLER.

Very rare transient visitor. May 20 to June 3; September.

I have a number of records for this bird in the latter part of May. On May 31, 1913, one visited my "forest" at Ipswich. The June 3 date is of a bird seen in Ipswich.

In 1912, Mr. Damsell records two instances at Amesbury, both on May 30.

299 [681] *Geothlypis trichas trichas* (Linn.).

MARYLAND YELLOW-THROAT.

Abundant summer resident. May 2 to October 29 (December 5, 6).

Eggs: May 24 to June 13.

The December 5 record was of a bird seen by Mr. George M. Bubier at Nahant, in 1909.

Early in the morning of May 30, 1919, a Maryland Yellow-throat in the plumage of the female, entered my lean-to in my "forest" at Ipswich and flew about distractedly trying to get out, alighting several times on my pillow. At last, when I pushed aside the netting it escaped, uttered a few scolding notes in a tree near by and then, much to my surprise, burst into a very imperfect but quite recognizable song of the species.

300 [683] *Icteria virens virens* (Linn.).

YELLOW-BREADED CHAT.

Not uncommon local summer resident. May 10 to October 27.

Eggs: May 30 to June 18.

From Mr. Damsell's records it is learned that one was shot at Amesbury on September 30, 1882. Dr. Allen remarks: "There is little probability that it had bred in the vicinity but may have wandered from the breeding stations in the southern part of the County."¹

On June 28, 1908, I discovered a Chat in a tangle of bayberries, wild roses, apples, cherries, and sumach on the north side of Sagamore Hill in Ipswich and

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

I believe a pair bred there every year until 1914. In 1913, there appeared to be two pairs. This locality is, I believe, the most northern breeding locality recorded. It is doubtful if it still breeds in Swampscott. It was reported as probably breeding in the Lynn Woods Reservation, in 1918 and in 1919.

The courtship performances of this bird are many and varied. I have seen only the following: in emitting his notes he throws his head up, swells his neck and sways from side to side. Every now and then he flies with fluttering wings, drooping tail, and dragging legs, uttering in rapid succession his mimicing notes. Sometimes he flies from bush to bush in this manner, sometimes he explodes straight up in the air and flops down again. I have heard the sound of fluttering wings after the vocal sounds ceased.

I have heard at various times and years at Ipswich the Chat imitate many other birds so perfectly that I have often been deceived. Many of the notes and sounds in his selection are harsh while others are exceedingly sweet and liquid. The various notes of the Red-winged Blackbird, of the Brown Thrasher and Cat-bird were particular favorites of his. The scream of the Blue Jay, the rough call of the Baltimore Oriole, the whistle of the Bob-white, the alarm-note of the Robin, the *caw* of the Crow and the scolding note of the Maryland Yellow-throat were all easily recognized. On one occasion he imitated the bark of a small dog so perfectly that I looked about for that animal.

*301 [684] *Wilsonia citrina* (Bodd.).

HOODED WARBLER.

Accidental visitor from the South.

I have four records for this unusual warbler new to the list. A male was taken at Pigeon Cove on June 20, 1909, by Mr. Charles R. Lamb. A male was seen on August 30, 1913, at Nahant by Messrs. Geo. M. Bubier and Arthur P. Stubbs. On May 17, 1916, and on June 2, 1917, Mr. C. E. Moulton saw a Hooded Warbler at Nahant.

302 [685] *Wilsonia pusilla pusilla* (Wils.).

WILSON'S WARBLER.

Uncommon transient visitor. May 15 to June 10; September 8 to 27.

In some years this species is almost common. On May 19, 1907, I saw five at Ipswich. I am inclined to think the bird has increased in numbers in the last fifteen years.

303 [686] *Wilsonia canadensis* (Linn.).

CANADIAN WARBLER.

Common transient visitor, rare summer resident. May 16 to June 11; August 16 to September 20.

304 [687] *Setophaga ruticilla* (Linn.).

REDSTART.

Abundant summer resident. May 3 to October 14.

Eggs: May 29 to June 21.

305 [697] *Anthus rubescens* (Tunstall).

PIPIT; TITLARK.

Abundant transient visitor in the autumn, uncommon in spring. March 31 to May 21 (June 8); August 30 to November 20 (December 1, January 4).

The December 1 record is for 1891 by Mr. Damsell.¹ The August 30 record is for 1906, at Ipswich by Mrs. Edmund Bridge. On August 31, 1913, at Ipswich I saw a Pipit. I have made many additions to my spring records for this bird as follows: one was observed at Amesbury by Mr. Damsell on May 9, 1904;¹ April 19, 1905, six seen at Ipswich by Mr. W. S. Townsend; April 30, 1905, fifteen seen at Ipswich by me; May 21, 1905, one at Ipswich; May 3, 1908, two at Ipswich; April 3, 1909, twelve; April 18, 1919, eighteen; May 15, 1910, two,—all seen by me at Ipswich; May 18, 1912, twenty at Ipswich seen by Mr. R. M. Marble; April 4, 1917, one seen at Marblehead by Mr. H. W. Wright.

306 [703] *Mimus polyglottos polyglottos* (Linn.).

MOCKINGBIRD.

Not uncommon visitor from the South.

In the original Memoir I collected seven records of this bird for the County. Four of these birds were shot. In the last fifteen years I have records of at least twenty-five birds seen in the County and only one shot. This would indicate

¹ Allen, G. M. *Auk*, vol. 30, p. 28, 1913.

that the bird is more common as a visitor and that, as it is received more kindly, it stays longer and comes again. It is also to be hoped that it is extending its range and is becoming a permanent resident. The bird has been recorded at all seasons of the year, and it has nested and raised young several times. Mr. F. B. Currier found them nesting at Newburyport, in 1914. Four young grew to full size. A second pair nested the same year. In 1915, two pairs also nested; one in 1916; and two in 1917.

The following are the records of birds for the County I have been able to collect in addition to those recorded in the original Memoir:

Date	Locality	Observer
Nov. 7 and Dec. 16, 1893	Amesbury.	B. F. Damsell.
Spring, 1901	Pigeon Cove.	Mrs. Marshall.
Dec. 20, 1905, to Jan. 19, 1906	Nahant.	Mrs. E. Bridge and H. W. Wright.
Jan. to Apr. 26, 1908	Ipswich.	Miss S. E. Lakeman.
June, 1908	Newburyport.	S. W. Bailey.
Sept. 20, 21, 1910	Pigeon Cove.	C. R. Lamb.
Nov., 1910 (later killed by a cat)	Danvers.	Mrs. E. S. Fowler.
Aug. 26 to 28, 1911 (two)	Ipswich.	C. W. Townsend.
Feb. 9, 1912	W. Gloucester.	J. Kittredge, Jr.
Oct. 19, 1913	Hamilton.	C. J. Maynard.
Summer, 1914 (three)	Newburyport.	F. B. Currier.
Sept. 6 to 8, 1914	Ipswich.	C. W. Townsend.
Winter, 1914-15	Newburyport.	J. P. O'Neil.
Summer, 1915 (two families)	Newburyport.	F. B. Currier.
Winter, 1915-16	Newburyport.	F. B. Currier.
Aug. 28, 1916	Ipswich.	C. W. Townsend.
Summer, 1916	Newburyport.	F. B. Currier.
Winter, 1916-17	Newburyport.	F. B. Currier.
Jan. 17 to May 9, 1917	Pigeon Cove.	Mrs. Babson.
Summer, 1917 (two pairs)	Newburyport.	F. B. Currier.
July 11, 1917	Newburyport.	F. P. Woodbury.
Winter, 1917-18	Newburyport.	F. B. Currier.
Entire year, 1918 (found injured and given to Pea- body Acad. Sci.)	Danvers.	A. B. Fowler.
Nov. 15, 1918	Rowley.	J. D. Sornborger.
Spring, 1919 (two, one taken)	Danvers.	A. B. Fowler.

Mr. S. Waldo Bailey¹ reported a Mockingbird that remained for nearly a week in Newburyport and sang exceptionally well. He was able to recognize the songs or notes of twenty-nine species of birds in its imitations.

The courtship display of the white in the wings and tail of the Mockingbird is at its best when the bird flies up a few feet in the air with wings and tail spread. It also flies slowly in full song from perch to perch.

¹ Bailey, S. W. Auk, vol. 28, pp. 372, 373, 1911.

307 [704] *Dumetella carolinensis* (Linn.).

CATBIRD.

Very common summer resident. April 27 to October 27.

Eggs: May 23 to June 20.

The Catbird is not as good a mimic as the Mockingbird, but I find in my notes that I have recorded the following birds that he has imitated: Yellow-legs, Kingfisher, Bob-white, Flicker, Blue Jay, Goldfinch, Barn Swallow, Wood Thrush, Veery, and Robin.

The song is sometimes given in flight. He frequently flirts his tail and displays on rear view the chestnut-red lower tail-coverts.

308 [705] *Toxostoma rufum* (Linn.).

BROWN THRASHER; BROWN THRUSH.

Common summer resident (winter). (March 30, April 6) April 30 to October 26 (November 14, February and March).

The March 30 record is of a bird seen at Howe's Landing, Danvers, in 1918, by Mr. Ralph Lawson. A bird was seen at Swampscott on November 14, 1918, by Mr. Mosley. At Methuen, during February and March, 1919, a Brown Thrasher was observed by Mrs. F. Schneider.

The continuous sweet and varied song of this bird, full of surprises, compares very favorably with that of the Mockingbird. Unlike the song of that bird it rarely contains harsh and disagreeable notes.

309 [718] *Thryothorus ludovicianus ludovicianus* (Lath.).

CAROLINA WREN.

Accidental visitor from the South and very rare summer resident.

