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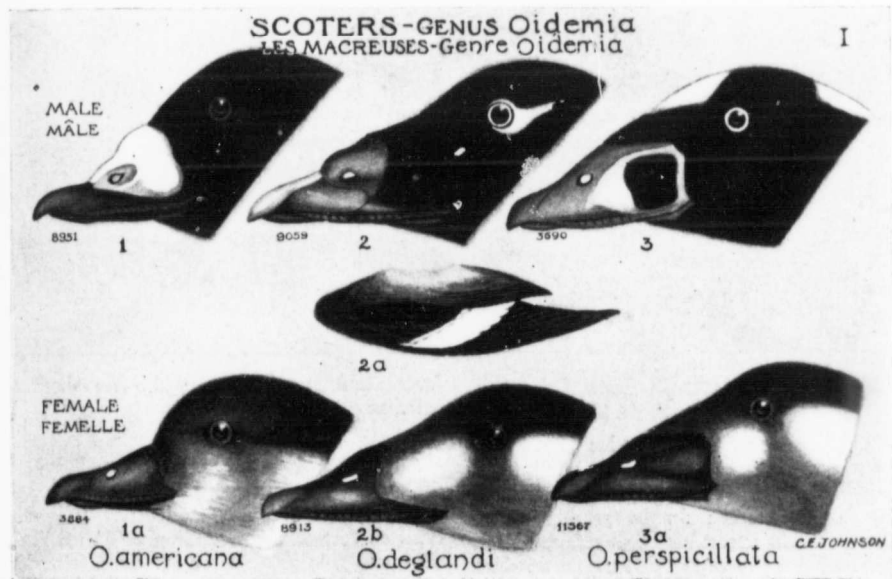
## THE SCOTERS AND EIDERS.

By P. A. TAVERNER.

(PUBLISHED BY PERMISSION OF THE GEOLOGICAL SURVEY OF CANADA.)

The scoters and eiders are often regarded by the amateur ornithologist and the general sportsman as confusing groups. Whilst the males are well marked by color and bill characters some females bear close general resemblance to each other. The following diagnosis and plates may therefore be of interest to those who have occasion to identify these

swellings, protuberances and extended processes. In the females these bill characters are reduced; but, except in the American Scoter, they retain enough peculiarity of shape for ready generic recognition. Generally juvenile males are similar to the females but soon show sufficient traces of the coming adult plumage to indicate their sex.



species. Two species of eider, Steller's and the Spectacled, are rather different from the others, but as they only are to be expected in the extreme north-west, Alaska and the Yukon, they need rarely be considered in connection with eastern material.

Except these two species, the scoters and eiders are ducks of the largest and sturdiest build. As the accompanying plates show, the males are characterized by unusually heavy bills often with strange

### THE SCOTERS.

The adult males of all the scoters are practically solidly black birds or with only restricted and sharply defined patches of pure white on head or wing. The females are without variegation, dark brown gradually lightening below or on breast and face, and show no indication of bars or streaks. The bills of all plumages except that of the female American Scoter are characteristic.

AMERICAN SCOTER, *Oidemia americana*.

Plate I, Figs. 1, 1a.

The adult male is solidly black without spot or touch of other colour except the butter-coloured swelling at base of bill. The female shows a comparatively normal duck bill, the feathering neither encroached upon nor encroaching on the sides of the bill. There is a more or less well defined dark cap including the sides of the crown, contrasting with the cheeks that are evenly coloured instead of showing two diffused light patches as in the other two scoters.

be traced in a depressed area of soft black velvet-like feathers. The sides of the bill encroaches on the cheek feathering in a square shape and is coloured bright yellow, red and white with a strange squarish spot of black as shown. The female has two lightish patches on the sides of the face like the female White-winged, but the bill surface intrudes upon the feathering of the cheek in the same square shape as in the male and the feathering of the crown extends half way to the nostril and far beyond that on the sides of the bill. The square black spot at the base of the bill is indicated in the

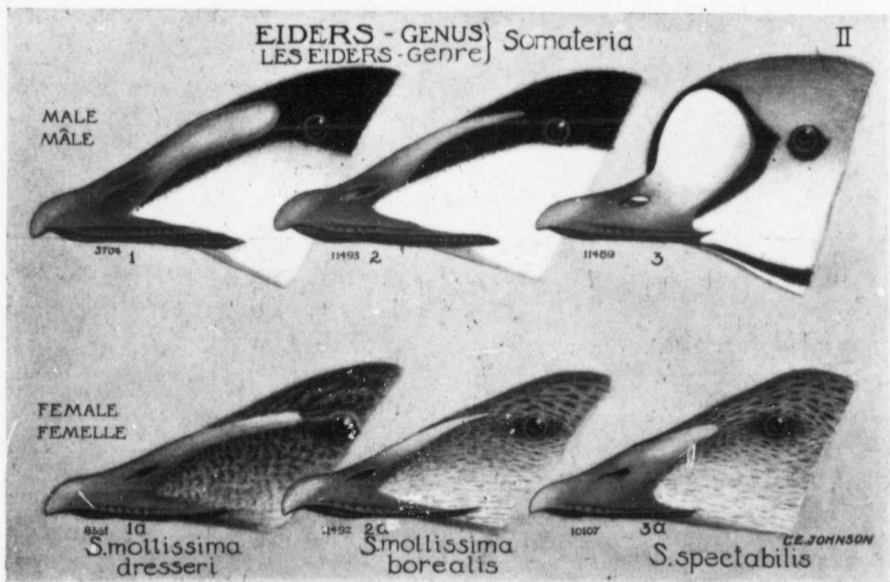
WHITE-WINGED SCOTER, *Oidemia deglandi*.

Plate I, Figs. 2, 2a, 2b.

The prominent white wing patches (Fig. 2a) in all plumages of this bird prevents its confusion with any other species. The adult male is all black with a white crescent under the eye, white secondaries and a bill coloured in bright reds and black. The female has two vague light spots on the cheek like the Surf Scoter, and the feathering of the cheeks encroaches upon the sides of the bill nearly to the nostrils and about as far as that of the crown.

SURF SCOTER, *Oidemia perspicillata*.

Plate I, Figs. 3, 3a.

The adult male is an all black bird with small white patches on the fore and hind crown. In some changing or moulting plumages this latter is lost wholly or in part but its position and outline can still

juvenile male at an early age and before other sexual characters are assumed.

## THE EIDERS.

Adult male eiders are easily distinguished from similar scoters by being colored in large contrasted masses of black and white, the latter variously suffused on face, fore and under parts with delicate Nile-green, pale slate-blue or vinaceous (pinkish). Comparable scoters are nearly solid black, relieved only by restricted, sharply defined patches of pure white about head and on wings.

Female eiders are colored with mixtures of black, brown, ochre and rusty in various proportions, tending towards fine streaks on face, coarser ones and V-shaped markings on back and broken bars across breast and flanks. The cross barring across the upper breast of the females is sufficiently distinctive of the eiders to separate them from any other duck

regularly occurring in Canada. Comparable scoters are solidly coloured dark brown without variegation except for gradual lightening of face, fore part, and below,—they are entirely without bars or streaks.

