

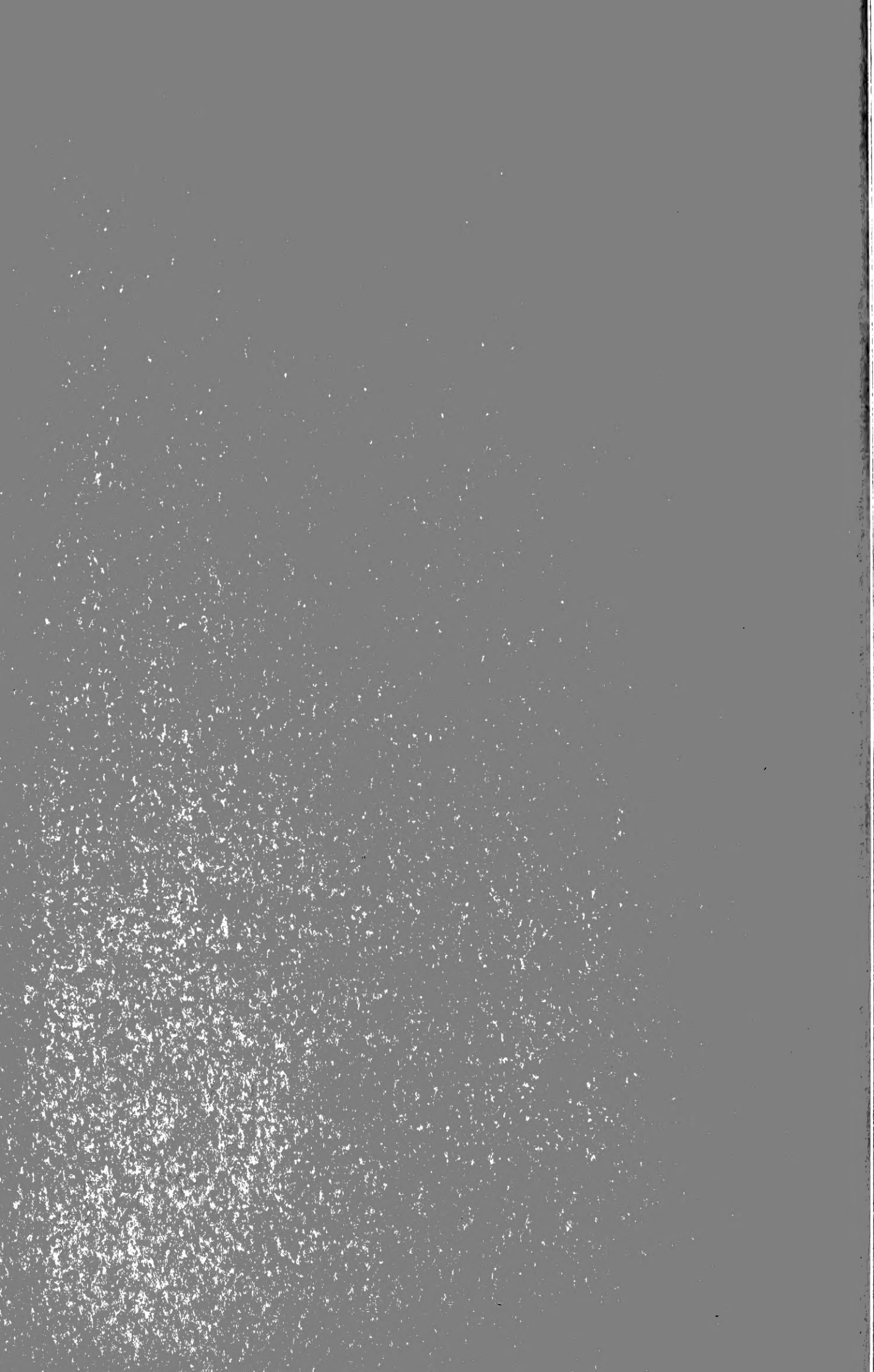
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No. 10: THE BIRDS OF THE LAKE ST. MARTIN REGION,
MANITOBA, BY T. M. SHORTT AND SAM WALLER.

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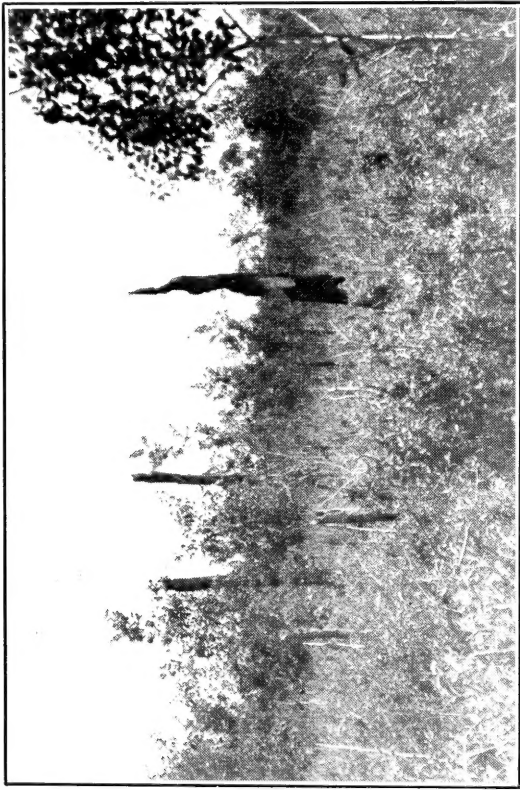


FIGURE 1. Reclamation by aspens of burnt-over coniferous forest.

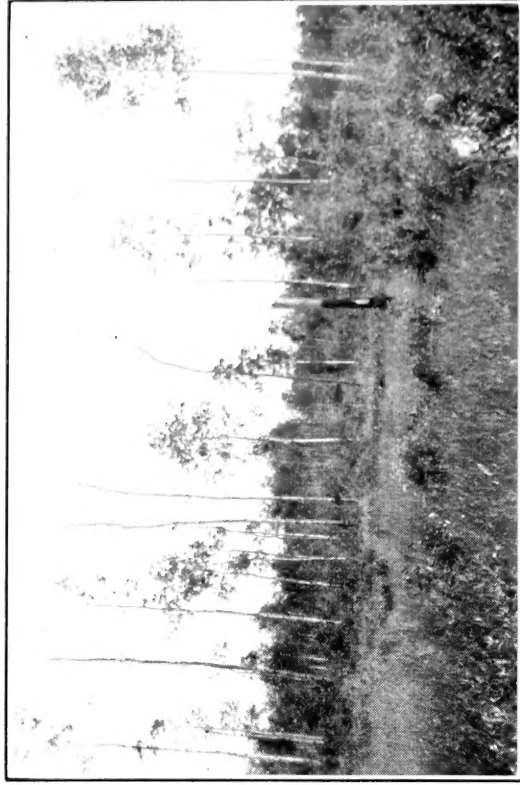


FIGURE 2. Typical deciduous woods with grass marsh in foreground.

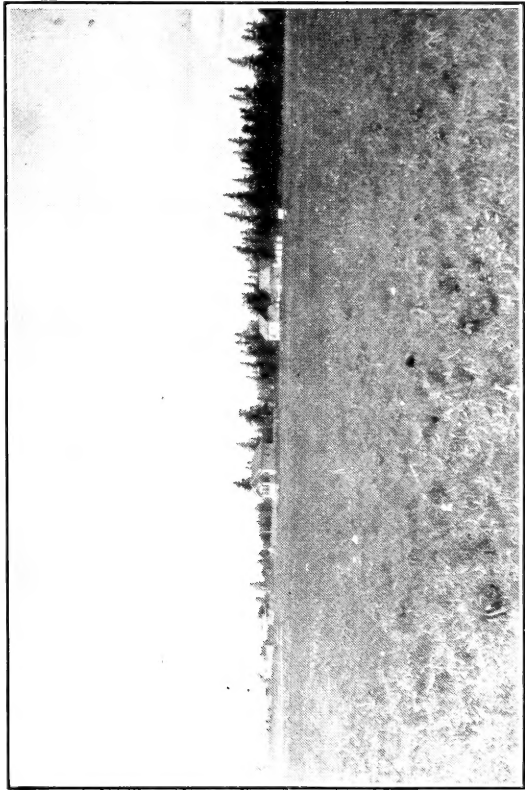


FIGURE 3. Lake St. Martin Indian Reserve, showing alkaline flats bordering the lake and white spruce in background.

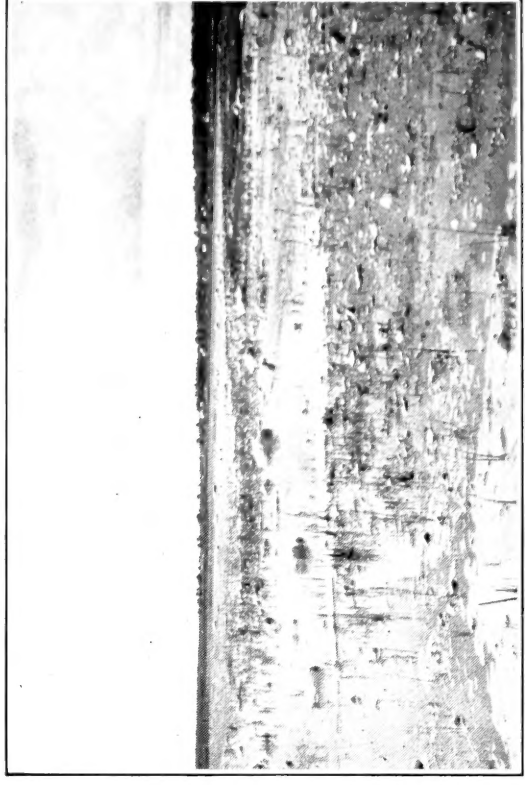


FIGURE 4. Typical shore-line at north end of Lake St. Martin.

THE BIRDS OF THE LAKE ST. MARTIN REGION, MANITOBA

BY T. M. SHORTT AND SAM WALLER

I. GENERAL INTRODUCTION

Lake St. Martin lies in the centre of the region known as the Interlake District of Manitoba. This region is bordered on the west by lakes Winnipegosis and Manitoba, on the east by Lake Winnipeg, on the south by Shoal Lake and on the north by Cedar Lake. Lake St. Martin is about twenty-six miles long in its north-south extent and its greatest width is approximately eight miles. It lies between latitudes 51° and 52° N. and forms a part of the great water system left by the recession of glacial Lake Agassiz. Its waters drain northward, through the Dauphin river which flows from the north end of the lake into Lake Winnipeg and thence by way of the Nelson river to Hudson Bay.

Lake St. Martin is composed of two bodies of water connected by "The Narrows." The smaller body of water was formerly known as "Pine Lake". The total area of Lake St. Martin is about 125 square miles and its altitude above sea level is 801 feet, or about 86 feet above the level of Lake Winnipeg. We have little information concerning the depth of Lake St. Martin but it is very shallow, in many places being only three to six feet deep; consequently it is much disturbed by winds and is extremely turbid. The clay bottom is thickly overgrown about the shores with aquatic vegetation such as pondweed (*Potamogeton*), water milfoil (*Myriophyllum*) and a small amount of yellow water-lily (*Nymphaea*).

The underlying geologic formation of the surrounding region is composed of sedimentary rock of great age. (The northern part of the lake lies in Ordovician and the southern in Silurian formations.) The rock is covered by a fairly thick deposit of soil. Limestone outcroppings are rare, but a ridge exists on the east side of the lake just north of the Narrows. A feature of the lake itself is the number of small rocky islands it contains. These are composed of granite boulders, no doubt brought down by glaciation. These islands have a sparse covering of soil in their centres and support a few scrubby trees. Balsam fir (*Abies balsamea*) becomes a prostrate stunted shrub in this situation.

The principal mineral of the region is gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) which is obtained from the Palaeozoic rocks. These rich gypsum deposits which lie to the north-west of Lake St. Martin were discovered about forty years ago and development work was first undertaken in 1901 when a

mill was erected at Old Gypsumville (now known as Davis Point) on Lake Manitoba.

The quarry, when first seen from the elevated road, presents an interesting appearance. It is a large excavation with isolated piles of rock some ten feet high, surrounded by water. The reflections are sometimes perfect, backed by the quarry face which is white and topped by the green of the trees and bushes, which grow where the overburden has not been removed. Upon closer inspection, one can find rocks of many hues, shell pink, pale blue, dark blue, red and many shades of brown. This is gypsum in its different formations, massive, satin spar, selenite (which is as clear as glass) and bands of anhydrite, both white and blue, changing their form into gypsum and causing anticlinal fracture of the beds.

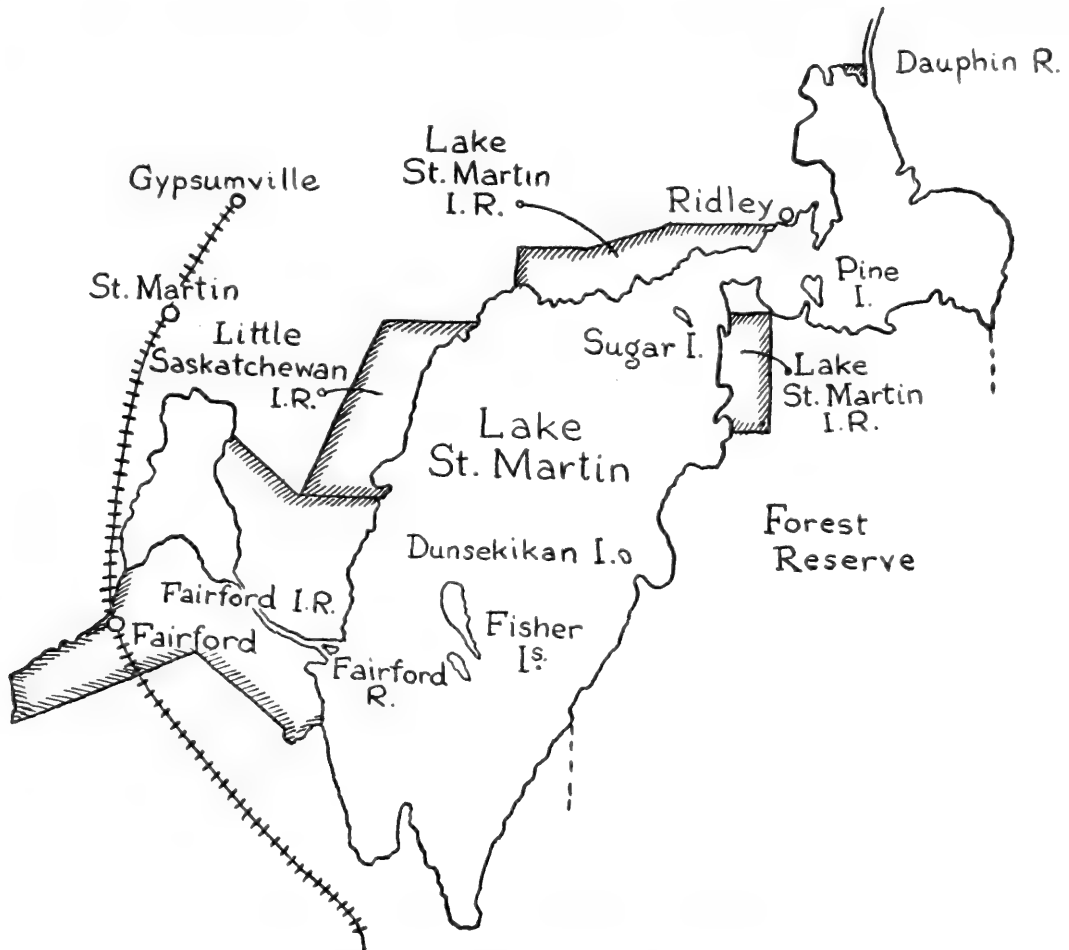
Several species of birds are attracted to the quarry; killdeers which choose their nesting sites among the loose pieces of surface rock; barn swallows which find the tunnel ideal as a nesting place and make their nests with the gypsum mud; and other species such as spotted sandpipers, kingfishers and robins. The latter find nesting places in the old tie piles and under the coal dock and even on the steam shovel. Bats inhabit the crevices in the rock face, frogs spawn in the quarry and in spring pike which sometimes make their way up the ditches from the lake are trapped by the fall of water and remain all summer in the quarry ponds.

