

Birds of the Battle River Region

of Central Alberta

FRANK L. EARLEY

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Birds of the Battle River Region

With Notes on their Present Status,
Migrations, Food Habits and
Economic Value

By
FRANK L. FARLEY
Camrose, Alberta

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Where Are the Birds?

Where are the birds, the joyous birds—
The trilling, singing, buoyant birds;
The birds that chattered all day long,
The birds with sweet and mournful songs;

The birds that hopped through all the trees
And told their secrets to the breeze,
And in their cosy little nest
Hugged wee, wee eggs close to their breast?

Where are the birds, the parent birds
That chided little errant birds,
And taught them how to hop and fly,
And know the wonders of the sky?

O winds that blow where birds have gone,
Where each has borne its own sweet song,
A message from us take, we pray,
Of how we miss them more each day.

We miss them for the joy they bring,
And all the lovely things they sing;
Of airy music there's a lack—
Oh, tell the birds to hurry back!

—VICTORIA WARING METCALFE,
Toronto.

Foreword

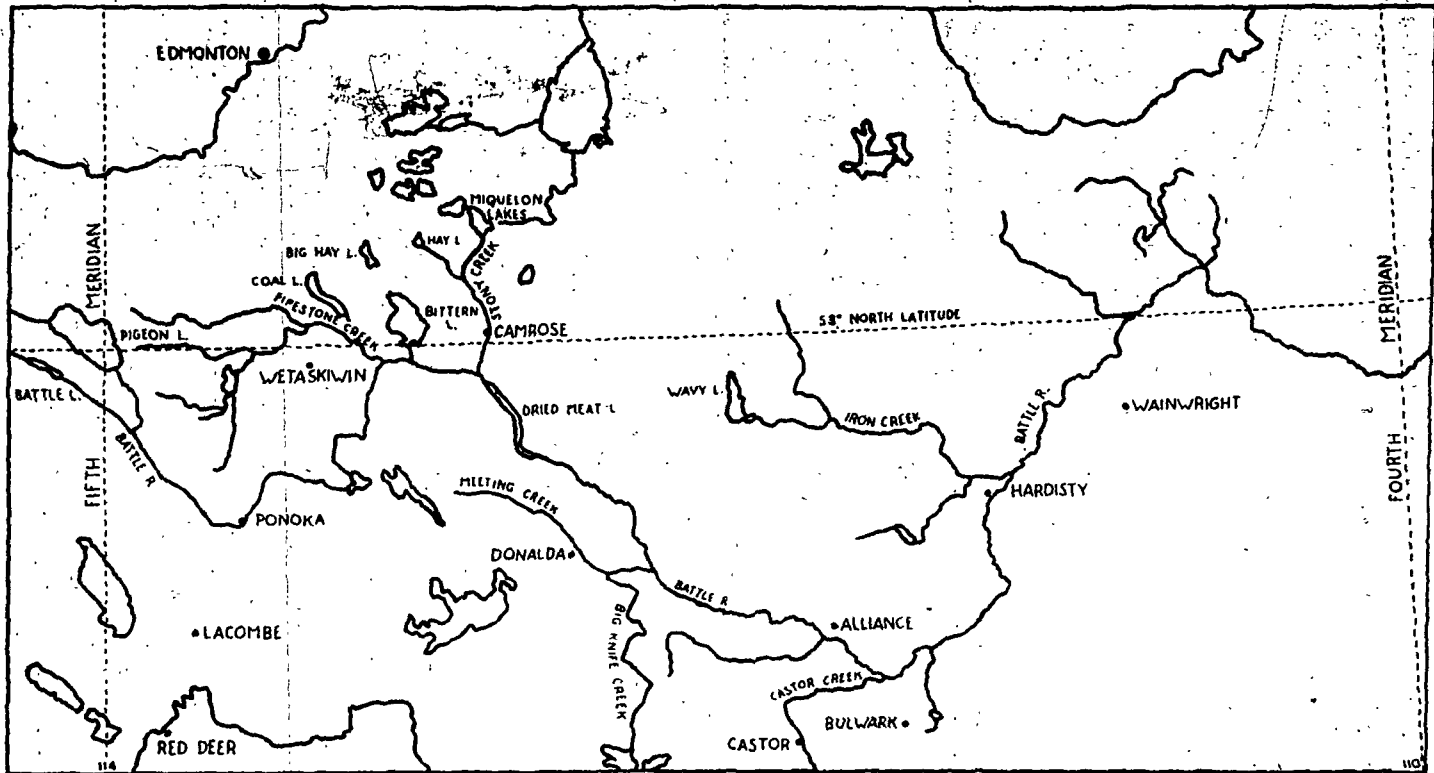


HE territory included in the preparation of this list of birds is all that portion of Central Alberta drained by the Battle River and its many tributary streams, an area approximately 200 miles from east to west and averaging about forty miles from north to south. This region is equal in size to the State of Massachusetts, and is more than three times the size of the province of Prince Edward Island.

The Battle River has its source in Battle Lake, some thirty-five miles west of the city of Wetaskiwin, and meanders in a general easterly direction across the eastern half of Alberta, at one place widening across its whole valley to form Dried Meat Lake. Battle Lake, about four miles long and less than a half mile in width, is partly surrounded by steep wooded banks rising abruptly a hundred feet or more from the water's edge, and is chiefly fed by a stream flowing into its northwest end. It is well supplied with whitefish, pike and pickerel, numbers of these being caught annually by settlers living in the vicinity. A sawmill has been operated for years at the south end of the lake, and considerable tracts of timber adjacent to it have been converted into lumber for the use of settlers as well as for outside markets.

Lying about six miles east of Battle Lake and at the intersection of the 114th meridian with the 53rd parallel of latitude is Pigeon Lake, a beautiful expanse of good clear water about 2800 feet above sea-level. Pigeon Lake is surrounded for the most part with low wooded banks, gently sloping sand beaches, and occasional marshy inlets. This lake, about twelve miles long and averaging four or five miles in width, is rapidly becoming a popular summer-resort and has recently been connected with Wetaskiwin by a gravelled highway. Commercial fishing is carried on extensively at this lake both by settlers and Indians living on a nearby reserve. The principal fish obtained are whitefish, pike and pickerel. At a point in Battle River, about twelve miles below the lake of the same name, the waters of Pigeon Lake are emptied into Battle River through Pigeon Creek.

The country in the vicinity of these lakes, as well as that extending north and west to the North Saskatchewan River, lies for the most part in the Canadian Life Zone, and varies considerably in topography and vegetation. It consists of extensive areas of muskeg and marsh, great stretches of sand-ridges, forests of spruce and jack-pine, with here and there fair sized tracts of good clay soil where farming



The Battle River Region of Central Alberta

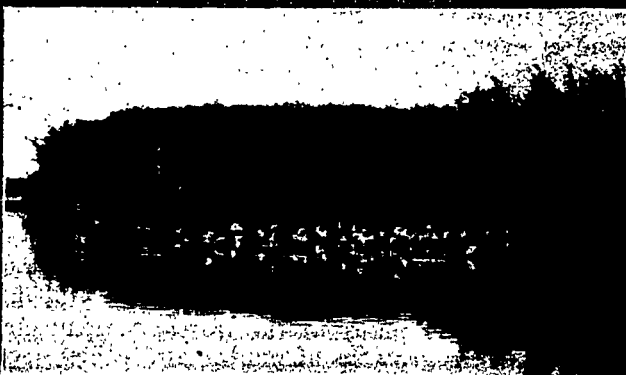


operations are carried on in a small way. The principal trees of the region are black and white spruce, jack-pine, tamarac, cottonwood, poplar, birch, alder, and certain varieties of willow that attain a considerable size. Several clumps of mountain ash, the only ones known to the writer in this part of the province, are well established at the lower end of Battle Lake. Shrubs of many varieties grow in profusion, including the bog birch, saskatoon, choke and pincherries, red willow, wild rose, raspberry, gooseberry, as well as several kinds of currants. Quantities of blueberries and cranberries are gathered by the settlers in favorable seasons, and at times considerable shipments of these fruits are made to nearby centers.

Moose and black-tailed deer are still found in goodly numbers throughout the region, and many are annually killed by settlers and hunters from older parts of the province. Black bear, beaver, mink, lynx, coyote and fox were plentiful until recent years, but now have all but vanished. Such birds as the spruce grouse, Canada jay, the three-toed woodpeckers, Bohemian waxwing, fox sparrow, Hudsonian chickadee and ruby-crowned kinglet breed within this area.

The Battle River, after leaving Battle Lake, flows in a south-easterly direction through a shallow valley and between clay banks varying from ten to fifteen feet high. Growing along these banks are almost impenetrable networks of tall willows which provide ideal nesting and shelter for many varieties of birds; these willow fringes persist on both sides of the river throughout its entire length. As the river descends there is a notable change for the better in the character of the soil and also in the general lay of the land. Mixed farming is carried on quite extensively in the fertile valley, and the many trim farmsteads, surrounded by luxuriant pastures with their sleek cattle and horses, give the impression that the owners are prosperous. The change from the Canadian to the Transition Life Zone is everywhere evident along this stretch of the river, and birds such as the Baltimore oriole, catbird, rose-breasted grosbeak and western meadowlark breed commonly.

About fifteen miles below Ponoka the character of the river and its valley changes, and the valley appears to be much older and widens considerably. The widely separating banks become higher, and the many deep lateral coulees are well marked by heavily wooded banks. Between the winding stream and the sidehills, marshlands and dry pastures alternate, while many of the northern exposures are covered with strong growths of poplar and other deciduous trees. These exposures are dotted here and there with fair sized clumps of spruce. About ten miles east of Wetaskiwin the Battle River is joined by Pipestone Creek



flowing in from the north-west and bringing with it the waters of Crooked Lake.

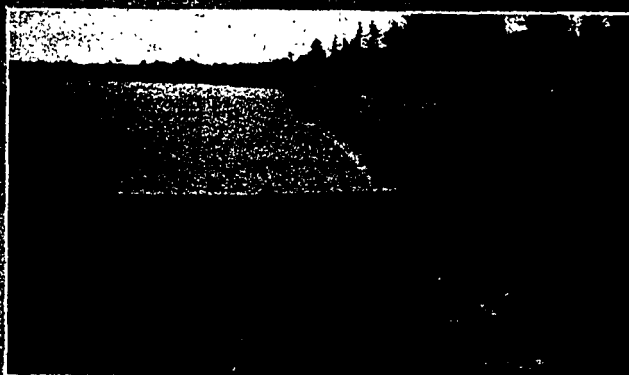
The river here follows a course almost due east, and traverses one of the oldest and most productive settlements in Alberta. The old trading post of Duhamel was for many years the center of this famous district and the latter has frequently been referred to as the "Heart of Alberta's Parklands." The land on both sides of the river was surveyed into long narrow river-lots, affording to each owner a frontage on the stream. A neat little Roman Catholic church, erected in the 80's and still in a fair state of preservation, is on the south side of the valley a half mile east of the site of the old trading post. This church is said to be the oldest building of its kind in the province south of Edmonton. About seven miles below Duhamel is Dried Meat Lake; midway the river is joined by two fair sized streams, Stony Creek on the north and Silver Creek on the south. Stony Creek has its sources in the Miquelon-Hay Lakes areas, about twenty miles north-west of Camrose, and flows in a south-easterly direction through that centre. It drains all three Miquelon Lakes, Hay Lakes and several smaller bodies of water; the last six miles of its course, from Camrose to the river, is through a deep wooded coulee. Silver Creek drains a large portion of the New Norway country and, before its junction with the river, flows through a well timbered canyon-like coulee.

Dried Meat Lake (about three miles below Silver Creek) is nothing more than a wide expansion of Battle River, nine miles long and averaging about a half mile in width. According to Indian legend this lake has for centuries been a popular camping place for their hunting parties, and the meat brought in from the surrounding country was cured and dried along its banks. It is well stocked with pike, pickerel and suckers, and in the summer of 1930 the Department of Fisheries planted 200 young perch in its waters. The hills along the southern bank of this lake are, in common with most northern exposures, heavily wooded with cottonwood, poplar and birch. At the upper end of the lake are extensive marshes, cut off from the channel by willow-crowned levees, which in times of normal water-level determine the course of the stream. In former years these marshes provided excellent nesting cover for many varieties of wild ducks; during the last ten years,

TOP—Muskeg Lake midway between Camrose and Edmonton, where four pairs of Bonaparte Gulls have nested for a number of years. Nests are built in spruce trees growing close to the water's edge.

MIDDLE—View showing dense growth on south side of Pigeon Lake. Trees and shrubbery.

BOTTOM—Flock of Bonaparte Gulls (*Larus philadelphia*) feeding in shoal water near north end of 2nd Miquelon Lake.



however, the water has receded to such an extent that the marshes have all but disappeared.

The Battle River flows out of Dried Meat Lake at its southern extremity, and for many miles follows a crooked course through a wide, high banked valley. Some of these cut-banks are quite rugged and are suggestive of the badlands of the lower Red Deer river. Continuing in a southeasterly direction, the river cuts through a rich, well settled agricultural area which annually produces millions of bushels of the world's finest spring wheat. At the "Big Bend," about seven miles north of Bulwark, the river takes an abrupt turn to the north-east and flows in that direction for more than a hundred miles. It crosses the Alberta-Saskatchewan boundary at practically the same latitude as that of its source. Between Dried Meat Lake and the "Big Bend" Battle River is joined by several fair sized streams flowing in from the south and west, the principal ones being Meeting Creek, Paint-Earth and Frenchman's Creeks. After draining a large area to the north and west, Iron Creek joins the river just north of Hardisty.

The "Big Bend" country is the most southerly portion of the region under consideration, and is, from an ornithological point of view, full of interest. Several species of birds, seldom or rarely seen farther north, and which suggest a near approach to the Upper Austral Life Zone, are known to breed in this area. Among these are the ferruginous rough-legged hawk, long-billed curlew, Arctic towhee, brown thrasher and lark bunting. Some of the characteristic breeding birds of the prairie level are the desert horned lark, chestnut-collared longspur and Sprague pipit.

It is well known that many kinds of birds, when migrating to and from their summer homes in the north, follow river courses and the shores of large lakes when such physical features suit their purposes. In this connection it is interesting to note that the section of the Battle River extending from the "Big Bend" to, and including Dried Meat Lake, Stony Creek, and the chain of lakes lying between Camrose and the North Saskatchewan river, form a very important route of travel for large numbers of migrants. In addition this route provides an almost unbroken link between the lower Red Deer river, the North Saskatchewan, Athabaska and Mackenzie rivers, and the Arctic coast. In all probability this arterial highway of the air accounts for the hosts of birds that are seen every spring and fall passing through the Camrose country.

TOP—Pelican Island, Upper Miquelon Lake. Pelicans, Great Blue Herons and Double Crested Cormorants formerly nested on this island.

MIDDLE—East end of Pelican Island, Upper Miquelon Lake.

BOTTOM—View of beach on south side of Pigeon Lake.



Although considerable time has been devoted by the writer during the past twenty-five years to the study of birds in practically every part of the region now being considered, it has been the lake and river areas of which Camrose is the centre that have always been given the most attention. That portion of the Battle River valley immediately south of Camrose (including the Dried Meat Lake territory with its varied topography), Bittern Lake, Big Hay Lake and the three Miquelon Lakes, have been under close observation at all seasons of the year and have yielded many records of unusual interest. It might be stated here that the town of Camrose is in the same latitude (53 n.) as is James Bay, the southern extremity of Hudson Bay, and also the southern portion of Labrador.

ACKNOWLEDGEMENTS

In the preparation of this list of birds, the writer gratefully acknowledges the valuable assistance which he has received from his young co-worker, Mr. Arthur Twomey. During the past six years Mr. Twomey has brought together a very creditable collection of local birds, and through his efforts a number of species have been found that otherwise could not have been included in the list. Mr. Twomey is a real Westerner, a Camrosian by birth, an indefatigable nature student, and a keen observer of birds.

For kindly help and advice regarding subspecific determinations of many mid-continental birds whose status is, and has been for years a source of much confusion, I wish to thank Mr. P. A. Taverner and Dr. William Rowan.

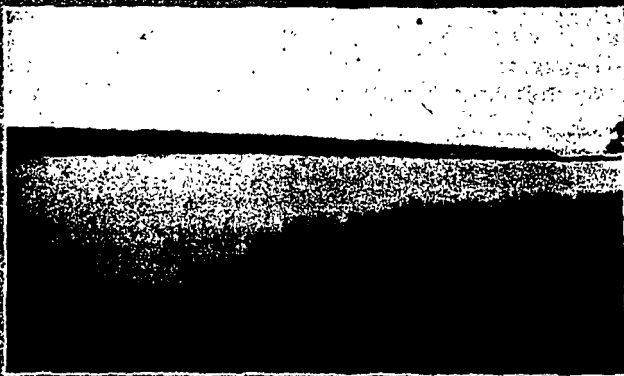
I am also greatly indebted to Mr. John W. Russell and Mr. Hugh A. MacGregor, both of Camrose, for helpful criticism of the text of this publication.

The author would like to acknowledge a deep debt to his old friend and preceptor, Will E. Saunders, of London, Ontario. It was Mr. Saunders who, nearly a half century ago, patiently taught the then youthful student the art of seeing and hearing what he otherwise would have passed

TOP—Spruce woods on south side of Battle River, six miles south of Camrose. Within one mile of where this picture was taken the following birds have been found nesting: Goshawk, Red-tailed Hawk, Sharp-shinned Hawk, Richardson Merlin, Sparrow Hawk, Horned Owl, Saw-whet Owl, Pileated Woodpecker, American Golden-eye Duck, Lesser Yellow-legs and Wilson Snipe.

MIDDLE—Spruce woods on south side of Battle River, six miles south of Camrose. During the winter the following birds frequent these woods: Arctic Three-toed Woodpecker, American Three-toed Woodpecker, Pine Grosbeak, Evening Grosbeak, Hudsonian Chickadee and Brown Creeper, besides other species of local resident birds.

BOTTOM—View of Battle River from the bridge, six miles south of Camrose.



blindly by, and drew his attention to those intimate and all-important facts so essential to a successful and loving knowledge of our feathered fellow-creatures. His time, his untiring energy and his vast store of knowledge have been freely at the disposal of all who have been in need of it. Personal advancement and prestige never interfered with the giving of his best to those in want of either knowledge or inspiration; this is a personal attribute which is as precious as it is rare, and one which is of incalculable value and encouragement to humble beginners in any field of activity. Without Will Saunders, this little volume would not have been possible.

TOP—Figure pointing to nest of Sprague Pipit on writer's farm, Dried Meat Lake.

MIDDLE—Bonaparte Gulls resting on dead spruce trees on island in lower Miquelon Lake.

BOTTOM—Upper end of Dried Meat Lake.

List of Birds

The following list includes 238 species and subspecies of birds which are or have been resident, transient, or of accidental occurrence in the region under review. The arrangement of the list, with but a few minor changes, is that of the Fourth Edition (1931) of the American Ornithologists Union Check-List. From the writer's viewpoint the only change of any consequence is the omission of the possessive in the English names, when such are used—an adjunct that has always seemed to me superfluous and uncalled for. Why the phalarope discovered by the great American ornithologist Wilson, and named in his honor by Sabine, should be designated Wilson's phalarope, any more than the great Canadian river that flows into the Pacific should be called Fraser's river, or the mighty Mackenzie be known as Mackenzie's river, or the street in Camrose on which the writer resides should be called Paulson's street, is beyond comprehension. In deference to the general reader the common name of each bird precedes the scientific designation. In a few instances I have departed somewhat from the Check-List in subspecific determinations.