**KING EIDER, *Somateria spectabilis*.**

Plate II, Figs. 3, 3a.

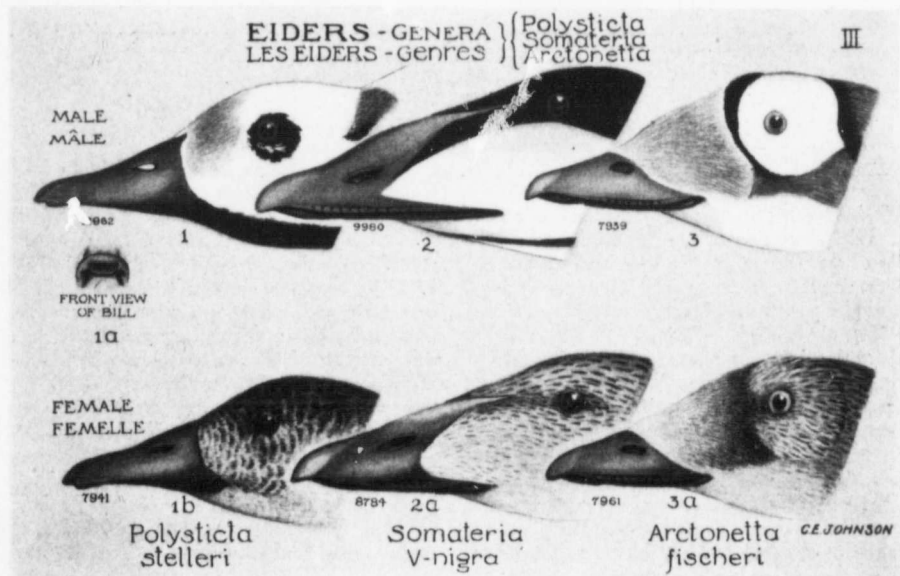
The greatly enlarged bill process, coloured bright yellow, easily distinguishes the male of this species. The feathering of the fore crown and the cheeks are diagnostic in other plumages. In this species the crown feathers extend down the ridge of the bill as far as the rear of the nostrils, whilst the feathering of the cheeks does not extend as far as that of the crown. In other comparable eiders the

the Northern Eider, *Somateria mollissima borealis* can be shown to exist. The American Eider therefore becomes *Somateria mollissima dresseri*. These two American forms can only be separated by the bill processes on the sides of the crown. In the American Eider these processes in either sex are broad and end in a well rounded instead of a pointed tip as in the Northern and the Pacific Eiders.

**PACIFIC EIDER, *Somateria v. nigra*.**

Plate III, Figs. 2, 2a.

The Pacific Eider can usually be told from the Atlantic Eider by the black V-mark on the throat similar to that of the King Eider. In occasional



cheek feathering projects forward of that of the crown.

**ATLANTIC EIDER, *Somateria mollissima*.**

Plate II, Figs. 1, 1a, 2, 2a.

The long Y-shaped arms of the bill processes extending up the sides of the crown are distinctive of the male Atlantic and the Pacific Eiders. In the females of these species the crown feathering not nearly reaching to the nostrils and the cheek feathers extending beyond those of the crown are diagnostic.

In the 1910 A.O.U. Check List, the standard authority, the American Eider is given as a full species, *Somateria dresseri*. Late investigation, however, has shown that it is only a subspecies of the eider common to the New and Old Worlds (Atlantic Eider), as all intermediates between it and

Atlantic specimens this throat mark is said to be present, in which case and in females, the relatively larger and heavier bill, the shorter and more acutely pointed bill processes on the fore crown, and the slightly blunter ending of the feathering on the sides of the bill of the Pacific seem to be the only diagnostic guides. None of these points are satisfactorily obvious or reliable but the ranges of the two species are so widely separated that it will only be birds from a limited section of the Arctic or occasional stragglers that need ever be confused.

**SPECTACLED EIDER, *Arctonetta fischeri*.**

Plate III, Figs. 3, 3a.

The white spot about the eye and the black spectacle mark of the male Spectacled Eider is unmistakable. In the female this white eye spot is indi-

cated by a similar patch of feathers scarcely distinguishable from the surrounding area in coloration but of peculiar velvety texture that makes its outlines obvious. In all plumages the feather line of the bill is distinctive, extending down the culmen of the bill well over the nostril, cutting in an almost straight line from thence to the gape at the sides.

STELLER'S EIDER, *Polysticta stelleri*,  
Plate III, Figs. 1, 1a, 1b.

This is the smallest and the most divergent of the eiders. The male with his strangely pied head and silvery sheen on face is distinctive. The female can be recognized from other eiders by its steel blue

speculum edged above and below with a white line like a mallard.

Probably the bill gives the most satisfactory single character for the recognition of the species. Coues says of it,—“tomial edges dilated and leathery.” In all dry specimens seen by the writer the edges of the upper mandible are incurved, (Fig. 1.a) probably the results of drying, and the normal condition of preserved specimens.

It is thus seen that by comparing the feathering characters about the base of the bill nearly all of these species can be readily identified. With the plates this task should be easy.

#### FURTHER NOTES ON THE ORCHIDS OF HATLEY, STANSTEAD COUNTY, QUEBEC, 1919.

By H. MOUSLEY.

In my last paper on the orchids of Hatley (*Ottawa Naturalist*, Vol. xxxii., 1918, No. 8, pp. 144-147) after recording eighteen species, I concluded by suggesting, that even then, the possibilities of the place might only have been touched upon, seeing that practically the whole of my time had been devoted to the birds, and very little attention paid to the orchids, it having taken eight years to locate the above eighteen species. Now in order to put the above suggestion to the test, and at the same time gratify a long felt wish of becoming better acquainted with the ferns of the district, I decided early in 1919, not without much deliberation however, to entirely ignore the birds after the spring migration and devote the rest of the summer months or until such time as the fall migration set in, to the collecting of ferns, and any further species of orchids, should that indeed be possible.

The weather entirely favoured my plans, it being very hot on and off, all through June and July, with a good deal of humidity in the air, which entirely suited the orchids, many appearing in greater profusion and blooming earlier, than in previous years. Of the ferns, probably forty species have been collected, including the Adder's Tongue (*O. vulgatum*) and at least six species and forms of Botrychiums, two of which have never been found in the Province of Quebec before. These however, will be dealt with in a separate paper, when they have been further critically examined.

Now I have noticed in some of the text books, that it is a moot point in many localities, as to which of the three following orchids is the earliest bloomer, namely, *Cypripedium acaule*, *Orchis spectabile* or *Calypso bulbosa*. There need be no mystery con-

cerning this at Hatley, for it is certainly the lovely little Calypso, which was much more plentiful in 1919 than in the year previous. As regards the showy Lady's Slipper (*C. hirsutum*), I am glad to say after the disaster that overtook the species in 1918 (as previously described), it was found this year growing in greater profusion than ever, one little patch alone containing forty-one blooms, whilst another close to, had seventeen. I only found a few plants, however, with more than one bloom, three blooms being the most in any case. Four snow-white blooms of the Mocassin or Pink Lady's Slipper (*C. acaule*) were noted. Of the Habenarias, I came across one very large plant of the Tall Leafy Green Orchis (*H. hyperborea*), the height of which including the raceme was 9.5 dm., the raceme being 3 dm. I have noticed the larger plants of this *Habenaria*, bloom much earlier as a rule than the smaller ones, and grow in certain localities only. Can it be that they belong to a distinct species?, a contingency not altogether unlikely in *hyperborea*, which is supposed by some authors to include several species.