In the original Memoir there is only one record for this bird from the County, and that bird was shot at once. In the last fifteen years a number of birds have visited the County, one pair at least has bred, they have been seen by numerous bird-lovers, and none as far as I know has been molested.

In 1908 and 1909, there was an invasion of Carolina Wrens into New England and I was able to collect a considerable number of instances for all of the States.¹

¹ Townsend, C. W. Auk, vol. 26, p. 263-269, 1909.

At Ipswich, Mr. A. C. Bent and I found a Carolina Wren on February 7, 1909, in a spruce thicket on Castle Hill. It stayed there until April. At Swampscott, Mr. A. P. Stubbs observed a Carolina Wren from March 30 to August 4, 1909. Miss Viola E. Crittenden,¹ on March 9, 1913, discovered a Carolina Wren at Beverly in brush-piles near a brook; it was in full song. On March 30 a female appeared. They raised two broods of three and two birds respectively.

The courtship performances of loud and varied songs, puffed-out feathers, erected tail and bobbing and courtesies make this bird a most attractive companion. Would that he would remain a permanent resident!

310 [721] *Troglodytes aëdon aëdon* Vieill.

HOUSE WREN.

Uncommon and local summer resident. May 8 to September 25.

Eggs: June 5.

I am afraid that the House Wren is not fond of Essex County. I have done all I could to tempt him to my place at Ipswich by erecting houses with entrance-holes so small that only he could enter, but so far without any success. I have nothing to add to the statements in the original Memoir.

311 [722] *Nannus hiemalis hiemalis* (Vieill.).

WINTER WREN.

Uncommon transient visitor, very rare summer resident; rarely winters. April 4 to May 11 (June); September 2 to October 19 (winter).

Mr. A. P. Stubbs found the Winter Wren in Oakland's Swamp, Swampscott, on February 11, 1911, and at North Saugus on March 19, 1913. From November 22, 1915, to March 26, 1916, he found a single bird wintering at Hall's Brook in Lynn. One was reported at Ipswich on February 15, 1912, by Miss Lakeman.

312 [724] *Cistothorus stellaris* (Naum.).

SHORT-BILLED MARSH WREN.

Common summer resident, locally. May 6 to September 18.

¹ Crittenden, Miss V. E. Bird-Lore, vol. 15, pp. 222, 223, 1913.

313 [725] *Telmatodytes palustris palustris* (Wils.).

LONG-BILLED MARSH WREN.

Abundant summer resident, locally. May 14 to October 5 (November 5).

Eggs: June 5 to August.

314 [726] *Certhia familiaris americana* (Bonap.).

BROWN CREEPER.

Permanent resident, very rare in summer, uncommon in winter; common transient visitor. September 13 to May 1; summer.

Eggs: May 16.

The courtship song of this bird is seldom mentioned. It is loud and clear and sweet with only a few fine notes that suggest the ordinary call-notes. I have heard it repeated four times a minute and have written it down *seec-a-wit, wit*. The last note comes after a slight pause and appears to be an afterthought.

315 [727] *Sitta carolinensis carolinensis* Lath.

WHITE-BREASTED NUTHATCH.

Permanent resident, rare in summer, common in autumn; uncommon in spring and winter.

Eggs: April 3 to May.

The courtship song is a repetition of short clear notes which suggest a miniature Flicker.

316 [728] *Sitta canadensis* Linn.

RED-BREASTED NUTHATCH.

Irregular and at times abundant autumn transient visitor, less common in winter and spring; rare summer resident. August 14 to May 16.

Eggs: May 23.

The courtship song may often be heard in the early spring. It consists of a rapid repetition of its short tin-trumpet calls. Sometimes the song is given from a perch and the wings are slightly open. In a March snow-storm at Ipswich I

heard this given at the rate of one hundred notes a minute. The bird was apparently circling above me out of sight in the falling snow. At last I saw him descend and alight in a maple tree where he continued to sing for about half a minute longer.

317 [735] *Penthestes atricapillus atricapillus* (Linn.).

CHICKADEE.

Very common permanent resident, especially common in winter.

Eggs: May 4 to June 21.

The Chickadee is a persistent singer. He may repeat his sweet and simple song from fifteen to twenty-five times a minute. Two whistling, *phwbc*-like notes constitute the regulation song. Sometimes only one note is given and I have occasionally heard a bird extend the song to three notes.

Chickadees have always been common on my place at Ipswich in the winter, but they went elsewhere to breed until the summer of 1917 when I found a pair with young in one of my nesting boxes in my forest. I had made especial efforts that winter to keep them on the place by feeding. Since then a pair and perhaps two have nested every summer. In the summer of 1917 for the first time I had a considerable visitation of gypsy-moth caterpillars in the "forest" and the egg-clusters were common in the fall. During the winter Chickadees and doubtless other birds cleaned them up and I have never been obliged to spray the trees or to creosote eggs.

318 [740a] *Penthestes hudsonicus littoralis* (H. Bryant).

ACADIAN CHICKADEE.

Accidental visitor from the North.

In the original Memoir were two records of this bird. On November 12, 1911, Mr. C. J. Maynard and Mr. R. C. Robbins observed an Acadian Chickadee in some spruces on Castle Hill, Ipswich. On January 28, 1912, I found him in the same place and again on March 3 and 10. On October 29, 1913, Dr. John C. Phillips and Mr. Outram Bangs discovered three at Wenham. On December 13, Mrs. Edmund Bridge found three on Castle Hill, Ipswich, and on January 11, 1914, Mr. F. H. Allen and myself came upon the same birds busily at work with eight Chickadees gleaning the small branches in a thicket of larches.

*319 [740b] *Penthestes hudsonicus nigricans* C. W. Townsend.

LABRADOR CHICKADEE.

Accidental visitor from the North.

Although this race has not yet been recognized by the American Ornithologists' Union, I have taken the liberty of introducing it here.

On July 23, 1915, at the head of Shekatika Inlet in Canadian Labrador I collected the type-specimen of this race to which I gave the subspecific name *nigricans*. I described it in "The Auk"¹ and remarked that "the short, stout bill and dark back almost devoid of brown tint as well as the absence of a strong brown tint on the sides make this a well marked subspecies." There the matter rested until a little over a year later, when, in the fall of 1916, there appeared an invasion of this Labrador form of Hudsonian Chickadee throughout New England and even into New York and New Jersey. I was indeed fortunate in having this race return my visit and confirm the truth of the discovery!²

On November 5, 1916, at Castle Hill, Ipswich, I found three Hudsonian Chickadees which seemed to me to belong to the Labrador race. At the first opportunity, which was on December 10, I collected two of these birds whose numbers had then reached seven. These two were plainly the Labrador Chickadee. Later I collected two more at Ipswich, one at Belmont, and one at Arlington, and had five others sent me taken at Harvard, Lexington, Belmont, Staten Island, N. Y., and Plainfield, N. J. All were of the *nigricans* type. The migration was a large and extensive one as a reference to the articles quoted will show. I saw these birds at Ipswich as late as March 11, 1917.

In the field the Labrador Chickadee is distinguished from the Acadian Chickadee by being distinctly dusky instead of brown on the back. The mouse-colored cap is generally clearly differentiated from the back which is not so dark and is generally a noticeable field-mark. It appears to be a more silent bird and more secretive in its ways, whereas the Acadian Chickadee, like our common Black-capped Chickadee, is very tame and familiar.

¹ Townsend, C. W. Auk, vol. 33, p. 74, 1916.

² Townsend, C. W. "The Labrador Chickadee in a southward migration," Auk, vol. 34, p. 160-163, 1917.

Wright, H. W. "Labrador Chickadee in Boston and vicinity in the fall of 1916," Auk, vol. 34, p. 164-170, 1917. "Labrador Chickadee in its return flight," Auk, vol. 35, p. 37-40, 1918.

320 [748] *Regulus satrapa satrapa* Licht.

GOLDEN-CROWNED KINGLET.

Abundant transient visitor, common in winter, very rare in summer. September 16 to May 24 (summer).

The May 24 record is of a bird found singing in Lynn in 1907, by Mr. H. W. Wright.

The song is far inferior to that of the Ruby-crowned Kinglet and suggests a feeble and languid Black-poll Warbler.

321 [749] *Regulus calendula calendula* (Linn.).

RUBY-CROWNED KINGLET.

Common transient visitor. April 7 to May 28; September 17 to November 26.

I have three November records for the County. The November 26 record is for 1885, by Mr. Damsell¹ at Amesbury.

The courtship song of this bird heard on the breeding-grounds in Newfoundland and Labrador is alone worth the long journey. It is there heard at its best and is given with an ecstasy rarely attained in this part of the world during the migrations. Songs in endless variations follow each other with hardly any pauses from these tiny singers in the spruce forests. On one occasion I watched one singing within six feet, and it was evident that he was at the same time making a display of his ruby crown.

322 [751] *Polioptila cærulea cærulea* (Linn.).

BLUE-GRAY GNATCATCHER.

Accidental visitor from the South.

In addition to the two records in the original Memoir, I have three others, viz.: one watched from a distance of fifteen feet in a garden in Salem in May, 1897, by Miss Annie L. Warner; one seen in the Ipswich dunes on August 24, 1912, by Mrs. Lidian E. Bridge² and Miss E. D. Boardman; one seen at Ipswich on September 1, 1919, by Mr. C. B. Floyd.

¹ Allen, G. M. Auk, vol. 30, p. 28, 1913.

² Bridge, Mrs. L. E. Auk, vol. 29, p. 546, 1912.

323 [755] *Hylocichla mustelina* (Gmel.).

WOOD THRUSH.

Common summer resident. May 4 to September 16; average date of arrival for sixteen years, May 10.

Eggs: May 25 to June 15.

324 [756] *Hylocichla fuscescens fuscescens* (Steph.).

VEERY; WILSON'S THRUSH.