The list is far from being complete; this could hardly be otherwise in a territory so extensive and with workers so few. Certainly many species of birds that pass through the region and others that spend part of the year in our midst have been overlooked. These are in such numbers that I have not considered it wise to attempt a listing of those other, and as yet unrecorded, species that might be detected in the future. It is hoped, however, that the present list will supply a need, and form a basis for future ornithological work for the ever increasing number of bird students resident in this part of Western Canada.

For those desiring a book describing the plumages and giving the measurements of the birds mentioned in this list, the writer would suggest that a copy of "Taverner's Birds of Western Canada" be procured. This can be obtained from the National Museum, Ottawa, Price \$2.00.

(1) COMMON LOON:

Gavia immer immer

An uncommon summer resident. Several pairs of loons nest every summer in the Miquelon Lakes. I have also seen them on Pigeon and Battle Lakes during the breeding season. The Lesser Loon (*Gavia immer elasson*), is ascribed by the new Check-List to Alberta, but comparative specimens are not available to make subspecific determination.

(2) **HOLBOELL GREBE:**

Colymbus grisegena holboelli

A fairly common summer resident on many of the large lakes. This grebe is sometimes called the "Laughing Hell-Diver" by people living in the vicinity of lakes frequented by it. During the nesting season it is very noisy and its loud, raucous notes have been likened to the laughing of a fool. Its nest is built in the open water with no attempt whatever at concealment. Large numbers of its eggs are destroyed every season by crows.

(3) **HORNED GREBE:**

Colymbus auritus

A common summer resident of ponds and small sloughs. This is probably the best known "Hell-Diver" in Alberta. It also nests out in the open water and crows take many of its eggs.

(4) **EARED GREBE:**

Colymbus nigricollis californicus

A common though locally distributed summer resident. These grebes usually nest in colonies. Until 1928 about fifty pairs nested in the large marshes at the north end of Dried Meat Lake. Since then low water has forced them to seek new locations. A small colony, probably a dozen pairs, nests in Big Hay Lake.

(5) **WESTERN GREBE:**

Aechmophorus occidentalis

A common summer resident of the Miquelon and other large lakes of the region. It was estimated in 1931 that from ten to twenty pairs of these beautiful grebes were nesting in each of the three Miquelon Lakes.

(6) **PIED-BILLED GREBE:**

Podilymbus p. podiceps

A rare summer resident. On June 10th, 1930, Mr. A. Twomey and the writer saw three of these grebes in a small lake a few miles north of New Sarepta, one of which was collected. This lake, and two larger ones a mile distant, are probably unique in that every grebe known in Canada nests within their borders.

(7) ***WHITE PELICAN:**

Pelecanus erythrorhynchos

Formerly a common summer resident in the Miquelon Lakes. In the summer of 1908 I found a large colony of these interesting birds nesting on an island in the upper Miquelon Lake. A few years later, when much of the land surrounding the lake was homesteaded, the big birds ap-

* Can. Field Nat., May, 1910.

peared to resent the intrusion and left for more remote parts. Small numbers of them are still seen occasionally in the Miquelon Lakes, but their visits are of short duration.

(8) DOUBLE-CRESTED CORMORANT:

Phalacrocorax a. auritus

A fairly common summer resident of the Miquelon Lakes. In 1931 it was estimated that 25 pairs were nesting there.

(9) GREAT BLUE HERON:

Ardea h. herodias

An uncommon summer resident. Several pairs of these stately birds nest regularly on islands in the Miquelon Lakes, showing a preference for spruce trees in which to build their nests. Occasionally one is seen fishing in the shallow waters at the north end of Dried Meat Lake.

(10) AMERICAN BITTERN:

Botaurus lentiginosus

A summer resident of the large lakes that provide suitable nesting marshes.

(11) WHISTLING SWAN:

Cygnus columbianus

A fairly regular spring and fall migrant, sometimes in great flocks. During the spring migrations thousands of these birds rest and feed for days at a time on Bittern Lake. On March 30th, 1919, four swans were seen sitting on the ice at the north end of Dried Meat Lake, an unusually early date for their appearance. Near the same place, on November 2nd, 1930, I saw eleven of the birds walking on the ice. At that time the lake was almost frozen over. I believe these swans are just as plentiful now as they were forty years ago.

(12) COMMON CANADA GOOSE:

Branta c. canadensis

An abundant spring and fall migrant, and not uncommon as a summer resident. On May 12th, 1931, I found five nests of the Canada Goose on an island in a lake a few miles north-west of Camrose. The nests, built in the open, on the highest part of the island, were made of dried grasses and reeds and liberally lined with down. Two of the nests contained seven eggs each, one had six eggs, and two, four eggs each. On the 21st of the month I again visited the island and found most of the eggs hatched, and the young, with the old birds, were out on the lake. Geese have nested on this island every year since 1907, when I first knew it.

(13) LESSER CANADA GOOSE:

Branta c. leucopareia

Uncommon and irregular migrants in the Camrose territory, but generally abundant in fall in the eastern portion of the region under consideration. This is the small gray goose that until recently has been called "Hutchins Goose", and which Mr. Taverner clearly proves in his "Revision of the Canada Geese" to have been improperly named. They are occasionally seen in the Camrose territory during the fall, but their chief line of migration lies a hundred miles to the east. While hunting in the Sounding Lake country on October 21st and 22nd, 1931, I saw many large flocks of them, possibly ten thousand birds during the two days. They rested on the lakes at night and fed twice daily in the fields, generally just after sunrise, and again in the middle of the afternoon. They decoy as readily as the larger species, and those killed were found to be in excellent condition. The measurements of one picked at random, an average bird, were: length 28 inches, wing 15½ inches, extent 54 inches, ill 11½ inches; number of feathers in tail 17.

(14) WHITE-FRONTED GOOSE:

Anser a. albifrons

An irregular spring and fall migrant. My first acquaintance with this goose was at Beaver Lake, when, on October 14th, 1922, I shot one out of a flock of about fifty. Later that fall many were killed by hunters in other parts of the territory. On October 1st, 1924, I came suddenly upon a large flock of them feeding in the grain stooks on our farm at Dried Meat Lake, four of which were killed as they rose. They decoy quite readily. The heaviest "White-front" that I ever weighed tipped the scale at 6 lbs. 10 oz.

(15) LESSER SNOW GOOSE:

Chen h. hyperborea

An abundant spring and fall migrant. A flight of these geese which has become historic with a few of the early settlers of a restricted portion of Alberta, was witnessed by the writer on October 14th and 15th, 1892. Towards evening on the 14th a sudden cold wave swept out of the north, accompanied by heavy snow and wind of blizzard proportions, the first sign of winter. I had just finished building a cabin on my homestead ten miles south-east of Red Deer, and was preparing for my first winter in Alberta. Before dark, flock after flock of white geese appeared in the sky coming from the north, heading due south, and flying with terrific speed in their attempt to get ahead of the winter's first icy blast. Tens of thousands of geese passed over in the first hour or two, while throughout the night the mad rush continued unabated. There was never a moment during the

darkness when the babel of noise could not be heard. In the morning a wonderful sight met my view as I looked out over the snow-covered valley and watched the flocks, so close together that they touched and in many cases overlapped. Several lines of V shaped flocks could always be seen over a width of a mile or more, and the noise was almost deafening as an enormous assemblage swung low, barely a hundred feet above the cabin's roof. Although snow fell constantly during the entire twenty-four hours, and vision was at times limited, the geese never appeared to lose their bearings. Thousands were always in sight during the day of the 15th, and it seemed as though all the "wavies" on the continent were rushing south through this very restricted area, probably less than five miles in width. The flight continued until darkness set in on the 15th, and it ended just as abruptly as it began. Many and varied were the estimates made by the settlers who were fortunate enough to see the flight as to the number of geese that passed over, and these estimates ran all the way from a million to many millions. I venture the assertion that I have never in all the intervening years, seen one-tenth as many "wavies" as I saw on that memorable occasion.

(16) ROSS GOOSE:

Chen rossii

A rare migrant. Several of these small "wavies" have been shot in the Camrose territory. Hunters refer to them as the "scabby nosed wayey" because of the scabby appearance at the base of the bill.

(17) COMMON MALLARD:

Anas p. platyrhynchos

An abundant summer resident, also a common migrant. The mallard is the commonest as well as the most popular of our wild ducks. It is usually the first duck to arrive in spring, and one of the last to leave in the fall. Occasionally, in winters of light snowfall, considerable numbers of mallards remain the entire winter in this latitude. The winter of 1923-24 was an unusually mild one with little snow. About two thousand mallards that fed in the Buffalo Lake country that fall failed to leave for the south at the usual time, and were apparently well satisfied to remain where there was an abundance of easily procured food. While Buffalo Lake was in process of freezing, a hole about 35 feet in diameter and nearly circular, was kept open by the ducks and in this they spent their time when not feeding in the stubble. The hole was about a mile from shore and was kept free of ice by the constant movements of the ducks, aided by the heat from their bodies.

Towards the end of January the weather turned decidedly cold and stormy, with an accompanying fall of snow.

People living in the vicinity of the lake saw the ducks leave for their feeding grounds in the morning, circle a few times over the fields and immediately return to the open hole. It was quite evident they were unable to find any feed in the snow-covered fields and were faced with a serious predicament. The matter was reported to interested citizens who, in turn, advised the authorities at Ottawa charged with the administration of the Migratory Bird Convention Act. Help was freely offered and a sum of \$500.00 was forwarded by the Parks Branch of the Department of the Interior to be used for the purchase of grain to feed the ducks. Many public spirited citizens, sportsmen, and Game Associations also offered to help. Straw was spread around the open hole, and on this wheat and barley were liberally scattered. Needless to say the ducks appreciated the attention, and a dire calamity was averted. When the snow left the fields in March, the ducks again cared for themselves, and shortly afterwards dispersed for their nesting grounds. Less than three per cent of the mallards succumbed from the hardships experienced.

(18) GADWALL:

Chauleasmus streperus

Formerly an abundant summer resident, now quite scarce. The gadwall, at the beginning of the century, was one of the most plentiful of ducks. In 1907, and several years following, more gadwalls were shot in the Camrose country than all other ducks together. I have known of two hundred of these ducks being killed by four hunters in an evening's shoot at Erickson's slough five miles northwest of Camrose. About 1920 there was a perceptible decrease in their numbers, and this has continued up till the present time. During the past year, in all my travels I have not seen a dozen individuals. What has caused this deplorable condition it is difficult to say, but close observers claim crows are chiefly to blame.

(19) BALDPATE:

Mareca americana

Formerly an abundant summer resident, now greatly reduced in numbers.

(20) AMERICAN PINTAIL:

Dafla acuta taitihoa

A common summer resident, more abundant as a migrant. The pintail is holding its own very well and does not appear to suffer from the depredations of crows, as do the marsh-nesting ducks. It nests on the uplands, like the mallard, and crows do not systematically hunt the prairies and brushy areas. Large numbers of these ducks arrive from the north in October and remain for several weeks

before resuming their journeys to the south-east. Pintails are slowly learning to feed in grain fields, in the same manner as the mallards.

(21) GREEN-WINGED TEAL:

Nettion carolinense

Formerly a very common summer resident, and abundant migrant, now quite scarce.

(22) BLUE-WINGED TEAL:

Querquedula discors

The "blue-wing" was a very common summer resident until recent years. It is now quite scarce.

(23) SHOVELLER:

Spatula clypeata

The spoonbill was, until recent years, one of the commonest ducks in Central Alberta. It is now becoming quite rare. Gunners seldom considered it worth shooting in the early days, and few were intentionally killed. Local hunters, therefore, cannot be held responsible for their present depleted numbers. It is one of the last ducks to arrive in spring.

(24) REDHEAD:

Nyroca americana

The redhead was a fairly common summer resident until the last few years. It is now becoming scarce. In the fall numbers of them arrive from the north and, for a time, frequent the large lakes where they, as well as the canvas-back, feed on the roots of a favorite water plant.

(25) RING-NECKED DUCK:

Nyroca collaris

An uncommon migrant through this region. A few of these "blue-bills" have been killed in the fall at the "narrows" in the Miquelon Lakes. They were never plentiful.

(26) CANVAS-BACK:

Nyroca valisineria

Formerly a common summer resident, now becoming scarce. Thousands of acres of marshlands, which in years gone by provided suitable nesting areas for canvas-backs, as well as other varieties of ducks, have entirely dried up, and it is now difficult for them to find satisfactory cover for their nests.

(27) LESSER SCAUP DUCK:

Nyroca affinis

Until recent years this "blue-bill" was very plentiful. It was never a popular duck with sportsmen, and few were killed. Previous to the recent dry seasons, nearly every

pot-hole on the prairie had its nesting pair of these ducks, and their presence in such places added greatly to the beauty of the countryside.

(28) AMERICAN GOLDEN-EYE:

Glaucionetta clangula americana

A regular summer resident on the Battle River, and the larger lakes. A pair of these ducks nested for years in a blind chimney on a Camrose residence, and were always successful in bringing out a good sized family of young. The brick chimney (which had been erected for appearance sake only) stood four feet above the roof. It was floored with brick and on this the nest was made. When the eggs hatched and the young were ready to leave, the mother duck would sit patiently on top of the stack and wait until the youngsters climbed out of their snug quarters and gained the top. From there they either jumped or were pushed off by the old bird, and rolled down the steep roof to the lawn below. It always appeared to me that they were pushed off by the mother, as they invariably came down on the same side of the house. The fall of nearly thirty feet did not appear in the least to hurt them. Willing hands were always waiting for their arrival, and as each duckling landed it was carefully picked up and placed in a covered basket. They were then taken to the creek, a half mile distant and placed in the water. The old duck was always in sight while the trip was under way, sometimes leading, at other times waddling along in the rear, but before the young were released she was in the water waiting for them. This experience exploded the old theory held by many that ducks carried their young out of holes in trees to the nearest water. To satisfy myself as to how the young reached the top of their birth-place, I climbed to the chimney one season after the old duck had been seen apparently coaxing her progeny to come up, and watched them in their attempts to reach the top. It was interesting to see how carefully and tactfully the little fellows climbed, sticking their tiny claws into the rough brick, always making sure one foot was secure before releasing the other. Occasionally one would fall back into its downy nest, but another attempt was immediately made and the top eventually reached.

I have frequently found dead golden-eyes in summer cottages at our lakes, and the supposition is that they entered the chimneys in search of nesting places, fell through into the house and there starved.

(29) BUFFLE-HEAD:

Charitonetta albeola

A fairly common summer resident on lakes with wooded banks. This dapper little duck was frequently called

the "Pinto Duck" by the early settlers, because of its black and white coloring. Its nesting habits are quite similar to those of the golden-eye, except that it nests higher in trees.

(30) WHITE-WINGED SCOTER:

Melanitta deglandi

A common summer resident on many of the large lakes. This duck is seldom seen on the smaller lakes or sloughs. As its flesh is not generally relished few are killed by hunters. It is an upland nesting duck. On June 28th, 1927, I found a nest containing nine eggs.

(31) RUDDY DUCK:

Erismatura jamaicensis rubida

A very locally distributed summer resident. This odd looking little duck is quite common during the summer on certain of our lakes. Quite a number of them nest in the marshes at the south end of Big Hay, in company with the nesting Franklin gulls. Their eggs are seldom laid before the 1st of June.

(32) HOODED MERGANSER:

Lophodytes cucullatus

On October 28th, 1927, Mr. T. E. Randall and the writer saw five of these fish-ducks at the north end of Dried Meat Lake, one of which was killed by Mr. Randall. This is our only record for the species.

(33) AMERICAN MERGANSER:

Mergus merganser americanus

A rare migrant and possibly a still rarer summer resident. On April 17th, 1926, Mr. Twomey and the writer saw a flock of about twenty of these ducks flying up the river near Battle Siding, south of Camrose. I have seen female mergansers followed by young in the Miquelon Lakes, but have been unable to positively identify the species. They were either this species or the red-breasted mergansers.

(34) RED-BREASTED MERGANSER:

Mergus serrator

An uncommon migrant. These ducks are occasionally killed in the fall.

(35) TURKEY VULTURE:

Cathartes aura septentrionalis

A rare summer resident. One or two pairs of "buzzards" nest every summer on islands in the Miquelon Lakes. On January 1st, 1911, a vulture was killed by a farmer at Lake de May about ten miles north-east of Camrose. It was in good condition when killed.

(36) EASTERN GOSHAWK:

Astur a. atricapillus

An irregular summer resident, occasionally resident throughout the year. I have known a half dozen of these hawks to spend the winter in the spruce woods along the Battle River south of Camrose. I have on several occasions seen them chase and capture sharp-tailed grouse, and once saw one swoop through the woods with the swiftness of a bullet, and pick up a ruffed grouse that was strutting away from me. It is my belief that the goshawk is partly, if not chiefly responsible for the periodic scarcity of spruce and ruffed grouse which occurs from time to time. I have often noted, when hunting big game in the timbered country along the foothills, that goshawks were always plentiful when there was an abundance of grouse, and vice versa. Hunters and trappers in those areas say that the hawks remain just as long as the grouse last, but no longer. In my opinion the goshawk is the most destructive bird of prey in the west, and it is the only one that I habitually shoot.

(37) SHARP-SHINNED HAWK:

Accipiter v. velox

A regular though locally distributed summer resident, often numerous in the fall during the sparrow migrations.

(38) EASTERN RED-TAILED HAWK:

Buteo b. borealis

The red-tailed hawks of the prairies have so many different color phases that it is not an easy matter to properly identify them. I believe, however, that this is the form most commonly represented in this portion of the west. It is a regular summer resident from early April until late in October. Its food consists chiefly of gophers, and because of this, its economic value to the agricultural interests of the country is of much importance.

A pair of red-tails has nested every year since 1914 in a large cottonwood tree, in a deep coulee, on our farm at Dried Meat Lake. Although the nest is less than three hundred yards from the farm buildings where poultry run at large, the hawks have never been known to molest them. The hawk's hunting grounds are the fields and pastures adjacent to the coulee, and on these areas, few gophers are allowed to live in safety. On several occasions, when walking along an old game trail that leads down the coulee and passes the nesting tree, I have found dead gophers lying on the ground, apparently untouched, but examination showed that the hearts of the animals had been removed through an opening made below the throat. These were most probably tid-bits for the setting bird.

Taverner in his "Hawks of the Prairie Provinces" has computed that a pair of hawks, such as the red-tails, take

350 gophers in a season. I believe that this is a very conservative estimate, as I have on more than one occasion seen a Swainson hawk catch two gophers in less than an hour. I have heard farmers claim that a single gopher destroys at least a half bushel of wheat from the time the seed is sown until it is harvested, and I think this, too, is a fair estimate. With these figures it is only a simple matter of arithmetic to arrive at the value our pair of red-tailed hawks are to the Dried Meat Lake farm. Supposing the wheat to be worth only thirty cents per bushel, the amount saved as a result of this pair destroying 350 gophers would amount to \$52.50. Some day the real value of these large hawks will be recognized, and they will then receive the protection to which they are justly entitled.

(39) KRIDER HAWK:

Buteo b. krideri

An uncommon migrant. Occasionally during migrations very light colored hawks of the red-tail type are seen, and I believe they belong to this form. On September 28th, 1922, I shot one of these birds near Hardisty and gave it to Mr. J. A. Munro, who pronounced it to be a Krider Hawk.

(40) WESTERN RED-TAILED HAWK:

Buteo b. calurus

According to the new Check-List, this form breeds from Alaska and central western Mackenzie, south to lower California, and east to the edge of the Great Plains. I have frequently seen red-tails that had the reddish underparts and which in every particular answered the description given of this hawk.