The climate of the Lake St. Martin vicinity is one of extremes: the mean annual temperature from year to year varies from 30° to 32.5° and that of summer from 60° to 65°. In winter the temperature often drops to -50° and as low as -63° has been recorded on the Lake St. Martin Reserve. The annual snowfall varies from 30 to 60 inches. Rainfall ranges from 17 to 20 inches, July being the month of maximum precipitation. A protracted period of daylight is characteristic of summer, 15 to 16 hours being possible in this latitude.

The vegetation of the general region may be described as representing a zone of transition from prairie and grove belt to the northwestern coniferous forest. The general aspect of the area may be described as an overlapping of prairie and woodland. The woods about the southern half of the lake are comprised for the most part of mixed deciduous trees and coniferous stands. The latter gradually become predominant toward the north. The region marks the southwestern limit of northern scrub pine (*Pinus banksiana*) while several other species such as white elm (*Ulmus americana*), bur oak or mossy-cup oak (*Quercus macrocarpa*) and mountain maple (*Acer spicatum*) are but sparingly represented and may be approaching their northern limits. The most characteristic trees of the district are white and black spruce (*Picea alba* and *P. mariana*), trembling aspen (*Populus tremuloides*), balsam poplar (*Populus*

balsamifera), paper birch (*Betula papyrifera*), balsam fir (*Abies balsamea*) and tamarack (*Larix laricina*). There are isolated areas where Manitoba maple or box elder (*Acer negundo*) grows, as on Sugar and Pine Islands, but it is not a common tree. The prairie land and prairie-like alkaline flats support clumps of willows (*Salix* spp.).

The undergrowth in the woods consists mostly of Viburnums, hazel nut (*Corylus americana*), beaked hazel (*C. rostrata*), hawthorn (*Crataegus coccinea?*), choke cherry (*Prunus virginiana*), pin cherry (*P. pennsylvanica*



MAP OF LAKE ST. MARTIN DISTRICT

and Saskatoon berry (*Amelanchier* sp.). The aspen and willow "bluffs" on the prairie are usually surrounded by a growth of shrubs such as silverberry (*Elaeagnus argentea*), Canadian buffalo-berry (*Shepherdia canadensis*) and wolfberry (*Symphoricarpos racemosus*). Certain clumps of the latter were noted to possess the whitened under-surface of the leaves characteristic of the variety *pauciflorus*.

The marsh plants found commonly are bulrush (*Scirpus* sp.), cat-

tail (*Typha latifolia*), reeds (*Phragmites* sp.) and scouring rush (*Equisetum* sp.).

The mossy spruce swamps are overgrown with Labrador tea (*Ledum groenlandicum*), wintergreen (*Gaultheria procumbens*), buckbean (*Menyanthes trifoliata*) and in cold bays at the edge of boggy swamps, the water arum (*Calla palustris*) is sometimes found.

The characteristic animals of the region indicate that Lake St. Martin lies in a belt of transition from the Assinaboian to the Algonquian faunal area. Among the common summer birds are such Assinaboian indicators as the clay-coloured, Baird's and Leconte's sparrows, Brewer's and yellow-headed blackbirds, Sprague's pipit, Forster's tern, marbled godwit, Wilson's phalarope and upland plover. Towards the northern end of the lake and in relic boreal "islands" throughout the region, however, such species as the hermit thrush, blue-headed vireo, yellow-bellied and olive-sided flycatchers, Canada jay, white-throated sparrow and bay-breasted warbler are found. These are all considered indicators of the Algonquian area.

It seems evident that the Algonquian fauna is gradually receding northward. This is mostly due to ecological factors, such as the clearing of the forest and the reclamation by grove-belt trees of burnt-over northern coniferous woods.

THE INDIANS OF LAKE ST. MARTIN

The Indians of the Lake St. Martin area belong to the Salteaux "tribe" of the great Ojibwa or Chippewa nation. When their traditional hunting grounds about Lake Superior were invaded by settlements, this group migrated north-westward to the Lake St. Martin region. The loose geographical bands characteristic of the tribe allowed considerable intermarriage with the Crees of the Lake Winnipeg area. Furthermore, Lake St. Martin is on a natural waterway between Lake Manitoba and Lake Winnipeg and has been long occupied by roving bands of Indians and by white traders. To-day the eight hundred Lake St. Martin Indians have a considerable admixture of White and Cree blood. This mixture is apparent even in their language since they speak a dialect of Salteaux, Cree and English.

No more ideal place could be found for Indian settlement as the surrounding district has many advantages. An abundance of fish for domestic and commercial purposes is obtained from the lake, and in the fall whole families migrate from Fairford towards Lake Winnipeg, to catch whitefish for their supply of "hung fish" as it is called, for use during the early winter months. Unorganized territory nearby provides good hunting grounds for meat and furs. Berries are abundant and the

marshes and waterways are a resort for wild fowl. Adjacent prairie lands produce an excellent crop of "marsh hay" which may be harvested for cattle or sold for shipment. The summer pasture is good.

The Indians do not engage in agriculture to any great extent. The season is short but fair garden crops can be produced. The wood supply has been depleted on the Fairford Reserve, but on the other reserves wood is still sufficiently plentiful to be cut and sold as cord wood.

Some of the Indians seek casual labour in freighting and in the fishing camps in winter, while others travel long distances into the agricultural areas to secure employment during seeding and harvest. The spring muskrat hunt is an important source of revenue. After this follows the digging and collecting of snake root (*Sanicula*). In this occupation whole families go out either for the day or to camp for several days, sending one of their number back to trade in the snake root for groceries and provisions. Although the women do not excel at needlework, many show skill in making beaded coats and moccasins. Others supplement their income by making rush mats and birchbark rogons for sale. Most of the women are efficient knitters, creating intricate designs and colour effects. One family, on the Lake St. Martin reserve, owns a flock of sheep and makes mitts and heavy stockings from unspun wool. The appearance of these is somewhat uneven, but the demand among fishermen for these products usually exceeds the supply. Canoes are not made or used by these people but they use instead flat-bottomed boats for fishing and travel. These boats are made on the reserves by certain families. Each spring sugar is made on Sugar and Pine Islands from the Manitoba maples. These trees are considered to be personal property and are willed or sold to others.

From the year 1900, white settlers began to drift into the district and take up homesteads. In 1921 there was considerable settlement about Ridley. Although many of these claims have since been abandoned several ranchers still find the locality good for grazing and have established comfortable homes on the lakeshore. With the advent of the railway from Winnipeg in 1911, the number of settlers increased and very creditable farms are now to be found in the vicinity of the towns of St. Martin and Gypsumville.

II. INTRODUCTION TO ANNOTATED LIST AND ACKNOWLEDGMENTS

In 1930, the junior author was transferred by the Indian Department from Moose Factory, Ontario to the Lake St. Martin Indian Reserve, Manitoba. Continuing an interest developed at Moose Factory he commenced a study collection of birds, the skins being sent to the Royal

Ontario Museum of Zoology. After four years, a fairly complete collection had been brought together and it was thought opportune for the Museum to make this collection as complete as possible and to publish an account of the birds of little-known Lake St. Martin. Consequently, in June 1934, the senior author was sent to the reserve to familiarize himself with the breeding birds of the region and to secure evidence of the presence of such obscure forms which might have been overlooked. Accompanied by his brother Mr. A. H. Shortt of the Manitoba Museum, Winnipeg, he spent the period from June 14 to June 27 at Lake St. Martin, made a collection of about 50 skins, took a number of sets of eggs and secured other evidence of the breeding of a number of additional species. Since then the collection has continued to grow through additions by the junior author and by the assistance of an Indian, John Marsden.

The collection in the Royal Ontario Museum of Zoology now numbers 503 bird-skins representing 200 species. Definite breeding evidence has been secured for 86 species. In addition, stomachs of most of the birds collected and many internal and external parasites have been preserved.

The nomenclature and arrangement is that of Taverner (*Birds of Canada*). This differs from that of the American Ornithologists' Union Check-List only in certain of the vernacular names.

Several subspecies are recognized by the senior author which are not accepted by the Check-List. In these cases it has been considered that sufficient material was available to satisfactorily demonstrate validity.

In the catalogue of specimens following the descriptive accounts of the individual species, the sex of each bird where positively known by dissection has been indicated by the accepted symbols, ♂ for male and ♀ for female. In such cases where determination was not possible but the sex is clearly indicated by plumage, the sex marks are questioned, thus ♀? or ♂?.

It is a pleasure to acknowledge aid from the following: Mr. P. A. Taverner for the use of his excellent notebooks pertaining to a trip which he and Mr. Hoyes Lloyd of Ottawa made to Lake St. Martin in the summer of 1921, Mr. A. H. Shortt of the Manitoba Museum, Winnipeg, for assistance rendered in the field during the summer of 1934, and Mr. Arthur Pitt, of the Gypsum, Lime and Alabastine Canada, Limited, for information given regarding gypsum and other minerals of the district.

ANNOTATED LIST

1. **Gavia immer.** COMMON LOON.—The loon is a fairly common summer resident of the region and breeds on the shores of Lake St. Martin. A nest was found and two eggs collected on May 28, 1931, on

the Lake St. Martin Indian Reserve. Incubation had commenced. Taverner (MS.) noted individuals on the Fairford river and on Lake St. Martin from July 17 to 19, 1921.

The material in the Royal Ontario Museum of Zoology seems to indicate that the two forms of the common loon, *immer* and *elasson* are "millimetre races" with a wide belt of intergradation. Three adults from Lake St. Martin though in this intergrading belt seem referable to the larger race, *immer*. Average measurements of three adults follow: Wing curve, 379; Exposed culmen, 83; Depth of culmen, 23.

♂ May 6, 1931. ♀ June 11, 1931.
♂ May 11, 1931.

2. **Colymbus grisegena.** RED-NECKED GREBE. — This is the commonest grebe of the region. It nests in considerable numbers in the more unfrequented marshes where reed and cat-tail growth are sufficiently dense and extensive to afford seclusion, good feeding and nesting grounds.

While it is seen comparatively seldom, its somewhat loon-like call, followed by a harsh chatter, is one of the characteristic sounds of early morning on Lake St. Martin.

Their large platform-like nests are built at the edge of the reeds, over fairly deep water. A set of four eggs was taken on May 28, 1935 and eggs which had been destroyed by crows were found on Sugar Island on June 19, 1934.

The eggs of this and of other species of grebes are much esteemed as food by the Indians and are gathered in large numbers.

Red-necked grebes are frequently taken in traps set for muskrat in early spring.

—May 14, 1931. 2 ♀ ♀ May 14, 1931.

3. **Colymbus auritus.** HORNED GREBE.—The horned grebe is an uncommon summer resident of Lake St. Martin. A breeding pair was taken on July 5, 1936 and an immature was taken from a fish net on Oct. 16, 1935.

Taverner, in his journals, records seeing a single bird which he and Lloyd believed to be of this species on Lake St. Martin on July 17, 1921.

♂ July 5, 1936. —Oct. 16, 1935.
♀ July 5, 1936.

4. **Aechmophorus occidentalis.** WESTERN GREBE.—A pair of western grebes was seen from June 19 to June 24, 1934, in the deep water bordering Sinclair's slough at the south end of the Lake St. Martin Indian Reserve settlement.

This grebe is seen more frequently in clear open water than the other grebes. One was observed preening and loosened several feathers which it soaked in the water with its bill and then swallowed.

♂ June 9, 1936.

5. **Podilymbus podiceps.** PIED-BILLED GREBE.—This species is not as common as the red-necked grebe, but it never-the-less makes itself more conspicuous than that species.

It breeds in the marshes bordering Lake St. Martin; an egg was collected on May 19, 1930. Like those of the red-necked grebe, the eggs of this bird are taken for food by the Indians.

♀ May 14, 1931.

6. **Pelecanus erythrorhynchos.** WHITE PELICAN.—Small flocks and individual pelicans are often seen feeding on Lake St. Martin. These birds probably come from the nesting colonies on Lake Winnipeg or the Dauphin river to the north. They have not been known to nest on Lake St. Martin for many years. Taverner (MS.) noted the species as common on Lake St. Martin in July 1921 but saw no indications of nesting.

Indians sometimes shoot them for their oils which are greatly esteemed as medicine but they are generally considered to be "too fishy" to eat.

John Marsden reports seeing a dead pelican on the Dauphin river on May 9, 1934. It had attempted to swallow a pickerel, tail-foremost and could not eject it.

Pelicans arrive on the Lake during the last week of April.

♀ June 19, 1936.

7. **Phalacrocorax auritus.** DOUBLE-CRESTED CORMORANT.—This species is known to the Indians by the sportsman's vernacular name for it "crow duck".

Like the pelican, the cormorant has not been known to nest on Lake St. Martin in recent years but it comes from the nesting grounds on Lake Winnipeg to feed about the rocky islands of Lake St. Martin.

Their spring arrival is from April 22 to 29.

The skull of one of these birds was picked up on Sugar Island on June 16, 1934 and a specimen was secured on Sept. 5, 1935.

—June 16, 1934 (skull). ♀ Sept. 5, 1935.

8. **Ardea herodias.** GREAT BLUE HERON.—While not definitely known to nest in the district here considered, the great blue heron is frequently noted in summer, feeding in the shallow water of the shores of Lake St. Martin.

A bird of the year was taken on the Lake St. Martin Indian Reserve on Oct. 2, 1934, and another on Sept. 26, 1936.

On one occasion, one of these birds was seen standing in the dry grassy flats some distance from water and at first was mistaken for a crane. It was apparently foraging for meadow voles or spermophiles.

Im.—Sept. 26, 1936. Im.—Oct. 2, 1934.

9. **Nycticorax nycticorax.** BLACK-CROWNED NIGHT HERON.—Sam Smith, of Fairford, states that black-crowned night herons pass through Fairford each spring and fall and that he sees a few each year. This is the only information we have regarding this species in the Lake St. Martin area.

10. **Botaurus lentiginosus.** AMERICAN BITTERN.—The American bittern is a characteristic bird of the Lake St. Martin marshes. Although it was found to be a fairly common nesting species on the Lake St. Martin Indian Reserve in 1934, it was said by Indians to be much less common than formerly. A nest was found in slough grass on the reserve on June 22, 1934, containing four newly hatched young. Another nest with four eggs was located at Lundy's Point on June 11, 1935; the eggs were collected. This species is sometimes used as food by the Saulteaux. The latest recorded date is Nov. 11 (1931).

♂ June 16, 1934.