With the exception of the Wide-leaved Ladies Tresses (*Spiranthes lucida*), I have this year (1919) found all of the other seventeen species enumerated in my previous paper, besides adding another twelve. It will thus be seen, that my total now stands at thirty species and forms of these rare and interesting plants that I have located at Hatley, or considerably more than one-third of all those to be found in eastern North America, and all have been gathered within a space of four square miles. The record for the Gray's Manual area has been made in the State of Vermont I believe, where



thirty-three species of orchids have been collected in a given space of five square miles. This being so, it looks as though I can now safely lay claim to second honours for the Province of Quebec.

Appended is an annotated list of the twelve new species found this year (1919), as well as an abbreviated one, for the benefit of those wishing to see at a glance, the total number of orchids, approximate dates when, and number of stations at which, they have been found.

**LARGE ROUND-LEAVED ORCHIS, *Habenaria orbiculata* (Pursh) Torr.** I first came across this orchid on June 8, four plants in leaf only being found at this date. On subsequent visits, however, I increased this number to eleven, but none of these bloomed, with the exception of one, which when I went to gather it the first time, was not quite fully out. Returning a few days later, I was disappointed to find that the flower had been eaten off, probably by some cows, of which there were a good many grazing in the immediated neighbourhood. Most of the plants were growing under hemlock trees, in company with *C. acaule* and *E. tessellata*.

*Habenaria macrophylla* Goldie. In addition to the eleven plants mentioned above, were two with very much larger leaves than any of the others. Fortunately one of these bloomed, and I think I am justified in recording it as *macrophylla*, for in addition to the size of its leaves, the scape was 41 cm. high, and none of the spurs were less than 3 cm. long, both of these dimensions considerably exceeding those given in Gray's Manual for *orbiculata*. The raceme was 11 cm. long and 5 cm. through, and held fourteen flowers. I first found this particular plant on June 13, the scape then being 18 cm. high, which had increased to 28 cm. by June 22. It was not, however, until the beginning of July, that its full height of 41 cm. was attained, and by the thirteenth, all the fourteen flowers were fully developed, making it, if not exactly a showy, still a fine, and uncommon looking plant, in my opinion.

x *Habenaria Andrewsii*, White. I have no vernacular name for this supposed hybrid between *H. psycodes* and *H. lacera*. I first came across it on July 26, when I found one perfectly white bloom, and one almost so, the top of the raceme only being suffused with pink. They puzzled me at the time, but I entered the record in my Gray's Manual under the above, with a note of interrogation, however, scarcely believing that they could be *Andrewsii*, seeing that there were no *H. lacera* about. Fortunately about a week after, I had the pleasure of

Mr. Ludlow Griscom's company for a few days botanizing, and on August 3, he came across another plant, which also puzzled him. However, on taking it home and critically examining it, he came to the conclusion that it was really *Andrewsii*, and on submitting it to Mr. Oakes Ames, his identification was confirmed, Mr. Ames at the same time questioning the correctness of regarding it as a hybrid between *H. psycodes* x *lacera*. I understand the plant has been found commonly in Newfoundland, which has also aroused suspicion as to its being a hybrid between *H. psycodes* x *lacera*. It may be of interest to here give Mr. Oakes Ames' exact label of determination of the above specimen, which is as follows, viz.: "*Habenaria Andrewsii* White? The divisions of the labellum not as deeply fringed as in Andrew's specimens from Vermont. This specimen is more like material from Newfoundland (Fernald and Wiegand 5216). The raceme of this specimen is rather characteristic of the hybrid. It may be convenient to regard it as of hybrid origin, with *psycodes lacera* parentage!" It seems obvious from this comment, that my failure to find *lacera* anywhere in the district, is an interesting piece of evidence.

**LARGE PURPLE FRINGED ORCHIS, *Habenaria fimbriata* (Ait) R. Br.** It was not until July 10, that I came upon a colony of these delicate belles of the swamp, as Thoreau calls them, alluding to the peculiar charm of the pale pink flowers. The larger, paler flowered, and usually more open raceme, distinguishes this species from its cousin *H. psycodes*, besides which it generally occurs in more shady situations than the latter. One very fine plant that I found, had a total height of 9.5 dm., the raceme being 18 cm. long by 5 cm. through, and the four large leaves were 16-18 cm. long by 6-10 cm. broad. My dates for fresh blooms, range from the tenth to about the middle of July, but judging from the condition of those on the tenth, it is evidently to be found somewhat earlier.

**GRASS PINK, *Calopogon pulchellus* (Sw.) R. Br.** The peculiarity of this lovely magenta crimson orchid, consists in its not having the ovary twisted, so that consequently the lip is on the upper, instead of the lower side of the flower. Apparently it is rare at Hatley, for I have only found one station for it so far, in the large bog to the north-east of the village, and then only a very few plants could be located. It was in bloom from July 8-15.

**SLENDER LADIES' TRESSES, *Spiranthes gracilis* (Bigel) Beck.** This slender little orchid like the Grass Pink, is apparently rare here, only one sta-

tion with three plants having so far been discovered. Two of these were found on July 16, and the remaining one on July 25, but they were not in bloom until August 3. The situation consisted of some very dry hilly knolls, on the outskirts of a large wood, and I am not likely to forget the day, seeing that at the same time I also discovered the Green Adder's Mouth (*Microstylis unifolia*), and those rare little ferns the Adder's Tongue (*Ophioglossum vulgatum*), and Little Grape Fern (*Botrychium simplex*), the dry location for these three latter, being somewhat uncommon, as they generally occur in damper situations as a rule.

**HODDIGES RATTLENAKE PLANTAIN**, *Epipactis tessellata* (Lodd) A. A. Eaton. I really found this orchid away back in 1915, but as it was not then in bloom, and I was unacquainted with the difference in the shape, size, and colouring of its leaves, to those of *E. repens*, I passed it over, and took it for the latter species. However in the fall of 1918, I came across a few dead scapes, which by their size and height, struck me at once as not being *repens*, but something new. This idea was further strengthened in the following spring, when the difference in the leaves was noticed, and later in July when the flowers appeared, all doubt was at an end, as they were then seen to be the present species, and not *repens*.