(41) HARLAN HAWK:

Buteo b. harlani

During the fall migrations, very dark, almost black hawks of the red-tail type are frequently seen, and I believe they belong to this subspecies. I have never seen the black ones in the breeding season.

(42) BROAD-WINGED HAWK:

Buteo p. platypterus

An uncommon summer resident, sometimes fairly common as a migrant. On May 14th, 1922, Mr. J. D. Soper and the writer found a nest belonging to this bird, in open poplar woods, a short distance north of the upper Miquelon Lake. It was in a poplar tree, 25 feet from the ground, and contained two eggs. The nest was built much in the same manner as that of the crow.

In the fall very dark plumaged birds are occasionally seen as they pass south through this territory.

(43) SWAINSON HAWK:

Buteo swainsoni

An uncommon summer resident, not as numerous as formerly. Of all our hawks this species is undoubtedly the most valuable as an aid to agriculture, chiefly on account of its fondness for gophers, and its persistent hunting of these destructive little pests. For this reason, it is in many parts called the "gopher hawk." Swainson Hawk is not nearly as plentiful now as it was twenty years ago, when almost every section of land had its nesting pair in the scattered woodlands. Today there are not a half dozen pairs in an entire township.

That a ruthless slaughter of these unwary hawks is being constantly carried on by thoughtless and cruel hunters is certain, and the large number of dead hawks seen along our country roads, most of them killed as they watch for gophers from telephone poles, is proof of this. When motoring through Montana and Wyoming in the fall of 1929, I noticed that the same shameful practice was everywhere in evidence in those States, and scores of dead hawks of various kinds were noted along the highways. Such scenes are grim reminders of the terrible ignorance of man, and his utter disregard for the country's valuable wild-life.

Coincident with the diminishing number of these useful hawks, it is worthy of note that there has been an unprecedented increase of gophers. These pests reached their maximum numbers during the last few years, and as a result, many thousands of acres of grain are annually destroyed in each of the three prairie provinces. This is a very serious matter, and it is feared that the losses will reach calamitous proportions unless the increase of the pests can be effectively checked.

In an effort to control the animals, the government of the Province of Alberta has in recent years expended thousands of dollars with but indifferent results. The Municipal District of Lloyd George, in which is situated the town of Camrose, has spent considerable sums of money for the same purpose, but in spite of these attempts at control the pests continue to increase. In 1930 this Municipal District paid \$378.90 for the destruction of 37,890 gophers, while in 1931 it paid \$519.90 in bounties for the killing of 51,990 of the rodents. When one realizes that a Municipal District is only eighteen miles square, and that there are several hundred such organized districts in Alberta, it is not difficult to visualize the enormity of the problem, one which our hawks could partially solve.

Referring again to Taverner's computation that a pair of the large hawks kill at least 350 gophers during the summer, it is interesting to note that 148 pairs could, and most likely would have killed the 51,990 gophers which cost the farmers of the Lloyd George Municipal District the respectable

sum of \$519.90 to destroy. And the work performed by the hawks would have been accomplished at no expense whatever to the country.

What folly to continue the expenditure of large sums of money in vain attempts to control or exterminate the pests, while at the same time allowing the indiscriminate killing of hawks that are and always have been the gopher's natural enemies!

(44) AMERICAN ROUGH-LEGGED HAWK:

Buteo lagopus johanni

An irregular spring and fall migrant. There are many winter records of this hawk in the region.

(45) FERUGINOUS ROUGH-LEGGED HAWK:

Buteo regalis

An uncommon summer resident of the south-eastern portion of the region. This large beneficial hawk is quite common along the Red Deer river south of Nevis, and it is occasionally seen in the vicinity of Sullivan Lake. A pair nested for several years in a large cottonwood tree in the Battle River valley, south of Alliance. That appears to be the northern limit of its breeding range.

(46) GOLDEN EAGLE:

Aquila chrysaetos canadensis

An irregular spring and fall migrant, sometimes wintering in the vicinity of large lakes. Unfortunately the majority of eagles that visit the settled portions of the province are killed by people who believe they are destructive birds. During the past twenty-five years no less than twenty-five eagles have been killed within a radius of twenty-five miles of Camrose, not one of which, as far as I have been able to learn, deserved the death penalty. I have on several occasions known these eagles to kill domestic cats that strayed too far away from the farm buildings.

(47) NORTHERN BALD EAGLE:

Haliaeetus leucocephalus alascanus

A rare migrant. On April 16th, 1928, I saw a beautiful white-headed bird at Battle River, south of Camrose, flying towards the north.

(48) MARSH HAWK:

Circus hudsonius

A common summer resident.

(49) OSPREY:

Pandion haliaetus carolinensis

A rare migrant. According to settlers living in the vicinity of Pigeon Lake, fish-hawks once nested on the western

side of that lake. On August 26th, 1922, I saw one flying along the shore of Pigeon Lake.

(50) GRAY GRYFALCON:

Falco rusticolus

Very rare. In his "Birds of the Red Deer River" Taverner records, on the authority of Mr. Horsbrough, the capture of a gray gryfalcon near Camrose in October, 1915. Although I have watched for these birds every winter since I came to the country, I have never been successful in seeing one.

(51) PRAIRIE FALCON:

Falco mexicanus

An uncommon spring and fall migrant. These falcons are quite plentiful during the summer in the open plains country along the Red Deer river, south of Nevis. On an afternoon's drive in that area I have counted as many as fifty. Mr. A. Twomey shot one at our farm on Dried Meat Lake in April, 1927.

(52) DUCK HAWK:

Falco peregrinus anatum

An uncommon migrant.

(53) EASTERN PIGEON HAWK:

Falco c. columbarius

An uncommon migrant. I have frequently seen small hawks chasing house sparrows in winter, and I believe they are of this species. So far I have not been able to collect a specimen.

(54) RICHARDSON PIGEON HAWK:

Falco columbarius richardsoni

An uncommon summer resident, frequently common as a migrant. These little hawks usually show a preference for woods in the vicinity of lakes and rivers for nesting. I have found their nests in poplar, cottonwood and spruce trees, and have also known them to use old magpie's nests. A nest found May 16th, 1931, was built in a spruce tree, thirty feet from the ground, and contained five eggs. Another nest found June 11th, 1927, was in a poplar tree in open woods on the prairie.

(55) EASTERN SPARROW HAWK:

Falco s. sparverius

A common summer resident.

(56) HUDSONIAN SPRUCE GROUSE:

Cathartes c. canadensis

Resident throughout the year in the Pigeon and Battle Lakes country.

(57) GRAY RUFFED GROUSE:

Bonasa umbellus umbelloides

Formerly an abundant resident, now scarce.

(58) WILLOW PTARMIGAN:

Lagopus l. albus

The only record of this northern bird in the region is that of a male, in full breeding plumage, which I shot May 16th, 1931, on Mr. Robt. Campbell's farm, eight miles south of Camrose. Its crop was full of undeveloped poplar leaves which, at the time, were just bursting from the buds. It was apparently alone, as a search for its mate was fruitless. What brought this bird to this part of the country at a time when it should be nesting in the north is a mystery. The specimen has been preserved and will be added to the Camrose Normal School collection.

(59) GREATER PRAIRIE CHICKEN:

Tympanuchus cupido americanus

A rare resident. This is the common "prairie chicken" of Manitoba, and appears in Alberta as a straggler only. A small colony nested for some years in a restricted area of open country at the south end of Beaver Lake. I have been advised that they have all disappeared from that territory during the last year or two. An individual was shot by a Mr. Francis on October 30th, 1916, near Bawlf. Another was killed by Mr. Alex. Ask, October 2nd, 1926, south of Camrose, while a third bird was taken by Mr. T. Solfleet, October 26th, 1926, on his farm about four miles east of Camrose.

(60) PRAIRIE SHARP-TAILED GROUSE:

Pedioecetes phasianellus campestris

A common resident, varying greatly in numbers from year to year. This is the well known "prairie chicken" of Alberta. It is not as plentiful now as when the country was first settled. In the fall of 1892 they were in great abundance and the settlers killed large numbers of them for food. In October of that year I knew two young homesteaders who shot between one and two hundred of the birds while on a day's drive, arriving home in the evening with their wagon-box filled. There were no game laws at that time and thousands of "chickens" were killed late in the fall and kept frozen until they were required for consumption.

(61) EUROPEAN PARTRIDGE:

Perdix p. perdix

An imported species and at the present time very abundant. This is the well known and popular "Hungarian Partridge." It was first liberated in Alberta in 1907 by Calgary sportsmen, when five pairs were given their freedom near Midnapore. Later that year the same number was released

in the Alix country. The first "Huns" reported in this part of the province was a flock of about fifteen birds, seen October 6th, 1919, by Mr. J. Sherman Fox, between Donalds and Buffalo Lake. This partridge is exceptionally well adapted to conditions in this northern latitude.

(62) RING-NECKED PHEASANT:

Phasianus colchicus torquatus

This is another introduced species. It has not, up to the present time, shown the same degree of adaptability in establishing itself as has the preceding species. On April 12th, 1932, forty-five pairs of these pheasants were released on the writer's farm at Dried Meat Lake, south of Camrose. These birds were raised at the Provincial Government poultry plant at Oliver.

(63) WHOOPING CRANE:

Grus americana

Formerly a summer resident. This is one of the largest of Canadian birds and is, according to some authorities, on the verge of extinction. At one time, within the memory of men still living, it was a fairly common summer resident, and also a migrant through this region. It is now extremely rare.

(64) LITTLE BROWN CRANE:

Grus c. canadensis

An abundant migrant. These cranes pass through this country in large numbers every fall, sometimes remaining for a time to feed in the grain fields. They are seen less frequently in the spring. In the fall their line of flight is generally from the north-west towards the south-east.

(65) SANDHILL CRANE:

Grus c. tabida

Formerly a summer resident, now only a migrant. A pair of these cranes spent the summer of 1892 in a marshy lake midway between Red Deer and Pine Lake. I saw them first on June 10th, and they were probably nesting. Late in May, 1895, Dr. H. George and the writer found a sandhill crane's nest, containing two eggs, in the large marsh on the west side of Spotted Lake, a few miles west of Buffalo Lake. The nest was built on a mass of old reeds, and was well concealed from view in the long grass. (These two records are outside of the region covered by this list.)

(66) SORA RAIL:

Porzana caroliniana

An uncommon summer resident, very locally distributed.

(67) **YELLOW RAIL:**

Coturnicops noveboracensis

A pair of small rails answering the description of this species was seen, and quite frequently heard during the summers of 1919 and 1920, in a marsh at the north end of our farm on Dried Meat Lake. The notes which sounded exactly like two small stones being rhythmically struck against each other, were often heard in June, coming from the marsh. Although I was unable to collect a bird to make positive identification, I include the species in this list on the strength of an experience which the writer and Mr. Will E. Saunders had, on June 20th, 1906, in a similar marsh located near my old homestead south-east of Red Deer. While wading through this marsh we heard the characteristic notes of a yellow rail, which were well known to my companion, who recognized and named them at once. We then separated about twenty yards, and when we were apparently close to the bird, we both ran directly to the spot from whence the notes came. When our converging paths met, up jumped a yellow rail which we saw at a range of three or four yards. It was indubitably of that species. It flew only about twenty yards, but we were unable to flush it again. Several others were also heard in other parts of this marsh, and our estimate of the total number was five. On the 23rd of the same month, another was heard in a nearby marsh, indicating the probability that the species, at that time, was well represented in the district.

(68) **AMERICAN COOT:**

Fulica a. americana

An abundant summer resident of many of the large lakes.

(69) ***PIPING PLOVER:**

Charadrius melodus

A rare summer resident. There are few records of this plover in Central Alberta, its range being more to the south and east. On June 10th, 1930, while walking in company with Mr. A. Twomey, on an island in a lake about fifteen miles north of Camrose, I saw a pair of these small waders running along the beach, and from their actions, believed they were nesting in the vicinity. After a careful search I found a slight depression in the gravelly surface, at the north end of the island, which contained a single egg. On the 23rd of the month I again visited the island and found four eggs in the saucer-shaped nest. There was no lining whatever in the depression, and the eggs lay on several flat, reddish colored stones. The eggs were taken and presented to the National Museum at Ottawa. The low, soft muffled whistle of the birds could be distinctly heard for a consid-

* Can. Field Naturalist, Jan., 1931.

erable distance before the island was reached. This is, I believe, the first recorded nesting of the Piping Plover in Central Alberta.

(70) SEMIPALMATED PLOVER:

Charadrius semipalmatus

A common migrant, generally appearing in small flocks.

(71) KILLDEER:

Oxyechus v. vociferus

A common and well distributed summer resident. This well known bird is usually the first member of the wader family to arrive in the spring and one of the last to depart in the fall. The following exceptionally early dates of its arrival in the vicinity of Camrose should prove of interest when it is known that Camrose is in the same latitude as James Bay, the southern extremity of Hudson Bay: February 12th, 1920; March 13th, 1922; and March 16th, 1926.

(72) AMERICAN GOLDEN PLOVER:

Pluvialis d. dominica

A fairly common spring migrant, less plentiful during the fall migrations. This large plover is holding its own very well, and appears to be about in the same numbers as it was forty years ago. It arrives from the south in flocks of from ten to thirty birds, and while here feeds almost entirely on cultivated fields and pastures. On May 19th, 1928, when driving north of Camrose, I noted ten flocks of these plovers totalling about 125 individuals. They were all feeding on freshly plowed fields, and farmers said they were devouring large numbers of cut-worms. The last date on which I have recorded them in the spring is June 1st.

(73) BLACK-BELLIED PLOVER:

Squatarola squatarola

A regular spring and fall migrant. This wader is generally more numerous during the fall migrations than in the spring. Unlike the preceding species it prefers the shores of lakes and sloughs for feeding, rather than cultivated fields and pastures. I have seen these plovers remain around the large lakes as late as the last week in October.

(74) RUDDY TURNSTONE:

Arenaria interpres morinella

A rare migrant. This beautiful bird has only been recorded once in the region. On May 27th, 1931, when walking in company with Mr. A. Twomey along the shore of a lake, 15 miles north of Camrose, we came upon five of them, one of which was collected.

(75) WILSON SNIPE:

Capella delicata

A common summer resident, not as plentiful as formerly.

(76) LONG-BILLED CURLEW:

Numenius a. americanus

Formerly a common summer resident of the south-eastern portion of the region. It still nests sparingly in the open country surrounding Sullivan Lake. ~~Mr. A. Twomey saw a pair of these birds on an island in one of the Miquelon Lakes on May 26th, 1931. They were in company with several Marbled Godwits.~~

767 Hudsonian Curlew - See, Can. J. Nat. Mus., 1936, p. 53.

(77) *UPLAND PLOVER:

Bartramia longicauda

Formerly a common summer resident, now quite rare. This interesting prairie bird has decreased in numbers at an alarming rate since the country was first settled. On my arrival in Alberta in 1892, I found it everywhere abundant, and at that time I believe this sandpiper, and the western meadowlark were about in the same numbers. In 1931 I knew of one pair only nesting in the region. A few are seen every year in August and September, on their southern migration.

(78) SPOTTED SANDPIPER:

Actitis macularia

A common summer resident.

(79) EASTERN SOLITARY SANDPIPER:

Tringa s. solitaria

An uncommon summer resident. Muddy sloughs surrounded by trees are the favorite haunts of this wader. In such places they lay their eggs in old nests, usually those of the robin or blackbird.

(80) WESTERN SOLITARY SANDPIPER:

Tringa solitaria cinnamomea

A fairly regular migrant, sometimes quite plentiful in the autumn.

(81) WESTERN WILLET:

Catoptrophorus semipalmatus inornatus

A fairly common summer resident in the vicinity of large lakes and sloughs.

(82) **GREATER YELLOW-LEGS:

Toxanus melanoleucus

An uncommon migrant.

* Ottawa Field Nat., Aug., 1913.

**Auk., April, 1931.

(83) LESSER YELLOW-LEGS:

Totanus flavipes

A rather common summer resident and an abundant migrant. This plover nests commonly in the burnt-over country lying north and west of the Miquelon Lakes. On May 28th, 1931, I found a nest containing four eggs, on the Canadian National right-of-way, a mile east of Battle Siding, south of Camrose. The nest was on the ground exactly fifteen feet from the rails over which several trains passed daily. In the fall large numbers of these plovers migrate through this region.

(84) PECTORAL SANDPIPER:

Pisobia melanotos

A fairly common migrant.

(85) BAIRD SANDPIPER:

Pisobia bairdi

A common spring and fall migrant.

(86) LEAST SANDPIPER:

Pisobia minifilla

A very abundant migrant, usually in large flocks.

(87) *INLAND DOWITCHER:

Limnodromus g. hendersoni

An uncommon migrant. This subspecies, and the following, apparently migrate through this region together. On July 15th, 1930, Mr. A. Twomey collected four dowitchers out of a large flock that was feeding in a slough about four miles east of Camrose, three of which were this subspecies.

(88) LONG-BILLED DOWITCHER:

Limnodromus g. scolopaceus

A common migrant. I have frequently seen these waders in the Camrose country as late as May 24th, when in full breeding plumage.

(89) STILT SANDPIPER:

Micropalama himantopus

An uncommon migrant. This sandpiper so closely resembles a lesser yellow-legs when feeding in a grassy slough, that it is a difficult matter to distinguish between the two. On August 28th, 1927, Mr. T. E. Randall saw one feeding with a flock of lesser yellow-legs at Lake de May. It is usually quite common at the south end of Beaver Lake during the fall migrations. (This lake is situated a few miles north of the region being considered.)

* "Rowan", Auk, Jan., 1932.

(90) SEMIPALMATED SANDPIPER:

Ereunetes pusillus

An abundant migrant, usually in large flocks.

(91) BUFF-BREASTED SANDPIPER:

Tryngites subruficollis

A rare migrant. On September 8th, 1929, Mr. A. Twomey collected one of these waders at Dried Meat Lake, where he found it feeding alone on a sandy point. This is the only record of the bird for the region.

(92) MARBLED GODWIT:

Limosa fedoa

A common summer resident in the vicinity of large lakes.

(93) HUDSONIAN GODWIT:

Limosa haemastica

An uncommon migrant. Although this godwit is a regular spring and fall migrant at Beaver Lake, thirty miles north of Camrose, it is seldom seen in the Camrose territory. On May 21st, 1927, Mr. A. Twomey and the writer saw three, about four miles east of Camrose, one of which was collected. On August 21st the same year, Mr. Twomey secured another specimen on the shore of a lake fifteen miles north of Camrose.

(94) SANDERLING:

Crocethia alba

A fairly common migrant.

(95) AVOCET:

Recurvirostra americana

A rather common summer resident in the vicinity of the larger lakes. On May 24th, 1924, I found a colony of these handsome waders nesting on a small island in Bittern Lake. The "community spirit" idea was quite in evidence in the colony, as four nests only were serving the needs of eight pairs. Two of the nests contained eight eggs each, one held seven, while the fourth nest had six eggs. As four eggs is the usual number laid by these birds, it is evident that two pairs were making use of each nest.

(96) WILSON PHALAROPE:

Steganopus tricolor

An uncommon, locally distributed summer resident. A few pairs of these waders nest every season in the marshes at the head of Dried Meat Lake. They are frequently seen during the summer in other parts of the region under review.

(97) NORTHERN PHALAROPE:

Lobipes lobatus

A very common migrant, sometimes in enormous flocks.

