

Tenth Annual Report of the Alberta Antural History Society for the year 1915.

The Annual Meeting was held on Wednesday, 24th November, 1915, in the Library of the City Hall, Red Deer.

The chair was occupied by the President, Mr. R. E. Fiske. Hillstown.

PRESIDENT'S REPORT.

Mr. Fiske noted with regret that little progress had been made in furthering the aims of the Society, chiefly on account of people not being sufficiently interested in the pursuit of natural history work. The field day had been a very successful one, and a fine list of botanical specimens then collected had been properly and scientifically named. Great improvement in the exhibits at the show, for which prizes had been offered, had been noted. One really excellent collection of insects contained 83 varieties, for which an extra prize was awarded. A composition of 2,1 pages of foolscap relating to bird life was very good, as was also a collection of flowers. Altogether the work was an advance on that of last year. The President expressed the hope that the arrangements for the coming year would give better results than the work of the preceding one. He also remarked that one of the Society's objects was to help farmers recognize various insects and other pests, and instanced Mr. Whitehouse's articles dealing with this subject, and published in the local press, which had been of benefit to many.

VICE-PRESIDENT'S REPORT.

Mr. Whitehouse also regretted that the aims of the Society had not been greatly advanced, but the individual work had made considerable progress. Personally speaking, his correspondence with Entomological Societies and Scientists in Edmonton, Ottawa and England, and also in helping farmers, had been large. In the evening he intended reading a paper on insect pests and methods of destroying them. Mr. Whitehouse paid a tribute to the work of the President, .Mr. Fiske, to advance the aims of the Society.

REPORT OF RED DEER BRANCH.

Mr. Pamey, Secretary of this Branch being unable to attend, Mr. Whitehouse read the report of the Branch as follows:

Owing to more pressing business very little active work had been undertaken by this Branch during the current year. The attendance at the Annual Field Day on July 3rd, numbered fifteen members. Mrs. Dr. George and Miss Cole acted as botanical guides, and some 63 varieties of plants were collected, a list of which is appended. The gentlemen present investigated the insect life of the Tamarac Swamp, which was the place visited by the party.

The Annual Meeting of this Branch was held at the residence of Dr. George on November 4th, Ittl.'S, when the following resolution was adopted:

"That it is not in the best interests of the Alberta Natural History Society that its membership and resources be split up into various branches as in the past, therefore be it resolved that the Red Deer Branch of the Alberta Natural History Society and its funds and records be turned over to the parent Society."

The funds of this Branch amount to \$71.50.

Mr. Whitehouse moved the adoption of the above report.

Dr. George, President of the Red Deer Branch, owing to the stress of business, was unable to prepare a written report, but gave observations on birds, etc.. and spoke of the benefit of the re-organization of the Society as outlined by .Mr. Whitehouse. and trusted it would prove a good step forward towards the study of Natural History in Alberta.

Report of Innisfail branch.

Mr. Geary, President, reported that a certain amount of individual work had to be done, and his advice had been frequently asked in preventing the spread of insect and plant pests. In the majority of cases he had been able to supply necessary information. Otherwise he had secured the desired information from different quarters. He had

collected notes on the Forest Tent Caterpillar, but was away during July and August when these pests were at their worst. He thought that these insects were dying out. owing perhaps to the increase of birds in this territory. He reported that only three members of the Innisfail Branch were left, but hoped to do further work during the winter, and more field work next year. The assets of this Branch comprise a good library, and cash in hand amounting to ?

REPORT OF ERSKINE BRANCH.

Mrs. Judd, President, stated that the membership of this Branch was small, but a good deal of individual work had been done. Mrs. Morton, the Secretary, handed in her report. The assets of the Branch comprise a small library, and funds amounting to \$38.40. Two prizes were presented at the Stettler District Fair; one for the best collection of wild flowers and awarded to Emanuel Gray; and one for the best collection of pressed flowers, awarded to Grade IX of the Stettler High School. A field day was held at Buffalo Lake on July 7th. A discussion followed regarding the giving of prizes for collection of flowers in the school at Erskine.

REPORT OF THE SECRETARY OF PARENT SOCIETY.

Mrs. George, Secretary, reported as follows:

During the year four executive meetings were held. Prizes were offered by the Society for Natural History exhibits at the local fairs, the following being awarded:

Collection of Alberta Wild Flowers: Marjorie Allen. Red Deer.

Collection of Alberta Insects: Lilian Gudmundson. Red Deer.

? Blake Allen, Red Deer.

Composition on Bird Life: Millie Meeres. Red Deer.

The Society gave a grant of \$40.00 to the Red Deer Library Board, to purchase books on Natural History subjects.

Grants of \$10.00 each were made to Branches at Innisfail and Erskine. and \$25.00 to the Red Deer Branch.

Total Receipts	\$ 266.44
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Total Expenditure	160.50
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Balance on hand	\$ 105.94
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A notice of motion was read by Mr. F. C. Whitehouse as follows; "That to achieve the purposes of the Society as set out in Sec. 2, A. B.

and C. of the Constitution, a large membership and a nominal annual fee are desirable. Be it therefore resolved that Section 3 ta) be amended to read as follows: (a) Twenty-five cents shall be the annual fee for the Alberta Natural History Society."

ELECTION OF OFFICERS FOR 1916.

Hon. President, Hon. Duncan Marshall.

Vice-President, H. A. Craig.

2nd. Vice-President, E. Michener. Esq.. M.'P.

President, Dr. H. George.

Vice-President, Mr. R. E. Fiske.

Directors: — Mr. W. Geary. Mrs. Greene. Mr. C. B. Horsbrugh. Mrs. Cottingham. Mrs. Pameley. Mrs. George. Miss Cole.

EVENING SESSION.

The following papers were read:

Mr. F. C. Whitehouse. "Aims and Opportunities of a .Natural History Society."

Paper on Entomology. Report for the year 1915.

Discussion followed on Insect Pests and their destruction.

Paper on Botany by Mr. Geary.

Paper on birds of Alix and Buffalo Lake districts by Mr. C. B. Horsbrugh.