11. **Ixobrychus exilis.** LEAST BITTERN.—A specimen of this bittern was brought in by Billie Sinclair, an Indian, on June 13, 1931. It was too badly damaged to make into a study specimen, but a wing and food were saved. This appears to be the most northerly record for the species. This bird was taken in typical habitat, but a thorough search of the area in the summer of 1934 failed to disclose further evidence of the occurrence of the species.

♂ ? June 13, 1931.

12. **Cygnus columbianus.** WHISTLING SWAN.—The whistling swan migrates through the region in large numbers in spring and fall. The Indians claim that it is very regular in its migrations and that the main flight usually passes through the Lake St. Martin region about May 11 or May 12. In fall they rest on the lake in large numbers.

13. **Branta canadensis.** CANADA GOOSE.—The Canada goose arrives on Lake St. Martin about April 7, while the shores are still ice-bound and chill winds sweep down from the north. It is not a common summer resident, but Indians have found nests of this species in the muskeg about the mouth of the Dauphin river.

With regard to the subspecies found at Lake St. Martin, the following extracts from Taverner's 1921 field notebooks are of particular interest,

“. . . Our chief Indian, Billy Sanderson, told us that there were three kinds of geese occurring on the lake that are alike in appearance and can only be told apart by size and minor characters. First, the *big* goose, (evidently *canadensis*); second, a short-necked bird, slightly smaller and with a shriller and sharper voice. It sometimes associates with the big goose. Third, a small goose, no larger than a mallard duck, that always keeps by himself and has a note like “Cack-cack-cack!” He called it a laughing note.

Another goose seems more or less traditional. It seems to be an immense bird and is so rare that it is known only by report. It is probably mythical.”

From the above, it would seem that three forms of geese are to be expected at Lake St. Martin, *canadensis*, *leucopareia* and *hutchinsi*. Definite sight records of *canadensis* have been secured and a specimen of *leucopareia* was taken on June 20, 1935.

♂ June 20, 1935.

14. **Chen hyperborea.** SNOW GOOSE.—This species, known to the Indians as the “wavey”, migrates through the region of Lake St. Martin in appreciable numbers, usually in company with the next species.

15. **Chen caerulescens.** BLUE GOOSE.—This species is a fairly common migrant, passing through in large flocks intermixed with snow geese. They often settle on the lake in spring.

16. **Anas platyrhynchos.** MALLARD DUCK.—This is the most plentiful breeding duck of the region. A nest was found on May 25, 1931, with eight eggs, in the reeds on the northern part of the east shore of Lake St. Martin and another with five eggs on Sugar Island on June 16, 1934. This latter nest, which was collected, was situated on the rocks under weeds after the habit of a merganser. Many broods of downy young accompanied by the female parent were noted after the middle of June in 1934. Taverner, in July, 1921, found this species common and with young.

The duck and drake frequently show much anxiety when the nest is found and circle about over-head, the female uttering a loud, nasal “quack” and the male a hoarse, whispered “arng, arng.”

In June, 1934, as many as a hundred males in a flock were seen feeding in the small grass marshes while their mates incubated or tended young. A mallard shot on Oct. 7, 1932 at Lake St. Martin had been banded at Big Suamico (Wisconsin) by L. H. Barkhausen on Sept. 20, 1931.

Juv. ♀ June 16, 1934.

17. **Anas rubripes.** BLACK DUCK.—This duck is not uncommon and in June, 1934, as many as six were seen in a day. The only specimen procured consists of a wing and foot of a drake shot by an Indian on Oct. 5, 1933. An examination of the foot while still in a fairly fresh condition showed the bird to be of the postulated red-legged type, *rubripes*.

In summer assumed males of this species are to be seen among the flocks of male mallard ducks which congregate in the shallow grass or Phragmites marshes to feed.

♂ ? Oct. 5, 1933.

18. **Chaulelasmus streperus.** GADWALL.—This duck, though formerly plentiful, was considerably affected by the drought in the years prior to 1934 and consequently was not common on Lake St. Martin in that year. Several pairs were noted at Sinclair's slough but did not appear to have nests. This was probably due to the depredations of Indian egg-hunters.

This species seems to be principally nocturnal in its feeding habits. It was seen mostly in the evening, paddling gently, foreparts well immersed and apparently feeding on aquatic herbage such as Poto-mogetons and duckweed.

♀ June 8, 1936. ♂ June 8, 1936.

19. **Mareca americana.** BALDPATE.—This is a fairly common duck at Lake St. Martin in summer. It evidently nests in the marshes, though no definite breeding record was established.

♀ Oct. 18, 1934.

20. **Dafila acuta.** PINTAIL.—Next to the mallard, this is the commonest breeding duck at Lake St. Martin. A nest found on May 22, 1933, contained nine eggs. An unexplained observation in connection with this nest is that it contained a large stone. A nest discovered on June 23, 1934, in a grassy field on the Lake St. Martin Indian Reserve, contained four fresh eggs. This instance was undoubtedly a late nesting. Many females with broods varying from five to twelve young were noted in June, 1934. A parent female usually decoys and feigns injury while her brood makes good its escape in the open water.

A pintail, banded by E. A. McIlhenny on Avery Island, La. on Dec. 12, 1933 was shot on the Lake St. Martin Indian Reserve on Sept. 14, 1934.

♂ May 17, 1934. ♀ Oct. 5, 1934.
Juv. ♂ June 14, 1934.

21. **Nettion carolinense.** GREEN-WINGED TEAL.—Though a common migrant, only a few remain to nest in the Lake St. Martin area. Two females, evidently possessing nests, were noted on June 19, 1934, but their nests were too well concealed for detection.

Males of this species are frequently seen battling each other in spring and early summer, but little or no actual injury seems to be done.

♀ ? Sept. 26, 1935.

22. **Querquedula discors.** BLUE-WINGED TEAL.—This is a plentiful duck in the vicinity of Lake St. Martin in summer. Five nests of this species were found in 1934, from June 22 to 26, on the Lake St. Martin Indian Reserve. The number of eggs varied in number from three to ten and in condition from freshly laid to pipping. The variety of nest structures varied from scanty grass nests to well made receptacles of reeds, roots and plant-stalks, thickly lined with down. It is interesting to note that the poorer nests contained fewer and fresher eggs. It may be that nest construction is continued throughout the egg-laying period. One nest, collected on June 24, 1934, contained six eggs and was a fairly well shaped nest but only one half of it was lined with down. The lined side was as completely constructed as any blue-winged teal nest we have observed but the other side was but loosely made and contained no down.

Teal, on the wing, keep together in a compact flock, turning and twisting with the precision of waders. Often a flock will suddenly and with unanimity take a short, spiral dive of ten or twelve feet and as suddenly resume horizontal flight, with no apparent change of speed or direction.

♀ May 21, 1934. ♂ May 21, 1934.
♂ May 30, 1931.

23. **Spatula clypeata.** SHOVELLER.—The shoveller is a fairly common summer resident of Lake St. Martin. It breeds in the marshes and in the weedy fields bordering *Scirpus* and cat-tail growths. A nest found on June 15, 1934, was situated in the latter type of habitat. The female was flushed from this nest and positively identified, but the nest contained only two unusually small eggs.

A male was noted diving for food in shallow water on June 18, 1934, an unusual behaviour for this species.

The flight call of the male as heard at the Lake St. Martin Indian Reserve is a rather guttural "uck, uck."

♂ May 2, 1932. ♂ June 13, 1935.
♀ May 9, 1934. — Sept. 26, 1934.

24. **Nyroca americana.** REDHEAD.—This is a common summer resident though much disturbed by Indian egg-hunters. The nest, built of tules on supporting reed-masses over rather deep water is readily accessible to the Indians by boat.

♂ June 22, 1934.

25. **Nyroca valisineria.** CANVAS-BACK.—The canvas-back is a very common duck, the most plentiful of the diving ducks on Lake St. Martin. As many as sixty males have been noted in one day in summer (June 16, 1934).

A nest was found on May 25, 1931 on a rocky ledge on the east shore of Lake St. Martin. Two others were located in small grass marshes, one found on June 22, 1934, contained eight heavily incubated eggs; another contained two fresh eggs on June 8, 1935, which were collected. Taverner (in his journals) states that Lloyd and he found canvas-backs common and with young on the Fairford river in July, 1921.

Canvas-backs "pitch-in" with great speed and at a steep angle and strike the water with considerably more impetus than most ducks.

♀ May 14, 1931.

♀ Oct. 4, 1935.

26. **Nyroca affinis.** LESSER SCAUP DUCK.—This is a not uncommon summer resident, which prefers grassy sloughs and dry open spaces covered with annual plants and seedling aspen as nesting sites. On June 22, 1934 a nest with ten heavily incubated eggs was found about fifty yards from the lake in one of the clearings described above.

This is the only scaup, the identity of which has been proven, at Lake St. Martin.

♂ ? Oct. 20, 1934.

27. **Glaucionetta clangula.** COMMON GOLDEN-EYE.—This is a plentiful species at Lake St. Martin and is one of the first of the ducks to arrive in spring. It nests commonly in the woods about the lake and occasionally one may discover the female parent leading the young to water. A downy chick was collected during this procedure on June 11, 1934. Taverner in his field notes for July, 1921, stated ". . . it was common with young on the Fairford river and on Lake St. Martin."

Female golden-eyes often circle about over the school house chimney on the Lake St. Martin Indian Reserve, evidently looking for nesting sites. On two occasions a female has been found in the schoolhouse after coming down this chimney.

♂ May 14, 1931.

Juv. ♀ June 11, 1934.

♀ May 19, 1931.

♀ Nov. 18, 1934.

28. **Charitonetta albeola.** BUFFLE-HEAD.—Though not uncommon migrant, this species is very inconspicuous in summer and is not definitely known to breed in the area here considered.

♀ Oct. 16, 1935.

♂ Oct. 22, 1934.

♀ ? Oct. 20, 1934.

29. **Melanitta deglandi.** WHITE-WINGED SCOTER.—This is a fairly common summer resident which breeds in the bushes about the lake. John Marsden reports having seen adults with young on several occasions on Lake St. Martin. Taverner, in his notes, records two white-winged scoters on the Fairford river on July 17, 1921.

—July 10, 1936.

30. **Erismatura jamaicensis.** RUDDY DUCK.—The ruddy duck is a fairly common nesting bird about the marshes on Lake St. Martin. They nest in the great umbrella-like masses of dried, cere tules but one seldom discovers these birds near their nests. The relatively large, white, pitted eggs are easily identified, however, even when laid in the nest of another species.

A nest of a ruddy duck found on June 20, 1935 and which contained two eggs, was built of tules. It greatly resembled the nest of a coot both in materials used and in construction. On June 25, 1934 a male was observed with young. The ruddy duck is one of the few ducks in which this sex contributes to the care of the brood. An egg of this species was found in the nest of an American coot on July 9, 1936. The nest also contained one egg of the coot.

♀ May 16, 1934. ♂ June 26, 1936.

31. **Lophodytes cucullatus.** HOODED MERGANSER.—The hooded merganser is not common but occurs in summer. It probably nests sparingly in the woods bordering Lake St. Martin.

Three birds of this species, two of them evidently immature, were seen on June 20, 1934 and a female was killed by an Indian on the Lake St. Martin Indian Reserve on June 13, 1933.

Taverner, in his journals, states "five were noted on the Fairford River, July 16" (1921).

32. **Mergus merganser.** COMMON MERGANSER.—This merganser is not as common on Lake St. Martin as the next. Only one pair was noted in June, 1934, as compared with six pairs of red-breasted mergansers. This gives an approximate estimate of the relative numbers of these two species in summer in this region.

A nest which contained six eggs, was found beneath an overhanging rock on a bouldery outcropping near Sugar Island on May 25, 1931. Indians state that once they found a nest of this species containing eighteen eggs. Since circumstances often enforce close association of several pairs and since the species is often indifferent in the disposition of its eggs, this nest may have contained the eggs of two or more females. Another nest containing two eggs was found on May 24, 1935.

33. **Mergus serrator.** RED-BREASTED MERGANSER.—This is the most common of the mergansers at Lake St. Martin. It breeds plentifully and is especially numerous in the fall. Females with young were seen in June, 1934 and a nest which had been destroyed by crows was found on Sugar Island on June 19, 1934.

While observing several of these birds feeding, it was noticed that almost invariably after capturing a fish, bringing it to the surface and swallowing it, they momentarily immersed their beaks in the water as if to drink. This was followed by throwing the head up and back in the attitude of swallowing.

2 ♀ ♀ ? Sept. 28, 1934. ♀ Oct. 15, 1931.
♀ ? Sept. 30, 1936.

34. **Cathartes aura.** TURKEY VULTURE.—John Marsden saw a turkey vulture on Sept. 4, 1934, flying quite low in a southerly direction over Lake St. Martin. He stated that it was the first he had seen in many years. His reputation for accuracy is such that the authors have no hesitation in including this easily recognized species in the list of Lake St. Martin birds.

35. **Astur atricapillus.** AMERICAN GOSHAWK.—This is a regular winter visitant, but to date it has not been found in this area in summer. The specimen taken is referable to *A. a. atricapillus*.

♂ Nov. 30, 1934.

36. **Accipiter velox.** SHARP-SHINNED HAWK.—This species is a scarce summer resident. A highly agitated female observed on June 22, 1934 was presumed to have flying young nearby.

A specimen taken on May 25, 1932 was heavily parasitized by large *Hippoboscid* flies.

♂ May 25, 1932.

37. **Buteo borealis.** RED-TAILED HAWK.—The red-tailed hawk breeds sparingly throughout the region. It was noted in three localities in June, 1934 including observations of parent birds accompanied by flying young. A nest containing one young was found on July 2, 1936, 30 feet up in a white spruce.

The breeding female taken from the nest seems referable to *borealis*, but shows some tendency towards *calurus* in the barring of the abdomen and tail. A fall immature is of little value taxonomically, but seems most like immature *borealis*.

♀ July 2, 1936. Im. ♀ Sept. 26, 1934.
Im.—July 2, 1936.

38. **Buteo platypterus.** BROAD-WINGED HAWK.—This is a not uncommon summer resident. Adults with two flying young were seen on June 25, 1934 and a set of two eggs was collected on June 19, 1935. This nest was situated thirty feet up in a white spruce on the Lake St. Martin Indian Reserve. The female associated with this nest was taken on June 22, 1935.

A lone bird, not fully mature, but changing to adult plumage was taken on June 25, 1934.

The species was seen and heard by Taverner on July 16 and July 20, 1921 at Fairford.

♀ June 22, 1935. ♂ June 25, 1934.

39. **Haliaeetus leucocephalus.** BALD EAGLE.—The only specimen of this species from the region, is the foot of a bird in the Royal Ontario Museum of Zoology which was taken by John Marsden at the north end of Lake St. Martin on May 8, 1933.

The Bald Eagle is seen not infrequently about the shores of Lake St. Martin.

—May 8, 1933 (foot only).

40. **Circus hudsonius.** MARSH HAWK.—This is the commonest hawk in summer at Lake St. Martin. It nests in the drier marshes, in the rank growth bordering sloughs on the flats and on the open, dry prairie land.

A set of three eggs was collected from a nest in a grassy slough on June 20, 1934.

Im. ♂ Oct. 9, 1933.

41. **Pandion haliaetus.** OSPREY.—This species is frequently seen fishing in the shallow waters of Lake St. Martin, and Indians have found the nest some three miles back in the woods.

42. **Falco peregrinus.** PEREGRINE FALCON.—This hawk is apparently not common but is well known to the Indians who claim to have found its nest on the limestone ridge at the north end of the lake.