**HEART-LEAVED TWAYBLADE**, *Listera cordata* (Lin.) R. Br. This little orchid even if it were common, would nevertheless be hard to find, owing to its small size, and inconspicuous madder-purple flowers. I first came across it on June 8, of the present year (1919), growing amongst sphagnum moss, in a damp wood to the north-west of the village, and again on July 8, in the large bog to the north-east of the village, and yet again on August 4 (one plant only), in the woods surrounding the great Brulé bog near Waterville, some miles also to the north-east of Hatley. In the first mentioned locality, I found bunches of eight, ten, nineteen, and in one case as many as twenty-seven plants, all growing somewhat closely together. In two cases, there was a small bract leaf (the same as often occurs in *H. obtusata*), at the base of the raceme, and in a few the lip was devoid of madder-purple, this giving the whole raceme a green appearance. My dates for fresh blooms, range from June 8 to July 3. In "THE CANADIAN NATURALIST," 1840, pp. 297-303, Gosse gives a good account of the Brulé, describing it as exactly resembling the bogs of Newfoundland. It consists of some thousands of acres, and is said to owe its origin to the beavers, which were formerly numerous, damming up the streams, which overflowing and spreading over the flat lands, killed the growing timber. When Mr. Griscom and I visited it for the first time, on August 4, we both

came to the conclusion, that there were great possibilities regarding the place. Seven different orchids were found, even at this somewhat late date, as well as many of the plants, shrubs and trees, mentioned by Gosse as growing in similar situations in Newfoundland, including black spruce, which I had not noticed here before. It is hoped to again visit the locality early in June, when good results are expected, especially in regard to the orchids, of which our trip in August gave promise.

**LARGE CORAL ROOT**, *Corallorrhiza maculata* Raf. It was not until August 9, that I came upon a little colony of this species, consisting of forty plants, the blooms of which were over of course, but the fruit still remained. They were found growing in a small cedar wood, on some dry sloping ground, about two miles to the south-east of the village. Later on, or on August 21, another plant was shown to me on the roadside, some few miles to the north of the present site, but also on the east of the village.

**WHITE ADDER'S MOUTH**, *Microstylis monophyllos* (Linn) Lindl. This rare little orchid like many others, is easily passed over, unless you are specially looking for it, which no doubt accounts for my having found it during the present season (1919), when all my energies were devoted to the fern and orchid families, instead of the birds. The situation was a low damp one, at the edge of a little wood, where twenty-four plants were located. Later on I found one other plant in a similar situation, two miles to the north-west of the village, whereas the first locality was two miles to the south-east of it. The plants were just in their prime on June 30, the day on which I found them.

**GREEN ADDER'S MOUTH**, *Microstylis unifolia* (Michx) B.S.P. This is another somewhat inconspicuous little plant, but is much commoner than *monophyllos*, there being at least five stations at which I have found it, and generally in somewhat goodly numbers. Its habitat seems to vary a good deal, the situation sometimes being very dry, as already mentioned in the account of the Slender Ladies' Tresses, and at others very damp, the same as those favoured by *monophyllos*.

**LOESEL'S TWAYBLADE**, *Liparis Loeselii* (Linn) Richard. This is another of those somewhat inconspicuous little orchids, and one which I must have passed over many times, before finally noticing it in bloom, on July 12 of the present year (1919). It certainly favours very wet boggy places, especially those where the water drains out of the land, at the foot of hill-sides. At present I have located about four stations, where its numbers vary considerably, from three plants in one, to some dozens in another. My data for fresh blooms range from June 27 to July 5.

List of the orchids of Hatley, with approx. stations, and dates of flowering.

Stations	Species	Flowering	Stations	Species	Flowering
			1	<i>Arethusa bulbosa</i>	June 11-July 17
			1	<i>Spiranthes lucida</i>	Aug. 3
3	<i>Cypripedium parviflorum</i>	May 29-June 10		(three plants only)	
3	do		1	<i>Spiranthes lucida</i>	July 20
	var <i>pubescens</i>	May 28-June 18		(one plant only)	
2	<i>Cypripedium hircutum</i>	June 14-July 17	Many	<i>Spiranthes cernua</i>	Aug. 17-Oct. 17
8	do <i>acaule</i>	May 24-June 18	Many	do <i>Romanzoffiana</i>	July 16-Aug. 22
4	<i>Orchis spectabilis</i>	June 1	4	<i>Epipactis repens</i> var <i>ophioides</i>	July 22-Aug. 22
4	<i>Habenaria bracteata</i>	May 20-June 11	4	<i>Epipactis tesselata</i>	July 8-Aug. 2
Many	do <i>hyperborea</i>	May 31-July 25	3	<i>Listera cordata</i>	June 8-July 3
2	do <i>dilatata</i>	June 18-July 26	6	do <i>convallarioides</i>	June 18-July 17
Many	do <i>obtusata</i>	June 8-July 17	Many	<i>Corallorrhiza trifida</i>	May 20-June 15
2	do <i>orbiculata</i>	July 8	2	do <i>maculata</i>	Aug. 9 (in seed)
1	do <i>macrophylla</i>	July 13	2	<i>Microstylis monophyllos</i>	June 30-July 4
Many	do <i>psycodes</i>	July 19-Aug. 15	5	do <i>unifolia</i>	July 12-Aug. 3
2	do <i>Andrewsii</i>	July 26-Aug. 3	4	<i>Liparis Loeselii</i>	June 27-July 5
2	do <i>fimbriata</i>	July 10-17	1	<i>Calyso bulbosa</i>	May 15-28
1	<i>Calopogon pulchellus</i>	July 8-15			

### AN ANNOTATED LIST OF THE BIRDS OF COLDSTREAM, ONTARIO, VICINITY.

By A. A. WOOD.

1. HOBOELL'S GREBE, *Colymbus holboelli*. One shot, Oct. 6, 1902, on Duncrief pond—four miles north of Coldstream—by Roger T. Hedley. The specimen is in my collection, No. 1,402.

2. HORNED GREBE, *Colymbus auritus*. A few stop on the mill-pond nearly every spring; only an occasional one seen in fall. They seem much friendlier than the Pied-bill, while here, especially when a single bird comes. If you sit quietly at edge of pond, it will swim within a few feet of you then fly to other end of pond, only to drift back again. It will repeat this several times, uttering its plaintive cry at intervals.

3. PIED-BILLED GREBE, *Podilymbus podiceps*. A pair bred here quite regularly previous to 1904; rather rare now in spring; common and regular in fall.

4. LOON, *Gavia immer*. A single bird seen every three or four years in spring; rare in fall.

5. HERRING GULL, *Larus argentatus*. A few small flocks pass through each spring and fall, some resting on the pond a few hours. I think the birds that touch here are passing between Lakes Huron and Erie. Coldstream is about in a straight line between Grand Bend and Pt. Stanley making it nearly a fifty mile flight direct.

6. BONAPARTE'S GULL, *Larus philadelphia*. Two came in spring of 1900. One was shot. Have a specimen taken by R. T. Hedley, at Duncrief, Apr. 26, 1902.

7. COMMON TERN, *Sterna hirundo*. I have two specimens shot by R. T. Hedley at Duncrief; the first, I believe to be taken in Middlesex.

8. BLACK TERN, *Hydrochelidon nigra surinamensis*. One specimen in my collection taken by R. T. Hedley at Duncrief—also a first record for this county.

9. MERGANSER, *Mergus americanus*. A few stay in the open rapids of the creek every other year, through January and February often they will walk away from the water in the snow considerable distances.

10. HOODED MERGANSER, *Lophodytes cucullatus*. Not regular. Have taken them both spring and autumn.

11. MALLARD, *Anas platyrhynchos*. Very irregular; more seen at Duncrief.

12. BLACK DUCK, *Anas rubripes*. Fairly common migrant. A flock of nearly 200 stayed in a slough, two miles south, about two weeks in August, 1917. The flocks very seldom come to the ponds; they seem to like the little sloughs back in the fields, especially late in the season.