Entomological, botanical and bird exhibits.

Mr. C. B. Horsbrugh was appointed Sec.-Treasurer for the year 1916.

THE FUNCTIONS OF NATURAL HISTORY SOCIETIES. (By F. C. Whitehouse, Vice-President.)

Our Constitution clearly states certain objects and purposes of the Society and it would be well first to deal with these,

- (a) "To assist farmers in recognition of beneficial and injurious insects, birds and plants, and to advise regarding the control or destruction of those that are injurious." This, in itself, is a large order, for first we must identify the injurious and beneficial insects, birds and plants, and secondly by all means in our powers pass on our knowledge to agriculturists and horticulturists in order that practical use may be made of it. Undoubtedly the best medium for this purpose is the public press.
- (b) "To promote interest in, and the study of, the economic and scientific phases of the various branches of Natural History."

To achieve these objects the most apparent methods appear to me as follows :

- (1) To build up our membership so that as many as possible may benefit by our meetings, and to this end I think the adoption this afternoon of a purely nominal membership fee is a step in the right direction.
- (2) To place at the disposal of our community a first class selection of books upon Natural History. This excellent object is already well advanced since money grants made by this Society to the Red Deer Library have made accessible to everyone a carefully selected library covering practically all branches of Natural History.
- (c) To establish public collections and also collections in connection with our schools. It has been a practice of this Society to offer prizes annually to school children for the best collections of botanical specimens and insects. In order, however, that children may acquire even the rudimentary knowledge of Natural History, and the technique of collecting, they must look to some one for instruction and encouragement. Obviously the members of this Society cannot get in touch with the individual children throughout the district. They can, however, as a body extend to the children's teachers the benefits, knowledge and assistance of the Society, and I think we should do all in our power to let it be generally known among teachers that in the matter of Natural History we are both willing and anxious to co-operate with them.

So far I have dealt only with the avowed purposes of the Society as an educational factor. I should now like to deal briefly with the scientific ambitions and aims of such a body.

In older countries, by patient study (collecting and research) a complete record has been established of the flora and fauna. The range is known of living things and their life histories recorded. In Canada this work is only in its infancy, for not only have men had the sterner realities of life to engage their attention, but the very size of the land has made the task increasingly difficult. Insects probably affect the welfare of man as much, if not more, than any other group in the animal kingdom, yet to date there is no authentic catalogue of the insects of Canada. The colossal task is now in hand, and to such an endeavour should we lend our aid. The birds we have catalogued by Macoun in 1909, but the work should be checked, and supplemented by continual observation. I am but little qualified to speak on the science of botany but do not doubt that much is yet to be accomplished. In 1913 the Dominion Government published a check list of Canadian fish. In this we learn that the Western limit for pickerel, perch and goldeyes is Saskatchewan, all of which are taken here in Alberta. I do not point out these errors in criticism of an excellent and laudable undertaking, but to exemplify the point I am endeavouring to make, viz., that naturalists and Natural History Societies should gather and place on record accurate data upon all branches of natural science, to the end that those entrusted with the compilation of scientific records may have ample information to work upon and that ignorance may no longer walk in our midst.

NEIGHBORHOOD STUDIES IN PLANTS, INSECTS AND BIRDS.

Below are set out the results of activity by the Society and by individual members in the study of the plant, insect and bird life of the Red Deer district.

Botanical Specimens Collected on Field Day, July 3rd. 1915.

1. Baneberry or *Actaea Spicata*. Crowfoot family.

2. Kinnikinnic or Beraberry. *Arctostaphylos Uva-ursi*.

3. Comandra. pallida. Sandalwood family.
4. Red Stemmed Dogwood. Cornus Stolonifera.
5. Fleabane. Erigeron. Philadelphicus.
6. Flag Honeysuckle. Lonicera ciliata.
7. Honeysuckle. Lonicera glaucescens.
8. Snowberry. Symphoricarpes, racemosus.
9. Lungwort. Mertensia paniculata.
10. Painted Cup. Cattilleja Coccinea.
11. Plantain. Plantage Major.
12. Northern Bedstraw. Galium Boreale.
13. Horse Tail. Equisetum Palustre.
14. Two Leaved Solomon's Seal. Unifolium Canadeuse.
15. Three Leaved Solomon's Seal. Smila cina Tripolia.
16. Scarlet Lily. Liliun Philadelphicum.
17. Blue-eyed Grass. Sisyrinchium Candidum.
18. Yellow Orchid. Cypripedium.
19. Pink Fly Spotted Orchis. Orchis Rotundifolia.
20. Small Northern Bog Orchis. Habenaria Obtusata.
21. Tali Leafy Green Orchis. Habenaria Hyperborea.
22. Comandra. Comandra Pallida.
23. Grass of Parnassus. Parnassia Palustris.
24. Red Currant. Ribes Rubrum.
25. Wild Rose. Rosa Acicularis.
26. Loco Weed. Oxytropis Lamberti.
27. Gooseberry. Ribes Setosum.
28. Arctic Raspberry. Rubus Arcticus.
29. Creeping Raspberry. Rubus Pedatus.
30. Ascending Vetch. Astragalus Adsurgens.
31. Milk Vetch. Astragalus Race-mosus.
32. Wild Camada Mint. Mentha Canadensis.
33. Crow Vetch. Vicia Cracea.
34. Hedysarum (Purple I. Hedysarum Boreala.
35. White Geranium. Geranium Richardsoni.
36. Wood Violet. Viola Canadensis.
37. One Flowered Wintergreen. Pyrola Uniflora.
38. Red Wintergreen. Pyrola Asarifolia.
39. Canada Blueberry. Vaccinium Canadensis.
40. Woolly Labrador Tea. Ledum Catifolium.
41. Silver Berry. Elacagnus Argentea.
42. Buffalo Berry. Shepherdia Canadensis.
43. Cotton Grass. Erophorum Captatum.
44. Bunch Berry. Cornus Canadensis.
45. Blue Columbine. Aquilegia Brevistyla.
46. Mitre Wort. Mitella Brewaria.
47. Penny Royal. Hedeoma Hispida.
48. Meadow Rue. Thalictrum Alpinum.
49. Anemone. Anemone Multifide.
50. Seneca-Snakeroot. Polygala Senega.
51. Twin Flower. Linnaea Borealis.
52. Coltsfoot. Potasites Palmata.
53. Sarsaparilla. Aralia Nudicaulis.
54. Potentilla. Potentilla Anserina.
55. Avens. Geum Triflorum.
56. Yarrow. Achillea Samolus.
57. Cleavers. Galium Triflorum.
58. Shrubby Cinquefoil. Potentilla Fruiticesa.
59. Black Birch. Betula Lenta.
60. Tamarck. Larix. Laricina.
61. Mustard. Brassica Nigra.
62. Sedge. Caro.\ Oligosperma.