(98) HERRING GULL:

Larus argentatus smithsonianus

An uncommon migrant, probably breeding. This large gull is frequently seen in the vicinity of the larger lakes, in the dark, juvenile plumage, when it is quite easily recognized. In the adult plumage it is often confused with the California Gull. Up until the present time it has not been known to nest in the region, although a small colony is suspected to be breeding on an island in Bittern Lake. This conjecture will be investigated during the summer of 1932.

(99) CALIFORNIA GULL:

Larus californicus

A common summer resident. This species and the following are the common large gulls of Alberta. A colony of approximately two thousand California, and ring-billed gulls have nested for years on an island in Bittern Lake, about fifteen miles north-west of Camrose. During the past five years I have, with the help of Camrose teachers and students, banded in the neighborhood of a thousand fledgling every summer in this colony, and some interesting recoveries have been made. Returns have been received from practically every western State, as well as from many points in Mexico. The prairie gulls are all beneficial to agriculture as they destroy enormous quantities of injurious insects. They are protected by law.

(100) RING-BILLED GULL:

Larus delawarensis

A very common summer resident. It is impossible to arrive at anything like a correct estimate of the relative numbers of ring-billed, and California gulls that nest on the Bittern Lake island, referred to when considering the preceding species. When this colony was discovered in 1927, California gulls appeared to greatly outnumber the ring-bills. In 1931 it looked as though there had been an entire reversal of status, and the opinion was freely expressed by banding operators that the ring-bills were then in the majority. It is a difficult matter to properly identify the two species as they circle high in the air, each bird presenting a different aspect to the observer.

Banded gulls have been reported from many outlying points in Alberta within sixty days after banding. A number are killed in July and August every year at Lesser Slave Lake, Lac la Biche and Cold Lake, showing that some of the young go north as soon as they are able to fly. Why these harmless birds are killed it is difficult to understand, although I suspect it is for food, as many recoveries are reported by half-breeds. One of the most remarkable recoveries was that reported by Major Allan Brooks. It was ring-billed gull, banded 544527, on June 22nd, 1927. On August 6th of the same year Mr. Brooks collected the

bird at Comox, Vancouver Island, exactly forty-five days after it was banded. This flight by a bird less than two months old, of approximately seven hundred miles over strange mountains and unknown seas, was a marvellous achievement.

(101) FRANKLIN GULL:

Larus pipixcan

An abundant summer resident in the vicinity of marshy lakes. Some notable changes have taken place in the nesting colonies of these small gulls in Central Alberta during the past twenty-five years, chiefly as a result of low water in the lakes. The first colony of Franklin gulls known to the writer was that on the south and west sides of Spotted Lake. I visited this colony late in May, 1895, and my estimate of the number of gulls nesting at that time was approximately ten thousand pairs. This enormous colony flourished for many years, and it was not until the lake was drained that they were forced to seek new nesting sites. Another large colony nested up until about 1929 at the southern end of Beaver Lake, when the water in the lake receded to such an extent that the gulls were compelled to move to other locations.

The most important colony of Franklin gulls known to the writer at the present time is that at the south end of Big Hay Lake, about thirty miles north-west of Camrose, and which in 1931 numbered about five thousand pairs. These industrious little gulls spend much of their time during the summer on cultivated fields and pastures, and destroy enormous quantities of injurious insects. Farmers living in the vicinity of gull colonies have frequently told me that their crops rarely, if ever, suffered from cutworm damage.

(102) *BONAPARTE GULL:

Larus philadelphia

An abundant migrant, rarely nesting in the region. In the fall thousands of these gulls may be seen feeding in the sheltered bays of some of the large lakes. Three or four pairs nest every year in the vicinity of a small muskeg lake, midway between Camrose and Edmonton. The nests are built in spruce trees growing close to the water, and are placed on branches from ten to twenty feet from the ground. They nest about May 20th and lay three eggs.

(103) **FORSTER TERN:

Sterna forsteri

A rare summer resident. On July 13th, 1925, Mr. A. Twomey collected a male of this species in the marsh at the upper end of Dried Meat Lake. On the 20th of the same

** Can. Field Nat., Sept., 1931.

**Can. Field Nat., March, 1926.

month and at the same place the writer found a nest containing two young, which he secured, together with the female. The nest was placed on top of an old musk-rat house, in open water, surrounded by tall grass. This is, I believe, the first recorded nesting of the Forster tern in Alberta. The female and young were presented to Dr. William Rowan, of the University of Alberta, Edmonton.

(104) COMMON TERN:

Sterna h. hirundo

A common summer resident of the three Miquelon Lakes.

(105) BLACK TERN:

Chlidonias nigra surinamensis

A common summer resident in the vicinity of marshes that offer suitable nesting sites.

(106) WESTERN MOURNING DOVE:

Zenaidura macroura marginella

An uncommon summer resident. Doves appear to be more plentiful now than in former years. Two pairs are known to have nested on the south side of Dried Meat Lake during the past few summers.

(107) PASSENGER PIGEON:

Ectopistes migratorius

Formerly a common summer resident, now extinct. According to Mr. Pascal Dumont, pigeons were quite plentiful in Central Alberta until the year 1875, when they began to rapidly disappear. As a boy Mr. Dumont caught numbers of them at Duhamel with a home-made trap, baited with barley.

(108) *BLACK-BILLED CUCKOO:

Coccyzus erythrophthalmus

A rare summer resident, probably extending its range northwards. Until recent years the cuckoo was unknown in this part of Alberta. On June 23rd, 1924, Mrs. A. Nelson, of Duhamel, found a dead cuckoo in her garden, that had been killed by flying against wire fence. The following day I went to see the bird, and also to make enquiries regarding the find. A careful search was made for the mate of the bird that was killed, but without success. A partially completed cuckoo's nest was found in a willow crotch, about a foot from the ground, and another, probably that used the previous year, was also found close by. On June 21st, 1925, I saw a pair of these birds in a poplar thicket on the Camrose Golf Course, and a few days later heard their notes in the same vicinity. It is worthy of note that these birds appeared both years, at a time when tent caterpillars

* Can. Field Nat., March, 1926.

were over-running the country and causing serious damage to the foliage of poplar trees. The cuckoo, it is said, is one of the few birds that eat hairy caterpillars.

(109) ARCTIC HORNED OWL:

Bubo v. subarcticus

Very light colored horned owls are frequently seen in winter, and occasionally during the summer, in this part of Central Alberta. I believe they belong to this form. On March 8th, 1931, I found a great horned owl's nest, about five miles south of Camrose, which contained four eggs. The nest was built in a cottonwood tree, about twenty-five feet from the ground. Both birds were very light in color, and when flying through the woods appeared to be nearly as white as some of the darker snowy owls that I have seen. I believe this nest belonged to "subarcticus". I have never before found four eggs in a great horned owl's nest, the usual number being two, rarely three.

(110) GREAT HORNED OWL:

Bubo v. virginianus

A rather common resident.

(111) SNOWY OWL:

Nyctea nyctea

An irregular winter visitor. Some winters this owl is entirely absent, while at other times it is quite common. The winter of 1930-31 was notable for its abundance, when as many as five or six of them were frequently seen in a day's drive through the country. Mr. J. W. Russell, of Camrose, reported having seen twenty-six in the Camrose territory that winter. Although these owls are charged with the killing of occasional grouse and partridge, their chief food, while here, is mice. These are caught in the vicinity of straw stacks where the owls make their headquarters during their sojourn with us. Unfortunately many of them are killed by people who are ignorant of their usefulness.

(112) AMERICAN HAWK OWL:

Surnia ulula caparoch

Formerly a regular winter visitor from the north, scarce in recent years. I have never seen these owls as plentiful as they were during the winter of 1896-97, when I once counted as many as thirty in a single day. On April 22nd, 1923, I collected one near Pipestone Creek, midway between Camrose and Wetaskiwin. This is the latest date I ever recorded one in the spring.

(113) GREAT GRAY OWL:

Scoliaptex n. nebulosa

A rare winter visitor from the near-north. These large

owls have been found nesting in the muskeg country a hundred miles north of Edmonton. On September 30th, 1924, I collected one on the west side of Bittern Lake, an unusually early date for its appearance in the fall.

(114) LONG-EARED OWL:

Asio wilsonianus

An uncommon summer resident. This owl, closely related to the following species, and whose food habits are quite similar, frequents the prairie bluffs. Its food consists almost entirely of mice of various kinds. On May 16th, 1931, I found a pair of these owls occupying an old magpie's nest, in a willow thicket two miles south of Camrose. There were four eggs in the reconstructed nest. While examining it and its contents, the two birds flew from tree to tree continually snapping their beaks and uttering a low, soft "who-o-o". A short distance from the nest, a Hungarian Partridge was setting on her nest of sixteen eggs, apparently not in the least worried by her strange neighbors. These useful, unobtrusive owls appear to be more plentiful than formerly, probably on account of the increased acreage of cultivated land. This naturally results in more mice. I have never noted the long-eared owl in winter, and think it must migrate south in the fall.

(115) SHORT-EARED OWL:

Asio f. flammeus

A common summer resident, occasionally wintering. Much that has been said concerning the value of Swainson Hawk as an aid in gopher control, may be said in favor of the short-eared owl as a destroyer of field mice. From the time of its arrival, early in April, until its departure in October and November, it is an indefatigable worker in search of the destructive pests. In years when there is an abundance of mice, the short-ear occasionally remains all winter in this latitude. In the fall of 1931, when engaged in threshing their grain, farmers in this part of Alberta noted an unprecedented number of mice in the fields. Later when winter set in and threshing operations were halted, it was discovered that grain stooks in the fields were infested with the rodents, and as many as a dozen of the destructive little animals had taken up their winter quarters under a single stook. In October and November, unusual numbers of short-eared owls were observed patrolling the fields, hunting for mice, and later their numbers were augmented by the arrival of thousands of northern-bred birds. The appearance of so many owls in winter was the cause of much comment throughout the countryside. Why were there so many? and why did they not proceed on their southern migration? Evidently the reason was definite. The food supply was in such abundance that it was unnecessary for them to continue their journey.

From various interested observers I was able to gather much information regarding their numbers, movements, and methods of hunting their prey. Mr. John W. Russell, Inspector of Schools for the Camrose Inspectorate, an enthusiastic student of bird-life, and a careful observer, had an excellent opportunity, while motoring from school to school, to make observations of this remarkable invasion of owls. On November 26th, 1931, he decided to keep a careful count of all the birds seen, and on that date noted ten. On the 29th of the month he added fifteen to his list, making a total of twenty-five owls for the two days. From December 1st to 15th he recorded fifty-four of the owls. Many days in January, 1932, were cold and stormy, with temperatures as low as 30 and 40 degrees below zero, yet there was no apparent diminution in the owl population. Drifted roads made travelling in the country by automobile next to impossible, and Mr. Russell's records cover two days only for the month. On January 3rd and 25th he noted ten owls. However, according to reports received from farmers living in the surrounding country, the owls were just as numerous as they had been in December.

While making inspections in the immediate vicinity of Camrose on February 2nd, 3rd, 4th and 5th, Mr. Russell observed twenty-seven owls while travelling the same number of miles. His observations during the winter covered 16-days between November 26th, 1931, and February 5th, 1932, and in this time he recorded 116 short-eared owls, an average of 7.25 for each day. Mr. Russell concludes an interesting letter as follows: "These owls were all noted as I drove, averaging 30 to 40 miles per hour, without hunting for them. At that rate, visibility was naturally rather severely restricted, and under the conditions affecting my observations, I am prepared to believe that the number of owls I saw on any day was far short of the number within sight-range, if I had been looking for them."

On Christmas Day, 1931, Mr. H. A. MacGregor, Science Master at the Camrose Normal School, motored through the New Norway country and counted thirty short-eared owls, all hunting in or adjacent to fields of stooked grain. On December 31st, 1931, Mr. MacGregor and the writer drove twenty-five miles through the Duhamel country, and twenty-four owls were seen. Reports received from observers in many other parts of Central Alberta indicate that the unusual visitation of short-eared owls was general.

I examined the stomachs of several of the birds that had been killed before their real value was known, and all contained traces of mouse hair. Hundreds of pellets thrown up by the owls were found in the fields, and on straw stacks, and in every case, it was evident the owls were feeding almost entirely on mice. The figures presented give a fair idea of the abundance of short-eared owls in this portion of

Central Alberta during the winter of 1931-32. The number of field mice that this vast army destroyed must have reached enormous proportions, and may have prevented what otherwise would have resulted in a serious plague. An invaluable service was rendered at a time of emergency, and at no cost whatever to the people. One naturally asks, what man-made device or scheme could have performed this work as efficiently as these allies of mankind? and at what cost? Surely they are our benefactors and are entitled to our care and protection.

(116) RICHARDSON OWL:

Cryptoglaux funerea richardsoni

An irregular winter visitor from the near-north. I believe many of these small owls perish during severe winters when it is difficult for them to find mice. In November, 1919, during a very cold spell, my attention was drawn to one of these owls as it sat motionless on the lower limb of a tree near our home. When I approached, it made no effort whatever to escape, and as it appeared to be in poor condition and chilled, I took it to the house and offered it meat, which it refused to eat. The following morning it died. This owl nests in the timbered country a hundred miles north of Edmonton where, I believe, I have heard its notes, which resembles those of the saw-whet owl, except that they are uttered more rapidly.

(117) SAW-WHET OWL:

Cryptoglaux a. acadica

An uncommon resident. These small owls, in their choice of habitat, show a preference for spruce woods. I have never been able to understand how they earned their name, as there is nothing in their monotonous tooting that in any way resembles the "whetting of a saw." The "Tooting owl" would be a more appropriate name for this unobtrusive denizen of the deep woods.

While walking through a thick stand of spruce on the south side of Battle River, south of Camrose, May 19th, 1931, I came suddenly upon four young, fully grown, saw-whet owls, sitting on the lower branches of a wide-spreading spruce tree. I approached to within four or five feet of them, when all took fright and flew to higher positions in nearby trees. Each bird had a clearly defined disk around the eyes. I have on several occasions found these owls in weasel traps where they met their doom when filching the bait. I have also seen dead ones in old buildings where they had taken shelter, or entered in search of mice, and were unable to find their way out again.

(118) EASTERN NIGHTHAWK:

Chordeiles m. minor

A fairly regular summer resident, common during migrations.

(119) RUBY-THROATED HUMMINGBIRD:

Architoechus colubris

Several pairs of these "hummers" nest fairly regularly in Camrose every summer. Although I have on several occasions seen in Camrose what I believed to be the Rufous Hummingbird, I have never been able to collect one to positively identify it.

(120) EASTERN BELTED KINGFISHER:

Megaceryle a. alcyon

An uncommon summer resident along the Battle River and in the vicinity of certain of our "fish lakes."

(121) NORTHERN FLICKER:

Colaptes auratus luteus

A common summer resident wherever trees are large enough to offer suitable nesting sites.

(122) NORTHERN PILEATED WOODPECKER:

Ceophloeus pileatus abieticola

This large woodpecker is a fairly common resident of the timbered country around Pigeon and Battle Lakes. Several pairs nest regularly in the heavy woods along the Battle River south of Camrose.

(123) *LEWIS WOODPECKER:

Asyndesmus lewis

An accidental straggler from the mountains. On October 12th, 1930, while driving along the south-east side of Big Hay Lake, in company with Mr. C. S. Bailey, of Camrose, I saw one of these birds fly across the road in front of the car. It alighted on the limb of a dead tree, less than one hundred feet from the road, and I was able to secure a good view of it. Although I had my binoculars with me, it was not necessary to use them, so close did I approach the bird. This is, as far as I am aware, the only record for Lewis Woodpecker in this part of the province.

(124) YELLOW-BELLIED SAPSUCKER:

Sphyrapicus v. varius

A common summer resident.

(125) NORTHERN HAIRY WOODPECKER:

Dryobates villosus septentrionalis

A fairly common resident.

(126) NELSON DOWNY WOODPECKER:

Dryobates pubescens nelsoni

A common resident.

* Can. Field Nat., March, 1931.

(127) ARCTIC THREE-TOED WOODPECKER:

Picoides arcticus

A fairly common resident of the timbered country in the vicinity of Pigeon and Battle Lakes. These woodpeckers occasionally winter in the spruce woods at Battle River, south of Camrose.

(128) AMERICAN THREE-TOED WOODPECKER:

Picoides tridactylus bacatus

This species occurs under the same conditions as the preceding.

(129) EASTERN KINGBIRD:

Tyrannus tyrannus

A common and evenly distributed summer resident in the "parkland" country.

(130) EASTERN PHOEBE:

Sayornis phoebe

A rather common summer resident, not as plentiful as formerly.

(131) SAY PHOEBE:

Sayornis s. saya

An uncommon summer resident, more plentiful during migrations. This flycatcher sometimes nests in crannies on the tops of grain elevators in our towns and villages, such locations taking the place of their usual nesting sites on the cliffs in the bad-lands.

(132) YELLOW-BELLIED FLYCATCHER:

Empidonax flaviventris

A rare migrant. Although I have frequently seen flycatchers that I believed to be this species, I have never been able to collect a specimen. On August 26th, 1931, Mr. A. Twomey shot one in Camrose, out of a company of migrating warblers. This is the only record we have of the species for the region.

(133) ALDER FLYCATCHER:

Empidonax t. trailli

A rather common summer resident, somewhat locally distributed. This flycatcher haunts the small poplar and willow clumps of the prairies. In such places its clear, far-carrying, characteristic notes "right here" may be heard throughout the day, and frequently at night.

(134) LEAST FLYCATCHER:

Empidonax minimus

A common summer resident. This is the common flycatcher of the "prairie parklands." Its familiar notes,

"chebec—chebec—" can be heard in such places at all hours of the day, and often at night.

(135) WESTERN WOOD PEWEE:

Myiochanes r. richardsoni

A common summer resident of light and heavy woodlands. The long, drawn-out "pe-er-ee" uttered by this flycatcher is familiar to all who live in the wooded parts of the region.

(136) OLIVE-SIDED FLYCATCHER:

Nuttallornis mesoleucus

An uncommon summer resident of the burnt-over areas of the Pigeon and Battle Lake country. Occasionally seen in the same type of country in the vicinity of the Miquelon Lakes. Noted rarely in the Camrose territory during migrations.

(137) *PALLID HORNED LARK:

Otocoris alpestris arctica

An uncommon migrant. Occasionally winters in the south-eastern portion of the region. When motoring on January 30th, 1923, south of the Big Bend of the Battle River, I saw two horned larks at close range, and they appeared to answer in every detail the description of this northern bird. Later in the day I observed another pair in the vicinity of Coronation. Residents of those districts said these larks frequently wintered there. The above are the only winter records of horned larks I have for the region.

(138) DESERT HORNED LARK:

Otocoris a. leucolaema

This is, I believe, the common breeding horned lark of Central Alberta. It is quite plentiful in summer in the open plains country along the lower stretches of the Battle River.

(139) TREE SWALLOW:

Iridoprocne bicolor

A common summer resident.

(140) BANK SWALLOW:

Riparia r. riparia

Quite plentiful along rivers and creeks where suitable nesting sites exist. Occasionally found nesting in railway cuts.

(141) BARN SWALLOW:

Hirundo erythrogaster

The barn swallow has become quite rare in Central Alberta during the past twenty years. Some seasons I do not see it at all. In 1927 a pair nested under a bridge on the highway, eight miles east of Camrose. According to Mr.

* Can. Field Nat., Sept., 1924.

Cal Knox, of Killam, several pairs of barn swallows have nested in the Killam district for the last two or three years. The nests in every case were built on the rafters of bridges. On September 16th, 1931, while watching some waders that were feeding in a slough just east of Bawlf, my attention was drawn to the loud metallic notes of barn swallows, and on looking up I saw five of them flying in their erratic manner over the slough. They were evidently migrating. This is the largest number of barn swallows I have seen together for many years.