13. GREEN-WINGED TEAL, *Nettion carolinense*. I have never seen them near in spring; always a few come through in the fall.

14. BLUE-WINGED TEAL, *Querquedula discors*. Not as common as the Green-wing.

15. SHOVELLER, *Spatula clypeata*. Only one specimen noted.

16. WOOD DUCK, *Aix sponsa*. Very rare now. Occasionally one or two stop at Konoka—eight miles south.

17. REDHEAD, *Marila americana*. Frequently one is met with in fall along with the Teals.

18. SCAUP DUCK, *Marila marila*. R. T. Hedley has a specimen he took at Duncrief, which, the late Robert Elliott of Plover Mills, Ont., identified as *M. marila*.

19. LESSER SCAUP DUCK, *Marila affinis*. Regular spring and fall visitor. The latest spring record I have is May 10, 1916.

20. GOLDEN-EYE, *Clangula clangula*. Nearly always appears spring and fall. Occasionally stays on the creek with the Mergansers. A flock of 20 came to the pond one fall.

21. BARROW'S GOLDEN-EYE, *Clangula islandica*. I have a young male I shot here October 17, 1917. The only Golden-eye seen with the crescent spot.

22. BUFFLEHEAD, *Charitonetta albeola*. Our commonest duck. They usually stay a day or two if unmolested.

23. OLD SQUAW, *Harlelda hyemalis*. A male in full plumage was taken at the Duncrief pond by R. T. Hedley.

24. KING EIDER, *Somateria spectabilis*. One taken at Duncrief by R. T. Hedley, November 24, 1900; the first Middlesex record. The specimen is in the collection of W. E. Saunders, of London.

25. WHITE-WINGED SCOTER, *Oidemia deglandi*. I have a specimen taken by R. T. Hedley, at Duncrief.

26. RUDDY DUCK, *Erismatura jamaicensis*. Rare fall migrant.

27. CANADA GOOSE, *Branta canadensis*. Abundant migrant. Sometimes feeding on the wheat fields in spring.

28. AMERICAN BITTERN, *Botaurus lentiginosus*. Always present during the breeding season. They have their eggs laid by June 3.

29. LEAST BITTERN, *Ixobrychus exilis*. Took one September 13, 1917, the only individual I have seen near Coldstream.

30. GREAT BLUE HERON, *Ardea herodias*. There is a black ash swamp 2½ miles east, where about 22 pairs have nested for years. The majority of the nest-trees are very tall dead ashes standing in water; in most cases next to impossible to reach. A set of six was taken from there by Clifford Zavitz, May 10, 1901; incubation was very far advanced, as they are through laying the last week in April. There is always a pair of Great Horned Owls staying there, as well as in the heronry north of here. A heron has spent the winter along the creek several times.

31. GREEN HERON, *Butorides virescens*. A pair

nest here regularly. Four nests observed—two in cedar, one in aspen and one in hawthorn, all quite near the creek. Last year the crows destroyed one set of five. Four more were laid in the same nest.

32. VIRGINIA RAIL, *Rallus virginianus*. Rather scarce. Usually a pair breeds. I found the young birds one season; have sets of nine and ten eggs.

33. SORA, *Porzana carolina*. At least one pair seen each year. In one nest containing fifteen eggs, they were piled up in two layers.

34. COOT, *Fulica americana*. Occasionally breeds, but much more frequently seen in the fall.

35. WOODCOCK, *Philohela minor*. Scarce now but a pair always breeds. Young birds seen quite regularly. I saw a nest with four infertile eggs, May 10, 1915. The bird allowed me to stroke her head before leaving. Evidently just the female was present that year, as during repeated waits in early April, no notes were heard from the male. Just the one bird was seen all season.

36. WILSON'S SNIPE, *Gallinago delicata*. Common spring and fall.

37. KNOT, *Tringa canutus*. Two birds were found dead under telephone wires, about eight and one-half miles south. They are mounted and in the possession of Mr. Knolls, Delaware.

38. PECTORAL SANDPIPER, *Pisobia maculata*. One specimen in my collection taken by R. T. Hedley, at Duncrief, Ont., October 18, 1901.

39. LEAST SANDPIPER, *Pisobia minutella*. Commonest in late July and early August.

40. RED-BACKED SANDPIPER, *Pelidna alpina*. Two came to the pond, October 15, 1917. Secured one specimen. These are the only ones noted.

41. SEMI-PALMATED SANDPIPER, *Ereunetes pusillus*. Frequently seen with Least Sandpiper.

42. GREATER YELLOW-LEGS, *Totanus melanoleucus*. A few each spring. Quite common in the fall.

43. LESSER YELLOW-LEGS, *Totanus flavipes*. Not so regular as *melanoleucus*.

44. SOLITARY SANDPIPER, *Helodromas solitarius*. Irregular in spring, but always a few in August.

45. UPLAND PLOVER, *Bartrania longicauda*. Several pairs nest regularly in the large grass field. W. R. Campbell, of Lobo, has a set of four taken in May, 1914. I have a set of four found on June 3, 1915. Both birds flushed hard from the nest; the one in June, 1915, did not leave until grass-tuft around the nest was touched (and these were fresh eggs). While searching for the last mentioned nest, two birds continually circled over the field giving their odd rattling notes. We thought at the time they were the pair from the nest but on finding a bird setting, concluded, there must have been two occu-



pied nests and that these were the two males—of the two birds off duty from the nests.

46. SPOTTED SANDPIPER, *Actitis macularia*. Common summer resident. An instance which might suggest that the number of eggs in a set is, perhaps, in a small measure voluntarily under control of the bird is the following: A pair of these birds were excavating the slight depression necessary for their nest; when they came to a stone practically the same size as an egg, they left this and built the nest around it, then laid three eggs which, with the stone, formed the perfect circle usual with the four eggs. I think if the stone had been removed at first, they would have laid the usual set of four, as I have never found a nest with other than four eggs.

47. BLACK-BELLIED PLOVER, *Squatarola squatarola*. Six were shot several years ago.

48. GOLDEN PLOVER, *Charadrius dominicus*. Two specimens in my collection taken by R. T. Hedley, at Duncrief, September 19, 1904.

49. KILLDEER, *Oxyechus vociferus*. Common summer resident.

50. SEMI-PALMATED PLOVER, *Aegialitis semipalmata*. Took one at Duncrief, July 29, 1918.

51. BOBWHITE, *Colinus virginianus*. Becoming exceedingly scarce; rarely seen now. A number of years ago they bred quite commonly.

52. RUFFED-CROUSE, *Bonasa umbellus*. Quite scarce in the township now.

53. MOURNING DOVE, *Zenaidura macroura*. Very generally distributed. I have found fresh eggs from the last week in April until the third week in June.

54. TURKEY VULTURE, *Cathartes aura*. Three pair bred in the vicinity every year. Four nests noted were all in hollow logs. W. R. Campbell took a set of one, May 18, 1919; it was in a hollow of the rotten wood, about twelve feet from opening, very difficult to see from end of log. Egg far advanced.