ENTOMOLOGICAL REPORT By F. C. Whitehouse.

Malacosoma Disstria — The larvae of The Forest Tent Caterpillar made their appearance early in June, and by the end of that month had done considerable damage to the foliage of white poplars, in the city to some extent, but to a greater extent in the country. West of Burnt Lake I inspected large poplar bluffs entirely denuded of leaves. On the Calgary trail, in the vicinity of Archdeacon Dewdney's, the pest was disagreeably plentiful. The moths emerged late July and early August. The egg clusters deposited at that time on the upper twigs of white poplar have been plainly discernible since the fall of the leaves. I forwarded some two hundred cocoons to the Dominion Entomologist, Ottawa, in early July, but I have not as yet been advised on the parasite destruction. I do not wish to be considered a pessimist when I state that I believe this pest will be still more troublesome next year.

Cutworms — Some horticulturists contend that cutworms are more troublesome in a wet season, some in a dry one. So far as my observations go, however, the exceptionally wet year of 1915 proved nothing. Cutworms were neither more nor less plentiful than in the average year, and my own contention is that "like the poor they are always with us." One peculiar fact I might mention, viz. that whereas I take the adult insects, i.e. (moths) of such notorious cutworms as Euxoa ochrogaster (the red-backed cutworm) ;

Feltiaducens (the dingy cutworm); Noctue clandestina (the W-raarked cut- worm); Peridroma saucia (the variegated cutworm), etc., it is only the first of these that in the larval stage I ever find doing damage in my own garden. Whether this is pure coincidence or that in this particular district the rest prefer vegetation other than that cultivated by man I cannot say.

Rachela Bruceata — Again this year in October this moth (or rather the male, for the female is wingless) was flying in hundreds after dusk. The insect deserves the attention of economic entomologists since in some districts the

larvae are almost as destructive to the foliage of white poplar as the Forest Tent Caterpillar. So far, however, in the Red Deer territory I have not discovered any serious case against them.

Galerucella Decora — Commencing late June and early July, the foliage of willow throughout our district showed signs of being seriously affected. As the summer wore on the leaves turned brown and died, disfiguring the landscape. The pest in this instance was a beetle, named *Galerucella decora*. The season of the insect appeared interminable, since as late as the third week in October I inspected black currant bushes covered with the adult beetles. They were busy eating the upper surface of the leaves. The true food-plant is willow and poplar, but like most pests they will apparently resort to other vegetation when their true food is no longer obtainable. Early in September, that is to say, when farmers were cutting grain, innumerable cases were reported to me of oats being covered close to the head by small insects. In some instances the canvas on binders had to be removed and cleaned every ten acres, being completely clogged by a conglomeration of the insects. Unfortunately at the time no actual specimens taken from the oats were brought to me, so that I was unable to make specific identification. I later made sure, however, that the insects were Aphidae and in October obtained a number in Red Deer that appeared to answer the description of the pest on the oats. I forwarded a number to Ottawa and hope at a later date to publish in the local papers a report upon the pest. In all Nature no creatures have a more extraordinary life history than the Aphidae. They are qualified to be a dangerous pest, but happily are usually well held in check by their numerous natural enemies.

Odonata — During the past summer I have devoted some of my time to the sub-order Odonata. dragon flies, and collected a number of different specimens in the Red Deer district. By the kindness of Prof. E. M. Walker, M.D. of Toronto University, the recognized Canadian authority on this sub-order, the identity of all the dragon flies taken this year and next will be established. I hope therefore at the Annual Meeting of this Society for 1916 to submit an authentic list, as complete as possible, of the dragon flies of the district.

Lepidoptera— Butterflies and Moths— New Records— I am again able this year to report new records for Alberta of moths taken by myself in this district, viz:

Drybota illocata — Red Deer, first week September. *Xylina innominata* — Red Deer, 30th August. *Xylina capax* — Blackfalds, 17th-24th August. (A rarity wherever it occurs) — At Blackfalds 17th-24th August, and Red Deer, 25th August to 7th September, I also took a good series of Red Underwings: *Catocala unijuga*; *Catocala briseis*; *Catocala relicta* and another *Catocala*, which after investigation is believed to be semi-relicta.

In the spring I published in the local papers short articles upon the House-fly; the Forest Tent Caterpillar and Cutworm, and also one in which I endeavoured to briefly show the economic value of birds.

Yours Faithfully F. C. Whitehouse,
Vice-President.

ORNITHOLOGICAL NOTES FROM THE ALIX AND BUFFALO LAKE
DISTRICTS, PROVINCE OF ALBERTA, CANADA, 1914.

(By Charles B. Horsbrugh)

(From the Ibis for October 1915. pp. 670-689.)