John Marsden states that many of the residents of the Lake St. Martin Reserve have seen the peregrine falcon strike down a loon over the lake and tow it ashore to eat. He also tells of a case in which both hawk and loon were killed by the impact and were picked up dead from the water. This statement seems quite plausible and it is reasonable that even the slightest miscalculation of distance or speed on the part of the falcon would produce a situation as dangerous to itself as for its intended prey.

Im. ♂ ? Oct. 1, 1934.

43. **Falco columbarius.** PIGEON HAWK.—This species is not common in the Lake St. Martin region, but is said by Indians to nest inland in the spruce forest. It occurs in migration about the same time as the warblers and its spring and fall movements may possibly be governed to a considerable extent by the movements of its food supply.

Im. ♂ Sept. 5, 1934.

44. **Falco sparverius.** AMERICAN SPARROW HAWK.—The American sparrow hawk is not common, but is found about old burns and occasionally it is seen in the clearings about the settlements on the Reserves. It has also been noted at the Gypsum quarry at Gypsumville. The form found here is the eastern one, *F. s. sparverius*.

♀ May 2, 1932.

45. **Canachites canadensis.** SPRUCE GROUSE.—This species is not uncommon in the black spruce forest according to Indians. It is more inclined to frequent the vicinity of settlement in winter. In October 1933, a large flock lived about the trees near the schoolhouse on the Lake St. Martin Reserve.

J. J. Sinclair, an Indian, found a nest of the spruce grouse while he was digging for snake-root on the east side of the Lake. It was situated in the shelter of a fallen log. Two downy young, capable of short flights, were taken on July 3, 1936.

The two female specimens have been carefully examined and compared and while perhaps not typical, are best referred to the northern race, *canadensis*.

♀ July 3, 1936 (head only).	♂ Oct. 10, 1933.
Juv. ♀ July 3, 1936.	♂ ? Oct. 10, 1933.
Juv. ♂ July 3, 1936.	♀ ? Oct. 17, 1935.
♀ Oct. 10, 1933.	

46. **Bonasa umbellus.** RUFFED GROUSE.—This species may be said to be still a common bird in the general district, subject to periodic fluctuations. It was quite common in 1933 and 1934.

The red phase is surprisingly well represented in this region. Two of three specimens taken in February, 1933, have red tails and other examples of this type are regularly seen. The three specimens taken are referable to *B. u. togata*.

The species breeds commonly in the mixed woods bordering Lake St. Martin. Two eggs were taken from a set of thirteen on May 25, 1932 and a set of eight was collected on May 15, 1933. Downy young have been seen frequently with the parent birds.

On two occasions stomachs of ruffed grouse taken at Lake St. Martin have been found to contain garter snakes. These had been swallowed almost whole.

♂ Feb. 25, 1933.	♀ Feb. 27, 1933.
♂ Feb. 27, 1933.	

47. **Lagopus lagopus.** WILLOW PTARMIGAN.—These birds are met with frequently in winter in the Lake St. Martin region. They were noted as more common than usual during the winters of the big southern migrations, 1932-3 and 1933-4.

All specimens taken have the dark shaft marks of *L. 1. albus*.

♀	Feb. 11, 1933.	♀	Dauphin R. Dec. 29, 1933.
♀	Mar. 10, 1932.	—	Warpath R. Dec. 1, 1936.

48. **Pedioecetes phasianellus.** SHARP-TAILED GROUSE.—Though a common bird in the general area of Lake St. Martin, the sharp-tailed grouse has become quite scarce on the Indian reserve. In the fall of 1932, they were particularly common in the area; on Oct. 18, Rev. G. C. Smith reported seeing a flock of a hundred between Fairford and the Lake St. Martin Indian reserve. Large flocks were noted throughout November and December. In 1934-5 they became scarce, and in 1935-6 were at a particularly low period of numbers.

Snyder (1935) considers the sharp-tailed grouse from this area to be intermediate between *phasianellus* and *campisylvicola*. It is possible that many, or all of the birds seen during the fall of 1932 at Lake St. Martin belonged to the northern form *phasianellus* which at that time was making one of its periodic southern invasions.

♂ ? Sept. 28, 1933.

49. **Perdix perdix.** GRAY PARTRIDGE.—The first occurrence of this introduced species at Lake St. Martin was discovered when an Indian took one from a steel trap on Nov. 25, 1931. On the same date, Nov. 25, in 1933, four were seen feeding in the settlement of the Lake St. Martin Reserve. About the same time, a small flock was reported from the North Star Ranch six miles north of the settlement. This flock was present at the Ranch until Dec. 2, 1933, when it disappeared and there has been no further report of the species.

♂ Nov. 25, 1931.

50. **Grus canadensis.** SANDHILL CRANE.—Indians state that this species is increasing in numbers in the region. A flock of twenty was seen on Oct. 9, 1933 and on June 22, 1934 a flock of ten was seen, circling upwards with and above a flock of nine white pelicans.

A nest was found on the Dauphin river, just north of Lake St. Martin, by John Marsden on May 19, 1933. It was made of old rotting rushes and situated in a marsh. It contained two eggs.

They usually fly in V-shaped or W-shaped flocks, generally passing over at a very high altitude. Many flocks probably pass over above the range of vision.

A leg of a crane, taken from a bird shot at the mouth of the Dauphin river on May 20, 1933 constitutes the only breeding specimen from the region. Its tarsal measurement, 238 clearly indicates that the race occurring at Lake St. Martin in summer is the larger form *tabida*.

An immature crane, collected on Sept. 22, 1936 has a tarsal measurement of 194. This specimen seems referable to *canadensis* and was probably a migrant from the north.

— May 20, 1933 (leg only). ♂ Sept. 22, 1936.

51. **Rallus limicola.** VIRGINIA RAIL.—This species is found in the cat-tail marshes around Lake St. Martin. This is probably the most northerly situation in Manitoba in which this rail has been found.

A male collected on June 15, 1934 was evidently in breeding condition. Several pairs were noted but the nests were not found.

♂ June 15, 1934.

52. **Porzana carolina.** SORA RAIL.—This is a much more common rail at Lake St. Martin than the last. It nests in cat-tail, *Scirpus* or grass-marshes and can be heard at almost any time during the night in the marshes bordering the Lake. The common nocturnal call of the Sora rail "hoo-eek" is remarkably amphibian-like in its pitch and rhythm and in its monotony.

Three fresh eggs were taken on June 15, 1934 from a nest which was situated in a cat-tail marsh on the Lake St. Martin Indian Reserve. Another nest was taken on June 22, 1936. This contained fourteen eggs at various stages of incubation.

While capturing toads at night by flashlight on June 21, 1934, the senior author heard a sora calling in the marsh nearby. The flashlight was turned on the bird, which turned and made a hasty retreat. In its haste it ran into deep water, where it swam like a coot, its head bobbing synchronously with its regularly interrupted progression.

On the night of June 14, 1934, soras were heard near the town of Gypsumville.

♂ June 18, 1934.

53. **Fulica americana.** AMERICAN COOT.—This is a very common breeding bird throughout the Lake St. Martin region. Their eggs are much esteemed as food by the Indians, who also eat the birds, but only in the fall of the year, when they are considered a delicacy.

A single egg was taken on May 19, 1930 and a nest containing a set of seven eggs was collected on June 14, 1934. The latter was made of reeds and lined with strips of birch bark. This nest was situated a few inches above water in a *Scirpus* marsh.

Coots are very belligerent and apparently terrific battles take place as several birds belabour each other in the early nesting season and even through to late August. Their frantic and agonized squawking on these occasions would lead the observer to believe that much damage was being done, but this is more apparent than real.

The species is frequently caught in traps set for muskrat.

♀ May 14, 1931. ♂ May 14, 1931.

54. **Charadrius melodus.** PIPING PLOVER.—This species is rather rare and so far it is not known to nest on Lake St. Martin, although its summer occurrence has been noted.

♀ June 15, 1935.

55. **Charadrius semipalmatus.** SEMIPALMATED PLOVER.—This plover is a fairly common migrant in spring and fall.

— May 24, 1934. ♂ May 25, 1932.

56. **Oxyechus vociferus.** KILLDEER PLOVER.—The killdeer plover is very plentiful at Lake St. Martin and vicinity. It was noted daily by Taverner from Fairford to the Narrows of Lake St. Martin in July 1921, and is common at Gypsumville and the Lake St. Martin Indian Reserve.

A set of four eggs was collected with the female on May 30, 1933 on the Reserve. On June 17, 1934, several killdeer plover were noted on a gravel shore of Lake St. Martin near the settlement. Three or four of these were evidently nesting birds and a search soon revealed a nest with one egg. It was surprising, however, to find less than a foot from this nest another egg, reposing in a saucer-like depression, as well hollowed out as the first. Further observations on this unusual situation were curtailed when the eggs were disturbed by Indians later in the same day. A juvenile was taken by A. H. Shortt on June 17, 1934.

In September, flocks of killdeer plover congregate and indulge in wild aerial manoeuvres, wheeling and diving at great speed.

♀ May 30, 1933.

57. **Pluvialis dominica.** AMERICAN GOLDEN PLOVER.—This species is a common migrant in spring and fall through the Interlake District. There are a few records of summer occurrences, but one of these birds, a male taken by A. H. Shortt on June 18, 1934 was not in breeding condition and had a curiously deformed and shortened upper mandible.

During migration they are often seen to fly in perfect V-formation. The specimens in the collection are referable to *P. d. dominica*.

♀ June 1, 1931. 2 ♂♂ Sept. 24, 1931.

58. **Squatarola squatarola.** BLACK-BELLIED PLOVER.—This species is a common spring and fall migrant at Lake St. Martin, sometimes appearing there in huge flocks.

♂ May 30, 1934. ♂ ? June 3, 1932.

59. **Arenaria interpres.** COMMON TURNSTONE.—The common turnstone is a fairly common migrant at Lake St. Martin and has been observed as late as June 14 (1934).

♂ May 24, 1934. ♀ ? May 30, 1932.
♂ May 30, 1932.

60. **Capella delicata.** WILSON'S SNIPE.—This species is plentiful in migration, and is found on the Lake St. Martin Indian Reserve in summer. No definite breeding record has been obtained at the time of writing. Their winnowing was heard in June, 1934, and "wisps" of presumably male snipes are often flushed from their feeding along the wet, oozy marsh borders towards evening.

One was seen perched on top of an Indian hut on June 20, 1934, uttering its "chip-pur" note.

A single individual remained on the Reserve until the Lake was frozen over in November (1930). It seemed attracted to a water hole which was being dug and circled over it for some time.

♂ April 17, 1931.

61. **Bartramia longicauda.** UPLAND PLOVER.—This sandpiper was not found to be common on the Lake St. Martin Reserve in June, 1934, but was noted as quite plentiful in the vicinity of Gypsumville.

Taverner noted two birds of this species on the shores of Lake St. Martin on July 17, 1921 and a single individual was seen on the Reserve on June 17, 1934. No nesting records are known but it probably breeds in the area.

62. **Actitis macularia.** SPOTTED SANDPIPER.—This species is fairly common on the gravelly bars of Pine Island, and many nest in the quarry at Gypsumville.

A nest and four eggs were taken on the Lake St. Martin Reserve on June 14, 1934. The nest was situated on the ground in a grassy field a few yards from the shore of the lake.

63. **Tringa solitaria.** SOLITARY SANDPIPER.—The solitary sandpiper is not uncommon and breeds about Lake St. Martin. Dissection of a female taken on June 18, 1934 revealed an egg just prior to shell formation. No doubt this bird had a nest nearby.

This female is ultra-typical of the western form *cinnamomea*. It possesses the mottled primary of this race and its measurements are large: length, 228; wing, 142; tarsus, 35; culmen, 31. Another female,

however, taken on May 27, 1935, falls well within the measurements of *solitaria* and lacks entirely the speckling of the primary. Its measurements are as follows: length, 205; wing, 127; tarsus, 30.5; and culmen, 29.5.

♀ May 27, 1935. ♀ June 18, 1934.

64. **Totanus melanoleucus.** GREATER YELLOW-LEGS.—The greater yellow-legs is not nearly as common as the next species, but occurs regularly in both spring and fall as a migrant.

— Oct. 5, 1934.

65. **Totanus flavipes.** LESSER YELLOW-LEGS.—This species is much more plentiful than the last during migration and many remain about the lake in summer. Indians state that they nest in the muskeg to the north and west of Lake St. Martin. Taverner, in his Lake St. Martin notes under the date of July 18, 1921, states that he saw “. . . a few yellow-legs, acting anxious enough to have young nearby . . .” They were observed back in the woods in June, 1934, and showed considerable concern at our intrusion, but no definite breeding evidence was obtained.

♂ April 30, 1931. ♀ April 30, 1931.

66. **Calidris canutus.** KNOT.—This species can only be recorded as a rare spring and early summer migrant.

♂ June 13, 1935.

67. **Pisobia melanotos.** PECTORAL SANDPIPER.—This is a common migrant in fall and somewhat rare in spring. It has been noted along the lakeshore in summer, but the individuals seen may have been “pensioners” since no nesting evidence was secured.

♀ Sept. 20, 1933.

68. **Pisobia fuscicollis.** WHITE-RUMPED SANDPIPER.—The white-rumped sandpiper is a common spring migrant, but we have no fall records.

These sandpipers, like some others, seem to fly in flocks segregated according to sex. The males appear to arrive earlier, three having been taken on May 24. Of the two specimens taken June 6, one was a female by internal dissection and the other, the sex of which is uncertain, measures large and is probably a female.

♂ May 24, 1932. ♀ June 6, 1931.
2 ♂♂ May 24, 1934. ♀ ? June 6, 1931.

69. **Pisobia minutilla.** LEAST SANDPIPER.—During migration the species is found in fair numbers in both spring and fall. A flock of twenty-five was noted as late as June 14 (1934). Taverner and Lloyd saw a flock of twelve and collected one on July 18, 1921, possibly the first southward returning migrants.

Least and semipalmated sandpipers were noted to be very swift flyers, frequently outdistancing larger companies such as pectoral, white-rumped and stilt sandpipers.

2 ♂♂ May 20, 1932. 2 ♂♂ May 24, 1934.

70. **Limnodromus griseus**. DOWITCHER.—The dowitcher evidently nests in the vicinity of Lake St. Martin as it was seen several times during June, 1934. Also one observed on June 24 exhibited a nuptial performance. Its flight was hesitant with frequent hovering and at the same time a vocal whistling was heard. A specimen collected by A. H. Shortt on June 26, 1934 was evidently in breeding condition.

A series of seven spring and breeding specimens seems best referred to the proposed form *hendersoni* of Rowan (1932) which occupies the interior of the northwest. They are of the short-billed type and in colour agree with *hendersoni* rather than *griseus*. The bill measurements are as follows: females, 61.5, 58, 59.5; unsexed but evidently a female, 60; males 50.5, 54, 54.5. This gives an average bill length of 59.7 for four females and 53 for three males, which is typical of *hendersoni* and combined with colour differences adds weight to the argument in favour of this proposed race. Four fall females, however, measure 62, 68, 71 and 72. This would indicate that the form *scolopaceus* occurs in the region as a migrant.

♀ ?	May 19, 1934.	♀	May 26, 1932.
♂	May 19, 1934.	♀ ?	Oct. 5, 1934.
2 ♀♀	May 20, 1931.	3 ♀♀	Oct. 5, 1936.
2 ♂♂	May 20, 1931.		