Abundant summer resident. May 1 to October 6.

Eggs: May 20 to June 30.

325 [757] *Hylocichla aliciae aliciae* (Baird).

GRAY-CHEEKED THRUSH.

Common transient visitor. May 10 to May 30 (June 18); September 10 to October 5.

326 [757a] *Hylocichla aliciae bicknelli* Ridgw.

BICKNELL'S THRUSH.

Not uncommon transient visitor. May; September 18 to October.

The relative abundance of this and the Gray-cheeked Thrush cannot be determined without the gun, as the two cannot be distinguished with certainty except by measurements.

327 [758a] *Hylocichla ustulata swainsoni* (Tschudi).

OLIVE-BACKED THRUSH.

Common transient visitor. May 7 to June; September 10 to October 6.

328 [759b] *Hylocichla guttata pallasii* (Cab.).

HERMIT THRUSH.

Very common transient visitor; not uncommon summer resident locally. April 4 to June 1 (summer); October 4 to November 24 (winter).

Eggs: May 30 to June 14.

Mr. Ralph Lawson observed one at Salem on January 4, 1919.

On November 7, 1915, at Ipswich I watched a Hermit Thrush pick at a woolly-bear caterpillar on the ground till he had beaten off all the hairs after which he swallowed the naked black worm.

Besides the breeding stations of Lynn, North Beverly, Gloucester, Magnolia, Essex, Georgetown, Topsfield, and Boxford, Amesbury must be added on the authority of Mr. Damsell.¹

329 [761] *Planesticus migratorius migratorius* (Linn.).

ROBIN.

Permanent resident, abundant in summer, uncommon in winter; average date of arrival for eight years, March 16.

Eggs: April 27 to July 25.

The nest referred to in the original Memoir that was built over the lintel of my front door at Ipswich was added to and occupied every year from 1901 to 1906 inclusive. It had then attained a height of eight inches. The following winter it was blown down, and a pair of Robins built the next summer in a bush close to the door. Lately they have built over the door again.

A multiple nest was built, presumably by one pair of Robins, in the spring of 1907, on the ledge over the window of a boat-house, on the marsh at Ipswich, and a brood was raised in one of the nests. On the ledge, four nests were built side by side of mud and dried eel-grass. Each of these nests was only about one-third of the height of the usual Robin's nest. Beyond these on the ledge was a fifth nest, represented by a slight cup-shaped depression, while beyond this was a sixth represented by but a small amount of mud, not shaped, and covered with eel-grass alone.²

The Robin is a beautiful singer; his familiar notes are full of cheer and hope, but there is a great variation in the excellence of the performance. I have known two Robins who utterly failed: one sang a hoarse and squeaky song while another, that has nested on my place at Ipswich for the last two years, sings so poorly that I was at first unable to recognize the origin. Two notes, *wee you*, repeated three to five times, constitute his song.

In the summer of 1915, Robins began to roost in my "forest" at Ipswich—the acre of native trees, most of them set out as seedlings in 1900—and they have continued to roost there much to my delight every year since. I have never

¹ Allen, G. M. *Auk*, vol. 30, p. 29, 1913.

² Townsend, C. W. *Journ. Maine Ornith. Soc.*, vol. 11, pp. 30, 31, 1909.

counted them but they must number three or four hundred. They roost there from May to October. During the early part of the season the morning song is of great volume and beauty. By the middle of August nearly all song has ceased, but the conversational notes that arise from the roost and the fluttering sounds as the birds move about are very interesting and occupy as much time as the morning song of previous days. Before entering the roost in the afternoon the Robins generally alight in the near-by fields or in separate trees and suddenly dive from there into the "forest." In stormy weather they sometimes drop down directly from the air.

During April, 1919, I saw a partially albino Robin, apparently a male, about my place. He had white patches on each side of the breast and on the back and middle of his tail. As he flew he displayed a pure white rump and back up to the middle and patches of white on the wings. The head was of normal color.

330 [763] *Ixoreus naevius naevius* (Gmel.).

VARIED THRUSH.

Accidental visitor from the West.

The record of 1864 remains unique.

*331 [765a] *Saxicola œnanthe leucorhoa* (Gmel.).

GREENLAND WHEATEAR.

Accidental visitor from the North.

This addition to the list was seen at Pigeon Cove—a single bird—by Mr. C. R. Lamb¹ on September 17, 1910. Mr. Lamb says: "I flushed the bird four or five times and as it made low flights from me, it spread its tail, which looked short, and the large white spot, on the upper tail-coverts and tail, with broad blackish band at the end of the tail, was particularly conspicuous."

332 [766] *Sialia sialis sialis* (Linn.).

BLUEBIRD.

Common summer resident. February 16 to October 26; average date of arrival for eight years, March 7.

Eggs: April 23 to June 5.

¹ Lamb, C. R. *Auk*, vol. 29, pp. 250, 251, 1912.

Mr. Damsell¹ furnishes two February records for 1902: February 16 and 27. In 1916, the first Bluebird was not seen until April 1.

In active courtship the male Bluebird sings rapturously both in the air and on a perch. In the latter case he elevates and flutters his wings and jumps up and down.

The Bluebird may be added to the list of birds that visit the salt-marsh. I have occasionally seen it in the black-grass zone.

INTRODUCED SPECIES.

1 *Phasianus torquatus* Gmel.

RING PHEASANT.

Common permanent resident.

Notwithstanding the large numbers that are shot every open season, this bird holds its own.

On January 4, 1913, in a westerly gale a dead cock Pheasant was found lying in the gutter of my house at Ipswich. On examination I found that the muscles of the breast were ruptured and the breast-bone badly splintered, but there was no injury to the plumage or skin. It would seem that the bird in very rapid flight urged on by the gale had been instantly killed by striking a chimney.

In courtship the ear-tufts of the cock are erected and the bare skin about the eyes is prominent and very red. He struts before the hens turning in all directions to display his gorgeous plumage, or walks with an exaggerated bobbing motion. Every now and again he flaps his wings almost inaudibly, crows and flaps again with a loud clapping sound.

In flight, like all gallinaceous birds, the Pheasant carries the feet extended under the tail.

A low wire-fence I have put up to keep cotton-tail rabbits out of my vegetable patch, has had a deterring effect on Pheasants also. I am inclined to think these birds are more apt to run into the garden from the fields than to fly in. At one time they were very destructive to my sweet corn, reaching up from the ground and pecking through the envelopes to the kernels.

In the autumn the Pheasant is commonly to be found in the salt-marshes. On October 26, 1913, I started eight of these birds in a small area of salt-marsh at Ipswich. I suppose they eat crabs and snails but have no exact evidence.

¹ Allen, G. M. Auk, vol. 30, p. 29, 1913.

*2 [493] *Sturnus vulgaris* Linn.

STARLING.

Common permanent resident.

Although this was included in the Check-list as a North American bird on the ground that it was accidental in Greenland, it was not until 1890 that it was introduced into the United States in New York City. From there it has spread widely and is increasing with great rapidity.

As far as I can learn, the first Starling to reach Essex County came in 1908. In that year and in three years following, a female was found nesting in Peabody by Mr. R. B. Mackintosh but no male was seen. In December, 1913, a flock of a hundred Starlings was seen in Gloucester by Mr. C. E. Brown and one shot, and another flock was seen by Mr. Brown at Willowdale. A pair bred in Gloucester in 1914, and the young were seen on May 6. On June 14, 1914, I saw a single Starling near my house at Ipswich and a flock of twelve at Wenham on October 3. In 1916, they bred at Ipswich and at Rockport. During June of 1916, I frequently saw a flock of about thirty of these birds flying about my place and alighting in the top of a tall bitternut hickory. Since this date the Starling has rapidly increased and flocks of several hundred or even a thousand are now not uncommon. In the next fifteen years it is probable that they will become a pest to agriculturists and affect considerably the hole-nesting birds.

The short tail and in general a meadowlark build distinguish this species from other black birds.

3 *Passer domesticus* (Linn.).

EUROPEAN HOUSE SPARROW; "ENGLISH SPARROW."

Abundant permanent resident.

I am inclined to think that the English Sparrow has passed the summit of the curve of increase in this part of the country and has begun to decline in numbers, and that he will in time take a more humble place in respect to other birds as is the case in his native country. Our birds are less afraid of him than formerly, and are not so easily imposed on. They are gradually coming back to the suburban towns. On my own place, although I have between twenty-five and thirty bird-boxes, none is ever occupied by English Sparrows and it is rare to see any of this species near my house. The tradition of my use of the gun apparently still exists among these alien pests.

The song, the courtship, and the roosting habits of this bird I have discussed elsewhere at some length.¹

4 *Perdix cinerea* Lath.

EUROPEAN PARTRIDGE.

In 1910 and 1911, Dr. J. C. Phillips released at Wenham about thirty or forty of these birds. They wintered through 1911 and 1912, but after that they were not seen.

APOCRYPHAL SPECIES.

1 *Muscicapa minuta* Wils. SMALL-HEADED FLYCATCHER.

SUMMARY

	1905	1920
Extant species and subspecies	319	332
Introduced species	2	3
	— 321	— 335
Extirpated species	6	6
Extinct species	2	3
	— 329	— 344
Species of doubtful record	16	12
Species of erroneous record	9	9
Apocryphal species	1	1
Total number of species considered	— 355	— 366
Species removed from doubtful to regular list		4
Other species added to regular list		12
Total		— 16
Species dropped from list		2
(One extinct, one no longer considered a valid subspecies)		— 14

¹ Townsend, C. W. Auk, vol. 26, p. 13-19, 1909.