The following notes concerning the birds of this particular part of the province of Alberta relate to those whose identity I am certain of. The list might have contained a few others, but I hesitate to include uncertainties, which another season will unfold. This district, wherein I have resided since April, is well wooded and is fairly hilly, with numerous small and large sloughs. To paraphrase a well-known song, it can be stated that "every little homestead has a snipe-marsh of its own." and bird life, except in winter is abundant. Buffalo Lake, which lies about seven miles north-east of Alix, is a huge expanse of water, roughly about twenty-one miles long by eight miles broad, with a coast line, so report says, of about two hundred miles. Bird life there is also abundant and interesting, but the advance of civilization has caused many of the larger birds, such as pelicans, cormorants, gulls, etc., which frequented the lake in olden days, to depart elsewhere. Of late years the ducks are following the example of the pelicans and cranes, owing to ruthless slaughter and slack or inefficient preservation though good sport is obtained still by the local sportsmen. This last season was an excellent one for Ruffed Grouse and Prairie Chicken, but I

believe a poor one for geese. The village of Alix is situated on rolling, well wooded country about half way between the well known towns of Edmonton and Calgary. It is an important railway centre, and the Canadian Pacific, Grand Trunk and Canadian Northern railways cross each other at this point. For the last seven years the average rainfall has been 17.52 inches. I have followed the nomenclature and classification of the A.O.U. check list.

Aechmophorus occidentalis. Western Grebe. — At Haunted Lakes, on May 17, two pairs of Western Grebes were swimming about side by side, repeatedly lowering their beaks to lightly touch their shoulders for a second's duration. A few more pairs arrived by the 24th. and yet more towards the end of the month, when they then began to build their nests.

On June 1, I went for ten days to Buffalo Lake, and counted six pairs, but towards the end of my visit, from one spot I observed thirty-two pairs and there must have been many more in other parts of this huge expanse of water. I preserved a dead specimen presented me by a farmer, and found its gizzard full of the bird's own feathers and water weeds. Nesting had just begun when I arrived at the lake, and I found many nests, the majority containing from one to three eggs. These were usually concealed under the rotting vegetation used in the construction of their nests, and were placed amongst the reeds bordering the edge of the lake. Close to this colony we found numerous nests of the Pied-billed Grebes, but no full clutches were seen — the Crows probably accounting for many a despoiled nest.

On November 19, I received a fine male Western Grebe from a friend in Alix which, for the time of year, surprised me, although I have heard reports about these birds being frozen into the ice, so late have they delayed migration. *Colymbus holboellii*. Holboell's Grebe. — The loud queerysome wail of this species during the mating season seems to be uttered at all times of the day and night. On a small lake opposite our house, in which we dwelt for our first three months in Alix, a pair appeared on May 7, and I observed them closely during this period. As soon as the hen bird began to sit (about

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May 25) they were fairly quiet and became so tame that I could approach close to the nest, but the moment I was discovered, the female would at once start to rapidly and thoroughly cover her eggs. Although I found a number of nests of this bird in the neighbourhood of our village, I never observed more than five eggs in a clutch. Mr. F. M. Chapman states the clutch to consist of from three to eight eggs. Holboell's Grebe seemed to be rare on Buffalo Lake. It is a curious sight to witness the courting antics of these birds. A pair may be swimming about within a short distance of one another, when the male, on the nearer approach to the female, suddenly raises his body at right angles to the water and vigorously pursues her for a yard or two. The latter also progresses in this curious fashion, and both birds always wail at the top of their voices. This weird performance is gone through several times in the course of the day, and possibly night.

Colymbus auritus. Horned Grebe. — On another small lake close to our house I noticed a single bird of the above species on May 3rd., and three more on the following day. A few days later, whilst watching a pair of Golden-eye and Canvas-backed Ducks on this same spot, I saw a female Grebe dive and viciously nip the male Canvas-back on the belly. The latter, after being thus "torpedoed," flew off to more peaceful waters.

These Grebes also assume quaint courting attitudes: one of the most usual is that the male bird lays his head and neck parallel with the water, at other times hunching up his back and keeping head and neck in-drawn to the body. I do not remember ever seeing these birds take flight. They were common everywhere as the nesting season approached, and as a rule were remarkably tame. On May 13 a pair were busy nest building, and by the 15th had made a bulky structure, which had its base on the bottom of the lake in about two feet of water. The birds swam right up to me whilst immersed to my knees, but were voiceless. By the 30th of the month another nest on a small pond contained four fresh eggs, whilst the pair previously mentioned had two eggs.

Podilymbus podiceps. Pied-billed Grebe. — On June 2, at Buffalo Lake, I obtained an excellent photograph of a nest containing seven eggs, and at Spotted Lake found a fairly large colony on June 19 (see note under Franklin's Gull). These birds appeared much more wary than the Western and Holboell's Grebes.

Gavia immer. Great Northern Diver or Loon. — Badly-mounted specimens of this handsome bird are generally exhibited in most taxidermists' shops in this country. It does not appear to be as common as I expected to find it, and my notes are therefore scanty. It was reported to me that a specimen was to be seen on the lake at Alix village on May 20. and I saw this bird and its mate there on June 7. I could find no trace of a nest. Their weird cries reminded me of the time when my friend Dr. Bowdler Sharpe and I used to watch them on the Sundalsoren fiord. Norway, in May and June, 1899. I have reason to believe that another pair reared one young on a lake about four miles south of Alix. On Buffalo Lake they appear to be very rare. Mr. George Cook informed me he picked up a dead specimen in June of the present year on the shore, and Mr. James Brindle told me he saw one on June 3. I saw no specimens during my visit there.

Larus marinus. Greater Black-backed Gull.— On entering Halifax Harbour, March 25, a few of these Gulls were observed.