71. **Micropalama himantopus**. STILT SANDPIPER.—Though never common, this species occurs regularly in the spring and fall at Lake St. Martin.

♂ May 24, 1935. — Sept. 20, 1933.

72. **Ereunetes pusillus**. SEMIPALMATED SANDPIPER.—This species is not so common as the least sandpiper in the area considered but it occurs frequently with flocks of that species during both northward and southward migrations.

♂ June 6, 1931.

73. **Limosa fedoa**. MARBLED GODWIT.—This bird is still common in the general region here discussed, but its numbers have somewhat diminished within the Indian Reserves. It occurs in summer and according to Indians sometimes nests on the Reserve.

The bill length of a female specimen is considerably greater than that of three males, being 123, as compared with 103, 102 and 100.

♀	May 7, 1931.	♂	June 23, 1931.
♂	May 13, 1931.	♂	June 29, 1936.

74. **Limosa haemastica.** HUDSONIAN GODWIT.—The Hudsonian godwit is an uncommon migrant through the district about Lake St. Martin. Two males in fully mature plumage were collected on May 21, 1934.

2 ♂♂ May 21, 1934.

75. **Steganopus tricolor.** WILSON'S PHALAROPE.—This is much the commonest nesting shorebird in the vicinity of Lake St. Martin.

Polyandry in this species was suggested by observations made. At a nest found on June 20, 1934 at Lundy's point, the parent birds hovered over after the male was flushed from the nest and uttered their peculiar grunting cries. They were soon joined by another male and later by two males and a female. This aggregation consisted then of four males and two females. The nest was situated in a tussock in a wet, grassy slough, a light grass structure containing four eggs. The male was flushed with difficulty.

Many phalaropes of this species, as many as a hundred in a flock, may be seen in the shallow water of the lakeshore in summer. These are, for the most part, females. Here they associated with male ducks, a striking exhibition of the various adjustments of nature. The respective mates of these birds were at the time undoubtedly concerned with the duties of nidification.

♂ May 18, 1934. ♂ May 25, 1931.
2 ♀♀ May 25, 1931. ♀ June 2, 1931.

76. **Lobipes lobatus.** NORTHERN PHALAROPE.—This species is a fairly plentiful migrant in the area. It shows a decided preference for shallow water over a mud-flat as a feeding ground, but it is also met with on the open water far from shore.

♀ Sugar Island, May 25, 1931.
♀ May 26, 1932.

77. **Stercorarius parasiticus.** PARASITIC JAEGER.—On June 14, 1934 two birds of this species were observed flying in a northerly direction over Pine Island by A. H. Shortt, John Marsden and the senior author. Marsden, who has been observing birds on Lake St. Martin for many years, had never seen the species before. It is probably of rare occurrence. The two observed came from the south, flying with leisurely, deliberate flight resembling the straightaway flight of a Marsh Hawk.

78. **Larus argentatus.** HERRING GULL.—This species arrives on Lake St. Martin about the end of March or in early April. When they first arrive, they feed on the dead fish which have been taken from the fish nets and thrown on the ice during the winter. In the early season, they remain on the ice of Lake St. Martin in large numbers at night, and make considerable noise all night. At daybreak they fly off

to Lake Winnipeg about forty miles distant and return at sundown. This is done daily until the nesting grounds on Lake Winnipeg are free of ice. Then only a few, perhaps the non-breeding birds, make this journey. They remain until early November, sometimes long after the lake is frozen over.

They have nested on the rocky isles near the Lake St. Martin Reserve, but they have abandoned this site probably due to disturbance by man.

♀ April 28, 1931. ♀ May 5, 1931.
♀ May 2, 1936.

79. **Larus delawarensis.** RING-BILLED GULL.—A colony of some fifty pairs of this species was found by Taverner and Lloyd on Lake St. Martin on July 19, 1921. Taverner's notebook, referring to this colony, reads as follows: "This (the colony) was on a small rocky islet of about half an acre in extent, composed of boulders out in the middle of the lake. In a little earth accumulated in the centre of the island was a rank growth of weeds, under which the ground was trampled hard and bare and where it appeared the eggs had been laid under the only concealment possible on the island. The young were grown to various stages. A number could fly, but they graduated downward to youngsters still half in down.

"As we approached the island, all of the birds capable of flight left and before I could land and get amongst them to photograph them, the remainder took to water and swam away. A few returned from time to time while we were on the island but immediately paddled off again at our approach.

"Even the youngest of these birds were so much lighter than juvenile plumaged Herring Gulls that there does not seem to be the slightest possibility of ever confusing them in life in these early stages.

"Several specimens were taken at . . . Lake St. Martin, most of which went to the Lloyd collection. The only one retained is 16620, male, adult, Lake St. Martin, July 19, 1921," (now in National Museum of Canada).

This colony seems to have disappeared as we could find no evidence of gulls breeding on Lake St. Martin during the period from 1930 to 1935.

Ring-billed gulls are still found in some numbers in migration and small groups of non-breeders and immatures may be seen in summer.

— Sept. 30, 1934.

80. **Larus pipixcan.** FRANKLIN'S GULL.—This gull is a very plentiful migrant, but no nesting colonies are known on Lake St. Martin. They evidently colonize somewhere to the north, either on the Dauphin river or on Lake Winnipeg, as large flocks are often seen passing over in summer. These flocks are said to be composed mostly of male birds and travel great distances for food.

Taverner in his notes records the habit of immature Franklin gulls of paddling about the edges of marshes like ducks, rather than flying as gulls usually do. This peculiarity was noted also by us.

♂ May 18, 1931.

81. **Larus philadelphia.** BONAPARTE'S GULL.—This gull is not uncommon during migration and many immature and sub-adult birds spend the summer on Lake St. Martin.

On June 23, 1934 a pair of adults attacked A. H. Shortt and the senior author on the lake shore near a black spruce swamp. They showed every indication of being a nesting pair and repeatedly dived at the heads of the intruders, uttering shrill cries, but their nest was not found.

♀ May 18, 1931.

82. **Sterna forsteri.** FORSTER'S TERN.—This species is quite plentiful on Lake St. Martin and apparently breeds in the marshes, though no definite nesting record has been secured.

It was found to be quite common at the mouth of the Fairford river and four specimens were taken by Taverner and Lloyd on June 18 and 19, 1921.

— May 26, 1934. — Sept. 20, 1933.

83. **Sterna hirundo.** COMMON TERN.—This is a more plentiful species than the last and has been found nesting on the gravelly bars and shores of Lake St. Martin. A set of three eggs was taken at Lundy's Point on June 11, 1935. The eggs in this set are quite variable in colour, two being brownish and the third pale green. Two eggs were taken on a gravelly pit on the Lake St. Martin Reserve on June 6, 1934 and two sets comprising three eggs each were collected on some rocky islands in Lake St. Martin on June 20, 1936.

♂ June 14, 1934.

84. **Hydroprogne caspia.** CASPIAN TERN.—This species is fairly common. It is often seen on the lake in summer, but according to residents has not bred there for many years. These summer birds are probably from the colonies on Lake Winnipeg.

♂ June 14, 1934.

85. **Chlidonias nigra.** BLACK TERN.—This is an abundant species in the marshes and prairie sloughs about Lake St. Martin. They can be seen by the thousands in the sloughs on the Little Saskatchewan Indian Reserve. They breed in some numbers on the Lake St. Martin Reserve, when the water in sloughs and marshes is high. Two nests, one with three eggs and the other with two, were taken on June 20, 1936. Incubation was well advanced.

In the National Museum of Canada there is a set of eggs taken at Lake St. Martin by J. B. Tyrrell in 1887 (Macoun, 1900).

2 ♂♂ May 26, 1931. ♂ June 1, 1931.

86. **Zenaidura macroura**. MOURNING DOVE.—This species is not common but is well distributed throughout the region as a summer resident.

We have no definite breeding record for this species, and only one specimen has been secured. This is a male taken on April 16, 1936. It has been compared with eastern and western birds in series and is here referred to *marginella*, the western form.

♂ April 16, 1936.

87. **Coccyzus erythrophthalmus**. BLACK-BILLED CUCKOO.—Though not uncommon in the surrounding district, this species is rare on the Lake St. Martin Indian Reserve. It is supposed to foretell death, according to Indian superstition, and the residents shoot it on sight. An attempt was made to convince an Indian that this was merely superstition, but he was firmly convinced that it was true and shot the bird recorded below on June 7, 1933. It may be of interest to record that five deaths occurred within a year, near where this bird was calling, a rather remarkable coincidence.

A nest of this species was found between the Lake St. Martin Reserve and Gypsumville on July 24, 1936. It contained five eggs.

♀ June 7, 1933.

88. **Bubo virginianus**. GREAT HORNED OWL.—The great horned owl is a common permanent resident. Its nest has been found in spruce and in dead birch trees by the Indians. A definite breeding record is afforded by a juvenile specimen collected on May 28, 1931. A series of eight specimens shows the horned owls of Lake St. Martin to be referable to *subarcticus*. Two individuals could be easily classified as *occidentalis* but it seems to be generally agreed that *subarcticus* is a very variable race, and the majority of the specimens are clearly referable to this form.

Juv. — May 28, 1931.	♀	Oct. 6, 1933.
♀ June 26, 1936.	♀	Nov. 7, 1931.
♀ Sept. 21, 1934.	♂ ?	Dec. 4, 1934.
♀ Sept. 23, 1935.	♀ ?	Dec. 5, 1934.

89. **Nyctea nyctea**. SNOWY OWL.—A common and regular winter visitor. It is often seen on the shore-ice, on the open flats along shore and about prairie land.

♀ Apr. 22, 1931. ♀ ? Dec. 2, 1933.

90. **Surnia ulula**. HAWK OWL.—This is a fairly common species in fall and winter. Although Lake St. Martin lies within the breeding range of this owl, no evidence of its nesting has been found.

— Oct. 28, 1933. ♀ Oct. 29, 1931.

91. **Scotiaptex nebulosa.** GREAT GRAY OWL.—The great gray owl is a rather rare fall and winter visitor and is not known to nest in the area. A specimen was taken on Nov. 7, 1935 and feathers from this species were found in the nest of a Canada jay, taken on the Lake St. Martin Reserve in 1934.

♂ ? Nov. 7, 1935.

92. **Asio wilsonianus.** AMERICAN LONG-EARED OWL.—This owl is not common, but is seen regularly in the fall of the year. No breeding records have been secured for the region.

♀ Oct. 24, 1931.

93. **Asio flammeus.** SHORT-EARED OWL.—This owl is not nearly so plentiful as formerly. An adult male taken on June 22, 1934 was the only one seen that summer. This bird was discovered on a narrow neck of hay meadow which during years of low lake level joins Pine Island to the mainland.

The nuptial flight of this owl takes place during late March and April. The male usually flies buoyantly about over the spot where the female rests on the ground. When he is almost directly over her the performance begins; the wings are brought together beneath the body and inclined backward while the bird dives head foremost at a 45° angle. During this dive, the wings are clapped smartly together below the body at a rate of about four times a second, and a low, vibrant, vocal "hooting" can be heard. Sharp clapping noises in synchronization with the wing beats are audible for fifty yards, an almost unbelievable fact, when one considers the softness of an owl's wings. Usually this flight starts when the male is about seventy-five feet above the ground and terminates after a drop of about fifty feet. The owl then makes the ascent again and repeats the performance from four to ten times before it sails slowly down in a long graceful glide to join the female.

♂ June 22, 1934.

94. **Cryptoglaux funerea.** LITTLE BOREAL OWL.—This species is not uncommon in the Lake St. Martin region in winter, but so far no record of summer occurrence has been made.

♀ Feb. 13, 1932. — Nov. 23, 1933.
— Oct. 23, 1933.

95. **Cryptoglaux acadica.** ACADIAN OWL.—Like the last, this species has not been recorded in the summer months at Lake St. Martin. It is not so common as *funerea*, but occurs in spring and fall.

♀ Oct. 15, 1931.

96. **Antrostomus vociferus.** WHIP-POOR-WILL.—The whip-poor-will is a not uncommon summer resident. It can be heard almost every night during June on the Lake St. Martin Indian Reserve. On June 27, 1934 three were heard in the vicinity of Gypsumville.

Although the Indians are convinced that a big storm will come if a whip-poor-will is killed, they frequently attempt to shoot these birds.

♂ June 11, 1934.

97. **Chordeiles minor.** NIGHTHAWK.—Nighthawks are fairly common on the Lake St. Martin Reserve and have been noted at Gypsumville. John Marsden found two nests on the Reserve on June 26, 1932. One had two eggs and the other a single egg. A set of two was collected on June 14, 1935.

Comparison with series from Ontario and Utah shows the Lake St. Martin birds to be clearly referable to the eastern form, *minor*.

♂ ? June 4, 1931. ♂ June 24, 1934.

98. **Archilochus colubris.** RUBY-THROATED HUMMINGBIRD.—This species is always quite common in summer. Males arrive about the middle of May at which time they make frequent visits to currant blossoms. Mr. Harkins of Davis Point, just outside the area considered here, found a nest on his property in 1931. This suggests that the species may breed in the vicinity of Lake St. Martin.

♀ ? May 20, 1933. ♂ May 26, 1934.

99. **Megaceryle alcyon.** BELTED KINGFISHER.—Taverner noted this species at Fairford River and took a specimen at Fairford in July 1921. It was noted as common in the quarries at Gypsumville in June 1934, but it does not seem to occur on Lake St. Martin, due no doubt to the lack of suitable nesting sites there.

100. **Colaptes auratus.** YELLOW-SHAFTED FLICKER.—This is a very common species, particularly in the fall. Nests are often found on the Lake St. Martin Reserve, the entrance holes being usually within a few feet of the ground.

Two eggs were taken from a nest on May 22, 1930. Another set of eight eggs was collected on June 4, 1935 in a rotted poplar stump. This nest was eighteen inches below the entrance hole.

A female collected on April 23, 1931 had one foot cut off just below the tarso-metatarsal joint. A callosity had formed at the extremity of this member.

The specimens taken have been compared with a large series from across Canada and seem to be larger birds than the southern and eastern form. They fit well the description of *borealis* of Ridgway now rejected by the A.O.U. The two males average 37.1 in culmen and the females

35.3. Thirteen male specimens from southern Ontario average only 33.7. On the basis of the above, it seems that further study of northern flickers should be made.

♀ April 23, 1931. ♀ June 9, 1931.
♂ April 23, 1931. ♂ June 12, 1931.

101. **Ceophloeus pileatus.** PILEATED WOODPECKER.—This species is a common year-round resident at Lake St. Martin. The Indians regard it with disfavour because its workings near the base of shade trees about their dwellings on the Reserves, weaken these trees considerably. This woodpecker commonly finds its source of food near the base of a tree. Also it is not unusual to observe it on the ground. When alarmed it quickly returns to an arboreal position. Here it watches an intruder with neck held back almost at right angles to the tree-trunk.

♀ March 30, 1931. ♂ May 21, 1931.
♂ March 30, 1931.

102. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—While this species is rare at Lake St. Martin, it is well known to the Indians. A male was collected on June 1, 1933. A pair appeared on May 30, 1934 and nested in a hole in a birch tree near the settlement. Indians state that three young were raised, at least to the stage of leaving the nest.

♂ June 1, 1933.

103. **Sphyrapicus varius.** YELLOW-BELLIED SAPSUCKER.—This species is a fairly common summer resident of the region.

The six specimens taken show no trace of red on the nape and are clearly referable to the type form *varius*.