ERRATA

The following misprints in the original Memoir are here corrected:

- | | | | | | | |
|---------|----|-------------------|------|----------------------|-----|---|
| P. 7, | 15 | lines from bottom | read | <i>northeasterly</i> | for | northwesterly. |
| P. 60, | 10 | " | " | " | " | <i>at</i> for <i>by</i> . |
| P. 72, | 16 | " | " | " | " | <i>A. B. Clark</i> for <i>A. H. Clark</i> . |
| P. 120, | 16 | " | " | " | " | <i>low</i> for <i>high</i> . |
| P. 188, | 4 | " | " | top | " | <i>Tecter</i> for <i>Teter</i> . |
| P. 240, | 5 | " | " | bottom | " | <i>Polynices</i> for <i>Polyinices</i> . |

BIBLIOGRAPHY

ALLEN, FRANCIS H.

1905. The White-throated Sparrow breeding in eastern Massachusetts. *Auk*, vol. 22, pp. 415, 416.
1906. Possible breeding of *Junco hyemalis* in Essex County, Mass. *Auk*, vol. 23, p. 103.
1908. *Larus kunlicni* and other northern gulls in the neighborhood of Boston. *Auk*, vol. 25, p. 296-300.

ALLEN, GLOVER M.

1913. An Essex County ornithologist. *Auk*, vol. 30, p. 19-29.

BAILEY, S. WALDO.

1912. Red-headed Woodpecker at Newburyport, Mass. *Auk*, vol. 29, p. 541.
1917. Killdeer (*Oxyechus vociferus vociferus*) in Massachusetts. *Auk*, vol. 34, pp. 207, 208.
1917. Migrant Shrike (*Lanius ludovicianus migrans*) at Newburyport, Mass. *Auk*, vol. 34, p. 214.

BARBOUR, THOMAS.

1919. Evening Grosbeaks about Beverly Farms, Mass. *Auk*, vol. 36, p. 572.

BAYLEY, MARION H.

1916. Evening Grosbeak at Newburyport, Mass. *Bird-Lore*, vol. 18, pp. 182, 183.

BREWSTER, WILLIAM.

1884. An ornithological swindler. *Auk*, vol. 1, p. 295-297.
1918. Nesting of the Red Crossbill (*Loxia curvirostra minor*) in Essex County, Massachusetts. *Auk*, vol. 35, p. 225.

BRIDGE, EDMUND and LIDIAN E.

1916. Bird-Lore's sixteenth Christmas census. Ipswich, Mass. (Castle Hill and Beach). *Bird-Lore*, vol. 18, p. 20.

BRIDGE, LIDIAN E.

1908. *Chondestes grammacus* at Ipswich, Mass. *Auk*, vol. 25, p. 476.
1910. The Massachusetts Audubon Society's Bird-lists. *Bird-Lore*, vol. 12, p. 191-195.
1912. Uncommon shore-birds seen in Essex County, Massachusetts. *Auk*, vol. 29, p. 537.
1912. Another occurrence of the Blue-gray Gnatcatcher in Essex County, Massachusetts. *Auk*, vol. 29, p. 546.

BROWN, FRANK A.

1909. The Cardinal at Ipswich, Mass. *Auk*, vol. 26, pp. 194, 195.
1909. The Cardinal in Massachusetts. *Bird-Lore*, vol. 11, pp. 85, 86.

COUES, ELLIOTT.

1883. Note on "*Passerculus caboti*." Bull. Nuttall Ornith. Club, vol. 8, p. 58.

CRITTENDEN, VIOLA E.

1913. The Carolina Wren in Beverly, Mass. Bird-Lore, vol. 15, pp. 222, 223.

DEANE, RUTHVEN.

1906. Another large flight of Snowy Owls. Auk, vol. 23, pp. 100, 101.

1906. Unusual abundance of the Snowy Owl (*Nyctea nyctea*). Auk, vol. 23, p. 283-298.

ESSEX COUNTY ORNITH. CLUB, Bulletin. See Stubbs, Arthur P., Editor.

FARLEY, J. A.

1895. Breeding of Traill's Flycatcher in eastern Massachusetts. Auk, vol. 12, p. 302.

FAY, S. PRESCOTT.

1910. Massachusetts notes. Auk, vol. 27, pp. 219, 220.

FLEMING, JAMES H.

1906. The unusual migration of Brünnich's Murre (*Uria lomvia*) in eastern North America. Proc. 4th Intern. Ornith. Congress, 1905, p. 528-543.

HALLOCK, CHARLES.

1877. The Sportsman's Gazetteer.

LAMB, CHARLES R.

1912. Greenland Wheatear seen in Massachusetts. Auk, vol. 29, pp. 250, 251.

1918. Massachusetts notes. Auk, vol. 35, pp. 233, 234.

MACKAY, GEORGE H.

1890. *Somateria dresseri*, the American Eider. Auk, vol. 7, p. 315-319.

1894. Notes on certain water birds in Massachusetts. Auk, vol. 11, p. 223-228.

MAY, JOHN B.

1916. Rough-winged Swallows in Essex County, Mass. Bird-Lore, vol. 18, pp. 371, 372.

PETERS, JAMES L.

1911. A Golden Plover in Massachusetts in April. Auk, vol. 28, p. 368.

PHILLIPS, JOHN C.

1910. Notes on the autumn migration of the Canada Goose in eastern Massachusetts. Auk, vol. 27, p. 263-271.

1911. Two unusual Massachusetts records. Auk, vol. 28, p. 119.

1911. Ten years of observation on the migration of Anatidæ at Wenham Lake, Massachusetts. Auk, vol. 28, p. 188-200.

1912. Rusty Blackbirds (*Euphagus carolinus*) wintering in Essex Co., Mass. Auk, vol. 29, p. 395.

1916. Eskimo Curlew in Massachusetts. Auk, vol. 33, p. 434.

1916. Early flight of Wilson's Snipe in Massachusetts. Auk, vol. 33, p. 434.

PUTNAM, FREDERICK W.

1869. [Note on Great Auk.] Amer. Naturalist, vol. 3, p. 540.

SEARS, JOHN H.

1874. Breeding of Passenger Pigeon in Essex County. Amer. Sportsman, vol. 4, p. 155.

STUBBS, ARTHUR P.

1916. Killdeer breeding in eastern Massachusetts. Bird-Lore, vol. 18, p. 365.

STUBBS, ARTHUR P., EDITOR.

1919. Bulletin of the Essex County Ornithological Club, no. 1.

THAYER, JOHN E.

1909. Eskimo Curlew taken at Newburyport, Mass. Auk, vol. 26, p. 77.

TOWNSEND, CHARLES W.

1906. The Lark Sparrow in Massachusetts. Auk, vol. 23, pp. 103, 104.
 1906. Note on the crop contents of a nestling Mourning Dove (*Zenaidura macroura*). Auk, vol. 23, pp. 336, 337.
 1908. On the status of Brewster's Warbler (*Helminthophila leucobronchialis*). Auk, vol. 25, p. 65-68.
 1908. An American White-fronted Goose and Wilson's Phalarope in Essex County, Massachusetts. Auk, vol. 25, pp. 80, 81.
 1909. Robins used same nests six seasons. Journ. Maine Ornith. Soc., vol. 11, pp. 30, 31.
 1909. The position of birds' feet in flight. Auk, vol. 26, p. 109-116.
 1909. The use of the wings and feet by diving birds. Auk, vol. 26, p. 234-248.
 1909. A Carolina Wren invasion of New England. Auk, vol. 26, p. 263-269.
 1910. The courtships of Golden-eye and Eider Ducks. Auk, vol. 27, p. 177-181.
 1911. The courtship and migration of the Red-breasted Merganser (*Mergus serrator*). Auk, vol. 28, p. 341-345.
 1912. The validity of the Red-legged subspecies of Black Duck. Auk, vol. 29, p. 176-179.
 1913. Sand Dunes and Salt-Marshes. Boston.
 1916. The courtship of the Merganser, Mallard, Black Duck, Baldpate, Wood Duck and Bufflehead. Auk, vol. 33, p. 9-17.
 1916. Lesser Snow Goose (*Chen h. hyperboreus*) in Massachusetts. Auk, vol. 33, p. 197.
 1917. The Labrador Chickadee (*Penthestes hudsonicus nigricans*) in a southward migration. Auk, vol. 34, p. 160-163.
 1918. Ipswich bird notes. Auk, vol. 35, p. 182-185.
 1918. A winter Crow roost. Auk, vol. 35, p. 405-416.

[WEBSTER, FRANK B.]

1892. [American Egret at Ipswich.] Ornithologist and Oölogist, vol. 17, p. 165.

WHARTON, WILLIAM P.

1909. The Clapper Rail in Essex County, Mass. Auk, vol. 26, pp. 76, 77.

WHITE, FRANCIS BEACH.

1918. Yellow-headed Blackbird at Ipswich, Mass. Auk, vol. 35, p. 224.

WRIGHT, HORACE W.

1917. Labrador Chickadee (*Penthestes hudsonicus nigricans*) in Boston and vicinity in the fall of 1916. *Auk*, vol. 24, p. 164-170.

1918. Labrador Chickadee (*Penthestes hudsonicus nigricans*) in its return flight from the fall migration of 1916. *Auk*, vol. 35, p. 37-40.

X. Y. Z.

1885. [Pileated Woodpecker in Manchester.] *Forest and Stream*, vol. 25, p. 443.