Larus franklini. Franklin's Gull.— On April 24. three Franklin's Gulls were seen near Alix, and on May 4 six in the same locality. From this date onwards they were one of the commonest birds over a wide tract of country. On Buffalo Lake and many small lakes during June and July they congregated by the thousand, and were always particularly noisy. This species does not appear to nest on the lake, although feeding there extensively; but on a fair sized expanse of water within a mile or two of the village of Mirror they do so abundantly. This swamp is called Spotted Lake, on account of the numerous and isolated clumps of reeds of varying sizes. I visited this colony with my friend Mr. George Cook, of Buffalo Lake, on June 19. My notes for this day's trip read as follows:— "To enter the lake we had hard work towing a punt against the stream of a narrow canal, which was one of the exits for the overflow of water, for about two miles. During our progress we flushed several Spotted Sandpipers and a Short-eared Owl from the banks We also discovered a Scaup's nest at the bottom of the bank, containing ten eggs, which were almost awash, the nest being hardly worthy of the name. Entering the lake we soon found quantities of Gull's nests and young in downy plumage everywhere. Their nests somewhat resemble Coots', being fairly bulky affairs made entirely of dead reeds. We found them in colonies amidst the reedy patches, and the majority of the nests contained two eggs, all of which seemed on the point of hatching out. We computed the number of Gulls in this spot to approach four thousand. Their noisy clamour could be heard for a considerable distance. A fair sized colony of Pied-billed Grebes also nest amongst the reeds, and although numerous nests were found none contained more than three eggs. A nest of the Canvas-backed Duck with six eggs of the Common Pochard was found completely submerged, doubtless on account of the heavy rains during the early part of the month. We noticed one Common Tern and only a few pairs of ducks (sp?). Dr. Henry George of Red Deer took two eggs of the Sand-hill Crane on this lake in 1895, but I believe these birds have long since ceased to nest hereabouts." My wife and I managed to rear a young Franklin's Gull to maturity, feeding it at first on hard-boiled eggs and bread, and at the present time of writing we hear it is doing well in the Zoological Gardens at Vancouver, B.C. The bulk of the Gulls appear to migrate south about the beginning of August, but a few were observed at Alix on September 17, and a little later at Buffalo Lake.

Larus argentatus. Herring Gull. — This seems to be a rare bird and, I am informed, used to nest on the islands, in Buffalo Lake. I only observed a pair there on June 2 and another on the 7th.

Sterna hirundo. Common Tern. — I first observed this species at Haunted Lakes, outside the village of Alix, on May 17, where a few were diving for fish at the narrows of the lake. On a small neighbouring lake I found these birds breeding. On a point of a small island they had laid their eggs in the dried sandy mud, and I found about six or seven nests, each containing two eggs. This Tern is far less numerous than the Black Tern in this part of the country.

Hydrochelidon nigra surinamensis. Black Tern. — I found this a very common bird during the spring and summer months, nesting in small colonies on many a little slough and back water. The nests, composed of water-weeds and decayed grasses and reeds, are often fairly bulky structures about four or five inches high. Considerable variation exists in regard to size and colour among the eggs of this species. The young soon after hatching are very difficult to discover amongst the long grass on the sloughs. At Buffalo Lake, on June 2, I found several completed nests but only one egg. I was informed that hundreds roost in the reeds around this lake.

Anas platyrhynchos. Wild Duck. — Together with the Greater Scaup this is the commonest species here. It arrived about April 7. I found many nests, the first, containing eleven eggs, being at Haunted Lakes on May 17. This species frequently has its nest far from water, and a favourite situation is in the growing corn.

Chaulelasmus streperus. Gadwall. — On a small slough in the vicinity of Buffalo Lake I saw a pair of Gadwall on May 16, but I feel sure this species must have arrived here a week or two prior to this. I would say that they were not particularly abundant hereabouts. Mr. Atkinson, who also visited Buffalo Lake at the same time as I did, found a nest with eight eggs on June 5.

Mareca americana. American Widgeon. — Usually known as the Baldpate in this country. Nowhere very common. The first pair was observed near our house on May 4.

Nettion carolinense. Green-winged Teal. — Fairly abundant. One specimen was observed on April 24 on a small pond near our house, and two pairs on May 4. They nest in the long grassy tussocks bordering the sloughs.

Querquedula discors. Blue-winged Teal. — Decidedly more abundant than the former species. My first sight of this bird here occurred on May 7, when I flushed five pairs from a flooded meadow close to Alix, where they feed on very minute water-snails, also water-weeds. On August 13 I noticed a small brood of rather young ducklings of this species close to Alix.

Spatula dypeata. Shoveller. — First pair seen here on May 7. A fairly abundant species. Mr. Atkinson found eggs on June 8 at Buffalo Lake, and we frequently saw parties of ducklings with the female every day during our stay. On July 'i a Shoveller duck was swimming about with eight quite small young on a small pond near our new home. On August 18 I saw some well grown ducklings close to our house, almost ready to fly. *Dafila acuta*. Pintail. — Several birds seen on May 4. Fairly numerous and quite as shy as at home.

Marila americana. Pochard. — Known here as the Redhead. According to my notes this species appears to be a late arrival as I have no record of it until May 27, when a pair was seen close to our home, on one of the smaller ponds. This bird shares its incubation duties with the Canvas-back Duck, and both Atkinson and myself often found nests containing eggs of the two species. One such nest which I found near Buffalo Lake on June 5 held sixteen eggs. So over crowded was it that two eggs lay under water outside the nest. I flushed a Canvas-back, the bulk of the eggs belonging to the other species. It is only fairly common in these parts.

Marila vallisneria. Canvas-back. — April 7 is my earliest record for its advent here. During the mating season these ducks become very tame, and I have often called them close to me, lying concealed in the bushes. By moving a hand slowly they evince curiosity and approach gradually to investigate. They are quite at home in company of other ducks, as my notes for May 17 read that a pair were feeding on a small lake together with pairs of Scaup, Mallard, Buffel-head, Widgeon, Green-winged and Blue-winged Teal, as well as a noisy pair of Holboell's Grebes. I found a nest of the Canvas-back containing eleven eggs on Haunted Lakes, near Alix, on May 24. This was a bulky structure, much like a Coot's, as it was made entirely of decayed reeds. The eggs were covered with a little down and partially hidden under cover of the same nesting materials. This same patch of reeds also held several nests of Hoboell's Grebe. Old residents inform me that this species is yearly decreasing in numbers.

Marila marila. Greater Scaup. — A single pair was first noticed here on May 5. Excepting the Mallard, this species seems to be the commonest in this locality. During my trip to Buffalo Lake I must have seen hundreds. Atkinson, on June .5, found a nest containing eight eggs hidden amongst the branches of a small bush. A local name for this bird is "Bluebill."

Clangula clangula americana. American Golden-eye. — In pairs and fairly numerous about April 7. They seemed to become rarer towards the nesting season, and I did not find any trace of nests or young birds.