A female taken on May 5, 1931 is one of the black-crowned type.

♀ May 4, 1931. 2 ♀ ♀ May 6, 1931.
♂ May 4, 1931. ♀ Sept. 26, 1934.
♀ May 5, 1931.

104. **Dryobates villosus.** HAIRY WOODPECKER.—This species is normally common at Lake St. Martin but a notable scarcity was recorded during 1935 and early 1936.

It breeds at the Lake St. Martin Reserve, a juvenile male having been taken by A. H. Shortt on June 25, 1934.

When suet is not available at the feeding trays which have been erected on the Reserve, these birds will eat grain and seeds and will also feed on the frozen fish which are thrown on top of the Indian huts to prevent the dogs from getting at them.

The only adult specimen from Lake St. Martin is a female, which measures, wing 126.5 and culmen 30. These measurements are within the size-range of both *villosus* and *septentrionalis* but tend toward the

latter. Taverner regards specimens which he collected at Lake Winnipegosis, Riding and Turtle mountains in adjacent Manitoba as representing *septentrionalis*

♀ June 25, 1931.

105. **Dryobates pubescens.** DOWNY WOODPECKER.—The downy woodpecker is quite common about Lake St. Martin as a migrant and as a winter visitor but it can only be regarded as an uncommon summer resident. It was noted as not common on the Lake St. Martin reserve in the summer of 1934. Taverner noted individuals on July 17, 1921 at Fairford.

The bill measurement of the single female specimen secured is 16.5 and the wing 96.5 which would suggest that the form at Lake St. Martin is *medianus*.

♀ May 14, 1931.

106. **Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.—This species comes south to the Lake St. Martin Indian Reserve in considerable numbers in September. It has not been found breeding in the area considered.

♂ Sept. 28, 1931. ♀ Nov. 9, 1931.
♂ ? Oct. 3, 1933.

107. **Picoides tridactylus.** AMERICAN THREE-TOED WOODPECKER.—Not so common as the last species, this three-toed woodpecker has only been found in fall at Lake St. Martin.

♂ ? Oct. 11, 1934.

108. **Tyrannus tyrannus.** EASTERN KINGBIRD.—This is a very common bird about brulés, poplar "bluffs" and partial clearings of the region.

A nest with three eggs was collected on the Lake St. Martin Reserve on June 21, 1934. It was situated about twelve feet from the ground in an aspen poplar. Straw, grass and the hair of snow-shoe rabbit were used in the construction of this nest and, like several old nests of this species examined contained many pieces of fish-net. It was well lined with horse-hair.

♂ May 25, 1931. ♂ June 4, 1931.
♀ May 31, 1933.

109. **Tyrannus verticalis.** ARKANSAS KINGBIRD.—Three individuals of this species were observed on the Lake St. Martin Reserve on June 8, 1932 and one was collected. The remaining two birds were seen later in the same day. This appears to be the first record of the Arkansas kingbird at Lake St. Martin. On June 8, 1933 two were seen and a single individual was observed in June, 1936.

? June 8, 1932.

110. **Myiarchus crinitus.** CRESTED FLYCATCHER.—This species is quite plentiful, particularly in the deciduous bush along the Portage Road.

An unusual observation was made on this species when an individual was discovered on the ground, feeding on crickets.

The crested flycatcher was found at Fairford on July 20, 1921 by Taverner and a specimen was collected.

♂ May 19, 1933. — June 25, 1931.
— June 11, 1931.

111. **Sayornis phoebe.** EASTERN PHOEBE.—A nest with eggs, evidently of this species, was shown to us by Mr. Delgaty, the school master at Gypsumville. It had been taken from a porch in the village. This evidence substantiated the only other record for the district, a bird heard but not seen by A. H. Shortt and the senior author on June 26, 1934 at Gypsumville.

112. **Empidonax flaviventris.** YELLOW-BELLIED FLYCATCHER.—This flycatcher must be here recorded as scarce at Lake St. Martin but since it is never a conspicuous or sociable bird and inhabits the dark, unfrequented black spruce swamps, its numbers are probably often underestimated. A female was taken on June 22, 1934 in a black spruce-tamarac bog at the north-east end of the lower lake. This bird was giving the "pu-eee" call.

♀ June 22, 1934.

113. **Empidonax trailli.** TRAILL'S FLYCATCHER.—Unlike the shy yellow-bellied flycatcher, the Traill's flycatcher is noisy and not easily overlooked. It is not common but is well distributed and breeds in the area considered here. A nest with three fresh eggs was found on June 25, 1936. It was situated in a small white spruce.

♂ June 22, 1934.

114. **Empidonax minimus.** LEAST FLYCATCHER.—Taverner noted this species as common in all suitable localities in the vicinity of Fairford in July (17-20) 1921.

It is a very common species at Lake St. Martin and breeds throughout the mixed and deciduous woods.

A female, its nest and four eggs were collected on June 18, 1934. The nest was situated in the fork of a willow about seven feet above the ground.

♀ June 18, 1934.

115. **Myiochanes virens.** EASTERN WOOD PEWEE.—The eastern wood pewee is comparatively rare at Lake St. Martin. The only definite record is that of a bird singing the unmistakable, long drawn-out

song of the eastern species on the Lake St. Martin Reserve on June 15, 1934. It could not be collected. Taverner noted the species at Fairford in July 1921.

116. **Myiochanes richardsoni**. RICHARDSON'S PEWEE.—This pewee is more common than the last, though not by any means a plentiful species when the region is compared with other parts of the bird's range.

Two specimens of pewees taken are both of this species.

— May 31, 1932. ♂ June 9, 1932.

117. **Nuttallornis mesoleucus**. OLIVE-SIDED FLYCATCHER.—This species is not uncommon and frequents the burnt-over country and black spruce bogs in summer.

♀ May 24, 1934. ♂ May 30, 1933.

118. **Otocoris alpestris**. HORNED LARK.—A common species, frequenting the dry alkaline flats and the lake shore. They arrive at Lake St. Martin during the last few days of February and in early March. Horned larks breed throughout the area and young birds are often seen with the adults along the lake shore. A juvenile bird was collected on June 21, 1935. A nest and two eggs were taken from a ploughed field on May 21, 1936.

Taverner noted a large migrant flock on July 19, 1921, at the north end of the lake and collected a specimen.

The breeding birds of Lake St. Martin are of the prairie race, *O. a. praticola*, while migrant birds are probably *hoyti*. A bird taken on May 23, 1931 is of *hoyti* size but is extremely ruddy and in colour. In fact it is not unlike *O. a. rubea* of California!

♂ Apr. 20, 1934. ♂ June 18, 1934.
♂ May 23, 1931. ♂ June 22, 1934.
Juv. ♂ June 21, 1935. — Oct. 7, 1933.

119. **Iridoprocne bicolor**. TREE SWALLOW.—The tree swallow is a common summer resident. It nests in bird boxes erected for its use and in hollow trees in the woods. They are often seen over the marshes.

♂? May 20, 1931. ♂ June 6, 1931.
♂ June 4, 1931.

120. **Riparia riparia**. BANK SWALLOW.—This species is fairly common at the gypsum quarry at Gypsumville. It is also found breeding in almost any suitable location throughout the region. At least four pairs were established in an abandoned lime kiln on the Lake St. Martin Reserve.

♀ June 21, 1934.

121. **Hirundo erythrogaster.** BARN SWALLOW.—This species is quite common in the region. A nest and two eggs were found on June 24, 1934 in a deserted barn on the Lake St. Martin Reserve.

♂ June 2, 1931.
♂ June 4, 1931.
♀ June 6, 1931.

122. **Progne subis.** PURPLE MARTIN.—The martin is common throughout the region, nesting in bird-houses about the settlements and in hollow trees in the woods. Taverner noted several at Fairford in July 1921 and also obtained evidence of their breeding at Lake St. Martin, indicating that they occupied the north end of the lake as early as 1921.

♀ June 20, 1934.

123. **Perisoreus canadensis.** CANADA JAY.—This species is fairly common about the settlements in winter but retires to the big woods to nest.

A fully grown juvenile male was taken on June 8, 1931 and an empty nest was found in a small "boreal island" of white and black spruce within a birch-aspen woods. The nest was six feet up in a white spruce. It was warmly lined with feathers, mostly from ruffed grouse, but feathers of great gray owl were positively identified. Feathers of broad-winged hawk and fur of snow-shoe rabbit were also present.

A nest with four eggs was found at Gypsumville on March 4, 1936. This nest was built of tamarac twigs and lined with feathers.

Juv. ♂ June 8, 1931.

124. **Cyanocitta cristata.** BLUE JAY.—This species is common in winter at Lake St. Martin. In summer it retreats to the deeper woods to nest and consequently becomes less conspicuous. A nest containing four eggs was found at Gypsumville on June 11, 1936. This nest was made of twigs and situated seven feet from the ground in a white spruce.

It was noted at Fairford in July by Taverner and Lloyd, and a specimen was taken there by Lloyd.

— May 19, 1931. ♀ May 30, 1931.

125. **Pica pica.** MAGPIE.—This species can be recorded here only as a rare fall visitant.

While attempting to remove the bait from a steel trap, an individual of this species was trapped a few miles east of Lake St. Martin.

— Oct. 21, 1936.

126. **Corvus corax.** RAVEN.—There are no local breeding records of this species, but it is occasionally seen in fall.

A raven was shot by the Favelle boys near the Lake St. Martin Reserve and a wing and foot secured from this bird constitute our only specimen.

— Oct. 17, 1933 (wing and foot).

127. **Corvus brachyrhynchos.** AMERICAN CROW.—The American crow is very common throughout the region, exceptionally so on Sugar Island. It arrives about the middle of March and feeds with the gulls on the dead fish which are strewn over the ice.

The species shows no decided preference in the matter of a nesting situation in the Lake St. Martin area. Nests may be found in tall trees, small willows, sapling aspens and often on the ground. Four eggs were taken from one of these big stick nests on the rocks, under weeds and currant bushes on Sugar Island on June 16, 1934. Another, situated on a rocky ledge on the east mainland, was found on May 25, 1931. It had four eggs and one young. A set consisting of seven eggs taken from a ground nest on June 20, 1936, is unusual.

The measurements of the two specimens secured, fall within the size range of *C. b. hesperis* rather than *C. b. brachyrhynchos*. The length of culmen and depth of bill at nostril of the male specimen are,—45.5 and 16.7; these measurements of the female are,—43.5 and 16.

♀ May 12, 1934. ♂ May 20, 1931.

128. **Penthestes atricapillus.** BLACK-CAPPED CHICKADEE.—The black-capped chickadee is a fairly common year-round resident of the district. While no nest has been found, the species undoubtedly breeds in the mixed woods of the region.

The tails of two males average 64; that of a female 61. This would indicate that the Lake St. Martin birds are probably *P. a. septentrionalis*.

♂ May 7, 1934. ♂ May 28, 1931.
♀ May 22, 1931.

129. **Penthestes hudsonicus.** BROWN-HEADED CHICKADEE.—This species is not common, but occurs in the black spruce swamps in summer and is occasionally seen about the settlement in winter.

Only one specimen has been collected. The form of this species occurring at Lake St. Martin would probably be *P. h. hudsonius* by geographic inference.

♂ Sept. 28, 1931.

130. **Sitta carolinensis.** WHITE-BREASTED NUTHATCH.—This is a fairly common resident, more common in winter. It is often noted feeding on frozen fish which the Indians throw on top of their huts out of the reach of their dogs.

The two specimens examined seem to be referable to the eastern or type form, *S. c. carolinensis*.

— Apr. 20, 1931 (wing and foot). ♀ Oct. 29, 1931.
♂? May 23, 1933.

131. **Sitta canadensis.** RED-BREASTED NUTHATCH.—This is a not uncommon species in fall and winter. It has not been found in summer to date.

♀? Oct. 2, 1933.
♀ Oct. 29, 1931.

132. **Certhia familiaris.** BROWN CREEPER.—This species is not common and so far has been noted only during the spring migration.

The form occurring at Lake St. Martin is probably *C. f. americana*.

♂ May 5, 1931.

133. **Troglodytes aedon.** HOUSE WREN.—This species is common, and nests in boxes about the dwellings on the Lake St. Martin Reserve. In 1933 a large nest, about the size of a football, was constructed by a pair of house wrens in a hawthorn on the Reserve.

On June 7, 1933 a nest and four eggs were taken from the tool-box of a hay mower. It was a well-made stick and bark-fiber nest, lined with a great variety of feathers including those of mallard, pintail, crow baltimore oriole, ruffed grouse and cedar waxwing.

The five adults collected are clearly referable to *T. a. parkmani*, the pale western form.

2 ♂♂ May 26, 1931. ♀ June 7, 1933.
♂ May 28, 1931. ♂ June 8, 1931.

134. **Telmatodytes palustris.** LONG-BILLED MARSH WREN.—This species is common in the bulrush marshes about Lake St. Martin. It was noted also by Taverner at Fairford in 1921.

Two specimens were collected and seem typical of the prairie race *T. p. dissaeptus*.

♂ June 20, 1934. — Little Sask. Res., Sept. 29, 1934.

135. **Cistothorus stellaris.** SHORT-BILLED MARSH WREN.—Colonies of these birds were noted in several suitable localities during June, 1934. They ranged in size from four to nine pairs, and inhabited the short-grass and *Phragmites* marshes which are numerous along the Lake St. Martin shore.

In July 1921, it was noted as far north as Fairford, but not on Lake St. Martin. It is evidently one of the many species which is extending its range northward.

♂ June 20, 1934. ♂ July 2, 1936.

136. **Dumetella carolinensis.** CATBIRD.—This species is rather rare on the Lake St. Martin Reserve but commoner at the south end of the lake. A nest was found by some boys on the Sinclair's farm in 1933 and another was collected with three eggs on the Lake St. Martin Reserve on June 15, 1936.

An adult male in breeding condition was taken by A. H. Shortt on June 19, 1934.

Taverner in July, 1921 found this species at Fairford but not beyond.
♀ May 26, 1931.

137. **Turdus migratorius.** AMERICAN ROBIN.—This species is never very plentiful at the north end of the lake but is somewhat commoner at Fairford. Its nest has been found on the Lake St. Martin Reserve and at Gypsumville.

The five specimens in the collection seem typical of the eastern form, *T. m. migratorius*.

♂ May 4, 1931. ♂ May 7, 1931.
2 ♀ ♀ May 6, 1931. ♂ June 2, 1931.

138. **Hylocichla guttata.** HERMIT THRUSH.—This is a common migrant and summer resident in the Lake St. Martin Region. Taverner and Lloyd found this species at Fairford in July, 1921. A juvenile was collected on July 3, 1936 on the Lake St. Martin Reserve.

The specimens seem typical of the eastern race *H. g. faxoni*.

♂ May 1, 1931. ♂ May 24, 1934.
♂ May 19, 1931. Juv. ♂ July 3, 1936.
♂ May 20, 1931.

139. **Hylocichla ustulata.** OLIVE-BACKED THRUSH.—Though a fairly common migrant, the olive-backed thrush has not been, to date, noted in summer.

While the single specimen is insufficient basis for a subspecific determination, it seems typical of the eastern form, *H. u. swainsoni* which by geographic inference is the form to be expected.

— May 23, 1931.

140. **Hylocichla fuscescens.** WILSON'S THRUSH.—This thrush is not common but breeds in the region. A nest and one egg were taken June 13, 1934 from the ground in a mixed woods. It was noted north to Fairford in 1921 by Taverner and Lloyd.