INDEX

- ACANTHIS hornemanni exilipes, 139
 linaria holbœelli, 139
 linaria, 139
 rostrata, 140
 Accipiter cooperi, 100
 velox, 100
 Actitis macularia, 89
 Additional species to list, 16
 Aegialitis meloda, 94
 circumcincta, 95
 semipalmata, 94
 wilsoni, 95
 Agelaius phœniceus phœniceus, 130
 Aix sponsa, 55
 Alca torda, 28
 Alle alle, 28
 Aluco praticola, 110
 American Ornithologists' Union, 5, 111
 Ammodramus bairdi, 143
 savannarum australis, 143
 Anas platyrhynchos, 50
 rubripes rubripes, 51
 tristis, 52
 Anser albifrons gambeli, 63
 Anthus rubescens, 169
 Antrostomus vociferus vociferus, 121
 Apocryphal species, 182
 Aquila chrysaëtos, 105
 Archibuteo lagopus sancti-johannis, 103
 Archilochus colubris, 123
 Ardea herodias herodias, 67
 Arenaria interpres morinella, 95
 Arquatella maritima maritima, 80
 Asio flammeus, 110
 wilsonianus, 110
 Astragalinus tristis tristis, 140
 Astur atricapillus atricapillus, 101
 Auk, Great, 28
 Little, 12, 28
 Razor-billed, 28
 Avocet, 77

 BALDPATE, 53
 Bartramia longicauda, 88
 Beach-bird, 85
 Beetle-head, 91
 Bird Protection, 7
 Bittern, 8, 21, 65
 Least, 22, 66
 Blackbird, Crow, 133
 Red-winged, 130
 Rusty, 133
 Yellow-headed, 16, 129
 Blackhead, 56
 Black-heart, 91
 Black-tail, 86

 Bluebill, 56
 Little, 57
 Bluebird, 8, 179
 Blue Peter, 75
 Boatswain, 30
 Bobolink, 128
 Bob-white, 13, 95
 Bombycilla cedrorum, 155
 garrula, 155
 Bonasa umbellus umbellus, 96
 Booby, 46
 Botaurus lentiginosus, 65
 Brant, 64
 Brant-bird, 83
 Branta bernicla glaucogastra, 64
 canadensis canadensis, 64
 hutchinsi, 64
 leucopsis, 65
 Brown-back, 79, 81
 Brown-tail moths, 9
 Bubo virginianus virginianus, 112
 Bufflehead, 59
 Bull-head, 91
 Bunting, Bay-winged, 142
 Black-throated, 150
 Indigo, 150
 Lark, 150
 Snow, 141
 Burgomaster, 32
 Butcher-bird, 156
 Buteo borealis borealis, 101
 lineatus lineatus, 102
 platypterus platypterus, 103
 swainsoni, 102
 Butorides virescens virescens, 69
 Butter-ball, 59
 Butterbill, 62

 CALCARIUS lapponicus lapponicus, 141
 ornatus, 142
 Calico-bird, 95
 Calidris leucophæa, 85
 Calamospiza melanocorys, 151
 Camptorhynchus labradorius, 60
 Canachites canadensis canace, 96
 Canvas-back, 56, 60
 Cape Race, 27
 Cape Racer, 27
 Cardinal, 150
 Cardinalis cardinalis cardinalis, 150
 Carpodacus purpureus purpureus, 137
 Catbird, 171
 Catharista urubu urubu, 98
 Cathartes aura septentrionalis, 97
 Catoptrophorus semipalmatus inornatus, 87
 semipalmatus, 87

- Cedar-bird, 155
 Censuses, Bird, 17-20
 Cephus grylle, 27
 Certhia familiaris americana, 173
 Ceryle alcyon, 116
 Chætura pelagica, 122
 Changes in Bird Life of the Country, 7-16
 Charadrius dominicus dominicus, 92
 Charitonetta albeola, 59
 Chat, Yellow-breasted, 8, 167
 Chaulelasmus streperus, 52
 Chebec, 125
 Chen caerulescens, 63
 hyperboreus hyperboreus, 63
 nivalis, 63
 Cherry-bird, 155
 Chewink, 149
 Chickadee, 8, 9, 174
 Acadian, 174
 Labrador, 16, 174
 Chicken, 95
 Chicken, Mother Carey's, 45
 Chippy, 147
 Chondestes grammacus grammacus, 145
 Chordeiles virginianus virginianus, 121
 Chuckle-head, 91
 Circus hudsonius, 98
 Cistothorus stellaris, 172
 Clangula clangula americana, 58
 islandica, 58
 Clark's Pond, 22-24
 Coccyzus americanus americanus, 115
 erythrophthalmus, 115
 Colaptes auratus luteus, 120
 Colinus virginianus virginianus, 95
 Colymbus auritus, 25
 holboelli, 25
 Compsothlypis americana usneæ, 161
 Coot, 22, 75
 Black, 62
 Butter-bill, 62
 Gray, 62
 Skunk-head, 62
 White-winged, 62
 Cormorant, 46
 Common, 46
 Double-crested, 47
 Corvus brachyrhynchos brachyrhynchos, 127
 corax principalis, 127
 Coturnicops noveboracensis, 74
 Courtship, 5, 49, 50, 52, 53, 55, 56, 58, 59,
 60, 61, 66, 78, 83, 84, 86, 88, 98, 100,
 120, 122, 123, 128, 129, 130, 133, 138,
 141, 142, 143, 144, 148, 153, 154, 155,
 163, 168, 172, 174, 176, 180
 Cowbird, 129
 Crane, 67
 Sandhill, 71
 Creciscus jamaicensis, 74
 Creeper, Black and White, 159
 Brown, 173
 Crossbill, 137
 Red, 137
 White-winged, 138
 Crow, 127
 Crow roost, 112, 127
 Cryptoglaux acadica acadica, 112
 funerea richardsoni, 112
 Cuckoo, Black-billed, 116
 Yellow-billed, 115
 Curlew, Eskimo, 90
 Hen, 89
 Hudsonian, 13, 89
 Jack, 89
 Long-billed, 89
 Sickle-billed, 89
 Cyanocitta cristata cristata, 126
 DABCHICK, 25
 Dafila acuta, 54
 Damsell, Benjamin F., 6
 Dendroica æstiva æstiva, 161
 caerulescens caerulescens, 162
 castanea, 164
 cerulea, 164
 coronata, 162
 discolor, 165
 fusca, 164
 magnolia, 164
 palmarum hypochrysea, 165
 palmarum, 165
 pennsylvanica, 164
 striata, 164
 tigrina, 161
 vigorsii, 165
 virens, 165
 Dickcissel, 150
 Dipper, 59
 Diver, Hell, 25
 Devil, 25
 Great Northern, 26
 Dolichonyx oryzivorus, 128
 Dough-bird, 90
 Dove, Mourning, 8, 14, 97
 Dovekie, 12, 28
 Dowitcher, 13, 79
 Long-billed, 79
 Western, 79
 Dryobates pubescens medianus, 117
 villosus, 116
 septentrionalis, 117
 Duck, Black, 7, 22, 52
 Dusky, 52
 Gray, 52, 54
 Greater Scaup, 56
 Harlequin, 60
 Labrador, 60
 Lesser Scaup, 22, 57
 Long-tailed, 59
 Pied, 60
 Red-legged Black, 51
 Ring-necked, 57
 Ruddy, 62
 Scaup, 56
 Sea, 60
 Spring Black, 52
 Spoon-bill, 54
 Summer, 55

- Duck, Summer Black, 52, 55
 Winter Black, 51
 Wood, 7, 8, 13, 22, 55
- Dumetella carolinensis, 171
- Dunlin, 83
- EAGLE, Bald, 105
 Golden, 105
- Ectopistes migratorius, 97
- Egret, 21, 67
 Snowy, 68
- Egretta candidissima candidissima, 68
- Eider, 60
 King, 62
 Northern, 60
- Elanoides forficatus, 98
- Empidonax flaviventris, 125
 minimus, 125
 trailli alnorum, 125
- Ereunetes mauri, 84
 pusillus, 84
- Erismatura jamaicensis, 62
- Erolia ferruginea, 83
- Erroneous records, 11
- Essex County Ornithological Club, 5, 11
- Euphagus carolinus, 133
- Extinct species, 16
- FALCO columbarius, 108
 islandus, 106
 peregrinus anatum, 107
 rusticolus gyrfalco, 106
 obsoletus, 106
 sparverius sparverius, 108
- Federal Law, 7, 13
- Field-glasses, 10
- Finch, Grass, 142
 Lark, 145
 Pine, 140
 Purple, 137
- Flicker, Northern, 8, 120
- Florida caerulea, 68
- Flycatcher, Alder, 125
 Crested, 124
 Least, 125
 Olive-sided, 124
 Small-headed, 182
 Yellow-bellied, 125
- Fool-bird, 60
- Fratercula arctica arctica, 27
- Fulica americana, 75
- GADWALL, 52
- Gallinago delicata, 78
- Gallinula galeata, 74
- Gallinule, Florida, 74
 Purple, 74
- Gannet, 46
- Gavia arctica, 26
 immer, 26
 stellata, 26
- Gelochelidon nilotica, 40
- Geothlypis trichas trichas, 167
- Gnatcatcher, Blue-gray, 176
- Godwit, Hudsonian, 13, 85
 Marbled, 86
- Golden-eye, 22, 58
 Barrow's, 58
- Goldfinch, 140
- Goosander, 48
- Goose, Barnacle, 65
 Blue, 63
 Canada, 64
 Greater Snow, 63
 Hutchins', 64
 Lesser Snow, 63
 Nigger, 48
 Sea, 76
 Snow, 63
 White-fronted, 16, 63
 Wild, 64
- Goshawk, 101
- Grackle, Bronzed, 14, 133
 Purple, 133
- Grass-bird, 81
 Hill, 88
- Grebe, Holboell's, 12, 25
 Horned, 25
 Pied-billed, 22, 25
- Green-back, 92
- Grosbeak, Evening, 15, 135
 Pine, 15, 137
 Rose-breasted, 150
- Grouse, Canadian Spruce, 96
 Ruffed, 9, 14, 96
- Grus mexicana, 71
- Guillemot, Black, 27
- Gull, Black-headed, 39
 Bonaparte's, 40
 Glaucous, 12, 32
 Great Black-backed, 10, 35
 Herring, 10, 12, 22, 36
 Hutchins', 33
 Iceland, 10, 12, 34
 Ivory, 16, 31
 Kumlien's, 12, 16, 34
 Laughing, 12, 39
 Mackerel, 42
 Ring-billed, 38
 Winter, 32
- Gun, Use of, 11
- Gypsy moths, 9
- Gyrfalcon, 106
 Black, 106
 White, 16, 106
- HAG, Black, 45
 Gray, 44
- Hagdon, 44, 45
- Haglet, 44
- Hairy-crown, 50
- Haliaeetus leucocephalus leucocephalus, 105
- Harelda hiemalis, 59
- Hawk, Broad-winged, 103
 Cooper's, 100
 Duck, 82, 107
 Fish, 8, 109
 Hen, 101, 102