(142) NORTHERN CLIFF SWALLOW:

Petrochelidon a. albifrons

An uncommon and very locally distributed summer resident.

(143) PURPLE MARTIN:

Progne s. subis

A fairly common summer resident. The purple martin is slowly but surely increasing in numbers in Central Alberta. This is due, I believe, to the efforts of bird-lovers who are ever striving to attract them to our towns and villages. It is also worthy of note that many small colonies of the birds are now found on farms where nesting boxes have been provided for them. The following comments relating to the status of these interesting birds in Camrose, taken from my 1930 note-book, may be the means of stimulating a desire on the part of bird-lovers in other places to emulate: "April 25th, 1930. A pair of martins arrived in Camrose this morning, the first seen this year. Why the haste to reach their summer home in Alberta, while the weather is still cold and stormy, and a month before their nesting time, is difficult to understand. The birds were reported by Vernon Craig, who found them busily engaged inspecting his bird boxes. It was not long until all the boys in the neighborhood gathered to welcome their return, and the newly arrived travellers appeared to be just as happy as were those who greeted them. Vernon certainly has the knack of getting his share of these confiding birds every year, and to him credit must be given for the steady growth of the Camrose colony.

"In 1919 only one pair of martins was known to nest in Camrose, and it is quite probable the present population owes its existence to those pioneers. In 1929 eight pairs of martins nested on the Craig property, and the increase for the season was thirty mature birds. Besides martins, this young bird-student had in 1929, the following birds nesting on an area 150 feet by 100 feet: one pair each of tree swallows and house wrens and two pairs of robins. On the adjoining vacant lot there nested during the same summer, one pair each of Baltimore orioles, song sparrows,

wood pewees and least flycatchers. This is a splendid achievement in the encouragement of birds to make their summer homes on a small area in the centre of a busy town, a total of sixteen pairs of birds of eight varieties. Other Camrose boys have been fortunate in having as many different species nesting, but none have been as successful as Vernon in gaining the confidence of the martins. He is looked upon as their friend; his bird-houses are thoroughly cleaned and closed in the fall, and cats and house sparrows are taboo around the Craig home."

(144) CANADA JAY:

Perisoreus c. canadensis

A common resident of the Pigeon and Battle Lakes country. I have never seen nor heard of the "Whisky Jack" in the parkland country east of Wetaskiwin or Ponoka. In 1892 and from that time on to the end of the century, this jay was quite common throughout the year in the wooded territory east of Red Deer, Penhold and Innisfail, where I have found their nests and eggs in March. It has entirely disappeared from those districts during the past twenty-five years, probably on account of much of the land being cleared and broken up.

(145) NORTHERN BLUE JAY:

Cyanocitta c. cristata

The blue jay is an uncommon resident of the wooded areas along the Battle River, and also in the vicinity of the larger lakes. It is seldom seen on the prairie level.

(146) *AMERICAN MAGPIE:

Pica p. hudsonia

This well known hardy resident species was first recorded by members of the Franklin Overland Arctic Expedition, early in the nineteenth century, from Cumberland House, on the lower Saskatchewan River. At that time countless numbers of buffalo roamed the prairies, and the offal left by hunting parties furnished an abundant food supply for the scavengers. When the buffalo disappeared the magpies either perished or moved to other regions. Magpies were unknown north of the Red Deer River when the first settlers came to Central Alberta. On October 14th, 1911, I saw two of the birds near Wolf Creek, a few miles north of Lacombe, and as far as I am aware that was their first recorded appearance in the territory. The following year in October, I noted two more of the birds near Bittern Lake. Since that time magpies have gradually increased in numbers until they are now so numerous they are considered a menace.

Mr. Pascal Dumont remembers fifty years ago when

* Ottawa Field Nat., Oct., 1912.

magpies were just as plentiful as they are at the present time, and says that they caused much annoyance, and sometimes death to the native horses used for hauling freight. When the backs or shoulders of the animals became galled, the birds alighted on them and picked so persistently at the sores that it was necessary to blanket or stable them to save their lives. He states that magpies disappeared from this part of the province in the early 80's.

(147) NORTHERN RAVEN:

Corvus corax principalis

A very rare winter visitor in the settled portions of the region, frequently seen in the Pigeon and Battle Lakes country from November until April. During the long severe winter of 1906-07 ravens were observed quite frequently in the open prairie country south and east of Red Deer.

(148) EASTERN CROW:

Corvus b. brachyrhynchos

An extremely common summer resident. Two outstanding changes of economic importance have taken place in the bird-life of Alberta during recent years, viz.: the extraordinary increase in the number of crows and the deplorable decrease of many species of our wild ducks. The crow, like its congenitor the magpie, is a comparatively new addition to the avifauna of Central Alberta, although both birds were here in the buffalo days. In 1892, the year of my arrival in Alberta, I did not record a single crow in the list of birds observed that season. Only the odd pair was seen during the next few years, and it was not until the beginning of the present century that their numbers showed any material increase. By 1910 there were evidences that crows would shortly become a menace to our water-fowl should their increase continue as it had in the previous decade. And unfortunately what was expected did happen. The increase has been phenomenal and there appears to be no satisfactory explanation for the extraordinary change of status.

It is significant that as the crows gained in numbers there was a corresponding decrease in the number of ducks, particularly of the marsh-nesting species. In the choice of nesting sites it was noted that the crows favored wooded areas adjacent to lakes and marshlands where ducks nested, this no doubt for the purpose of being close to a rich food supply during the nesting season. Mr. Francois Adam, a former prominent farmer of the Edberg district, and on whose farm are extensive marshes, told the writer of the discovery of twenty-two ducks' nests on his place one Sunday in May. The following Sunday, being suspicious all was not well with the nesting ducks, he again visited the marsh and was surprised to find every nest empty, and many crows

busily engaged in every part of the marsh, searching for nests that had been overlooked. He stated that there were a dozen crows' nests in the willows surrounding the lake, and others nearby in scattered clumps on the prairie. It is evident that in such places ducks could not carry on nesting operations successfully.

Realizing the seriousness of the crow menace, the Game Commissioner of Alberta, during the last few years, has sponsored competitions for the purpose of encouraging the destruction of crows, and considerable sums of money have been paid in prizes. Many Municipal Districts and Game Associations are working along the same lines. In 1931 the Municipal District of Lloyd George paid bounties on 14,908 crow eggs and on 924 pairs of crow feet.

It is my belief that crows are chiefly responsible for the present deplorable plight of our wild ducks, and the sooner this is realized and concerted action taken to check their increase, the better will be our chance of saving the ducks from total extinction.

(149) LONG-TAILED CHICKADEE:

Penthestes a. septentrionalis

A common resident. This is the well known chickadee of the prairie provinces.

(150) HUDSONIAN CHICKADEE:

Penthestes h. hudsonicus

A fairly common resident of the Pigeon and Battle Lakes country. A few of these chickadees spend the winter in the spruce woods along the Battle River, south of Camrose. They arrive in that area in November and remain until the end of March.

(151) RED-BREASTED NUTHATCH:

Sitta canadensis

An uncommon summer resident, frequently quite plentiful during migrations.

(152) ROCKY MOUNTAIN CREEPER:

Certhia familiaris montana

Resident of the Pigeon and Battle Lakes country. Numbers of these hardy little birds come from the north and west and spend the winter in the spruce woods along the Battle River, south of Camrose.

(153) WESTERN HOUSE WREN:

Troglodytes aedon parkmani

A common summer resident of the wooded parts of the region. Many nests in towns and villages where suitable nesting boxes have been erected for them.

(154) EASTERN WINTER WREN:

Nannus h. hiemalis

A rare migrant, probably nesting in the Pigeon and Battle Lakes country.

On November 22nd, 1924, Mr. A. Twomey collected one of these small wrens about four miles south of Camrose. It was feeding alone in a sheltered thicket. This is our only record of the bird for the region.

(155) ALBERTA MARSH WREN:

Telmatoodytes palustris laingi

A fairly common summer resident, locally distributed.

(156) *SHORT-BILLED MARSH WREN:

Cistothorus stellaris

Apparently very rare, possibly of accidental occurrence. On September 19th, 1927, Mr. A. Twomey collected one of these wrens from a flock of migrating sparrows and warblers, at the Battle River, south of Camrose. This is, as far as I am aware, the only record of the bird, for Alberta.

(157) CATBIRD:

Dumetella carolinensis

A fairly common summer resident.

(158) **BROWN THRASHER:

Toxostoma rufum

A rare summer resident of the eastern portion of the region. When driving through the hamlet of Rossyth about six miles east of Hardisty on June 19th, 1925, I saw one of these birds fly from one poplar clump to another. I approached to within a hundred feet of the bird and was able to positively identify it.

(159) EASTERN ROBIN:

Turdus m. migratorius

A common and fairly well distributed summer resident. Robins are much more plentiful now than they were, when the country was first settled. During the entire summer of 1892 I did not see as many robins as I now see in a single day. They appear to enjoy the association of man.

(160) EASTERN HERMIT THRUSH:

Hylocichla guttata faxoni

An uncommon migrant, probably nesting in the Pigeon and Battle Lakes country.

(161) OLIVE-BACKED THRUSH:

Hylocichla ustulata swainsoni

A rather common summer resident.

* Can. Field Nat., Feb., 1928.

**Can. Field Nat., March, 1926.

(162) GRAY-CHEEKED THRUSH:

Hylocichla minima aliciae

An uncommon migrant. On September 7th, 1929, Mr. A. Twomey collected one of these northern nesting birds at our farm on Dried Meat Lake.

(163) WILLOW THRUSH:

Hylocichla f. salicicola

A rather common summer resident.

(164) MOUNTAIN BLUEBIRD:

Sialia-currucoides

A common, though irregular summer resident, also an abundant migrant. Bluebirds vary greatly in numbers from year to year. They are frequently the first spring birds to arrive. Early dates for their arrival at Camrose are: March 2nd, 1918; March 22nd, 1920; March 14th, 1926; and February 21st, 1931.

(165) TOWNSEND SOLITAIRE:

Myadestes townsendi

An accidental straggler from the mountains. On October 7th, 1921, Mr. Alex. Ask, of Camrose, collected one of these birds near Lake de May, about ten miles north-east of Camrose. This is, as far as I am aware, the only record of the bird for the region.

(166) EASTERN GOLDEN-CROWNED KINGLET:

Regulus s. satrapa

An uncommon migrant. On December 24th, 1931, Mr. A. Twomey and Mr. H. A. MacGregor observed a number of these midgets in the spruce woods at the Battle River, south of Camrose, one of which was collected. The next day more were seen at the same place. These are our only winter records.

(167) EASTERN RUBY-CROWNED KINGLET:

Corthylio c. calendula

A common migrant through most of the region, and nesting in the western portion. This kinglet is plentiful in the muskeg country around Pigeon and Battle Lakes during the summer.

(168) AMERICAN PIPIT:

Anthus spinoletta rubescens

An abundant spring and fall migrant.

(169) SPRAGUE PIPIT:

Anthus spraguei

An uncommon and locally distributed summer resident.

(170) BOHEMIAN WAXWING:

Bombycilla garrula pallidiceps

An irregular visitor from November until April. These birds have been observed in June in the country between Battle and Buck Lakes where they were probably nesting.

(171) CEDAR-WAXWING:

Bombycilla cedrorum

A fairly common summer resident, and one of the last birds to arrive in spring, usually the end of May.

(172) NORTHWESTERN SHRIKE:

Lanius borealis invictus

An uncommon winter visitor, generally arriving late in October and remaining until April. While here it is solitary in its habits.

(173) WHITE-RUMPED SHRIKE:

Lanius ludovicianus excubitorides

A common summer resident.

(174) BLUE-HEADED VIREO:

Vireo s. solitarius

An uncommon migrant through the Camrose territory, probably nesting in the Battle and Pigeon Lakes country.

(175) RED-EYED VIREO:

Vireo olivaceus

A regular summer resident of the prairie "parklands", also in the heavy woods along the Battle River, and some of the larger lakes.

(176) PHILADELPHIA VIREO:

Vireo philadelphicus

This vireo is an uncommon migrant through the Camrose territory. It may nest sparingly.

(177) WESTERN WARBLING VIREO:

Vireo gilvus swainsoni

A common summer resident, frequenting the same types of country as the red-eyed vireo.

(178) BLACK AND WHITE WARBLER:

Mniotilta varia

A common migrant through the Camrose territory, and nesting in the western portion of the region.

(179) TENNESSEE WARBLER:

Vermivora peregrina

A fairly common summer resident. Abundant during the migrations.

(180) ORANGE-CROWNED WARBLER:

Vermivora c. celata

An uncommon migrant, possibly breeding in some portions of the region.

(181) YELLOW WARBLER:

Dendroica a. aestiva

A common summer resident.

(182) MAGNOLIA WARBLER:

Dendroica magnolia

An uncommon migrant.

(183) CAPE MAY WARBLER:

Dendroica tigrina

An uncommon migrant.

(184) MYRTLE WARBLER:

Dendroica coronata

An abundant migrant, probably nesting in small numbers in the spruce woods along the Battle River, south of Camrose. A common summer resident in the western portion of the region. Thousands of these warblers, in scattered flocks, pass through the Camrose territory in October every year, on their southern migration. They are, I believe, the hardiest members of the warbler family, and can withstand sub-zero temperatures for days at a time. On October 20th, 1930, I watched three Myrtle warblers feeding on aphids which infested many of the cottonwood trees in Camrose, and though the weather was cold and stormy they did not appear in the least anxious to leave this food supply and continue their southern journey. Several nights previous the thermometer registered 10 degrees below zero.

(185) AUDUBON WARBLER:

Dendroica a. auduboni

A rare migrant. On April 30th, 1925, Mr. A. Twomey collected one of these birds at our farm on Dried Meat Lake. It was with a number of Myrtle warblers. This is the only record we have of the bird.

(186) BLACK-THROATED GREEN WARBLER:

Dendroica v. virens

An uncommon migrant, most probably nesting in the western portion of the region.

(187) BLACK-POLL WARBLER:

Dendroica striata

A common migrant.

(188) WESTERN PALM WARBLER:

Dendroica p. palmarum

An uncommon migrant. Mr. J. A. Munro collected one of these warblers near Hay Lake on September 1st, 1922. On May 9th, 1931, Mr. A. Twomey secured a specimen in Camrose.

(189) OVEN BIRD:

Seiurus aurocapillus

An uncommon summer resident of dense woods.

(190) GRINNELL WATER THRUSH:

Seiurus noveboracensis notabilis

An uncommon migrant. This bird probably nests in the western portion of the region.

(191) MOURNING WARBLER:

Oporornis philadelphia

An uncommon summer resident. Several pairs of these warblers nest regularly in high dry woods along the Battle River, south of Camrose.

(192) MACGILLIVRAY WARBLER:

Oporornis tolmiei

I have secured this warbler in May at the Battle River, when in company with the preceding species.

(193) WESTERN YELLOW-THROAT:

Geothlypis t. occidentalis

A rather common, though locally distributed summer resident. Large numbers of these birds pass through the Camrose territory during migrations.

(194) WILSON WARBLER:

Wilsonia p. pusilla

An uncommon migrant, probably nesting in small numbers. A nest of this warbler was found in June, 1926, near the Red Deer River, south of Nevis.

(195) CANADA WARBLER:

Wilsonia canadensis

An uncommon migrant.

(196) AMERICAN REDSTART:

Setophaga ruticilla

An uncommon summer resident, abundant as a migrant.

(197) HOUSE SPARROW:

Passer d. domesticus

An introduced species. Very abundant, and a nuisance. I saw these sparrows for the first time in Alberta during

the summer of 1898, when several were noted feeding along the railroad tracks in the town of Red Deer. Since that time its increase has been very rapid.

(198) BOBOLINK:

Dolichonyx oryzivorus

A rare straggler from the south and east. On June 7th 1919, while Mr. Stewart Smith and the writer were walking through some meadowland in the Battle River valley, south of Camrose, a male bobolink flew from a dead tree towards us and circled overhead, at the same time bursting forth into its characteristic song. As the writer was very familiar with the bobolink in Ontario, there could be no doubt as to the identification of the bird. A careful search for the female was made, and although she could not be found, the actions of the male led us to believe she was on her nest thereabouts. As far as I am aware, this is the only record of the Bobolink for Central Alberta.

(199) WESTERN MEADOWLARK:

Sturnella neglecta

An abundant summer resident. This popular and well known bird is much more numerous now than formerly. Whether this change of status is the result of human habitation or because of the suppression of prairie fires, it is difficult to say. We have several winter records of meadowlarks.

(200) YELLOW-HEADED BLACKBIRD:

Xanthocephalus xanthocephalus

An uncommon and locally distributed summer resident. One of the most important colonies of these birds at the present time in the region, is that in the large marsh at the south end of Big Hay Lake. From twenty-five to fifty pairs of "yellow heads" nest there regularly.

(201) GIANT RED-WINGED BLACKBIRD:

Agelaius phoeniceus arctolegus

According to the new Check-List this is the form of Red-wing that inhabits Alberta. It is one of our commonest and best known birds, and nests wherever there are suitable marshes.

(202) BALTIMORE ORIOLE:

Icterus galbula

A common summer resident, gradually extending its range. Orioles are now found quite commonly during the summer in what was formerly the bald-prairie country lying to the south and east of Hardisty. Since that large area of fertile land has been brought under cultivation, prairie fires have disappeared, and as a result thousands of small poplar

and willow groves are springing up everywhere. In these "bluffs" many varieties of birds such as orioles, flycatchers, warblers, and vireos nest commonly. I have on several occasions, in these little "oases", seen nests of the Baltimore oriole built in saplings so low that I could look into them from the ground.

(203) *RUSTY BLACKBIRD:

Euphagus carolinus

A rare summer resident, abundant as a migrant. Eleven rusty blackbirds spent the entire winter of 1919-20 in the stockyards in Camrose. On November 6th, 1919, the thermometer registered 24 below zero. Towards the end of January the cold was intense, the mercury on several occasions dropping to 55 below zero, yet the blackbirds appeared to get along just as well as the snow-bunting with which they fed. On March 26th they were noted making short excursions into the country, probably in search of a change of food. On that date their plumage was beginning to assume the lustre of spring, and some of the males were singing. A few days later the birds left, probably for their nesting grounds further north.

(204) BREWER BLACKBIRD:

Euphagus cyanocephalus

An abundant summer resident.

(205) BRONZED GRACKLE:

Quiscalus quiscula aeneus

A common though locally distributed summer resident.

(206) NEVADA COWBIRD:

Molothrus ater artemisiae

A common summer resident, abundant as a migrant.

(207) WESTERN Tanager:

Piranga ludoviciana

A common summer resident of the western portion of the region, and a rare migrant through the Camrose territory.

(208) ROSE-BREADED GROSBEAK:

Hedymeles ludovicianus

A rather common summer resident. This fine songster shows a preference for woods bordering rivers and lakes during its sojourn here.

(209) EASTERN EVENING GROSBEAK:

Hesperiphona v. vespertina

An irregular winter visitor. This beautiful bird usually appears in this territory late in October, and frequently re-

mains until May. While here its principal food is the seed of the Manitoba Maple.

(210) EASTERN PURPLE FINCH:

Carpodacus p. purpureus

An uncommon migrant in the Camrose territory, probably nesting in small numbers along the Battle River. Common during the summer in the western portion of the region.

(211) ROCKY MOUNTAIN PINE GROSBEAK:

Pinicola enucleator montana

A fairly regular winter visitor from November until March.