55. MARSH HAWK, *Circus hudsonius*. Breeds here regularly. See more of the "blue" males than formerly.

56. SHARP-SKINNED HAWK, *Accipiter velox*. A few seen every spring and fall, but only occasionally in summer.

57. COOPER'S HAWK, *Accipiter cooperi*. Only one or two observed each season.

58. GOSHAWK, *Astur atricapillus*. Occasionally comes in late fall.

59. RED-TAILED HAWK, *Buteo borealis*. Is always common in breeding season, a pair or two often staying over winter. Then, they usually nest earlier. On March 30, 1914, a nest was found with three eggs. This pair was usually resident and laid at least a week earlier than the average migrating

bird. Twelve nests were noted near here in 1916.

60. RED-SHOULDERED HAWK, *Buteo lineatus*. The Red-shoulder seems to be locally distributed. It is very scarce in this part, while south and east a few miles it is commoner than the Red-tail. On May 10, 1901, C. G. Zavitz and I found a Great Blue Heron's nest containing three eggs and one Red-shouldered Hawk's egg, all equally incubated (far advanced). The Hawk doubtless had only laid one egg by the time the colony of Herons came and when it was driven out. I have found this Hawk to lay in a squirrel's nest of leaves, without adding any twigs or sticks, but never have heard of its having laid in other bird's nests.

61. BROAD-WINGED HAWK, *Buteo platypterus*. Quite abundant during migration. Very ordinary fare seems to satisfy these birds. I have found a Mole shrew, *Blarina brevicauda*, in the stomach of one specimen in the spring of 1919.

62. ROUGH-LEGGED HAWK, *Archibuteo lagopus*. Two or three are seen nearly every year.

63. BALD EAGLE, *Haliaeetus leucocephalus*. One or two seen nearly every year. A pair bred about about eight miles south in the spring of 1919.

64. SPARROW HAWK, *Falco sparverius*. Regular summer resident. Although usually subsisting on small fare, I have seen them carry off an adult robin.

65. OSPREY, *Pandion haliaetus*. Usually one or two visit the pond each spring.

66. LONG-EARED OWL, *Asio wilsonianus*. A pair breeds always in one of the cedar swamps or woods each spring. I think their average date of finishing laying is about April 1, but the crows destroy the first set more often than not. The five sets noted, which escaped destruction by crows before completion, each contained five eggs; all were in old crow's nests, no repairs evidently being made. The eggs in the early sets are laid usually at intervals of several days, so the young birds are quite noticeably different in size, especially while in the natal down. One set taken, May 1, 1916, all eggs were uniformly incubated; they may have been laid unevenly (as the bird would not have to set until through laying this time of year) but I think not as I have never found a nest with an egg in it and the bird not setting close. They apparently are much like the Great Horns, nesting at the usual time regardless of the weather. One pair had two eggs on March 31, 1903, when there was four inches of snow on the ground.

In a nest found April 24, 1917, the young birds stayed in the nest three and a half weeks. The old birds were very bold. One would alight on a limb near the next tree, flapping its wings, then fall, sometimes fifteen feet, to the ground, floundering about among the leaves as if wounded.



They seem to feed almost entirely on meadow voles and white-footed mice. In twenty disgorged pellets of fur and bones found under roost trees, 15 contained, each, skulls, etc. of two *M. pennsylvanicus*, 3, each, one *M. pennsylvanicus* and 2, each, one *M. pennsylvanicus* and one *P. leucopus*. When one bird is setting the other keeps a plentiful supply of mice; usually a mouse is lying on the edge of the nest.

67. SHORT-EARED OWL, *Asio flammeus*. Some autumns a few are seen, also, on through the winter.

68. SAW-WHET OWL, *Cryptoglaux acadia*. Rare only one specimen taken, November 2, 1913.

69. SCREECH OWL, *Otis asio*. Common resident.

70. GREAT HORNED OWL, *Bubo virginianus*. Several pair breed near here, laying the last week in February. On April 28, 1914, in climbing to a Great Blue Heron's nest, was surprised to find a young Horned Owl, nearly ready to fly. In a heron's nest a few rods over was another young owl. I tried this bird but it couldn't fly, so I presume the old bird must have moved the one to the second nest—perhaps when they became quarrelsome. Evidently the other nest was appropriated after the herons took possession, as a pair of herons were building a new nest; the other 21 were all occupied. The owls were nearly in the centre of the heronry. I took three specimens in the spring of 1918 which I think are a phase of *subarcticus*.

71. SNOWY OWL, *Nyctea nyctea*. Very seldom seen, more commonly appearing a few miles north.

72. YELLOW-BILLED CUCKOO, *Coccyzus americanus*. Common; breeds.

73. BLACK-BILLED CUCKOO, *Coccyzus erythrophthalmus*. Common; breeds.

74. BELTED KINGFISHER, *Ceryle alcyon*. Has stayed over winter.

75. HAIRY WOODPECKER, *Dryobates villosus*. *T. v. villosus* seems to be the common winter form.

76. DOWNY WOODPECKER, *Dryobates pubescens*. Is commoner than the Hairy woodpecker. Several present at all seasons.

77. ARCTIC THREE-TOED WOODPECKER, *Picoides arcticus*. W. R. Campbell took a male in 1913 and I a female, Nov. 20, 1918, the only two I have seen.

78. YELLOW-BELLIED SAPSUCKER, *Sphyrapicus varius*. Regular migrant.

79. PILEATED WOODPECKER, *Phocotomus pileatus*. Two pair nest regularly a few miles southwest of here. One dead beech stub has three nest-holes about three or four feet apart. The lowest forty-five feet from ground.

80. RED-HEADED WOODPECKER, *Melanerpes erythrocephalus*. Not nearly so common as formerly. Winters over in years the beech-nuts are

plentiful. They seem to nest earlier those years.

81. RED-BELLIED WOODPECKER, *Centurus carolinus*. A few pair resident; but used to be much more common. A nest May 7, 1913, contained two fresh eggs.

82. FLICKER, *Colaptes auratus*. Very common. An occasional bird staying through the winter.

83. WHIP-POOR-WILL, *Anthrostomos vociferus*. Quite regular, never very many.

84. NIGHTHAWK, *Chordeiles virginianus*. Always several pairs. Found a nest June 4, 1918, near edge of a small wood. The eggs were laid in the imprint of someone's heel in the earth, only one small leaf under eggs.

85. CHIMNEY SWIFT, *Chaetura pelagica*. They seem to build in silos, granaries, or in barns on the siding as often as in chimneys.

86. RUBY-THROATED HUMMINGBIRD, *Archilochus colubris*. Breeds. Is quite abundant along the borders of swamps when the spotted jewel-weed (*Impatiens biflora*) is in bloom.

87. KINGBIRD, *Tyrannus tyrannus*. Common; breeds.

88. CRESTED FLYCATCHER, *Myiarchus crinitus*. Fairly common; breeds.

89. PHOEBE, *Sayornis phoebe*. Very common; breeds.

90. OLIVE-SIDED FLYCATCHER, *Nuttallornis borealis*. Only three individuals seen.

91. WOOD PEWEE, *Myiochanes virens*. Common; breeds.

92. YELLOW-BELLIED FLYCATCHER, *Empidonax flaviventris*. Rare. One taken May 28, 1919.

93. ALDER FLYCATCHER, *Empidonax traillii*. Two *E. t. alnorum* taken May 10, 1918. Not more than one or two seen in the spring.