- Hawk, Marsh, 8, 98, 107
 Pigeon, 108
 Red-shouldered, 102
 Red-tailed, 101
 Rough-legged, 14, 103
 Sharp-shinned, 100
 Sparrow, 108
 Swainson's, 102
- Heath Hen, 97
- Helmitheros vermivorus, 159
- Helodromas solitarius solitarius, 87
- Herodias egretta, 68
- Heron, Black-crowned Night, 21, 69
 Great Blue, 21, 67
 Green, 21, 69
 Little Blue, 68
 Yellow-crowned Night, 71
- Hesperiphona vespertina vespertina, 135
- Hill Grass-bird, 88
- Himantopus mexicanus, 77
- Hirundo erythrogastra, 103
- Histrionicus histrionicus, 60
- Humility, 87
- Hummingbird, Ruby-throated, 123
- Hydrochelidon nigra surinamensis, 44
- Hylocichla aliciae aliciae, 177
 bicknelli, 177
 fuscescens fuscescens, 177
 guttata pallasi, 177
 mustelina, 177
 ustulata swainsoni, 177
- Ibis, Wood, 65
- Ice-bird, 28
- Icteria virens virens, 167
- Icterus galbula, 132
 spurius, 132
- Increase of Birds, Actual and apparent, 10
- Indigo-bird, 150
- Insect Pests, 9
- Introduced Species, 180
- Introduction, 5, 6
- Ionornis martinicus, 74
- Iridoprocne bicolor, 154
- Italian workmen, 9
- Ixobrychus exilis, 66
- Ixoreus naevius naevius, 179
- JAEGER, Long-tailed, 31
 Parasitic, 30
 Pomarine, 30
- Jay, Blue, 102, 126
 Canada, 127
- Junco, Slate-colored, 147
- Junco hyemalis hyemalis, 147
- KILLDEER, 13, 92
- Kingbird, 123
 Gray, 124
- Kingfisher, Belted, 116
- Kinglet, Golden-crowned, 16, 176
 Ruby-crowned, 176
- Kite, Swallow-tailed, 98
- Kittiwake, 32
- Knot, 13, 80
 Pine, 12, 28
 Knotty, 12, 28
- LAGOPUS lagopus lagopus, 97
- Lanius borealis, 156
 ludovicianus migrans, 156
- Lanivireo flavifrons, 158
 solitarius solitarius, 158
- Lark, Horned, 126
 Prairie Horned, 14, 126
 Shore, 126
- Larus argentatus, 36
 atricilla, 39
 delawarensis, 38
 hyperboreus, 32
 kumlieni, 34
 leucopterus, 34
 marinus, 35
 philadelphia, 40
- Light-houses, 9
- Limited Areas, Birds of, 17-24
- Limosa fedoa, 85
 haemastica, 86
- Lobipes lobatus, 76
- Longspur, Chestnut-collared, 142
 Lapland, 141
 McCown's, 142
- Loon, 26, 27
 Black-throated, 26
 Red-throated, 26
- Lophodytes cucullatus, 50
- Lord and Lady, 60
- Loxia curvirostra minor, 137
- MACHETES pugnax, 87
- Macrorhamphus griseus griseus, 79
 scolopaceus, 79
- Mallard, 50
- Mareca americana, 53
 penelope, 52
- Marila affinis, 57
 americana, 55
 collaris, 57
 marila, 56
 valisineria, 56
- Marling-spike, 30
- Martin, Purple, 151
- Maryland Yellow-throat, 167
- Meadowlark, 129, 130
- Megalestris skua, 29
- Melanerpes erythrocephalus, 119
- Meleagris gallopavo silvestris, 97
- Melospiza georgiana, 148
 lincolni lincolni, 148
 melodia melodia, 147
- Merganser, 37, 48
 Hooded, 50
 Red-breasted, 13, 22, 37, 49
- Mergus americanus, 48
 serrator, 49
- Micropalama himantopus, 80
- Mimus polyglottos polyglottos, 169
- Mniotilta varia, 159

- Mockingbird, 16, 169
 Molothrus ater ater, 129
 Mother Carey's Chicken, 45
 Mud-hen, 75
 Murre, 28
 Brünnich's, 28
 Muscicapa minuta, 182
 Mycteria americana, 65
 Myiarchus crinitus, 124
 Myiochanes virens, 125
- NANNUS hyemalis hyemalis, 172
 Nettion carolinense, 53
 Nighthawk, 121
 Numenius americanus, 89
 borealis, 90
 hudsonicus, 89
 Nuthatch, Red-breasted, 173
 White-breasted, 173
 Nuttallornis borealis, 124
 Nyctanassa violacea, 71
 Nyctea nyctea, 113
 Nycticorax nycticorax nævius, 69
- OBSERVERS, Increased number of, 10
 Oceanites oceanicus, 45
 Oceanodroma leucorhoa, 45
 Ochthodromus wilsonius, 95
 Oidemia americana, 62
 deglandi, 62
 perspicillata, 62
 Old-squaw, 59
 Olor buccinator, 65
 columbianus, 65
 Oporornis agilis, 166
 formosus, 166
 philadelphia, 167
 Oriole, Baltimore, 14, 132
 Orchard, 14, 132
 Ornithological Swindler, 58
 Osprey, 109
 Otocoris alpestris alpestris, 126
 praticola, 126
 Otus asio asio, 112
 Oven-bird, 166
 Owl, Acadian, 112
 Barn, 110
 Barred, 111
 Burrowing, 115
 Great Gray, 111
 Great Horned, 112, 128
 Hawk, 115
 Long-eared, 110
 Pinny, 32
 Richardson's, 112
 Saw-whet, 112
 Screech, 112
 Short-eared, 110
 Snowy, 113
 Oxyechus vociferus vociferus, 90
- PAGOPIHA alba, 31
 Pandion haliaëtus carolinensis, 109
 Pale-belly, 92
 Partridge, 96
 European, 182
 Spruce, 96
 Passer domesticus, 181
 Passerculus princeps, 142
 sandwichensis savanna, 143
 Passerella iliaca iliaca, 149
 Passerherbulus caudacutus, 144
 henslowi henslowi, 143
 maritimus maritimus, 144
 nelsoni nelsoni, 144
 subvirgatus, 144
 Passerina cyanea, 150
 Peabody-bird, 146
 Peep, 82, 84
 Bull, 82
 Mud, 82
 Sand, 84
 Teeter, 89
 Web-footed, 76
 Pelecanus erythrorhynchos, 48
 occidentalis, 48
 Pelican, Brown, 16, 48
 White, 48
 Pelidna alpina sakhalina, 83
 Penguin, 28
 Penthestes atricapillus atricapillus, 174
 hudsonicus littoralis, 174
 nigricans, 174
 Perdix cinerea, 182
 Perisoreus canadensis canadensis, 127
 Perroquet, 27
 Petrel, Leach's, 45
 Stormy, 45
 Wilson's, 45
 Petrochelidon lunifrons lunifrons, 152
 Pewee, Wood, 125
 Phalacrocorax auritus auritus, 47
 carbo, 46
 Phalarope, Northern, 76
 Red, 75
 Wilson's, 76
 Phalaropus fulicarius, 75
 Phasianus torquatus, 180
 Pheasant, Ring-necked, 9, 180
 Philohela minor, 77
 Phloeotomus pileatus abieticola, 119
 Phebe, 124
 Picoides americanus americanus, 118
 arcticus, 118
 Pigeon, Passenger, 14, 16, 97
 Wild, 8, 97
 Pinicola enucleator leucura, 137
 Pintail, 54
 Pipilo erythrophthalmus erythrophthalmus,
 149
 Pipit, 169
 Piranga erythromelas, 151
 ludoviciana, 511
 Pisobia bairdi, 82
 fuscicollis, 82
 maculata, 81
 minutilla, 82