Charitonetta albeola. Buffle-head. — My notes for April 24 state that these ducks were to be seen in small numbers on all the ponds hereabouts, and in pairs. They feed at this season on a small red worm-like larva (mosquito sp., minute stones, and water-weeds. On May 16 I was giving some horses their morning hay, when I suddenly saw a pair of Buffleheads fly round the barn a few times and the duck dive like an arrow straight into an old decayed poplar tree. The nesting site was an ancient Golden-winged Woodpecker's, about eighteen feet above the ground, and with the aid of a thin twig I could feel a large clutch of eggs. On the lake just below the barn I saw a hen bird on June 18, followed by five young ducklings, which I watched for many days. The feet of the ducklings are dark slate, and I should like to know when they assume the striking flesh-coloured tint of the adult. Whilst driving a few miles south of Alix with my wife, on June 21, we almost ran over a duck with five young. She was leading them through the long grass towards water (some considerable distance from the trail) and was a most devoted parent, flying around very close to us until we passed on. These birds are excellent eating, but it wounded are almost impossible to retrieve on account of their diving powers. The local name given them is "Butter-balls." This species seems to be fairly plentiful in this part of the province, but so shy are they in the vicinity of their nesting sites that the latter are rarely betrayed. I located two other nests, but could not find the exact spots. These birds are reported to nest in holes in the ground if suitable trees are scarce.

Oidemia deglandi. White-winged Scoter. — At Haunted Lakes, on May 10, my notes record "many pairs of these ducks." Whilst staying at Buffalo Lake in June I saw many hundreds, and they were quite the commonest species. They nest round the lake, inland amongst the bushes, much later than other species. Mr. George Cook informed me that he had found nests in late July.

Erismatura jamaicensis. Ruddy Duck. — I came across several pairs of this handsome species at Buffalo Lake in June, but had no success in discovering a nest. Mr. George Cook showed me eggs he had taken a year or two ago. On Parlby Lake, Alix, I had observed a pair which were fairly tame. The curious position of the tail, at right angles to the body, determines the species at a considerable distance.

Chen hyperboreus hyperboreus. Lesser Snow Goose. — Mr. James Brindle sent me a pair of these birds, a lucky shot having secured five specimens at once, from Buffalo Lake on September 26. They were excellent eating. On October 8, I received another male from the same locality. Almost a thousand, or even more, were noisily migrating south over Alix on October 26 during day and night.

Branta canadensis canadensis. Canada Goose. — I have only seen a single bird on a small pond a few miles north of our house on May 19, and a pair at Buffalo Lake on June 3. My host, Mr. Brindle, owned a pair of tame ones which quickly lured the wild visitors to their deaths. These birds are not protected on account of the damage they cause to the crops; as a result, persecution yearly diminishes their numbers.

Olor sp. ? Swans. — Mr. Walter Parlby reported three swans on his lake. about two and a half miles west of Alix, for a few days, and I also heard of a flock of seven, on Haunted Lakes, during the last week in April.

Botaurus lentiginosus. American Bittern. — A fairly common summer resident. I first observed a pair at Haunted Lakes on May 10, and flushed a bird off a nest with two eggs at Buffalo Lake on June 5, and Mr. Atkinson found another with four eggs on the 6th. The call of this bird is certainly one of the weirdest I have ever heard, and at first I failed to determine what caused it. The bird which Mr. Atkinson flushed, he said, sat on its nest during a heavy shower, with its bill pointing heavenwards.

Ardea herodias herodias. Great Blue Heron. — For a little while a heron of this species frequented Haunted Lakes, and another Parlby Lake, during the late summer, but I did not personally see any specimens.

Porzana Carolina. Sora. — This species seems to frequent every marsh in the neighbourhood of Alix. Mr. Atkinson found a nest with three eggs at Buffalo Lake on June 1, and at the same locality I also found a nest with nine eggs and another containing thirteen, on the 3rd and 9th of June respectively. These nests were very cunningly concealed in dead rushes. On July 8 I picked up a dead Sora which had flown against the telegraph wires in the main street of Alix.

Fulica americana. American Coot. — Quite the commonest bird on Buffalo Lake, where I found many nests. The average clutch contained ten eggs. I saw two nests with twelve and thirteen eggs respectively. I found eggs in all stages of incubation on June 1. A pair of birds attempted to build near our house, close to a pair of Holboell's Grebes, on a small lake. Some nests were built with landing stages.

Steganopus tricolor. Wilson's Phalarope. — I saw a pair of these birds at Buffalo Lake on June 3, and later found them fairly common. I flushed a pair on June 5 out of some dried grass, where I feel sure they intended nesting.

Recurvirostra americana. American Avocet. — On a small lake near Buffalo Lake I saw a single bird on June 3, where the previous year Mr. George Cook had found several clutches.

Gallinago delicata. Wilson's Snipe. — I found this species plentiful on Buffalo Lake and also around Alix, where I flushed a bird off four eggs on July 18.

Actitis macularia. Spotted Sandpiper. — Not uncommon in this district. On June 21, within a few miles of Alix, my wife and I found three newly hatched young on the roadside, after a close search for a quarter of an hour.

Oxyechus vociferus vociferus. Killdeer. — Two or three pairs were observed during my visit to Buffalo Lake in June. Mr. Atkinson found a handsome clutch of four eggs at this locality early the same month. Another clutch had been destroyed by crows.

Bonasa umbellus togata. Canada Ruffed Grouse. — This last season was an excellent one for grouse, as coveys were large and numerous. A nest with ten eggs was found near the house on May 25. These birds are quite fearless and afford poor sport, as they are not easily flushed, even with a dog. They are very bold in defence of their young, and endeavour to lure one away from the vicinity of their brood or nest by feigning a broken wing.

Perdix perdix var. Hungarian Partridge. — Mr. Walter Parlby informed me that fifteen brace of these birds, received from New York, were turned down in April 1909 close to Alix. Unfortunately a snow-storm, which doubtless caused many deaths, occurred the next day. Various reports stated that a few birds were seen the following year, but since then they seem to have disappeared. The annual report of the Department of Agriculture for Alberta for 1913 states that "the Hungarian or European Partridge (no scientific name given), which was imported and distributed in the Calgary district some few years ago, has increased to such an extent that it has been deemed advisable to declare an open season." The bag limit was placed at twenty-five birds for the season, and five per day, the open season being during the months of October and November.