94. LEAST FLYCATCHER, *Empidonax minimus*. Common in migration. Only a very few seem to breed here.

95. PRAIRIE HORNED LARK, *Otocoris alpestris*. *O. a. praticola* is a common resident, raising two broods a season. It seems more abundant in winter owing to its being in flocks. Took an albino female June 11, 1917.

96. BLUE JAY, *Cyanocitta cristata*. Resident. They gather in the Cedar swamps in the late fall and eat large quantities of Skunk Cabbage (*Symplocarpus foetidus*) seeds.

97. CROW, *Corvus brachyrhynchos*. Abundant resident; sometimes rather scarce in winter. Their chief form of recreation seems to be making life miserable for the Horned Owls. Yet they prove an effectual body guard, when the owl is pursued with a gun, always getting him in motion in plenty of time.

98. BOBOLINK, *Dolichonyx oryzivorus*. Very common summer resident.
99. COWBIRD, *Molothrus ater*. Much too abundant. Most of the small birds are burdened with the rearing of its offspring.
100. RED-WINGED BLACKBIRD, *Agelaius phoeniceus*. Breeds in most of the cat-tail runs, also building in the wild Red Osier, *Cornus stolonifera*, and sedge grasses.
101. MEADOWLARK, *Sturnella magna*. Common; breeds. Sometimes few stay over winter.
102. ORCHARD ORIOLE, *Icterus spurius*. One noted in song May 31, 1917.
103. BALTIMORE ORIOLE, *Icterus galbula*. Common, breeds.
104. RUSTY GRACLE, *Euphagus carolinus*. Common migrant. More abundant in fall.
105. BRONZED GRACLE, *Quiscalus quiscula*. Abundant summer resident. Occasional birds staying in winter. Is in rather poor grace with the farmers of this locality, through its love for sprouting corn, yet I think they receive much more benefit than harm from the bird.
106. PINE GROSBEAK, *Pinicola enucleator*. A number were here through the winter of 1918-19. They seemed to feed largely on apple seeds.
107. PURPLE FINCH, *Carpodacus purpureus*. They seem to be great wanderers, as there are long stretches at a time through the winter when they are entirely absent.
108. CROSSBILL, *Loxia curvirostra*. Three seen Feb. 14, 1918.
109. WHITE-WINGED CROSSBILL, *Loxia leucoptera*. Saw six Nov. 18, 1917.
110. REDPOLL, *Acanthis linaria*. Some winters quite abundant, but usually only a very few seen, or entirely absent.
111. GOLDFINCH *Astragalinus tristis*. Abundant resident. Found commonest in winter on the Black Birch, *Betula lenta*. Feeds on the catkins.
112. PINE SISKIN, *Spinus pinus*. Occasional small flocks met with in fall.
113. SHOW BUNTING, *Plectrophenax nivalis*. Abundant winter visitor.
114. VESPER SPARROW, *Foocetes gramineus*. Very common; raising two and three broods a season.
115. SAVANNAH SPARROW, *Passerculus sandwichensis*. Common summer resident.
116. GRASSHOPPER SPARROW, *Ammodramus savannarum*. Regular summer visitor. Have heard them in song up to the last week in July.
117. WHITE-CROWNED SPARROW, *Zonotrichia leucophrys*. Always present in spring and fall migrations.
118. WHITE-THROATED SPARROW, *Zonotrichia albicollis*. Abundant in spring and fall. Have never observed it during the breeding season.
119. TREE SPARROW, *Spizella monticola*. Common winter resident; remaining until the second week in April.
120. CHIPPING SPARROW, *Spizella passerina*. Very common; breeds.
121. FIELD SPARROW, *Spizella pusilla*. Very few here. Common four miles south-west.
122. SLATE-COLORED JUNCO, *Junco hyemalis*. Abundant in spring and fall; a very few remaining to breed. Always quite a number present through the winter.
123. SONG SPARROW, *Melospiza melodia*. Very abundant summer resident. A few spend the winter.
124. LINCOLN'S SPARROW, *Melospiza lincolni*. Saw three Oct. 3, 1917. Took one specimen. They did not skulk through the grass, as I had expected, but stayed in the low dog-wood bushes which margined the pond.
125. SWAMP SPARROW, *Melospiza georgiana*. Breeds sparingly here each season.
126. FOX SPARROW, *Passerella iliaca*. Five to ten seen each migration.
127. TOWHEE, *Pipilo erythrophthalmus*. Common. A few wintered here the season of 1917-18.
128. CARDINAL, *Cardinalis cardinalis*. One taken May 3, 1918. The first to be observed. Another heard July 8, 1918.
129. ROSE-BREADED GROSBEAK, *Zamelodia ludoviciana*. Common; breeds.
130. INDIGO BUNTING, *Passerina cyanea*. A pair breeds in nearly every large raspberry patch.
131. SCARLET Tanager, *Piranga erythromelas*. Common. Took a beautiful male June 3, 1918, half way between summer and winter plumage, yet it was full—no pin-feathers. The underparts were color of the female with heavy, clear-cut blotches of scarlet. Crown, nape and back, variegated with scarlet and green, darker than crown of female.
132. PURPLE MARTIN, *Progne subis*. Only one seen—June 1, 1918.
133. CLIFF SWALLOW, *Petrochelidon lunifrons*. Occasionally a colony attempts to build under the eaves of a barn, but are usually driven out by House Sparrows.
134. BARN SWALLOW, *Hirundo erythrogaster*. Common; breeds.
135. TREE SWALLOW, *Iridoprocne bicolor*. Regular migrant; few nesting.
136. BANK SWALLOW, *Riparia riparia*. A few breed in most of the gravel-pits. Larger colonies in the sand-banks along the creek.