No specimens have been secured, but Manitoba birds generally are referable to the western race, *H. f. salicicola* and it seems reasonable to suppose that Lake St. Martin birds are of this form.

141. **Sialia sialis.** RED-BREASTED BLUEBIRD.—Though only fairly common as a spring migrant, this species is found in large flocks in September. On September 26, 1932 and September 27, 1933 large numbers passed over in the early morning on their southward migration.

J. J. Sinclair found a freshly built nest of this species, about five feet from the ground in a hole in a tree, on June 3, 1933.

♂ June 9, 1932.

142. **Sialia currucoides.** MOUNTAIN BLUEBIRD.—This species is not uncommon as a migrant and has been taken in summer on the Lake St. Martin Reserve. Its occurrence in the region is, according to the Indians, of comparatively recent date.

♂ Apr. 8, 1932. ♂ June 2, 1931.

143. **Regulus satrapa.** GOLDEN-CROWNED KINGLET.—This is a fairly common migrant but it is not known to nest in the district.

While the Lake St. Martin specimens appear greener than typical *R. s. satrapa* they are here referred to that race, since they seem closer to it than to the western *R. s. olivaceus*.

♀ ? Sept. 20, 1932. ♂ Oct. 4, 1932.

144. **Corthylio calendula.** RUBY-CROWNED KINGLET.—This species evidently nests in the district. A much agitated female noted on June 15, 1934, apparently had a nest in one of the dense spruce trees close at hand. More of these birds are seen in the spring than in the fall.

The two specimens seem to be of the eastern race, *C. c. calendula*.

♂ May 1, 1934. ♀ May 6, 1931.

145. **Anthus spraguei.** SPRAGUE'S PIPIT.—Sprague's pipit is a not uncommon species in suitable localities. It frequents the prairie land and the broad flats bordering the lake. A female in breeding condition was collected at Lundy's Point on June 20, 1934.

♀ June 20, 1934.

146. **Bombycilla garrula.** BOHEMIAN WAXWING.—A rather uncommon late winter visitant. A specimen was collected on April 10, 1936.

— April 10, 1936.

147. **Bombycilla cedrorum.** CEDAR WAXWING.—This is one of the familiar birds of the Indian Reserve settlements. It is a common nesting species throughout the whole of the region.

A nest and five eggs were taken on June 29, 1935 on the Lake St. Martin Reserve. Like many nests taken in the vicinity of Lake St. Martin, it was lined with deer-hair.

A male taken on June 8, 1931 possesses the scarlet wax-like extension of the shafts of the tail feathers.

♀ June 1, 1933. ♂ June 8, 1931.
♀ June 2, 1934. ♂ June 9, 1931.
♂ June 2, 1934.

148. **Lanius borealis.** NORTHERN SHRIKE.—The Northern shrike occurs sparingly in winter in the region but retires to the larger spruce woods to the north in summer. It has not been found breeding at Lake St. Martin.

The Indians call these birds "Windego panase" which means literally "cannibal-bird."

The single specimen secured seems to show the characters of the northwestern form *L. b. invictus*. Miller (1931) regards the region in which Lake St. Martin lies as the intergrading area between *invictus* and *borealis*.

— Oct. 9, 1933.

149. **Lanius ludovicianus.** COMMON SHRIKE.—A rather rare bird at Lake St. Martin. It inhabits the hawthorne and willow clumps on the flats. A nest was found on July 1, 1932, situated five feet up in a willow. It was a well made structure, lined with grass and a few horse-hairs and contained five eggs. In the same tree, a few feet higher up, was an occupied crow's nest.

The single specimen in the museum collection is typical of the eastern race, *L. l. migrans* which was first recorded in Manitoba by Cartwright (1931). This is on the western limits of the range of *migrans*.

Two specimens in the collection of the junior author are more typical of *excubitorides* and it is probable that the region lies in a belt of intergradation between the two forms.

♂ Nov. 17, 1931.

150. **Sturnus vulgaris.** COMMON STARLING.—A specimen of this species was collected thirty miles north-east of the Lake St. Martin Reserve on April 28, 1936 and constitutes the only record for the vicinity.

♀ April 28, 1936.

151. **Vireo solitarius.** SOLITARY VIREO.—A rather rare summer resident, a female and nest being collected on July 2, 1936.

♀ July 2, 1936.

152. **Vireo olivaceus.** RED-EYED VIREO.—The red-eyed vireo was noted by Taverner as being "very abundant" at Fairford in July, 1921. This superlative might well be applied to the species on the Lake St. Martin Reserve at the present time. Its song can be heard at almost any time during the daylight hours in summer.

A nest with four eggs, collected on June 15, 1934, was situated six feet up in a choke cherry.

♂	May 26, 1931.	♂	June 6, 1931.
♂	June 5, 1931.	2 ♂♂	June 6, 1934.
2 ♀♀	June 6, 1931.		

153. **Vireo philadelphicus.** PHILADELPHIA VIREO.—The Philadelphia vireo is not uncommon during migration at Lake St. Martin. We have no summer records.

♀	May 19, 1933.	—	May 26, 1931.
♂	May 26, 1931.	—	Sept. 17, 1934.

154. **Vireo gilvus.** WARBLING VIREO.—This species is not uncommon at Lake St. Martin. As many as seven singing birds have been noted in a day (June 16, 1934). The warbling vireo probably breeds in the area since the species is present throughout the nesting season. It was seen as far north as Pine Island on June 22, 1934.

In 1921 Taverner and Lloyd found the species as far north as Fairford.

♀ June 24, 1934.

155. **Mniotilta varia.** BLACK AND WHITE WARBLER.—This species is a common summer resident of the Lake St. Martin area. It ranks as one of the most plentiful summer warblers.

♂ May 19, 1933. ♀ May 26, 1931.

156. **Vivermora peregrina.** TENNESSEE WARBLER.—The Tennessee warbler is not uncommon in summer on the Lake St. Martin area. It was found to be quite numerous in the spruce woods on the north-east shore of the lake on June 25, 1934. Twenty singing birds were noted on that day.

Taverner took a specimen at Fairford on July 20, 1931 and writes that it was "probably breeding."

— Sept. 20, 1933.

157. **Vermivora celata.** ORANGE-CROWNED WARBLER.—This species is only a transient in the Lake St. Martin region, passing through early in the spring before most of the other warblers but in the fall it joins the migrating flocks of other species.

— Sept. 27, 1933.

158. **Vermivora ruficapilla.** NASHVILLE WARBLER.—This species is a fairly common summer resident, frequenting open mixed woods and partial clearings.

♂ June 24, 1934.

159. **Dendroica aestiva.** YELLOW WARBLER.—The yellow warbler is not common at Lake St. Martin but it occurs in summer. Its habitat preference in this region is second-growth aspen with a thick undergrowth of hazels and other shrubs.

2 ♂♂ May 26, 1931.

160. **Dendroica magnolia.** MAGNOLIA WARBLER.—While fairly common as a transient, this species is rather rare in summer. It inhabits the edges of spruce and balsam woods and is more plentiful at the north end of the lake.

♂ May 20, 1931. ♂ May 26, 1931.

161. **Dendroica tigrine.** CAPE MAY WARBLER.—This species is quite numerous during the spring migration, but is rarer in fall and unknown as a summer resident.

♂ May 15, 1934. ♀ ? May 24, 1934.
 ♂ May 20, 1933. ♂ ? May 24, 1934.
 ♂ ? May 23, 1931.

162. **Dendroica coronata.** MYRTLE WARBLER.—The myrtle warbler is a common migrant. Suitable nesting habitat for this species is rare in the Lake St. Martin region and probably as a consequence it has not been found nesting.

♂ May 6, 1931. ♂ ? May 23, 1931.
 ♀ ? May 23, 1931. ♂ May 25, 1931.

163. **Dendroica virens.** BLACK-THROATED GREEN WARBLER.—This species is not common at Lake St. Martin. It was not noted during the summer of 1934 and no breeding evidence has been obtained.

♂ May 19, 1933.

164. **Dendroica fusca.** BLACKBURNIAN WARBLER.—The Blackburnian warbler is fairly common in summer in the drier spruce woods and is a common migrant in the region.

♂ May 20, 1933. ♂ May 31, 1932.
 ♂ May 30, 1933.

165. **Dendroica pensylvanica.** CHESTNUT-SIDED WARBLER.—This species is not common but is found in the area in summer.

♂ June 20, 1934.

166. **Dendroica castenea.** BAY-BREASTED WARBLER.—This species is quite scarce as a migrant and a rare summer resident. A singing bird noted on June 17, 1934 on the Lake St. Martin Reserve constitutes the only summer record.

♂ May 27, 1935.

167. **Dendroica striata.** BLACK-POLLED WARBLER.—This bird is a not uncommon migrant, which frequents the spruce woods. It does not occur in summer.

♂ May 24, 1934.

168. **Dendroica palmarum.** PALM WARBLER.—The palm warbler is not uncommon and evidently breeds in the spruce bogs at the north end of Lake St. Martin. As many as six singing males were noted on June 25, 1934.

— May 25, 1931. — Sept. 25, 1933.
 — Sept. 6, 1934. ♂ Sept. 26, 1934.
 — Sept. 10, 1934. — Sept. 27, 1933.

169. **Seiurus aurocapillus.** OVEN-BIRD.—The ovenbird is fairly common in the region. It has been found in summer on the Lake St. Martin and Little Saskatchewan Reserves, on Pine Island and by Taverner at Fairford in July, 1921.

♂ May 19, 1934. ♂ May 30, 1931.
♂ May 19, 1933.

170. **Seiurus novaboracensis.** NORTHERN WATER-THRUSH.—This species is quite rare and has been noted only as a fall migrant. A specimen taken on September 5, 1934 and two September birds in the collection of the junior author are considered to represent the western form *S. n. notabilis*.

— Sept. 5, 1934.

171. **Oporornis agilis.** CONNECTICUT WARBLER.—The Connecticut warbler was found to be not uncommon in the summer of 1934, between Gypsumville and Lake St. Martin station and on the Lake St. Martin Reserve on the east side of the lake. In the former location it inhabited damp black spruce bogs, while on the Reserve it occurred in poplar and hazel slash. The birds were apparently nesting in both situations. A singing male was taken on the Reserve on June 16, 1934. It was in breeding condition.

♂ June 16, 1934.

172. **Oporornis philadelphia.** MOURNING WARBLER.—This was the commonest of the warblers at Lake St. Martin during June, 1934. It was evidently nesting in second-growth poplar-hazel woods, at the edges of spruce swamps and in slashes and clearings. It was found by Taverner at Fairford in July, 1921 and a specimen was taken there by him on July 20.

♂ June 18, 1934.

173. **Geothlypis trichas.** MARYLAND YELLOWTHROAT.—This is a common summer resident inhabiting the cat-tail marshes and damp willow swales on the flats. A nest collected on July 3, 1936 contained four eggs.

Three males have been compared with a series from Ontario and the western provinces and are obviously intermediate between *G. t. brachydactyla* and *G. t. occidentalis*. They show a tendency toward *occidentalis* in the extensiveness of the yellow below and in the whiteness of the forehead, and toward *brachydactyla* in the restriction of the white forehead areas.

♂ ? May 23, 1933. ♀ July 3, 1936.
♂ May 26, 1931. Im. ♂ Sept. 10, 1934.
♂ July 3, 1936. ♀ ? Sept. 20, 1933.

174. **Wilsonia pusilla.** BLACK-CAPPED WARBLER.—This species is quite common and breeds in the willow swales which dot the alkaline flats about Lake St. Martin.

A series of four males has been carefully examined and is regarded as being intermediate both in size and colour between *W. p. pusilla* and *W. p. pilcolata*. Their average measurements are, length, 118.5; folded wing 56, and they are definitely of a brighter yellow than eastern birds.

♂ May 23, 1931. ♂ May 26, 1931.
♂ May 25, 1931. ♂ June 18, 1934.

175. **Wilsonia canadensis.** CANADA WARBLER.—This is a fairly common migrant and a not uncommon summer resident.

♂ May 26, 1931.

176. **Setophaga ruticilla.** AMERICAN REDSTART.—A common summer resident. A male was observed on June 24, 1934 carrying food to its young which, however, could not be located.

♂ May 20, 1931. Im. ♂ ? May 30, 1933.
♀ May 25, 1931. Im. ♂ June 23, 1931.

177. **Passer domesticus.** HOUSE SPARROW.—This introduced bird has been at Lake St. Martin for many years, according to Indians. It occupies nest boxes which are erected on the Reserves for the use of other species. On June 21, 1933 a nest and seven eggs was removed from a tree near the schoolhouse on the Lake St. Martin Reserve. It was a very untidy structure, composed of feathers, grass, horse-hair, string, rags and thistle-down.

♀ May 7, 1934. ♂ May 23, 1931.

178. **Dolichonyx oryzivorus.** BOBOLINK.—This species is said by Indians, who know it as the "skunk bird", to be increasing in the Lake St. Martin region. One was noted in July, 1921 at the mouth of the Fairford River by Taverner and in 1933 it was reported by Rev. G. C. Smith as being unusually plentiful at Fairford.

A female with enlarged ovaries was collected on June 18, 1934.

♂ May 23, 1931. ♀ June 18, 1934.

179. **Sturnella neglecta.** WESTERN MEADOWLARK.—This bird has become much more common within the last five years at Lake St. Martin.

It breeds commonly on the alkaline flats and on the prairie land. Two nests were located and collected in June, 1934, one on June 12 with three eggs and the other on June 16 with four eggs.

♂ May 8, 1931. ♂ May 24, 1934.

180. **Xanthocephalus xanthocephalus.** YELLOW-HEADED BLACK-BIRD.—This is a very common bird about the marshes of Lake St. Martin. It arrives later than the red-winged blackbird, but often associates with that species when feeding.

It nests in the bulrushes and cat-tails bordering the lake, preferring to build over deep water. A nest and three eggs were taken on June 28, 1935. The nest is a beautiful structure quite unlike the nest of a red-winged blackbird. Flat clean shavings of cat-tails are used for a lining while the exterior is made of older, dirtier and less conspicuous stems. The shavings used in the lining are evidently stripped from standing cat-tails. An early nest of this species was one found on May 30, 1936. It contained two fresh eggs.

♂ May 9, 1931. ♀ June 1, 1931.
♂ May 18, 1931. Im. ♂ June 19, 1934.

181. **Agelaius phoeniceus.** RED-WINGED BLACKBIRD.—This is a very common species at Lake St. Martin, rivalling the last in point of numbers. It nests in cat-tails over shallower water than the yellow-headed blackbird and thus ecological "strata" in the marsh are created. The red-wingeds occupying the areas adjacent to the land and the yellow-headed the outer strip of marsh nearer open water.

Many nests of this species have been found at Lake St. Martin, and three were collected, one on June 15, 1934 with two eggs and two on June 18, 1935 with four eggs each. The nests are constructed mostly of grasses and stalks of other plants and sometimes lightly lined with horse or deer-hair.

Nine specimens are here referred to the form *A. p. arctolgeus* on the basis of bill size. The average length of bill of seven males is, 23.3; depth at base, 12.5. The wing length of the seven males is 125.

2 ♂♂ Apr. 17, 1931. ♂ May 26, 1931.
♂ May 7, 1934. ♀ June 2, 1931.
♂ May 14, 1931. ♂ June 15, 1934.
♀ May 25, 1931. ♂ June 23, 1934.