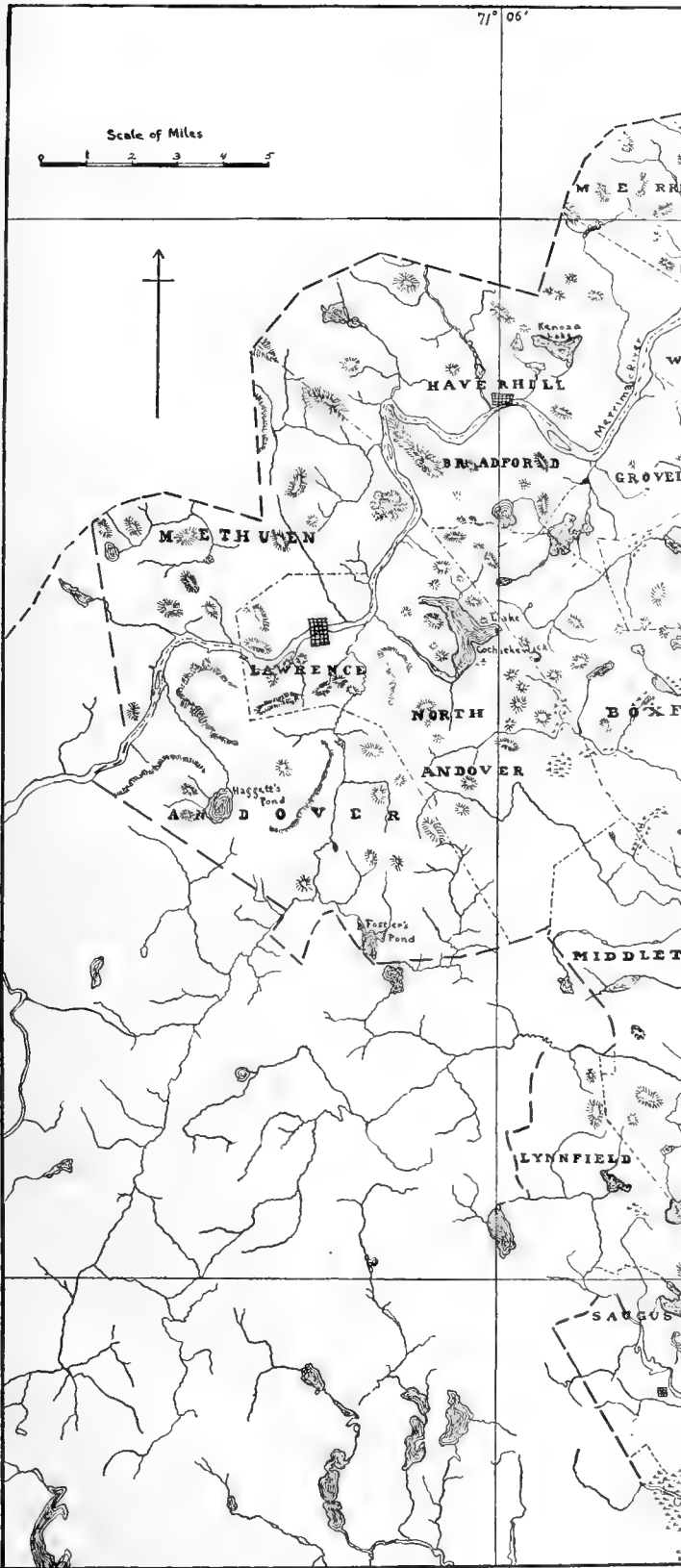
- Planesticus migratorius migratorius*, 178
Plautus impennis, 28
Plectrophenax nivalis nivalis, 141
 Plover, Beach, 85
 Belted Piping, 16, 95
 Black-bellied, 8, 91
 Blue, 80
 Chicken, 95
 Golden, 8, 92
 Green, 92
 Pasture, 88
 Piping, 13, 94
 Ring-neck, 94
 Semipalmated, 13, 94
 Silver, 80
 Upland, 13, 88
 Wilson's, 95
Podilymbus podiceps, 25
 Poisoning by spraying fluids, 8
Polioptila cærulea cærulea, 176
 Pond Crow, 75
Poœetes gramineus gramineus, 142
Porzana carolina, 73
Profinus cinereus, 45
Progne subis subis, 151
Protonotaria citrea, 159
 Ptarmigan, Willow, 97
 Puffin, 27
Puffinus gravis, 44
 griseus, 45
 puffinus, 45
 QUAIL, 95
 Marsh, 130
 Quawk, 69
Querquedula discors, 54
Quiscalus quiscula æneus, 133
 quiscula, 133
 RAIL, Black, 74
 Carolina, 26, 73
 Clapper, 71
 King, 71
 Virginia, 22, 72
 Yellow, 74
Rallus crepitans crepitans, 71
 elegans, 71
 virginianus, 72
 Raven, Northern, 127
Recurvirostra americana, 77
 Redhead, 22, 55
 Redpoll, 139
 Greater, 140
 Hoary, 139
 Holboell's, 139
 Redstart, 169
Regulus calendula calendula, 176
 satrapa satrapa, 176
 Reservations, 7, 10
Riparia riparia, 154
Rissa tridactyla tridactyla, 32
 Robin, 14, 178
 Golden, 132
 Robin roost, 178
 Ruff, 87
Rynchophanes mccowni, 142
 SADDLE-BACK, 36
 Sagamore Pond, 20-22
 Sanderling, 13, 85
 Sandpiper, Baird's, 82
 Bartramian, 88
 Bonaparte's, 82
 Buff-breasted, 88
 Curlew, 83
 Least, 22, 82
 Pectoral, 22, 81, 107
 Purple, 80
 Red-backed, 83
 Semipalmated, 13, 84
 Solitary, 22, 87, 124
 Spotted, 89
 Sült, 80
 Western, 84
 White-rumped, 82
 Sapsucker, Yellow-bellied, 118
Saxicola œnanthe leucorhoa, 179
Sayornis phœbe, 124
 Scoter, 62
 Black, 62
 Surf, 62
 White-winged, 62
Scotiaptex nebulosa nebulosa, 111
 Sea-parrot, 27
 Sea-pigeon, 27
 Sea-robin, 49
Seiurus aurocapillus, 166
 motacilla, 166
 noveboracensis noveboracensis, 166
Setophaga ruticilla, 169
 Shag, 47
 Shearwater, Bermuda, 45
 Black-tailed, 45
 Greater, 44
 Manx, 45
 Sooty, 45
 Shelldrake, 49
 Pond, 48
 Shite-poke, 69
 Shoveller, 22, 54
 Shrike, Migrant, 156
 Northern, 156
Sialia sialis sialis, 179
 Sickle-bill, 89
 Singing-tree, 17
 Siskin, Pine, 140
Sitta canadensis, 173
 carolinensis carolinensis, 173
 Skua, 29
 Arctic, 30
 Buffon's, 31
 Richardson's, 30
 Skunk-head, 62
 Snipe, 8, 22, 78
 English, 78
 Jack, 78
 Red-breasted, 79
 Robin, 79

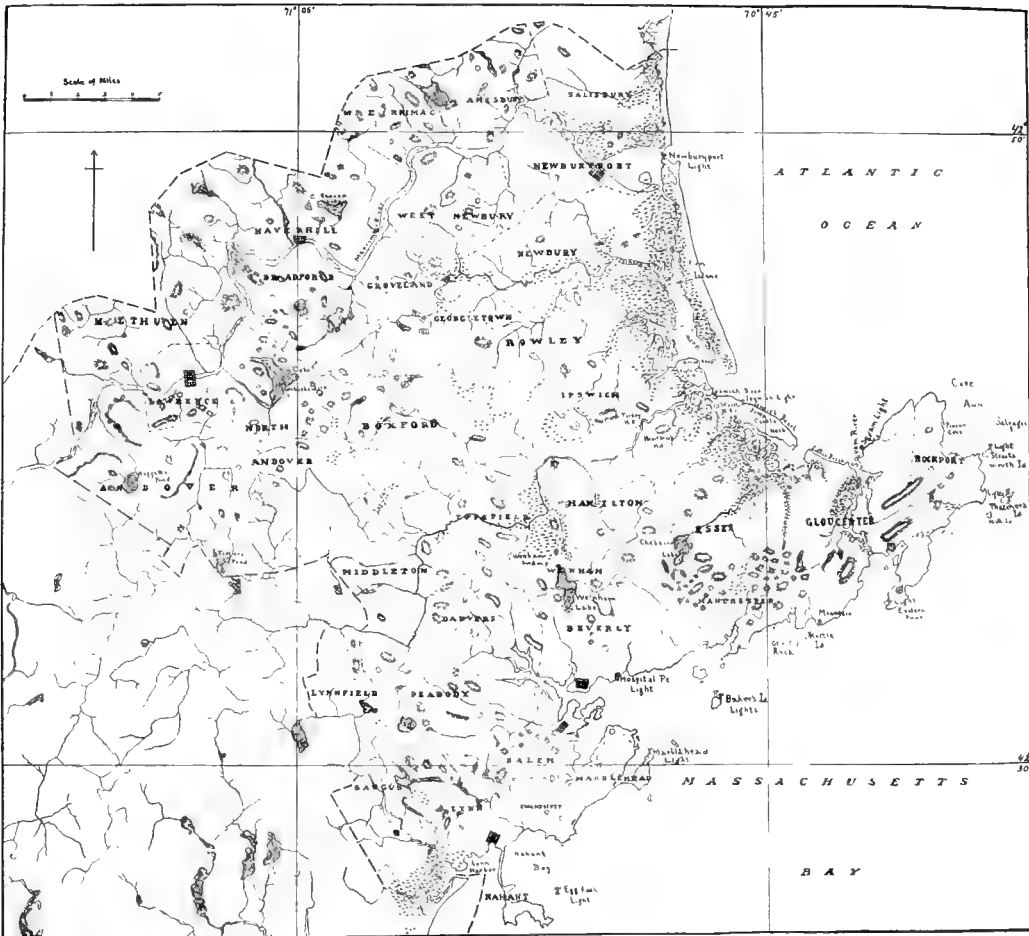
- Snipe, Rock, 80
 Wilson's, 78
 Winter, 80
 Snowbird, 147
 Snowflake, 141
 Somateria molissima borealis, 60
 dresseri, 60
 spectabilis, 62
 Sora, 22, 73
 Sparrow, Acadian Sharp-tailed, 21, 144
 Baird's, 143
 Chipping, 147
 English, 9, 15, 181
 European House, 181
 Field, 147
 Fox, 147
 Grasshopper, 143
 Henslow's, 143
 Ipswich, 15, 142
 Lark, 145
 Lincoln's, 148
 Nelson's Sharp-tailed, 144
 Savannah, 143
 Seaside, 144
 Sharp-tailed, 21, 144
 Song, 147
 Swamp, 149
 Tree, 146
 Vesper, 142
 White-crowned, 146
 White-throated, 146
 Yellow-winged, 143
 Spatula clypeata, 54
 Speotyto cunicularia hypogæa, 115
 Sphyrapicus varius varius, 118
 Spinus pinus, 140
 Spiza americana, 150
 Spizella monticola monticola, 146
 passerina passerina, 147
 pusilla pusilla, 147
 Spoonbill, 54
 Spraying, 8, 14
 Sprigtail, 54
 Spring Shooting, 8
 Squatarola squatarola, 91
 Starling, 9, 16, 181
 Steganopus tricolor, 76
 Stegidopteryx serripennis, 155
 Stercorarius longicaudus, 31
 parasiticus, 30
 pomarinus, 30
 Sterna antillarum, 44
 caspia, 41
 dougalli, 43
 forsteri, 41
 fuscata, 44
 hirundo, 42
 maxima, 41
 paradisæa, 43
 Stilt, Black-necked, 77
 Strix varia varia, 111
 Sturnella magna, 130
 Sturnus vulgaris, 181
 Sula bassana, 46
 leucogastra, 46
 Summer, 86
 Surnia ulula caparoch, 115
 Swallow, Bank, 154
 Barn, 15, 154
 Cliff, 152
 Eave, 15, 152
 Rough-winged, 16, 154
 Tree, 8, 15, 154
 White-bellied, 154
 Swan, Trumpeter, 65
 Whistling, 8, 65
 Swift, Chimney, 122
 TANAGER, Scarlet, 151
 Summer, 151
 Tattler, Greater, 86
 Lesser, 86
 Teal, Blue-winged, 22, 54
 Green-winged, 53
 Telmatodytes palustris palustris, 173
 Tern, Arctic, 43
 Black, 44
 Caspian, 41
 Common, 13, 42
 Forster's, 41
 Gull-billed, 40
 Least, 13, 42
 Marsh, 40
 Roseate, 12, 43
 Royal, 41
 Sooty, 44
 Wilson's, 42
 Thrasher, Brown, 171
 Thrush, Bicknell's, 177
 Brown, 171
 Gray-cheeked, 177
 Hermit, 177
 Olive-backed, 177
 Varied, 179
 Wilson's, 177
 Wood, 177
 Thryothorus ludovicianus ludovicianus, 171
 Tinker, 28
 Titlark, 169
 Totanus flavipes, 86
 melanoleucus, 86
 Towhee, 149
 Toxostoma rufum, 171
 Tringa canutus, 80
 Troglodytes ædon ædon, 172
 Tryngites subruficollis, 88
 Turkey, Wild, 97
 Turnstone, Ruddy, 95
 Tympanuchus cupido, 97
 Tyrannus tyrannus, 123
 dominicensis, 124
 URIA lomvia lomvia, 28
 troille troille, 28
 VEERY, 177
 Vermivora celata celata, 160