(212) HOARY REDPOLL:

Acanthis hornemanni exilipes

An uncommon winter visitor, frequently seen in company with the following species.

(213) COMMON REDPOLL:

Acanthis l. linaria

An abundant winter visitor, often in very large flocks. During their sojourn in this territory they consume enormous quantities of noxious weed seeds.

(214) NORTHERN PINE SISKIN:

Spinus p. pinus

An irregular spring and fall migrant. The siskin nests in the Battle Lake country. Large flocks of them frequently appear in the Camrose territory in June and July.

(215) PALE GOLDFINCH:

Spinus tristis pallidus

A fairly common summer resident, and one of the last birds to arrive in spring.

(216) RED CROSSBILL:

Loxia curvirostra pusilla

An uncommon spring and fall migrant, rarely seen in winter.

(217) WHITE-WINGED CROSSBILL:

Loxia leucoptera

An irregular winter visitor, more frequently observed in flocks during July and August.

(218) ARCTIC TOWHEE:

Pipilo maculatus arcticus

An uncommon summer resident, very locally distributed. The towhee occurs sparingly during the summer, in the

Battle River valley, south and east of Alliance. A pair was seen in July, 1928, in the vicinity of old Duhamel. They were probably nesting.

(219) LARK BUNTING:

Calamospiza melanocorys

An uncommon summer resident of the open prairies south of the "Big Bend" of the Battle River. That is probably the northern limit of its range.

(220) WESTERN SAVANNAH SPARROW:

Passerculus s. alaudinus

A common summer resident.

(221) LECONTE SPARROW:

Passerherbulus caudacutus

An uncommon summer resident, locally distributed. This sparrow frequents damp, grassy meadows. Its soft lisping note, "tze", uttered with monotonous frequency as the bird clings to a tall grass stem, sounds more like an insect than that of a bird.

(222) NELSON SPARROW:

Ammospiza caudacuta nelsoni

An uncommon summer resident. In appearance, actions and general habits, this sparrow much resembles the preceding species.

(223) WESTERN VESPER SPARROW:

Pooecetes gramineus confinis

An abundant summer resident. The clearing and breaking up of the prairies has not in the least interfered with this well known sparrow, and it appears to be more plentiful now than it was when the country was first settled. It nests just as readily in cultivated fields and pastures as it formerly did on the virgin prairies.

(224) SLATE-COLORED JUNCO:

Junco h. hyemalis

An abundant migrant, less numerous as a summer resident. There are, I believe, two, if not three, forms of the junco in this territory. Frequently, during migrations, birds of varying sizes and plumages are seen, but up to the present I have been unable to make subspecific determination.

(225) EASTERN TREE SPARROW:

Spizella a. arborea

An abundant migrant. Countless numbers of these northern breeding birds pass through this territory in April and October every year. While here its food consists almost

entirely of noxious weed seeds, gleaned along the country roads or in the fields. On December 24th, 1931, Mr. A. Twomey saw two of these sparrows in a sheltered spot in ~~Silver Creek coulee~~, one of which he collected. This is the first winter record we have of the tree sparrow.

(226) EASTERN CHIPPING SPARROW:

Spizella p. passerina

An uncommon summer resident, more numerous during migrations.

(227) CLAY-COLORED SPARROW:

Spizella pallida

A common summer resident. Large areas of brush lands, the favorite haunts of these little sparrows, have been cleared and broken up during recent years, and as a consequence they have been forced to move to newer districts. The "clay colors" are not as plentiful now as they were twenty-five years ago. The notes of this sparrow are often mistaken for those of a large insect, and might be represented by the repetition of the syllable "zee" repeated in a low nasal tone, from three to a dozen times.

(228) WHITE-CROWNED SPARROW:

Zonotrichia l. leucophrys

An abundant migrant.

(229) GAMBEL SPARROW:

Zonotrichia l. gambeli

This sparrow is seen during the migrations in company with the preceding species.

(230) WHITE-THROATED SPARROW:

Zonotrichia albicollis

A common migrant, less numerous as a summer resident.

(231) EASTERN FOX SPARROW:

Passerella iliaca iliaca

A rare migrant and an uncommon summer resident. In June, 1907, I found several pairs of these beautiful songsters nesting on a tract of virgin brush-land a few miles south-east of Camrose, where as many as four or five males could be heard singing from the tree-tops at the same time. For some unaccountable reason they have never returned to that area.

(232) LINCOLN SPARROW:

Melospiza l. lincolni

A fairly common migrant, less common as a summer resident. These sparrows breed commonly in the western portion of the region.

(233) SWAMP SPARROW:

Melospiza georgiana

An uncommon summer resident, more numerous as a migrant.

(234) EASTERN SONG SPARROW:

Melospiza m. melodia

A common and evenly distributed summer resident. It is probable there are two or more forms of the song sparrow in this region, as birds' showing various shades of plumage are frequently seen.

(235) LAPLAND LONGSPUR:

Calcarius l. lapponicus

An abundant spring and fall migrant.

(236) SMITH LONGSPUR:

Calcarius pictus

An irregular migrant.

(237) CHESTNUT-COLLARED LONGSPUR:

Calcarius ornatus

A common summer resident of the open country along the lower stretches of the Battle River. Several pairs regularly nest in the vicinity of Bittern Lake.

(238) EASTERN SNOW BUNTING:

Plectrophenax n. nivalis

A common winter visitor, generally from October until April.

Supplement

Table Showing Average Date of Arrival of Spring Birds in the Vicinity of Camrose, Alberta, from 1907 to 1931

- April 1—Canada Goose, Mallard, Crow, Western Meadowlark, Mountain Bluebird, Tree Sparrow.
- April 5—American Rough-legged Hawk, Killdeer, Robin.
- April 10—Red-tailed Hawk, Horned Lark, Junco, Lapland Longspur.
- April 15—Lesser Snow Goose, Whistling Swan, Pintail, Herring Gull, Marsh Hawk, Sparrow Hawk, Northern Flicker, Red-winged Blackbird, Fox Sparrow, Song Sparrow, Golden crowned Kinglet, Chestnut-collared Longspur.
- April 18—California Gull, Ring-billed Gull, Shoveller, American Golden-eye, Bufflehead, Widgeon, Red-breasted Merganser, Sharp-shinned Hawk, Bronzed Grackle, Rusty Blackbird, Red-breasted Nuthatch.
- April 20—White Pelican, American Coot, Franklin Gull, Swainson Hawk, Lesser Yellow-legs, Brewer Blackbird.
- April 23—Great Blue Heron, Greater Yellow-legs, Phoebe, Purple Finch, Ruby-crowned Kinglet, Brown Creeper.
- April 25—Little Brown Crane, Mourning Dove, White-rumped Shrike, Tree Swallow.
- April 28—Horned Grebe, Holboell Grebe, Western Grebe, Wilson Snipe, American Titlark.
- April 30—Bonaparte Gull, Broad-winged Hawk, Willet, Richardson Merlin.
- May 1—Yellow-headed Blackbird, Say Phoebe, Hermit Thrush, Vesper Sparrow, Myrtle Warbler, Audubon Warbler.
- May 5—Spotted Sandpiper, Solitary Sandpiper, Avocet, Bittern, Cowbird, White-crowned Sparrow, White-throated Sparrow, Savannah Sparrow.
- May 10—Black-bellied Plover, Kingfisher, Yellow-bellied Sapsucker, Sora Rail, Golden Plover, Field Plover, Cliff Swallow, Bank Swallow, Wilson Thrush, Olive-backed Thrush, Palm Warbler, Tennessee Warbler, Orange-crowned Warbler, Black and white Warbler, Clay-colored Sparrow.
- May 12—Sprague Pipit, Solitary Vireo, Lincoln Sparrow, Chipping Sparrow, Redstart.
- May 16—Alberta Marsh Wren, Western Wood-Pewee, Least Flycatcher, Yellow Warbler, Cape May Warbler, House Wren.
- May 18—Western Tanager, Black-poll Warbler.
- May 20—Black Tern, Baltimore Oriole, Magnolia Warbler.
- May 22—Kingbird, Northern Yellowthroat, Wilson Warbler.
- May 23—Warbling Vireo, Alder Flycatcher.
- May 24—Nighthawk, Rose-breasted Grosbeak, Philadelphia Vireo.
- May 28—Cat Bird, Rey-eyed Vireo, Oven Bird, Canada Warbler.
- June 1—Goldfinch, Cedar Waxwing.

Table Showing Last Date on which Birds were Recorded in the Fall of 1931, at Camrose, Alberta

1931

Sept.

- 4—Field Plover.
- 7—Baltimore Oriole.
- 8—Philadelphia Vireo.
- 9—Kingbird.
- 9—Sora Rail.
- 10—Red-breasted Nuthatch.
- 10—Say Phoebe.
- 11—Swamp Sparrow.
- 13—Redstart.
- 14—Sharp-shinned Hawk.
- 14—Catbird.
- 15—Clay-colored Sparrow.
- 15—Black-poll Warbler.
- 15—Lincoln Sparrow.
- 15—Orange-crowned Warbler.
- 15—Wilson Warbler.
- 16—Barn Swallow.
- 16—Nelson Sparrow.
- 16—Great Blue Heron.
- 22—Lesser Yellow-legs.
- 22—White-throated Sparrow.
- 22—Siskin.
- 22—Savannah Sparrow.
- 23—House Wren.
- 23—Killdeer.
- 23—Greater Yellow-legs.
- 25—White-crowned Sparrow.
- 26—Northern Flicker.
- 27—Little Brown Crane.
- 30—Vesper Sparrow.

Oct.

- 1—Cedar Waxwing.
- 1—Bronzed Grackle.
- 1—Swainson Hawk.
- 1—Sparrow Hawk.
- 4—Myrtle Warbler.
- 7—Red-winged Blackbird.
- 7—Bittern.
- 9—Broad-winged Hawk.
- 10—Golden Eagle.
- 10—Golden-crowned Kinglet.
- 10—Bonaparte Gull.
- 10—Lesser Scaup.
- 11—American Titlark.
- 13—Long-eared Owl.
- 15—Junco.
- 15—Robin.
- 15—Mountain Bluebird.
- 16—Red-tailed Hawk.
- 16—Ring-billed Gull.
- 18—Wilson Snipe.
- 20—Lapland Longspur.
- 20—Coot.
- 21—Crow.
- 23—Rough-legged Hawk.
- 23—Rusty Blackbird.
- 24—Kingfisher.
- 24—Bufflehead.
- 24—Widgeon.
- 24—Pintail.
- 28—Tree Sparrow.
- 29—Lesser Snow Goose.

Nov.

- 8—Marsh Hawk.
- 9—Western Meadowlark.

Table Showing Spring Arrival Dates during the Past 40 Years of Three Well Known Summer-resident Birds in Central Alberta

The records from 1892 to 1906 were taken in the vicinity of Red Deer; those from 1907 to 1931, all inclusive, were made in the vicinity of Camrose.

Year	House Wren Date	Yellow Warbler Date	Baltimore Oriole Date
1892	May 24	May 22	May 24
1895	May 16	May 16	May 20
1897	May 17	May 17	May 18
1898	May 16	May 17	May 18

Year	House Wren Date	Yellow Warbler Date	Baltimore Oriole Date
1899.....	May 21	May 20	May 24
1900.....	May 16	May 15	-----
1901.....	May 14	May 18	-----
1903.....	May 14	May 25	June 2
1904.....	May 18	May 16	-----
1905.....	May 21	May 18	May 21
1906.....	May 17	May 13	May 23
1907.....	May 27	May 23	May 26
1908.....	May 18	May 17	May 27
1909.....	May 23	May 16	May 21
1911.....	May 22	May 16	May 18
1912.....	May 16	May 13	May 26
1913.....	May 14	May 20	May 25
1914.....	May 17	May 14	-----
1915.....	May 18	May 12	May 20
1916.....	May 14	May 16	May 24
1917.....	May 18	May 16	May 20
1919.....	May 16	May 12	May 22
1920.....	May 18	May 14	May 26
1921.....	May 18	May 14	May 26
1922.....	May 13	May 17	May 21
1923.....	May 20	May 16	May 20
1924.....	May 17	May 19	May 24
1925.....	May 13	May 16	May 16
1926.....	May 9	May 8	May 8
1927.....	May 18	May 8	-----
1928.....	May 14	May 11	May 14
1929.....	May 15	May 15	May 17
1930.....	May 18	May 9	May 20
1931.....	May 21	May 16	-----
1932.....	May 15	May 15	May 16

The records for 1920 and 1921 are remarkable in that each species arrived on the same date each year.

SUMMER BIRDS IN A CAMROSE GARDEN

From time to time the writer is in receipt of interesting letters from people in various parts of Alberta telling of their experiences with birds in their particular localities. Some of these letters recount valuable observations which it seems should be made accessible to those who are interested in the subject. The letter reproduced below is from Mr. John W. Russell, Inspector of Schools for the Camrose Inspectorate, a comparatively new recruit in the rapidly increasing number of bird-lovers in the west. His letter is dated September 24th, 1929. While it reads like a chapter of calamities and failures, it clearly proves that quite a number of interesting varieties of birds can be attracted to

our very doors, if they are invited in the right spirit. It also reminds us of the terrible mortality that goes on from year to year among our feathered friends. The letter is replete with interesting details concerning the home-life of some of our common birds. It is quite evident that the birds have made a strong appeal to Mr. Russell, and it is just as clear that the birds have appreciated what he has done for them. They have found in him a friend and protector, and it will be interesting to know who will share the greatest joy when these same birds return from the south in April and May—the birds or their protector. Mr. Russell's letter follows:

"There appeared to be a larger number of robins prospecting for nesting locations this spring than in previous years. I observed, one morning, a pair in my upper balcony. I placed a small board on a ledge which they immediately discovered and built their nest there. Of the four eggs laid I found one cast out and one stale. One young robin was found dead on the floor. The fourth survived, grew fast and matured. I saw him several times later when he was quite strong and flying. Another pair built under the cornice in the eave outlet. They hatched their young, but one day I observed that they were not about. I discovered one stale egg and one dead robin about a third grown. It was badly bruised about the shoulders. I had previously shot two grackles that had been intruding in their territory. No young robins left this nest alive. Another pair built in an elm tree. I worked under this tree within two feet of the mother-bird without frightening her. I found, one day, that the nest had been forced into a crotch of the tree two feet lower than where it had been built. The marauders had come through the hedge, leaving broken branches and foot marks. The pair of robins that built in the balcony repaired the nest they had formerly occupied, and laid three eggs. One was pierced by a wren, one was stale, and one produced a young robin which developed rapidly and got away safely. I do not remember finding in any previous season so many stale robin eggs.

"The first tree swallow I observed was on April 26th. Within a week his mate had located in the bird-box on the back of the balcony pillar. They bluffed occupation of another box nearby and discouraged other pairs which wanted it. Another pair built in a box on the garage. Both nests produced young safely, all of which flew. The first nest yielded seven young. The other family left while I was away, but I judge that there were from five to seven in it.

"A pair of cliff swallows built in the angle of the garage gable. They produced young, but unfortunately the garage door was blown by the wind and closed with a bang, which knocked the nest to the ground. There were four young

in it, all of which died. Within a week a new nest was built on the old site. The young in the second hatching flew safely, but these birds were so shy and reserved that they escaped my careful watch for their departure.

"A pair of Purple martins took possession of my martin house, and although other pairs were around continuously, I could not detect a second nest. The eggs were undoubtedly disturbed by a wren as I observed the martins no longer took any interest in it. They built, however, another nest and reared their young safely. The family was last seen as a unit on August 27th, when the female, and as nearly as I could discover, five young left. The male and one young, very downy at the time of the family breaking up, remained until September 5th. They took one excursion of forty-eight hours, but returned between August 27th and September 5th. On the latter morning, after they had sunned themselves and preened their feathers for a good half hour, the young one became excited. It walked around the bird-house several times, apparently trying to arouse the old bird to action. Having succeeded it made a take off towards the south, and was followed two or three minutes later by the male. During the summer the mother-bird was exceedingly bold and cross-tempered. Dozens of times when working in the garden I was badly scared by a rush of wings and a screech in my ear. She frequently repeated the assault five or six times in succession. This should be an enterprising family, with so strong-minded a mother, and so wise and thoughtful a father. My house was the assembling place for the martins all summer, and I have counted as many as thirteen of them at one time on the wires and ledges.

"Having learned from experience the ravaging mind of the wren, I refused this year to give him a home. He was very much disturbed, going through every box I had and returning to the original site of my wren house near the elm tree. Three times I basted him with handfuls of dirt. He had his revenge, however, driving away one pair of martins and stuffing up their box with sticks, stuffing at least three other boxes, and piercing I cannot tell how many eggs. Time after time a mate came with him to look over the nesting ground. They did not nest here, however. Next year I shall certainly adopt sterner measures insofar as wrens are concerned. The least flycatchers that built last year came again. Though they were around and observed very often, I could not locate their nest. I rather think they built a block or two north of my place.

"In the early spring, bluebirds prospected, but evidently felt that the martin house would be too noisy for their more refined temperaments. They, however, visited me almost daily, and as in former years patrolled my dahlia patch most regularly. For the past two weeks there have been

several around. They appear to think the martin house is a good camping place.

"During the nesting season I waged war daily with the house sparrows. The martin house, as a possession, was their objective. To defend this house for the martins I shot 68 shells, accounting for 66 sparrows. I also shot two grackles. In spite of this fusillade none of the birds except the sparrows showed any evidence of fear, though I shot sparrows close to their nests. The mother-martin, however, at the first shot I fired after she had located, came down at me like an avalanche and consistently made her attacks on me all summer.

"I need not tell you the real pleasure and enjoyment I had in watching the birds which spent the summer with me."
The Journal, Edmonton, Alberta.

BIRDS AND WEATHER

The storm that swept over Alberta on April 17th and 18th, 1927, is conceded to have been one of the most severe ever experienced at this time of the year. Friday and Saturday had been the first real spring-like days of the season, the thermometer registering 60 degrees above on Saturday afternoon. There was a feeling that winter had gone for good, and that the long-looked for growing season was at hand. But such was not to be. Late Sunday evening the wind changed to the north and hourly became colder. The light drizzle that had been falling at intervals all day Sunday turned to snow, and by midnight real blizzard conditions prevailed. During the night the mercury touched the zero mark.

While the storm raged, anxious bird-lovers inquired as to the probable fate of the spring birds that had already arrived from the sunny south. Grave fears were expressed on every hand that some of the tender varieties could not survive the extreme cold, and even if they could survive, how could they procure food with the ground covered deep with snow? Up until the 16th of the month, exactly thirty species of spring arrivals had been recorded by the Camrose observers. It was well known that many of these birds were insectivorous. How long could they just from the south, live under these unfavorable conditions? With insect life entirely absent, could they adapt themselves to the use of other foods, such as dried berries, seeds or rosehips? These were some of the questions showered in over the telephone from a score of interested observers. Where birds had been seen in large numbers just previous to the storm, they were now entirely absent, and because of this it was feared that the worst had happened. It was evident that many boys and girls in Alberta spent anxious hours

wondering just how serious the situation was. Because of the interest shown by our young folk this article is written.

It has often been stated that birds sense changes in the weather long before there are any outward indications to man, and that they seldom make mistakes. Birds know the proper time for their arrival at their summer homes, and it is claimed that they are always prepared for eventualities, that they are resourceful, and that they can adapt themselves to 'all conditions. Wild geese and ducks sometimes arrive before there is any open water for them, and as this is essential, it is an easy matter for them to return to more suitable conditions further south. With their great powers of flight they can easily cover several hundred miles in a few hours. But it is entirely different with the smaller birds. The writer has never seen them turn back once the migratory instinct has started them northwards. Something impels them to move on, even during adverse weather.