182. **Icterus spurius.** ORCHARD ORIOLE.—A male in high breeding plumage, taken on June 6, 1932, constitutes the only record and seems to be the most northerly occurrence of the species. It should not be regarded, perhaps, as accidental, since the species has been found on several occasions in southern Manitoba since 1929. These occurrences have been recorded by Cartwright (1931). It may best be termed a northern, marginal occurrence.

♂ June 6, 1932.

183. **Icterus galbula.** BALTIMORE ORIOLE.—The Baltimore oriole is very plentiful in this region and breeds commonly in the deciduous woods, preferring to build in aspens. Several nests have been found and

one containing four eggs was collected on June 20, 1935. Very little string had been used in its construction, plant fibres, grasses and horse-hair being the most conspicuous materials. It was taken from a balsam-poplar.

By a confusion of colours, the Indians call the oriole the "pink-bird"

Taverner found this species common at Fairford in 1921 but did not see it at Lake St. Martin.

♂	May 20, 1933.	♂	June 18, 1934.
2 ♂	May 26, 1931.	2 ♀	June 25, 1931.
♀	May 27, 1931.	♂	June 25, 1931.

184. **Euphagus carolinus.** RUSTY BLACKBIRD.—A fairly common migrant, but not known to nest about the lake.

♂	Apr. 23, 1931.	2 ♀ ♀ ?	Sept. 27, 1933.
♂	May 4, 1931.		

185. **Euphagus cyanocephalus.** BREWER'S BLACKBIRD.—Not uncommon and breeds on the flats bordering the lake. It prefers fields overgrown with weeds and annual plants. A colony was noted at the Lake St. Martin Reserve settlement.

♂ June 16, 1934.

186. **Quiscalus quiscula.** CROW BLACKBIRD.—A very common species at Lake St. Martin. It is particularly numerous on Sugar Island. Here this species and the American crow vie with each other in the practice of egg-stealing, from each other, and from the several species of small birds resident there. However, crow blackbirds and crows are both plentiful in spite of this constant competition and warfare. A set of four eggs was taken from a nest in the rafters of a deserted Indian house on June 21, 1935.

♂	Apr. 17, 1931.	♂	May 30, 1933.
2 ♀	May 4, 1931.	♂	May 30, 1934.
♀	May 19, 1931.	♀	Nov. 13, 1931.
♂	May 28, 1931.		

187. **Molothrus ater.** COWBIRD.—The cowbird is now very plentiful in the Lake St. Martin region and its numbers are said to be increasing. It was found to be "less numerous" (than farther south) but still regularly seen at Fairford and Lake St. Martin . . ." by Taverner in July, 1921.

On June 2, 1934 a female cowbird was seen flying with an egg in its bill. It dropped the egg and a portion of the shell was retrieved. It served to identify the egg as that of a song sparrow. The contents of the egg may have been eaten, as only the shell remained.

A song sparrow's nest which was found on the ground under a hazel bush on June 15, 1934 contained a young cowbird as well as two song sparrow eggs. A third sparrow egg had been ejected probably by the cowbird and was found near the nest.

The specimens collected are typical of the western race, *M. a. artemisiae*. Females of this form in the collection of the Royal Ontario Museum of Zoology are consistently browner, less gray than eastern specimens. This warmth of colour combined with the more pronounced streaking below seems to be a good sub-specific character.

♂	May 15, 1931.	♂	June 2, 1931.
♀	May 25, 1931.	♀	June 10, 1931.
♂	May 25, 1931.	♂	June 24, 1934.
♀	May 26, 1931.		

188. **Hedymeles ludovicianus**. ROSE-BREADED GROSBEAK.—This species is a fairly common summer resident, frequenting the younger deciduous growths.

♂	May 23, 1931.	♂	May 25, 1931.
♂	May 23, 1933.	Im. ♂ ?	May 28, 1931.

189. **Hesperiphona vespertina**. EVENING GROSBEAK.—Though frequently seen in winter and late in spring, this species has not yet been found in summer. It is most often seen on Sugar Island, feeding on the seeds of the box elder.

♀ May 23, 1931.

190. **Carpodacus purpureus**. COMMON PURPLE FINCH.—The common purple finch is quite plentiful during migration and summers in the spruce woods about the north end of the lake.

♂	May 20, 1931.	♂	June 6, 1931.
♂	May 23, 1931.		

191. **Pinicola enucleator**. PINE GROSBEAK.—This species has been found only during the winter season. It feeds extensively on the berries of wolfberry and sometimes on the fruit of the hawthorne. In feeding these birds appear to nibble small pieces from each berry instead of swallowing it whole.

The three specimens seem best referred to *P. e. leucura*.

2 ♀ ♀	Oct. 28, 1931.	♂	Oct. 28, 1931.
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192. **Acanthis linaria**. REDPOLLED LINNET.—This is the only "redpoll" which has been found at Lake St. Martin to date. It is very common in winter, particularly in the later months, and large flocks may be met with in spring.

All specimens collected are referable to the common form, *A. l. linaria*.

—	March 15, 1934.	—	May 5, 1931.
♂	April, 19, 1934.	♀	May 6, 1931.
♂	May 5, 1931.		

193. **Spinus pinus**. PINE SISKIN.—A common migrant and summer resident of the district. It is seen almost daily in the spruce woods in summer.

♀	June 5, 1931.	—	Sept. 27, 1933.
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194. **Spinus tristis.** AMERICAN GOLDFINCH.—A very common summer resident, which inhabits the open woods and willow swales.

A series of specimens seems to demonstrate that the race occupying this area is the pale prairie form, *S. t. pallidus*. Even the summer males are a brighter and paler yellow than typical birds from the east.

2 ♂♂	May 28, 1931.	♀	June 2, 1931.
	♀	♂	June 2, 1931.
2 ♂♂	May 29, 1933.	♂ ?	Sept. 10, 1934.

195. **Loxia curvirostra.** RED CROSSBILL.—This species is common in fall and winter, but very erratic, moving swiftly away to another locality leaving a litter of dislocated cones under the spruces.

The specimens obtained are referable to *L. c. pusilla*.

	♀	Oct. 17, 1931.	♀	Oct. 29, 1931.	
2 ♂♂	♂♂	Oct. 28, 1931.	2 ♂♂	♂♂	Oct. 29, 1931.

196. **Loxia leucoptera.** WHITE-WINGED CROSSBILL.—The white-winged crossbill is a common winter visitor, most plentiful in the late winter and spring months.

♂	Apr. 2, 1931.	♀	May 1, 1931.
♂	Apr. 17, 1934.	♂	May 1, 1931.

197. **Passerculus sandwichensis.** SAVANNAH SPARROW.—This is probably the most abundant bird of the general area. It breeds in every grassy field and on the prairie.

A nest and five eggs was taken with the parent birds on June 5, 1933. The nest was made of plant fibres and stalks and lined with fine grass and some horsehair. Two Savannah sparrows were observed feeding a young cowbird on June 19, 1933.

Taverner refers his Lake St. Martin savannah sparrows (collected in 1921) to the proposed prairie race *P. s. campestris* of Taverner. The writers see no reason to question this identity and consider their specimens as of this race.

♂	May 7, 1934.	2 ♂♂	June 15, 1934.	
♂	May 19, 1931.	♂	June 18, 1934.	
♂	May 26, 1931.	♀	June 19, 1931.	
♀	June 5, 1933.	2 ♂♂	♂♂	June 19, 1931.
♂	June 5, 1933.	♂	♂	June 21, 1934.
♀	June 15, 1934.			

198. **Ammodramus bairdi.** BAIRD'S SPARROW.—This species is not uncommon on the dry alkaline flats about Lake St. Martin. As many as six singing males were noted on June 20, 1934.

In the region here discussed, this species seems to sing entirely from the ground. This is due to the absence of shrubby plants in the grass-country which it inhabits. Like most of the other ground sparrows

taken at Lake St. Martin, this species was collected with difficulty. The only opportunity for a shot at a Baird's sparrow was as it flew away over the grass.

♂ June 20, 1934.

199. **Passerherbulus caudacutus.** LECONTE'S SPARROW.—Leconte's sparrow is, next to the Savannah, the commonest of the small grass sparrows at Lake St. Martin. It inhabits damper ground than the last and is found mostly about the borders of shrinking snow-pools and in damp meadows.

A female taken on June 20, 1934 exhibited a bare brooding patch and was undoubtedly nesting.

A set of three eggs was collected on June 4, 1935 from a grass nest in a damp field.

♀ June 20, 1934. ♂ July 6, 1934.

200. **Ammospiza caudacuta.** SHARP-TAILED SPARROW.—This species is fairly common in the marshes of Lake St. Martin. It was evidently breeding in Phragmites and gassr marshes at many points along the shore, during June, 1934.

The sharp-tailed sparrow sings long after sunset, and on one occasion, June 21, 1934, two of these birds were heard singing continuously from 9 p.m. to near midnight. The night was clear and cold, and exceptionally still, and it was surprising to learn that the weak lispng song of the sharp-tailed sparrow could be heard under these conditions at almost two hundred yards.

The form occurring at Lake St. Martin is *A. c. nelsoni* as would be expected.

♂ June 18, 1934.

201. **Poocetes gramineus.** VESPER SPARROW.—This species has spread northward into the region of recent years, according to Indians. It is becoming more common on the flat, cleared land about the settlements. It was seen by Taverner at Fairford in 1921.

A nest and four eggs were collected on July 3, 1936.

It is surprising to one who is acquainted with the vesper sparrow in the south to find this species wary and suspicious, seldom allowing an approach of closer than fifty yards, even in the nesting season.

The specimens secured do not seem typical of either the eastern or western forms, and might be classed as intergrades with a strong tendency towards the western race, *P. g. confinis*.

2 ♂♂ May 4, 1934. ♂ June 25, 1934.
♀ May 8, 1931.

202. **Chondestes grammacus.** LARK SPARROW.—This is a rare species and is found only at Lundy's Point where a few birds evidently nest. This seems to be the most northerly occurrence of the species.

A single specimen was collected. It is pale and no doubt belongs to the western race, *C. g. strigatus*.

♂ May 2, 1934.

203. **Junco hyemalis.** SLATE-COLOURED JUNCO.—The Junco is quite common as a migrant but occurs sparingly in the district in summer.

A nest and four eggs were collected on June 11, 1934. The nest was beautifully lined with deer-hair.

Taverner found the species common at Fairford in 1921, and collected three specimens, including a juvenile.

♀ May 5, 1931.

204. **Spizella arborea.** TREE SPARROW.—Plentiful as a migrant in spring and fall.

Three of these migrating birds were collected and are considered to be *S. a. arborea*, the eastern race, on the basis of their dark colour and size. In the latter particular they average a little larger than a series of Ontario *arborea* but considerably smaller than *ochracea* from Alberta.

— Apr. 27, 1931. ♂ May 2, 1934.
— May 1, 1934.

205. **Spizella passerina.** CHIPPING SPARROW.—A rather rare summer resident. It is found in wild, black spruce bogs in this region rather than the vicinity of settlements as is characteristic for the species in other localities.

While only two specimens have been taken, they are referred to the western form *S. p. arizonae*. They are typical of the pale race as shown by comparisons with examples from Alberta, British Columbia and Utah.

♂ June 24, 1934. — July 2, 1936.

206. **Spizella pallida.** CLAY-COLOURED SPARROW.—The buzzing song of the clay-coloured sparrow is a characteristic feature of the Lake St. Martin region. The species frequents open country overgrown with wolfberry, rose, silverberry or other shrubs.

A nest and four eggs was collected on June 18, 1934. The nest was situated on the ground under a tuft of grass and sheltered by a silverberry bush.

♂ May 24, 1935. ♀ June 18, 1934.
♂ May 25, 1931. ♂ June 25, 1931.

207. **Zonotrichia querula.** HARRIS'S SPARROW.—This species is a common spring and fall migrant, frequently found associated with white-throated and white-crowned sparrows. It is not known to summer in the region.

— May 16, 1933. ♂ May 17, 1933.
♂ May 16, 1934. Im. ♂ Sept. 28, 1931.

208. **Zonotrichia leucophrys.** WHITE-CROWNED SPARROW.—A common species on migration but not known to nest.

The birds taken at Lake St. Martin are interesting specimens. An adult female collected May 17, 1933 is typical of the form *gambeli* while a male shot on May 14, 1934 is evidently an intergrade between *gambeli* and *leucophrys*. It has the lores mostly black, but the pale superciliary stripe continues over the eye and down to the angle of the mouth without interruption.

♀ May 7, 1933. —Sept. 26, 1933.
♂ May 14, 1934.

209. **Zonotrichia albicollis.** WHITE-THROATED SPARROW.—A very common species in migration but not so common in summer at which season it is found mostly in the coniferous woods.

♀ May 19, 1933. ♂ May 30, 1933.
♂ May 23, 1931. ♂ Sept. 26, 1930.

210. **Passerella iliaca.** FOX SPARROW.—A not uncommon migrant in spring and fall.

♀ May 5, 1931. — Sept. 26, 1930.
♀ May 8, 1931. — Oct. 7, 1933.

211. **Melospiza lincolni.** LINCOLN'S SPARROW.—A rather local species, being found only in muskeg about black spruce and tamarack. In certain of these restricted areas, it is not uncommon, but in the region as a whole it is rare.

♀ ? Sept. 23, 1935.

212. **Melospiza georgiana.** SWAMP SPARROW.—This species is fairly common in the marshes and at the edge of the muskeg about Lake St. Martin. A nest was found on June 22, 1934 contained one young bird and a broken egg. It was located at the base of a willow, in a clearing in a black spruce woods. Taverner took an adult male at Lake St. Martin on July 18, 1921.

♂ Sept. 19, 1935. — Sept. 20, 1933.

213. **Melospiza melodia.** SONG SPARROW.—This is a plentiful bird about Lake St. Martin, nesting about the settlements and in the wilds alike. A nest was found on the Lake St. Martin Reserve on May 28, 1935. The nest, which was lined with deer and moose hair, and five eggs were collected.

Another nest was found under hazel bushes on June 15, 1934 on the Reserve. This nest contained one young cowbird and two heavily incubated song sparrow eggs. An egg of the song sparrow was found a few feet from the nest. It probably had been ejected by the cowbird. A third nest containing four eggs was found on Pine Island on June 14, 1934.

Eight adult specimens were taken and have been referred without hesitation to *M. m. juddi*.

♀	May 11, 1934.	♂	June 19, 1934.
♀	May 19, 1931.	♂	June 23, 1931.
2 ♂♂	May 25, 1931.	♀	June 24, 1934.
♀	May 28, 1935.	Im. ♂	July 6, 1934.

214. **Calcarius lapponicus.** LAPLAND LONGSPUR.—This bird migrates along the shores in great numbers in spring and fall.

Two males taken on May 20, 1932 show almost the extremes in throat plumage. One still retains the white throat-feathers and the well-veiled black breast. The other has completed the throat-moult and the light tips to the breast feathers have been lost.

♀	May 20, 1932.	—	Sept. 25, 1933.
2 ♂♂	May 20, 1932.	—	Sept. 25, 1930.

215. **Plectrophenax nivalis.** SNOW BUNTING.—This species is extremely common in winter. However, the biggest flocks are seen in the middle of October and again in the middle of April.

Four males taken on May 2, 1931 show varying degrees of colour change from the almost typical winter plumage to the bicoloured appearance in summer dress.

♂ ?	April 24, 1934.	4 ♂♂	May 2, 1931.
2 ♀♀	May 2, 1931.	♀	May 7, 1934.

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