- Vermivora chrysoptera*, 160
 leucobronchialis, 160
 peregrina, 161
 pinus, 159
 rubricapilla rubricapilla, 160
Vireo griseus griseus, 158
 Blue-headed, 158
 Philadelphia, 157
 Red-eyed, 157
 Solitary, 158
 Warbling, 157
 White-eyed, 8, 15, 158
 Yellow-throated, 158
Vireosylva gilva gilva, 157
 olivacea, 157
 philadelphica, 157
Vulture, Black, 98
 Turkey, 97
- WARBLER**, Bay-breasted, 15, 164
 Black and White, 159
 Blackburnian, 164
 Black-throated Blue, 162
 Black-throated Green, 165
 Blackpoll, 164
 Blue-winged, 16, 159
 Blue Yellow-backed, 161
 Brewster's, 160
 Canadian, 169
 Cape May, 15, 161
 Cerulean, 164
 Chestnut-sided, 164
 Connecticut, 166
 Golden-winged, 160
 Hooded, 16, 168
 Kentucky, 166
 Magnolia, 164
 Mourning, 167
 Myrtle, 15, 162
 Nashville, 160
 Northern Parula, 161
 Orange-crowned, 160
 Palm, 165
 Parula, 161
 Pine, 165
 Prairie, 165
 Prothonotary, 16, 159
 Red-poll, 165
 Tennessee, 15, 161
 Wilson's, 168
 Worm-eating, 159
 Yellow, 161
- Warbler*, Yellow Palm, 165
 Yellow Red-poll, 165
 Yellow-rumped, 162
Water-Thrush, 166
 Louisiana, 16, 166
Water-witch, 25
Waxwing, Bohemian, 155
 Cedar, 155
Wheatear, Greenland, 16, 179
Whip-poor-will, 121
Whistler, 37, 58
Whitey, 85
Widgeon, American, 53
 Bluebill, 56
 European, 13, 52
Willet, 13, 87
 Western, 16, 87
Wilsonia canadensis, 168
 citrina, 168
 pusilla pusilla, 168
Winter, 86
Woodcock, 77
Woodpecker, Arctic Three-toed, 118
 Downey, 117
 Golden-winged, 120
 Hairy, 116
 Northern Hairy, 117
 Northern Pileated, 119
 Pigeon, 120
 Red-headed, 119
 Three-toed, 118
Wren, Carolina, 171
 House, 172
 Long-billed Marsh, 172
 Short-billed Marsh, 172
 Winter, 172
- XANTHOCEPHALUS xanthocephalus**, 129.
- YELLOW-BIRD**, 140
Yellow-legs, 86
 Bastard, 80
 Greater, 8, 22, 86
 Lesser, 8, 22, 86
 Summer, 86
 Winter, 86
Yellow-throat, Maryland, 167
- ZAMELODIA ludoviciana*, 150
Zenaidura macroura carolinensis, 97
Zonotrichia albicollis, 146
 leucophrys leucophrys, 146

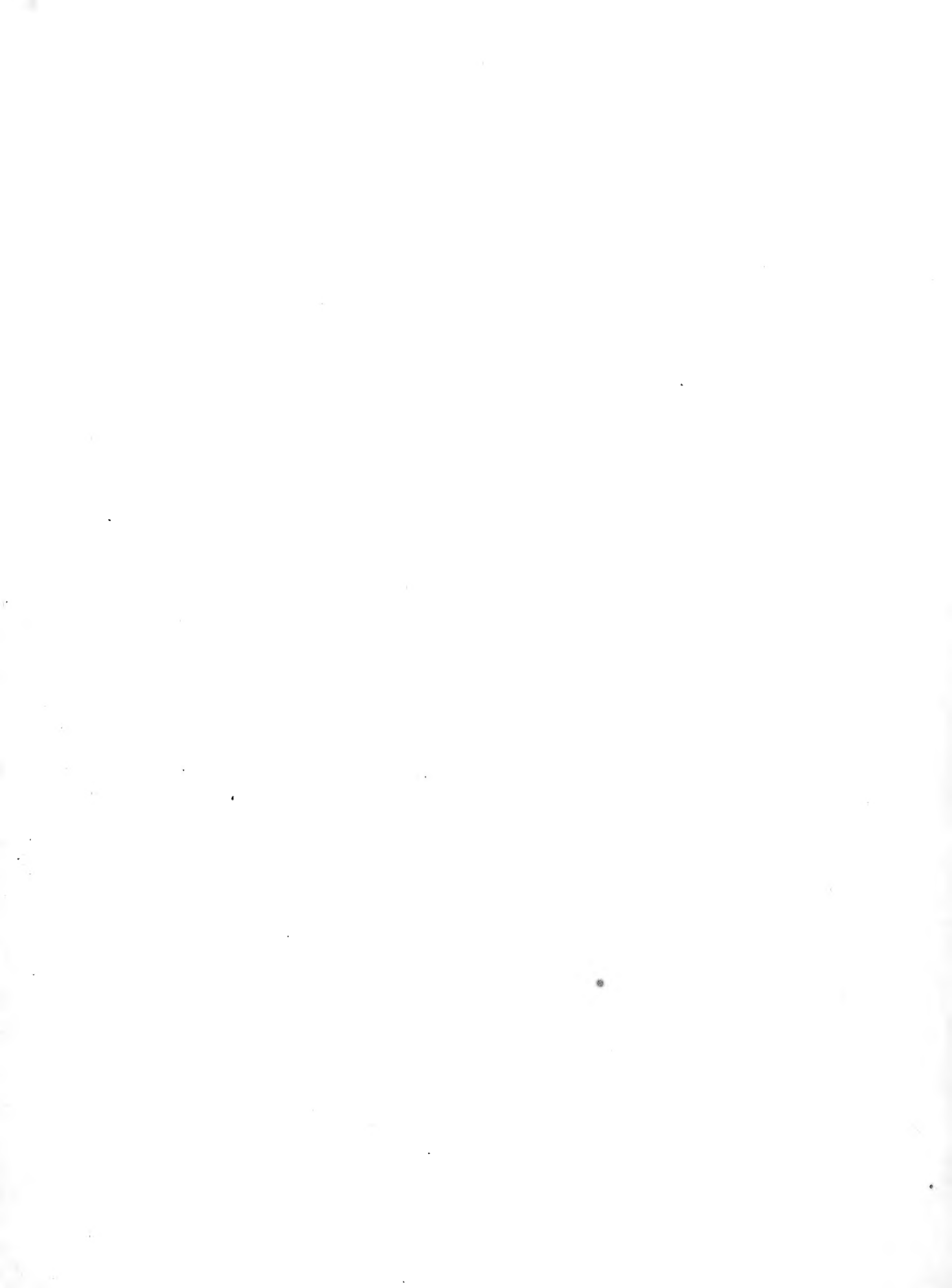
71° 06'

Scale of Miles





MAP OF ESSEX COUNTY



SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00064 3528