Tympanuchus americanus americanus. Prairie Chicken, — A fairly common species and very tame during the nesting season, but wild enough soon after the shooting season opens.

Zenaidura macroura macroura. Mourning Dove. — I received a specimen from Mr. George Cook, which he shot at Buffalo Lake on November 9. He states that it is very rare and this was the only one seen.

Circus hudsonius. Marsh Hawk. — May 13 is my first record for this species, which later in the season may daily be seen flying over the sloughs in search of prey. I received a young male in the flesh on September 17.

Accipiter velox. Sharp shinned Hawk. — I received an immature male bird on October 6 which was shot near Alix. The species seems rare in this district.

Astur atricapillus atricapillus. Goshawk. — I first observed this species on May 15, flying over a lake near our house. A fine specimen boldly flew into our poultry yard on October 15, but did no damage to the chickens. I shot an immature bird on the 28th which also came to worry the poultry. A nice male specimen, shot at Alix, was presented to me on November 26.

Buteo borealis borealis. Red-tailed Hawk. — In a small copse bordering a large grassy slough I found a nest of this species on May 9. It was placed in a straight poplar about 7.5 feet from the ground and contained three eggs, dullish white slightly blotched with pale red markings, and well incubated. The birds were very noisy, and kept in the vicinity until we left.

On June 21. shortly after my wife and I almost drove over a brood of young Buffelheaded Ducks (see notes under that species), we saw a Red-tailed Hawk evidently searching for them. A pair flying around the house on August 17, mewing like European Buzzards. I shot a male, heavy in moult, on September 26. The crop contained a partly digested squirrel.

Aquila chrysaetos. Golden Eagle. — This bird seems to be fairly common, as I saw a good many in various taxidermists' shops and hotels at Calgary and Edmonton. At Mirror a youth has a magnificent specimen which was wounded at Spotted Lake about a year ago. I observed a Golden Eagle feeding on a rabbit within a few hundred yards of the house on October 20.

Haliaetus leucocephalus leucocephalus. Bald Eagle. — Whilst at Buffalo Lake, on May 19, a farmer showed me a very fine specimen of this species he had picked up from a nest which a gale had blown down, together with the whole tree, four years ago. During the present year it has assumed the white head and tail, which even yet are not so pure as is attained by more adult specimens.

Mr. George Cook brought me an immature female shot at Buffalo Lake on September 28. The spread of wings measured seven feet two inches, and the crop was filled with fish.

Falco sparverius sparverius. Sparrow Hawk. — A common summer visitant. I saw one investigating the nesting site of the Buffel-headed Duck I found close to the barn (see note re Buffel-head). A single bird first seen near Alix on May 6.

Asio wilsonianus. Long-eared Owl. — On May 24 I went to Haunted Lakes, where Mr. H. Hickling showed me an old hawk's nest tenanted by a pair of Great Horned Owls. Below this nest I found the legs of a Long-eared Owl which had been picked by a young well fledged youngster of the larger species. I received a male bird on September 26 and another on the 13th of following month.

Asio flammeus. Short-eared Owl. — At Buffalo Lake on June 5, Mr. Atkinson found a nest in the long grass close to the water, with five eggs on the point of hatching. Near the same locality Mr. George Cook found another with four eggs on June 9. A specimen in the flesh was shot near Alix and presented to me on October 15.

Cryptoglaux acadica acadica. Saw-whet Owl. — I received a specimen on December 5, which was shot a few miles south of Alix.

Bubo virginianus pallescens. Western Great Horned Owl.— Near Buffalo Lake on May 16, I found a pair of young Owls of this species sitting in an old hawk's nest which was placed in a high and leafless poplar. Mr. George Cook ascended the tree with climbing irons and brought me the birds, which were well grown. The remains of a Shoveller Duck and Blue-winged Teal lay in the nest and a few small bones of various birds. At the present date they are full grown and thriving in my barn, and are quite tame. Whilst Cook was looting the nest the female frequently sat just above his head uttering croaks sounding like "werk," "werk," but the male kept at a distance. I caught a fine bird in a gin-trap on October 21 close to the house, and received a living specimen on November 2, caught near Alix. Both of these birds are now in the barn and feed readily on rabbits, musk-rats. etc. This species is fairly common in this locality and can often be heard calling at night.

Nyctea nyctea. Snowy Owl. — I heard lately that a pair of birds had been seen near Mirror in November, and believe it is a regular, though rare, winter migrant to this locality. I have seen two mounted specimens which were probably obtained locally, but they possess no data. Mr. George Cook presented me with a fine living specimen on December 13, which is still with me.

Surnia ulula caparoch. Hawk Owl. — I received a pair in the flesh on September 17, shot near Alix. I have also a living specimen which has damaged its wing against the telephone wires and up to the present time (December) has quite recovered in captivity. This species I believe to be common here. Fisher states that the note is a shrill cry, which is uttered while the bird is on the wing. My specimen gives voice to a melodious "wheup, OOP, OOP, OOP, oop, oop," generally at dusk.

Ceryle alcyon. Belted Kingfisher. — I have only seen a single specimen, which was sitting on the telegraph wires close to Alix on August 5.

Dryobates villosus leucomelas. Northern Hairy Woodpecker. — A fairly common resident throughout the year. *Sphyrapicus varius varius*. Yellow-bellied Sapsucker. — In the early spring this species is a quiet migrant, but towards the nesting season is the reverse of silent. It is fairly plentiful in this locality, and I found numerous nests, which are usually situated from twenty or more feet up the tree trunk. I was presented on July 15 with four young birds, which my wife and I reared on house-flies, wasp-grubs, and hard-boiled eggs. We also found, as their name gave us to expect, that they were very partial to syrup and water, which they greedily swallowed. Insectivorous food arriving from home enabled our pets to get through a successful moult, and by October 25 we could see a few red feathers on the heads of the two male specimens. Unfortunately we lost three of these birds, due chiefly to the sudden cold weather, but my remaining specimen continues to do well. A female flew into my shack on July 27, which I released later.