There can be no doubt that it is the fittest and hardiest individuals that commence the northward migration every spring. They and their ancestors have always been the pioneers in the annual pilgrimage to their northern summer homes, while the tender ones are the last to commence the long trek. Therefore the birds of any species that are first to arrive in this latitude are the best prepared to meet the vicissitudes. It is well known that the majority of any species of migratory birds do not arrive at their destination for some weeks after the first or earliest ones make their appearance.

Curious to know how the birds had weathered the blizzard, a trip was made along Stony Creek to Battle River on the Tuesday morning following the storm. The day was cold and a stiff wind was blowing out of the north. Although the sun was shining brightly it made no impression whatever on the 18 inches of snow that covered the ground. River valleys are generally looked upon as favorite arteries of travel for migrating birds, especially if their course is in a northerly and southerly direction. The valleys and coulees adjacent offer the birds necessary shelter from the elements, as well as from their many enemies. The Battle River, or that portion of it from the Big Bend to its junction with Stony Creek, is a favorite route followed by thousands of birds during the spring and fall migrations. Upon reaching the river we were surpris'd to see great numbers of robins, bluebirds, several kinds of blackbirds, tree sparrows and juncos, all busily engaged feeding in sheltered places, and apparently not in the least concerned with the unusual weather conditions. The tree sparrows and juncos were singing in merry bands as though nothing out of the ordinary had happened. Hundreds of robins and bluebirds were noted feeding along the hillsides, where several varieties of berries were exposed above the snow. They seemed to be

in good spirits but were quiet, and not a note from them could be heard. They were hungry, and it was amusing to see both robins and bluebirds vieing with each other in efforts to perch on the slender branches of the berry-bushes or jumping up from the snow, often after the same bunch of berries. Whenever the birds left one bush to begin feeding on another the movement was always toward the north, never south. It was estimated that one hundred robins and an equal number of bluebirds were feeding on one favorite piece of sidehill less than an acre in extent. From this vantage point a few song sparrows could be heard singing in sheltered thickets along the creek. Several killdeer were noted flying high, all headed in a northward direction. In the afternoon the meadowlarks resumed their singing and became quite numerous, but it was difficult to know on what they were feeding.

Ducks of various kinds, in flocks large and small, were seen at all times during the day as they moved from one open place in the river to another. Crows were noisy while busily engaged hunting along the sidehills and the river flats. What happened to the three great-blue herons that were seen flying north a few days before the storm? It would indeed be interesting to know. As their food consists chiefly of frogs, salamanders, and small fish, it is questionable whether they were able to procure these delicacies with the marshes, lakes and sloughs frozen over. And with these conditions prevailing one asks if the killdeer turned into a berry eater for the time being? A careful examination of the locality revealed no dead birds, and there was not a sign of weakness or exhaustion in all the hundreds that were observed during the day. Late in the afternoon the birds commenced to gather into flocks ready to continue their journey which was so abruptly halted a few days before. As far as the writer could learn there were no losses to the birds.

The Journal, Edmonton, Alberta.

THE WHOOPING CRANE

At one time, not so very long ago, the prairies and marshes of that vast region lying between Hudson Bay and the Rocky Mountains, now comprising the provinces of Manitoba, Saskatchewan and Alberta, and a portion of the North-west Territory, was the summer home of the tallest, and by many considered the most beautiful of North American birds—the Whooping Crane, "*Grus americana*", commonly called the "white crane" or "flying sheep."

When the Canadian Pacific Railway was building across the plains, this remarkable bird was fairly well known to the pioneers of the country, and while never as plentiful as

the other representatives of the family, the Sandhill Crane and the Little Brown Crane, it was quite common during the migrations, if less so as a summer resident. It arrived from the south early in May, and remained until the early frosts of September. Its summer range extended from the Central United States to within the Arctic circle, and it wintered from the Gulf of Mexico to South America.

The Whooping Crane is a bird of large dimensions, being about 54 inches in length, from point of bill to end of tail; when standing erect it measured nearly five feet in height. The adult bird is pure white, with the exception of the black wing primaries, and the dull red on the bare top of the head. The plumage of immature birds is more or less washed with a reddish color. Wilson, the great American ornithologist, believed the Little Brown Crane to be the young of the "Whooper"; this theory in later years was found to be incorrect.

Early in the present century authorities on wild life became alarmed over the possible extinction of this characteristic bird of the plains, so rapidly were they decreasing in numbers. The species was included in the list of birds which were considered to be on the verge of extinction, and they were given full protection of the law at all times. Whether this action was taken in time to save the bird to posterity, time alone will tell. Some authorities consider its numbers so low at the present time that it is only a matter of a few years until the great bird will have vanished for ever.

Mr. Taverner in his "Birds of Western Canada", referring to this matter says, "When a species becomes so low in numbers it succumbs to the weakened conditions induced by in-breeding in spite of every protection that can be offered. Whether this will be the case with the Whooping Crane remains to be seen." Dr. William T. Horniday, Director of the New York Zoological Park, gave it as his opinion in 1914, that this crane would be totally extinct by the year 1934. Dr. Horniday is one of the leading conservationists on this continent, and has a national reputation as an authority on wild-life.

Published records of the occurrence of the Whooping Crane, as well as observations on its life, habits, distribution, dates of migration, and nesting in Alberta are scarce. Apparently, everything that is possible to prolong its existence with us has been done in recent years, but in the face of this the situation looks serious. On account of its probable extinction in the near future, it seems fitting that as much information relating to the bird's past history as it is possible to get together should be gathered while it is still fresh in the memory of our people.

It is well known that this crane had its centre of abundance through the eastern portion of Alberta and central

Saskatchewan. It is reported to have been frequently seen in the latter province as late as 1910. At least one pair was known to have nested south-west of Saskatoon as recently at 1922. No satisfactory reason has been advanced for the sudden disappearance of this wary bird from its former habitat. Why it should be reduced to its present dangerous numbers, and the Sandhill and the Little Brown Cranes retain their former abundance is a difficult problem to solve. Thousands of the latter species may be seen every fall as they slowly move towards the south, high in the air, uttering their well known, far-carrying "car-ew-car-ew." The Little Brown Crane is extremely wary, and it is probably that not one in a thousand is ever killed when migrating to and from the southland. This article may be the means of bringing forth an explanation for the inequality of numbers.

Mr. Peter Dumont, of Edberg, Alberta, well remembers when white cranes were common in the Dried Meat Lake country. He was born and lived all his life in the vicinity of the Battle River and Dried Meat Lake. He homesteaded on the west side of the lake in 1886, and says that he often saw these cranes feeding in his grain field. He can offer no explanation for their disappearance, but says that their numbers decreased very rapidly about the end of the last century. He and his brother, Pascal Dumont, saw a pair in a marsh about seven miles west of Tofield in the summer of 1919, and they believed them to be nesting.

Mr. William Ruzicka, of Killam, well known as a bird student and taxidermist, has a large collection of mounted native birds. Referring to his experience with the Whooping Crane in Alberta, he writes, "I cannot give the exact date, but it was about the middle of June, 1905, the first year I was in the country, that I saw two, perhaps three, pairs of white cranes, which spent the summer in a slough in a bend of Iron Creek on section 19, township 46, range 13, about twelve miles north of Killam. I found one nest with two eggs. The nest looked as though it was built on top of an old muskrat house. On coming towards the nest the bird would act as if its wing or leg was broken, in this way trying to lead me away from the nest. My father saw white cranes nesting in this same place in 1904, he having arrived in Alberta a year before the rest of the family." This appears to be the most recent record of the nesting of the Whooping Crane in Alberta.

In May, 1913, Mr. C. E. Mills of Wabamum Lake, witnessed the shooting of one of these large birds by a boy, six miles up the Swan River, on the south side of Lesser Slave Lake. When it was shown to the aged chief of the Drift Pile Indians, "Wi-ch-uze," he remarked, "Yes, yes, used to come like cloud in the sky, not many now, not many now." In the collection of birds in the Parliament Buildings in Edmonton there is a mounted specimen of this inter-

esting crane. According to Mr. Ben Lawton, Game Guardian, it was killed several years ago by a harvester in the Sounding Lake country. There may be other specimens preserved in the province, but the Edmonton bird is the only one known to the writer.

Mr. J. D. Soper records in the "Canadian Field Naturalist" seeing a bird on Oct. 15th, 1919, near Islay, which he believed to be a Whooping Crane. Mr. Thomas E. Randall observed one with a flock of six brown cranes near Sullivan Lake on September 13th, 1920; he also saw four on June 4th, 1923, feeding in his grain field near Sullivan Lake. This was a very late date for migrating birds, and Mr. Randall was led to believe that they may have nested in the vicinity of Sullivan Lake that year.

The latest record of the bird that we have is more hopeful. Mr. Fred Brandt, a resident of Camrose since 1912, and formerly from the Dakotas, where in the 80's he was familiar with the Whooping Crane, reports seeing three small flocks of these birds flying high over the west side of Bittern Lake on the afternoon of September 22nd, 1927. He watched them through his field glasses until they passed out of sight in a south-easterly direction. Mr. Brant is well acquainted with the water-fowl and game birds of the west, and he is positive in his identification.

Wilson, in his "American Ornithology," stated that the Whooping Crane passes to and from its breeding grounds at "prodigious heights" and is seldom seen during migrations. Can it be that the settlement of the "Last West" has driven this majestic bird into the remotest parts of the continent, there to raise its young away from the haunts of man? Possibly, but not probably. Thirty or forty years is not a long period of time in the history of a new country, but unfortunately, long enough to add still another bird to the growing list of vanishing species. This time it is to be one of the largest and most interesting of the feathered tribe that is in imminent danger of extinction.

The Journal, Edmonton, Alberta, January 31st, 1928.

CHANGES IN THE STATUS OF CERTAIN BIRDS AND ANIMALS IN CENTRAL ALBERTA DURING THE PAST FIFTY YEARS

It has been my fortune during thirty-three years' residence in Alberta to gather a considerable amount of information regarding conditions relating to the fauna of the partially wooded prairies of Central Alberta as it existed half a century ago. In addition to being of general interest from an historical viewpoint, an element of scientific value should also be attached to the information gained. The writer cannot vouch for the absolute accuracy of all the

statements presented here, but he believes the narrators who made this article possible had no object in being other than truthful in telling of their experiences, and it is certain that their stories are consistent. It is regrettable that so much latitude as to dates of events has been necessary, but under the circumstances this was inevitable.

Many of the famous hunters of the plains have passed beyond, and only rarely is one of these old-timers to be found who can tell of conditions as they existed over fifty years ago. There was a vast difference between the ordinary buffalo hunter, and the native who was a keen observer of nature in its varied forms. Had these latter been privileged in their younger days to have associated with present-day students of science, they would have become naturalists in the truest sense of the word.

Matthew Cook and the Dumont brothers, Peter and Pascal, were children of nature, all natives of the west, and as such made the observation of wild-life part of their every-day interests. Matthew Cook was of Scotch origin with a slight admixture of native blood in his veins. He was born about the year 1840, and lived for many years on the shores of Buffalo Lake, forty miles south of Camrose. It was there that the writer first had the pleasure of meeting him in 1892. The Dumonts were of French Canadian stock, and they also had a share of the sturdy native blood. They were born between 1860 and 1865, and lived all their days along the Battle River and Dried Meat Lake. All three carried on freighting as one of their chief occupations, and this calling took them many times over the old trails between Edmonton and Winnipeg. Trading and trapping were included in their activities. Fortunate indeed was the man who, in the years when they had retired from a strenuous life that required a stout heart and hard muscles, could draw these men into a conversation about their experiences along the trail, or on the hunting ground. From them a valuable record has been obtained by way of narrative, but it is significant that the records of all three coincide, although given at different times.

According to them, buffalo were plentiful along both sides of the Battle River until 1875, after which their numbers decreased rapidly. The valley of Meeting Creek, now a prosperous farming district, was a favorite hunting ground for the shaggy monarch of the plains, and it was there that the Blackfoot Indians from the south and the Crees of the north met on their regular hunts; the creek derived its name on that account. At times when no buffalo were to be found in the valley, the hunters would move on thirty miles or more to the south-east, where they were reasonably sure of locating them along the Red Willow Creek.

Elk, or Wapiti, could be found in considerable bands where there were large areas of wooded country, and sur-

rounding Little Beaver Lake there are still evidences of such areas. The Dumonts claim that many elk were killed there until 1880. At the present time elk are not uncommon in a strip of country near the old settlement of Victoria, north of the North Saskatchewan River. Black-tailed deer were everywhere numerous in the woodlands. They have become rare during recent times in this territory, but with a closed season for five years or more the writer believes much of the country would be restocked with this fine animal. A hunter named Joe Monro is said to have killed 55 deer during the winter of 1893-94, along the Red Deer river just south of Buffalo Lake.

The Dumonts killed moose in the vicinity of Dried Meat Hill, 20 miles south-east of Camrose. Moose were commonly taken in the timbered country surrounding the Hay Lakes, where an occasional one is still seen. Antelope ranged the open prairie country north of the Big Bend of the Battle River about 1880, and the last of these animals observed there in 1903 were a male and female, about four miles west of Flagstaff Hill. Prairie Dogs were fairly common in that same territory at that time, but disappeared shortly afterwards.

Timber wolves were common at times when the buffalo inhabited the country. The Dumonts tell of poisoning seven wolves, three red foxes and five coyotes in January, 1872, on Dried Meat Lake, where the creek of the same name empties into it. They used for their purpose the carcass of a dead horse, which had been treated with strychnine. For the pelts of these animals they received the following prices: wolves, \$3; foxes, \$1; and coyotes, 50 cents each, all in trade.

Grizzly bears were occasionally met with in the coulees along the rivers. Sometime between the years 1870 and 1880, the Dumonts, with their uncle, dug out a den of four two-year-olds, and an aged grizzly, all of which they killed. This happened late in the fall at the junction of the Beaverdam Creek and the Battle River, north of the present location of the town of Castor. About fifty miles north of where this happened there is a creek known as Grizzly Bear Creek, and this without doubt received its name through some connection with the grizzly.

Caribou were not known so far south, but Pascal Dumont has seen them a few miles north of the present site of St. Paul de Metis, about midway between Frog Lake and Lac la Biche. The writer found caribou antlers, apparently very old, some distance north of that vicinity in 1919.

The appearance of the magpie in numbers in this section of Alberta during the last ten years has been the cause of much discussion. Until 1911 it was unknown north of the Red Deer river. In October of that year, the writer observed two about seven miles north of Lacombe. The fol-

lowing year magpies were reported from the vicinity of Bittern Lake, and from that time on they have gradually become more numerous until they are now very plentiful at all times of the year. Magpies were very common during the buffalo days when flocks would follow the hunting parties and live on the refuse of the hunt. The bird was considered a pest in those times on account of its habit of alighting on horses with saddle or harness galls, and persistently picking at the sores until death of the animal resulted. The only means of saving the horses thus attacked was to stable or blanket them. With the extinction of the buffalo, the magpies disappeared, and the present incursion is the first which has occurred since that time.

Passenger pigeons were very common and appeared in immense flocks up until 1875, when they gradually disappeared. The Dumonts often trapped them, and they were considered a great delicacy. Pigeon Lake was named due to the large numbers of these birds that nested in the woods surrounding the lake.

Little wonder, then, that this country of rich grasses and vetches, watered with many rivers, lakes and springs, was known throughout the world as a hunter's paradise. All kinds and conditions of men, from every part of the world, struggled against terrible odds to gain admittance. Some were successful, while others who could not surmount the difficulties turned back. With the coming of the railroad a change took place, and one of the most fruitful agricultural portions of the American continent has replaced what is generally accepted to have been the world's greatest hunting ground. This transformation has been gradual, and perhaps unnoticed by many of the hardy settlers who have carved comfortable prairie homes on its rich surface, but the animals which were hunted, partly for food, for their furs, or for sport, have all but vanished.

The Canadian Field-Naturalist, December, 1925.

TRACING THE GULLS TO THEIR WINTER HOMES

The presence of gulls on the lakes and cultivated fields of the prairie provinces has caused much surprise to observing people on their arrival in the west. Such birds are usually associated with the sea coasts, the harbors on large rivers, or the Great Lakes, and few are prepared to find them so far inland. There are, however, several varieties of the gull family which are not entirely restricted to maritime conditions, four of them being quite common summer residents of the prairies. They might quite properly be separated into two groups: the large ones, commonly called sea gulls, the Herring, the California and the Ring-billed, all closely resembling each other in size and general coloration,

as well as in their feeding and nesting habits; and the two smaller black-headed varieties, the Franklin and the Bonaparte. Where these Canadian gulls spend the winter, and by what route they travel to and from their summer homes has, until quite recently been shrouded in mystery.

The prairie gulls are of enormous economic value to agriculture as destroyers of insect pests, more particularly in cultivated areas adjacent to nesting colonies. Their arrival in spring coincides with the commencement of cultivation of the land, and it is then their usefulness is greatest. Towards the end of April large flocks may be seen in the fields following the plow, busily engaged searching for worms and grubs exposed in the freshly turned earth. Because of the valuable service rendered by the gulls in the suppression of injurious insects, they are protected by law in Canada and the United States, under the Migratory Birds Convention Act.

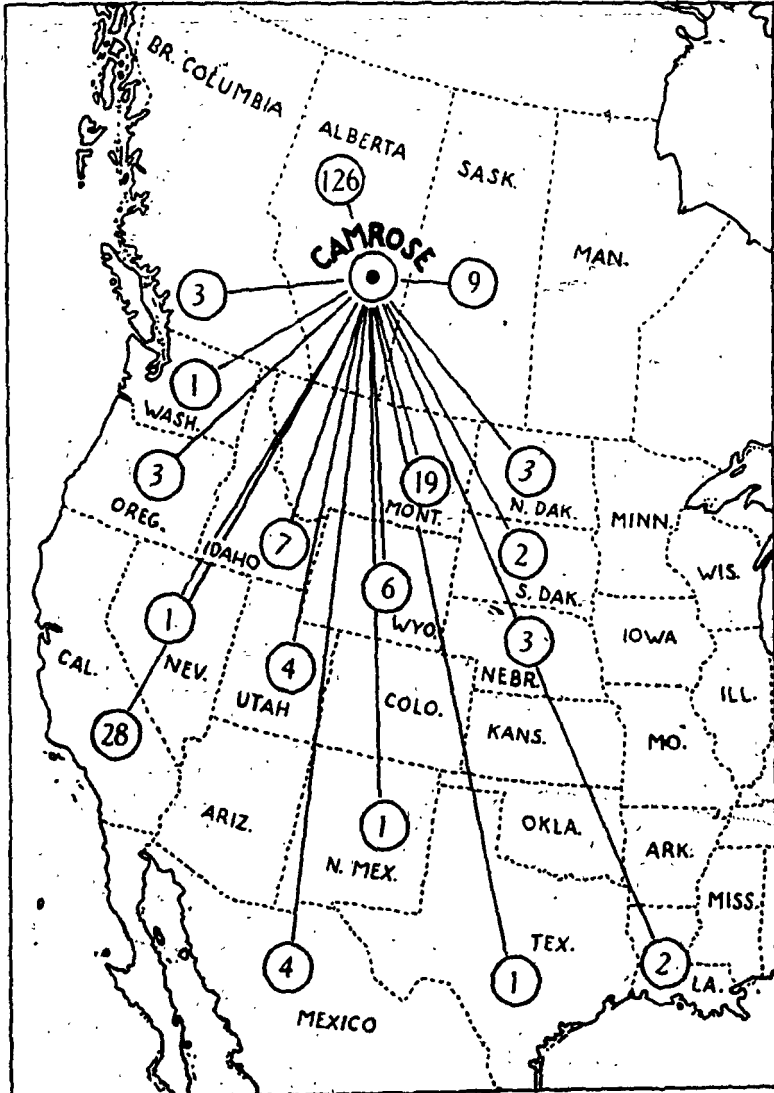
In the early years of the Mormon settlement in the State of Utah, a plague of grasshoppers descended upon their crops, and for a time they were threatened with destruction. Starvation of the pioneers would have resulted had it not been for the timely arrival of large numbers of California gulls, which, in their northern migration, halted to feed on the pests, and in a short time cleaned them from the fields. To commemorate the event, which by many was considered an act of Providence, an imposing monument was erected in Salt Lake City, at a cost of \$40,000.00. Other instances could be recited of valuable aid given by gulls to western farmers during periods of insect invasion. The writer has frequently been told by farmers living in the vicinity of nesting colonies of gulls, that their fields were practically free from cut-worm damage, while those living a few miles further from the colonies suffered heavy losses to their crops.