Colaptes auratus luteus. Northern Flicker or Golden-winged Woodpecker. — I noticed a specimen feeding on an ant heap on April 21. and after this date they became quite common. Throughout the nesting season I found many borings for nest holes. They seem to migrate early in the autumn.

Tyrannus tyrannus. Kingbird. — I observed a pair near Alix on April 4. Eggs were found on June 10 near Alix by a friend, and on the village lake. I found a nest with four eggs and two others with well fledged young. This species is a common summer resident.

Corvus brachyrhynchus hesperis. Western Crow. — This was almost the only bird observed during our run from Halifax to Calgary, flying about singly or in small flocks, generally close to the towns and villages enroute. It is one of the commonest birds in this locality and is most destructive to game. I noticed many nests of ducks and other birds destroyed by crows. Several nests were observed placed in low bushes about six or eight feet from the ground. I found 3 crows' nests on May 21 close to Alix all containing five eggs highly incubated. The birds were very tame, and fiercely mobbed me until I shot three.

Pica pica hudsoni. Magpie. — I observed a pair of Magpies close to the house on September 12, and another pair on October 20 in the same locality.

Molothrus ater ater. Cowbird. — At Alix a few of these birds arrived on April 17, where they are common summer visitants. A friend found an egg in the nest of a Clay-coloured Sparrow with three of the rightful owner's, near Alix on June 10, and I found two eggs in a Song-Sparrow's nest, which held five of the latter's, in the same locality on June 14.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird. — This species nests commonly around Buffalo Lake in the reeds. I first noticed nests with eggs on June 2.

Agelaius phoeniceus fortis. Thick-billed Red-winged Blackbird. — In company with the Yellow-headed Blackbird this species also nested abundantly in the district and in almost every slough around Alix. I found eggs on June 2 at the former place, and many more elsewhere subsequently.

Sturnella neglecta. Western Meadowlark. — A very common summer resident everywhere. I did not succeed in finding any nests of this species. It has a most striking and musical song, and prefers to sing from a telegraph pole or fence post,

Quiscalus quiscula quiscula. Purple Grackle. — I observed this species in fair numbers at Buffalo Lake and Alix. At the former place I found several nests on June 2 ready for eggs, and on June 10 two clutches of three eggs.

Passer domesticus domesticus. House-Sparrow. — At Haunted Lakes on April 17 I saw three or four pairs of this species and a few in Alix. but on December 2 this number had increased to over thirty. I did not observe any at Buffalo Lake.

Astragalinus tristis tristis. Goldfinch. — Not a very common summer visitant. I first observed a pair on July 3 at Alix.

Plectrophenax nivalis nivalis. Snow-Bunting. — A flock of ten appeared near the house on November 16 and they have since been numerous through- out the district.

Passerculus sandwichensis alaudinus. Western Savannah Sparrow. Fairly common around Buffalo Lake, where I found a clutch of four eggs cleverly concealed in the grass, on June 3, and on June 14 another clutch of five eggs with two Cowbirds' eggs near Alix. This bird is rather shy, and on this account may be more abundant than would appear to be the case.

Spizella pallida. Clay-coloured Sparrow. — I was shown a nest with three eggs and one of a Cowbird near Alix on June 10, and another on the 14th with young just hatched.

Junco hyemalis hyemalis. Slate-coloured Junco. — I did not observe this species until September 23, when there were many flying about close to the house.

Zamelodia ludoviciana. Rose-breasted Grosbeak. — Rare. I only saw three specimens early in May near Alix. I was surprised at the sweetness of the song.

Petrochelidon lunifrons lunifrons. Cliff-Swallow. — Under the eaves of a barn at Dartmoor (about two and a half miles west of Alix) a number yearly build their nests in June.

Iridoprocne bicolor. Tree-Swallow. — Mr. George Cook showed me several coffee-pots with the spouts removed, in which these swallows nested every year in front of his house at Buffalo Lake. These birds also nest in old woodpeckers' nests of the smaller species, and I saw the Swallow at Alix in May hunting round the woods near the house for nesting holes. Mr. Atkinson and I found a nest by the roadside, near Buffalo Lake, in a hole in an old burnt poplar stump on June 3. It was plentifully lined with feathers, but had no eggs. I also found a nest at Haunted Lakes too high up to examine.

Riparia riparia. Bank-Swallow. — A few pairs nested in a railway cutting near Haunted Lakes in June.

Bombycilla garrula. Bohemian Waxwing. — Dr. Henry George informed me that a pair of these birds nested this year in a garden at Red Deer, and Mr. George Cook has a skin which was obtained near Buffalo Lake on January 19 this year; he had also found a nest on June 8, with four young birds, in the same locality. ' One was dead in the nest, but the rest were ready to fly. He further stated that these birds were plentiful during January and September.

Troglodytes aedon parkmani. Western House-Wren. — Fairly abundant. On June 23 I was shown a nest which had been built in the string-box attached to a reaping machine. It was a very bulky structure made of small twigs, plentifully lined with fowls' feathers and horse hair. It contained six eggs. I found another nest, near Alix, which was merely a collection of a few feathers and horse hairs built in a hole in a small decayed poplar tree, and another in June in a large stump which held young birds.

Telmatodytes palustris iliacus. Prairie Marsh Wren. — Mr. Atkinson and I found numerous nests of this species in the reeds around Buffalo Lake, but none held eggs. The birds, nevertheless, were always very noisy but shy.

Penthestes hudsonius hudsonius. Hudsonian Chickadee. — A common resident. Except in the nesting season they keep in small flocks and are very tame. I found a nest with young in a hole in a dead poplar, about three feet from the ground, near the house on May 30.

Planesticus migratorius propinquus. Western Robin. — Plentiful around Alix, but I failed to observe any at Buffalo Lake. I saw many young birds but no nests.

Respectfully .subniittod,
E. E. Fiske, Mrs. B. M. George,
President. Secretary-Treasurer.