Banding Gulls to Study Their Migration

During the past four years approximately 5,000 young California and Ring-billed gulls have been banded on an island in Bittern Lake, fifteen miles northwest of Camrose. This was done in the hope that information might be gained leading to the discovery of their winter homes, the routes travelled and other facts relating to their life history. That the experiment has been successful is evidenced by the recovery of more than two hundred of the banded gulls, in practically every corner of their known habitat. It has also demonstrated the many dangers encountered by the birds in their travels. Numbers of the large gulls are killed annually by hunters, as most of the recoveries are made during the fall and winter months. Among a certain class of so-called sportsmen there is a shameful practice of shooting at any large bird that passes over, whether it is fit for food or not. The writer has, on various occasions, noted as many as half

a dozen dead gulls, lying as they fell, close to where hunters waited under cover for ducks. The names of parties, reporting recoveries of banded gulls in California and Mexico, suggest that they are killed for food by immigrants from Mexico, Japan, and southern Europe.

Banding of birds has been carried on for a number of years, under the supervision of the Biological Survey, Washington, D.C. The Survey supplies neatly made aluminum bands, free of cost, on which is stamped the following legend: "Notify Bio. Sur. Washington, D.C." These bands are



Map showing recoveries of Ring-billed and California Gulls, banded as juveniles during the summers of 1927-28-29-30 and 1931, on Gull Island, Bittern Lake, 15 miles northwest of Camrose, Alberta.

all numbered serially. Bird students in many parts of Canada and the United States co-operate with the Survey by placing bands on the legs of nestlings, and birds which are trapped. Records of the birds banded, as well as those recovered and reported, are kept at Washington, although in recent years much of the work done by Canadian banders is looked after by the Parks Branch of the Department of the Interior, Ottawa. Many thousands of birds have been banded during the past fifteen years, and the information gained regarding the movements of birds on the North and South American continents has been amazing.

Casualties among birds take an enormous toll, probably the greatest during the spring and fall migrations when some species travel thousands of miles over land and sea, in the darkness as well as during the day. Countless numbers are killed by flying against light-houses, high buildings, telephone, telegraph and fence wires, and other man-made devices. Occasionally one of these birds is picked up, and in rare cases a band is found attached to a leg. Complying with the request stamped on the band, the number is reported to the authorities at either Washington or Ottawa, and other information, such as place of recovery, date, and apparent cause of death is also furnished. These facts are tabulated, and the bander is notified by post-card.

The records connected with the recovery of the gulls banded near Camrose are interesting, and show the dangers which at all times surround the birds. A number of them were caught in gopher traps, or poisoned by gopher poison. Many were found dead along the lake shores. One was caught in a fish net, while another was killed by a hawk. Some were killed in mistake for ducks, and one met its fate flying against a light-house on the Pacific Coast. According to M. P. Wright of Robstown, Texas, No. 521361 was "captured while getting worms, following the tractor, band was removed and bird released." No. 699616 was "hit and killed in flight by a golf ball September 2nd, 1928" on a golf course in Edmonton. The well known bird artist, and ornithologist, Major Allan Brooks, collected a Ring-billed gull, bearing band number 544527, at Comox, Vancouver Island, on August 6th, 1927, just 45 days after it had been banded near Camrose, June 22nd. When banded this nestling could not have been more than 15 days old; a marvellous flight for a two months' old bird over unknown mountains and seas. It would, indeed, be interesting to know the route travelled, and whether the journey was made alone, or with other members of the Bittern Lake colony.

ARE OUR WILD DUCKS DOOMED?

Increase in human population means inevitable encroachment on the natural domain of the birds and animals

of a country. This is particularly true as regards new territory. Laws for their protection, followed by honest and strict enforcement may be enacted, but nothing can ever stop the ever increasing greed on the part of man to acquire more and more land, invariably with the object of bringing it under cultivation. There is evidence of this in every part of the civilized world.

The people of western Canada have only recently awakened to the fact that our wild ducks are decreasing in number at an alarming rate. So rapid has this been in the last decade that some authorities claim certain varieties are even now threatened with extermination. The press of both this country and that of the United States has taken an unusual interest in the matter, and various suggestions have been offered as a remedy. The gravity of the situation is realized by the authorities at Ottawa and Washington, and as a result, an investigation has been conducted in northern Alberta during the past summer, with the object of obtaining reliable data on the present status of the water-fowl in a region that has generally been considered one of the most important breeding areas for wild ducks on the continent. Two outstanding experts on wild-life conservation, Dr. Bell, of the Biological Survey, Washington, and Mr. James A. Munro, Chief Migratory Bird Officer for western Canada, were in charge of the work.

On their return to Edmonton, a report of their observations was presented at a meeting arranged for that purpose, and at which were present the Game Commissioners of the three prairie provinces, representatives of the government of the province of Alberta, members of the Alberta, and the Northern Alberta Fish and Game Associations, as well as others interested in wild-life conservation. The report on conditions in the north, as found by Messrs. Bell and Munro, was indeed a gloomy one. Where formerly tens of thousands of ducks spent the summer in the extensive marshes at the mouth of the Athabaska river, few were to be found. Broods of young were seldom seen. It was plainly evident that the visitors were greatly disappointed in their findings. Messrs. Lawton and Etter told of like conditions in their respective provinces. As a result of the meeting it was decided that the situation had reached a very serious stage, and called for immediate and drastic action.

At the beginning of the present century countless numbers of ducks of many species nested every summer in the sloughs and lakes, as well as on the prairies of western Canada. Then, there was never a thought that their numbers could be seriously threatened. But the inevitable has happened, and it has come like a bolt from the blue. The drouth which has prevailed over large portions of western Canada and the United States in recent years has been, by many, held responsible for the present shortage of ducks.

Great as has been the calamity caused by the dry seasons, there is another factor which in the opinion of the writer must bear its share of the responsibility, and that is the crow menace. If the ducks are to be saved to posterity, this question, which up till the present has been all but ignored, must be given consideration.

There are still many hundreds of lakes in the west, both large and small, with a plentiful supply of water, and these, with one exception, offer just as suitable nesting and feeding areas as they did in former years, and this is the absence of nesting cover. Man must bear his share of responsibility for this. Before the prairies were broken up and the rich vegetation of the sloughs and lake margins were cut for hay, there was safe covering for the nesting ducks and their light colored, conspicuous eggs. Now without cover the birds cannot hide themselves or their nests from the keen eyes of the crows. The black robbers soon discovered this Mecca of a rich food supply, and the ease with which the nests could be found. Wherever the ducks nested, there also did the crows take up residence in the surrounding woods. They had no enemies, neither furred, feathered or human, and their increase was not checked. Every hundred crows that came in Canada to raise their young, each season returned south in the fall with an additional 250 lusty youngsters.

When the Migratory Birds Convention Act was brought into being in 1916 by the Dominion of Canada and the United States, one of the immediate results was the creation of numerous bird sanctuaries in both countries. Those selected in the prairie provinces were lakes which were known to be favorite breeding places for wild ducks. Hunting and shooting on these waters, as well as on the limited land areas which were included, was prohibited, and the water-fowl soon learned that they were safe on such lakes, especially in the shooting season. Shortly after these sanctuaries were set aside, the water in the lakes and sloughs began to recede as a result of the drouth. Growth of grasses on the uplands was sparse, and farmers and ranchers were forced to cut the coarse grasses of the sloughs which had dried up, as well as that surrounding the lakes. Those areas which did not produce the proper kind of hay were often pastured by stock, and in this way the natural cover for the ducks was destroyed. The usefulness of the sanctuaries was short-lived. Crows in large numbers took possession of the adjoining lands and built their nests in trees close to the lakes. This was an ideal arrangement for them, good nesting sites, plenty of water, absence of firearms, and a plentiful supply of eggs and young ducks. The crows greatly outnumbered the ducks in a few years, and the selected areas in reality proved to be veritable sanctuaries for the usurpers.

The sanctuary idea was a commendable one, but it lacked a very necessary adjunct—that of proper supervision.

A resident guardian would be required for at least seven months of the year, and his principal duties would be the detection of poachers, and the control of crows and other vermin. The expense of administration of the many scattered sanctuaries as they exist at present would be too great to consider in these times of stress, but there could be a linking up of several favored lakes not too widely separated, and such an enlarged sanctuary could be placed in charge of one superintendent. Also, it would be necessary for the government to secure all, or most of the marshlands and hay lands surrounding and adjoining the lakes, and these should be properly fenced and fireguarded. Cutting of hay or pasturing stock on such areas should not be tolerated at any season of the year. Two or three sanctuaries such as these, located in favored areas in each of the prairie provinces, would at least save the ducks from total extinction. A wholehearted policy on the part of Canada and the United States for the destruction of crows would help materially in bringing the ducks back to their former numbers.

A CHRISTMAS BIRD CENSUS IN ALBERTA

Thousands of bird-lovers, living in all parts of Canada and the United States, every year band themselves into small parties for the purpose of counting the birds in their respective localities during Christmas week. According to the rules laid down by the Audubon Society this census must be taken on a single day, and that chosen is generally Christmas, although with many it is the day before or the day following the holiday. Most of the observations are made while walking. Where the locality selected for the work is too far distant, the intervening space is covered by automobile. Every species of bird seen or heard during the trip is carefully noted, as well as the total number of individuals. These reports are immediately sent to the Editor of "Bird Lore" at the American Museum of Natural History, New York City, and they appear in the February number of that magazine. Thus, from thousands of reports received it is an easy matter to get a fairly accurate idea of the distribution of the bird-life of the continent during the winter season. The number and variety of birds varies greatly over such an extensive area at this time of the year, and runs from one or two species in Baffin Island, in the Arctic, to as many as a hundred, totalling tens of thousands of individuals, in favored states such as Florida, Texas, and California.

Members of the Camrose Bird Club take this bird census, and it is remarkable the number and variety of birds that are recorded some seasons in this high latitude. The spruce woods that grow in profusion along the southern banks of the Battle River, south of Camrose, has always been the

chosen locality for the work, with side trips up Silver Creek Coulee, and to adjacent meadows and fields. The journey to the river is often covered by automobile, and this is followed by a five or six mile hike through the woods. One of the most enjoyable events of the outing is the lunch which is partaken in the shelter of the spruce, before a camp fire. At this time the observers are always on the alert for bird notes which might come from the spruces, or from birds passing over. If there are but two or three observers they travel together; if the number is greater two parties are formed, and thus much more territory is covered with better results.

The census for 1931 was taken on Saturday, December 26th, and seven enthusiastic bird-lovers co-operated. The party left Camrose at 10:30 a.m. and returned at 4:30 in the afternoon. The weather was bright, with little wind, and the thermometer registered around zero most of the day. About four inches of snow covered the ground and many interesting tracks of animals and birds were noted. The trip to the river was made by auto. From there the observers formed into two parties and walked in different directions, a distance of six miles. On the return trip to Camrose a detour was made through the rich farming district lying north of Dried Meat Lake, this for the purpose of noting the unusual visitation of short-eared owls that have remained in this portion of western Canada to date. These owls on their southern migration discovered that the grain fields were overrun with mice, and thousands of them decided to remain where such a good food supply existed. The detour yielded an additional ten owls to the list, which would work out at about two owls to the mile. On Christmas day Mr. H. A. MacGregor, Science Master at the Camrose Normal School, motored to New Norway (about 16 miles south-west of Camrose) and returned home by an entirely different route. In the thirty odd miles travelled he counted 30 of these valuable owls, most of which were noted hunting over the fields, or around straw stacks. In a few cases the birds were seen feeding on freshly killed mice on the fence or telephone posts. On December 31st, the writer, in company with Mr. MacGregor and other interested students, motored about 25 miles south of the Battle River, and in less than two hours 24 short-eared owls were counted. Farmers report that mice are more plentiful this winter than for many years, and it is fortunate that the short-ears arrived in time to avert a plague of these injurious pests. There has been a total absence of Hawk Owls in this part of Alberta during the last few years, and this probably accounts for the abnormal increase of mice.

In the following list of birds recorded on Saturday, December 26th, 1931, it will be noted that several species of more or less abundance during the winter do not appear;

such as snowbirds, Bohemian Waxwing, Hudsonian Chickadee, Crossbills, two species of three-toed Woodpeckers, Northern Shrike, Snowy Owl and Goshawk. None of these were seen on that day, although some of them were undoubtedly in the vicinity.

List of Birds

Short-eared Owl, 12; Hungarian Partridge, 25; Ruffed Grouse, 5; Magpie, 15; Black-capped Chickadee, 20; Blue Jay, 5; Common Redpoll, 100; Hairy Woodpecker, 2; Arctic Horned Owl, 1; Montana Horned Owl, 1; Brown Creeper, 6; Hoary Redpoll, 5; Sharp-tailed Grouse, 1; Evening Grosbeak, 1; Pine Grosbeak, 20; Golden-crowned Kinglet, 1; Pileated Woodpecker, 1; Downy Woodpecker, 1. A total of 15 species and approximately 222 individuals.

SETTLEMENT AND CULTIVATION OF THE PRAIRIES, AND ITS EFFECT ON BIRD-LIFE

Some years ago a careful census was taken of the birds found during the breeding season on a half section of virgin brush-land near Dried Meat Lake, about seven miles south of Camrose. There were no improvements on the land except a three-wire fence which enclosed the entire area and provided pasture for a small number of horses. About one quarter of the area was covered with small clumps of poplar and willow, the balance being open prairie, with here and there scattered patches of small brush. Two sloughs, each less than an acre in extent, supplied water and also nesting cover for certain varieties of ground-nesting birds. It was assumed that all the birds enumerated were nesting, and to a large extent obtaining their food on the three hundred and twenty acres, but this could not be definitely determined.

The count was made on an afternoon in June, and it revealed the interesting information that at least forty-one species, totalling 256 individual birds, had chosen this comparatively small area as their summer home. The figures, as they relate to the smaller and commoner birds, can only be considered approximate as it was found to be impossible to obtain a correct count, as they moved from one part of the land to another. However, if there was an error, it was on the side of conservatism. In the case of the larger and less common birds, such as Swainson hawk, long-eared owl, crow, grouse and ducks, the figures may be considered as correct.

Two years after taking the census, the half section, with the exception of a few acres of coulee, was cleared and brought under cultivation. Since then only a few vesper sparrows have nested on the land. Fortunately for the

birds another tract of wild land, untouched by the hand of man, lay just across the road from the cultivated half section, and no doubt many of the birds deprived of their former habitat moved onto it, and carried on their nesting operations.

A serious situation confronts our birds as a result of clearing and breaking up of the "parklands" of western Canada, and we owe it to them to make provision for their future nesting and feeding requirements. Every year, countless thousands of birds are ousted from their breeding grounds, and unless immediate action is taken to restore, even in a small measure, the necessary trees and shrubs, the central and northern portions of the three prairie provinces will lose much of their former attractiveness. Instead of a land renowned for its richness in bird-life, as it now is, it will become as barren and uninteresting as the deserts of the western States.

It is a hopeful sign that farmers are leaving considerable areas of poplar and willow, as well as planting other varieties of trees and shrubs near their buildings, ostensibly for protection from winter storms, but fortunately for the birds this will serve a two-fold purpose. Such reservations and planting will provide a sanctuary for them. A program of re-forestation should be instituted at once and earnestly carried on from year to year, both for economic and aesthetic reasons.

Following is the list of birds and the number of individuals counted on a half-section (320 acres) of wild-land south of Camrose, Alberta, on an afternoon in June:

	Pairs		Pairs
Clay-colored Sparrow	15	Crow	2
Vesper Sparrow	12	Flicker	2
Savannah Sparrow	8	Wilson Thrush	2
Song Sparrow	5	Sharp-tailed Grouse	2
Least Flycatcher	5	Magpie	1
Richardson Pewee	5	Ruffed Grouse	1
Brewer Blackbird	5	Mallard	1
Robin	5	Sparrow Hawk	1
Yellow Warbler	5	Swainson Hawk	1
Cow-bird	5	Short-eared Owl	1
Tree Swallow	5	American Golden-eye	1
Kingbird	3	Wilson Snipe	1
Red-eyed Vireo	3	Nighthawk	1
Warbling Vireo	3	Yellow-bellied Sapsucker	1
House Wren	3	Downy Woodpecker	1
Western Meadowlark	3	Western Yellow-throat	1
Bronzed Grackle	3	Alder Flycatcher	1
Goldfinch	3	Leconte Sparrow	1
Baltimore Oriole	3	Bluebird, Mountain	1
Chickadee	3	Tennessee Warbler	1
Purple Martin	2		

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Avocet	34	Goldfinch, Pale	56
Bittern, American	16	Goose—	
Blackbird—		Common Canada	16
Brewer	55	Lesser Canada	17
Red-winged	54	Lesser Snow	17
Rusty	55	Ross	18
Yellow-headed	54	White-fronted	17
Bluebird, Mountain	50	Goshawk, Eastern	23
Bobolink	54	Grackle, Bronzed	55
Bunting—		Grebe—	
Eastern Snow	59	Eared	15
Lark	57	Holboell	15
Catbird	49	Horned	15
Chickadee—		Pied-billed	15
Hudsonian	48	Western	15
Long-tailed	48	Grosbeak—	
Coot, American	30	Eastern Evening	55
Cormorant, Double-crested	16	Rocky Mountain Pine	56
Cowbird, Nevada	55	Rose-breasted	55
Crane—		Grouse—	
Little Brown	29	Gray Ruffed	28
Sandhill	29	Hudsonian Spruce	27
Whooping	29	Prairie Sharp-tailed	28
Creeper, Rocky Mountain	48	Gull—	
Crossbill—		Bonaparte	36
Red	56	California	35
White-winged	56	Franklin	36
Crow, Eastern	47	Herring	35
Cuckoo, Black-billed	37	Ring-billed	35
Curlew, Long-billed	32	Gryfalcon, Gray	27
Dove, Western Mourning	37	Hawk—	
Dowitcher—		American Rough-legged	26
Inland	33	Broad-winged	24
Long-billed	33	Duck	27
Duck—		Eastern Pigeon	27
Baldpate	19	Eastern Red-tailed	23
Buffle-Head	21	Eastern Sparrow	27
Canvas-back	20	Ferruginous Rough-legged	26
Gadwall	19	Harlan	24
American Golden-eye	21	Krider	24
Lesser Scaup	20	Marsh	26
Mallard	18	Richardson Pigeon	27
Pintail	19	Sharp-shinned	23
Redhead	20	Swainson	24
Ring-necked	20	Western Red-tailed	24
Ruddy	22	Heron, Great Blue	16
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