137. ROUGH-WINGED SWALLOW, *Stelgidopteryx serripennis*. Becoming commoner. Several pair nest each season. Eggs are laid early in the second week in June. All nests I examined contained six eggs.
138. CEDAR WAXWING, *Bombocilla cedrorum*. Resident, but very uncertain in winter, sometimes not noted until spring.
139. NORTHERN SHRIKE, *Lanius borealis*. Usually one each fall or winter.
140. MIGRANT SHRIKE, *Lanius ludovicianus*. A pair or two always nested, but none seen near since 1918.
141. RED-EYED VIREO, *Vireosylva olivacea*. Common summer resident. Last spring (June 8, 1918) I noticed a Red-eye excited over something, then saw a chipmunk climbing the sapling the bird was in. When he was about eight feet up, the vireo darted down knocking him to the ground. The other bird was on the nest at the end of one of the branches. The nest contained four cowbird's eggs and one of their own, so little was gained in keeping the chipmunk away.
142. PHILADELPHIA VIREO, *Vireosylva philadelphia*. Appears sparingly early in the last week of May.
143. WARBLING VIREO, *Vireosylva gilva*. Three or four pair breed in the village every summer.
144. YELLOW-THROATED VIREO, *Lanivireo flavifrons*. A regular summer resident.
145. BLUE-HEADED VIREO, *Lanivireo solitarius*. Usually from one to six seen each spring and fall.
146. BLACK AND WHITE WARBLER, *Mniotilta varia*. Common migrant. Very seldom seen during nesting season.
147. GOLDEN-WINGED WARBLER, *Vermivora chrysoptera*. A pair regularly breeds near here, May 18, 1919, saw five.
148. NASHVILLE WARBLER, *Vermivora rubricapilla*. Never abundant. A few seen each spring.
149. ORANGE-CROWNED WARBLER, *Vermivora celata*. Only one positively identified, a male, May 9, 1918.
150. TENNESSEE WARBLER, *Vermivora peregrina*. Fairly well represented from May 15 to 25. Always a few in fall.
151. PARULA WARBLER, *Compsothlypis americana*. Have only observed it in spring.
152. CAPE MAY WARBLER, *Dendroica tigrina*. Arrives about May 6. Usually see from two to six each spring; one or two in the fall.
153. YELLOW WARBLER, *Dendroica aestiva*. Very common summer resident.
154. BLACK-THROATED BLUE WARBLER, *Dendroica caerulescens*. Common migrant spring and fall.
155. MYRTLE WARBLER, *Dendroica coronata*. Abundant migrant.
156. MAGNOLIA WARBLER, *Dendroica magnolia*. Common, spring and fall.
157. CERULEAN WARBLER, *Dendroica cerulea*. Arrives about May 13. Breeds in a number of nearby woods.
158. CHESTNUT-SIDED WARBLER, *Dendroica pensylvanica*. Very common during migration, but only a few remaining to breed. Found two pair building June 13, 1918.
159. BAY-BRESTED WARBLER, *Dendroica castanea*. Always quite a number in spring, the females arriving nearly a week later than the males. Have never taken it in autumn.
160. BLACK-POLL WARBLER, *Dendroica striata*. Regular, spring and fall, but in no great numbers.
161. BLACKBURNIAN WARBLER, *Dendroica fusca*. Very abundant migrant. Spring stay is about May 12-29.
162. BLACK-THROATED GREEN WARBLER, *Dendroica virens*. Very regular in spring and fall.
163. PALM WARBLER, *Dendroica palmarum*. Most common in fall. All specimens I have examined were *D. p. palmarum*.
164. PRAIRIE WARBLER, *Dendroica discolor*. On the evening of May 20, 1919, C. H. Zavitz, of Coldstream told me of seeing a warbler in an orchard which he took to be the Prairie. I was on the ground at sunrise the next morning and secured a male, the only record for here.
165. OVENBIRD, *Seiurus aurocapillus*. Common; breeds in most of the woods.
166. WATER-THRUSH, *Seiurus noveboracensis*. Always a few each spring; have never heard them in June. May 8, 1917, I took a water-thrush which agrees perfectly in measurements and color with *S. n. notabilis*. My other skins fit *noveboracensis* fairly well.
167. CONNECTICUT WARBLER, *Oporornis agilis*. Usually see two or three each spring in the woods or mixed swamps.
168. MOURNING WARBLER, *Oporornis philadelphia*. Always several each spring, but usually only a pair stay to breed.
169. MARYLAND YELLOW-THROAT, *Geothlypis trichas*. Several pair breed.
170. YELLOW-BREASTED CHAT, *Icteria virens*. One taken here on May 14, 1918, by Hoyes Lloyd. The only record.
171. WILSON'S WARBLER, *Wilsonia pusilla*. Occurs sparingly as a migrant.
172. CANADA WARBLER, *Wilsonia canadensis*. Common migrant.
173. REDSTART, *Setophaga ruticilla*. Common during migration; quite a number breed.

174. PIPIT, *Anthus rubescens*. Occurs both spring and fall but very irregular; always in flocks.

175. CATBIRD, *Dumetella carolinensis*. Very common summer resident. W. R. Campbell records one as wintering season of 1918-19.

176. BROWN THRASHER, *Toxostoma rufum*. Common. Eggs laid about May 10.

177. CAROLINA WREN, *Thryothorus ludovicianus*. A male came in spring of 1916; was in full song until August.

178. HOUSE WREN, *Troglodytes aedon*. Very common; breeds nearly as often in old stumps in clearings as about farm-buildings.

179. WINTER WREN, *Nannus hiemalis*. Have only found it as a migrant in spring and fall; is fairly common.

180. SHORT-BILLED MARSH WREN, *Cistothorus stellaris*. Have observed it but twice locally; took a specimen Sept. 2, 1916; saw another June 5, 1917.

181. BROWN CREEPER, *Certhia familiaris*. Usually resident. Absent winter of 1918-19. There is usually one to be seen in a mixed flock of chickadees, nuthatches and downy-woodpeckers.

182. WHITE-BREADED NUTHATCH, *Sitta carolinensis*. Common resident.

183. RED-BREADED NUTHATCH, *Sitta canadensis*. Quite common in spring and fall of some years; during others nearly absent.

184. CHICKADEE, *Penthestes atricapillus*. Common resident; nesting early in May.

185. GOLDEN-CROWNED KINGLET, *Regulus satrapa*. Ordinarily fairly common all winter and

spring, but the last two winters (1917-18, 1918-19) entirely absent. Only one individual seen each spring.

186. RUBY-CROWNED KINGLET, *Regulus calendula*. Regular migrant.

187. BLUE-GRAY GNATCATCHER, *Poliopila caerulea*. Rare; only two noted.

188. WOOD THRUSH, *Hylocichla mustelina*. Fairly common summer resident, breeding in most of the woods.

189. VEERY, *Hylocichla fuscescens*. Not as common as the woodthrush in the breeding season, but common during migration.

190. GRAY-CHEEKED THRUSH, *Hylocichla aliciae*. Rare migrant. Took a specimen May 13, 1918; saw one May 14, 1919.

191. OLIVE-BACKED THRUSH, *Hylocichla ustulata*. Common spring and autumn migrant.

192. HERMIT THRUSH, *Hylocichla guttata*. Appears in numbers both spring and fall.

193. ROBIN, *Planesticus migratorius*. Very abundant, occasional birds staying through the winter. The spring of 1915, two albinos hatched from a nest at Lobo (five miles east). One was practically white, the other had a dark head. The white one became quite tame, as food was put out for it daily. It returned the next spring, but soon disappeared, probably taken by a cat.

194. BLUEBIRD, *Sialia sialis*. Very commonly distributed. Oct. 12, 1914, I took an albino from a large flock. It is pure white with a little dusky shade on wings and tail, crown, nape and back showing very pale blue.\*

### THREE NEW PELECYPODS FROM THE COLORADOAN OF THE PEACE AND SMOKY VALLEYS, ALBERTA\*

By F. H. McLEARN.

The revised stratigraphy of the Cretaceous of northern Alberta is treated in recent reports of the Geological Survey of Canada.<sup>1</sup> To them the reader is referred for detailed lithological and structural

descriptions, thicknesses, areal distribution, correlation, correlation table, faunal lists, and description of new species. A statement of the principal facts concerning the Coloradoan of the Peace and Smoky Valleys is given below and is followed by the description of three new species of pelecypods. Thanks are due to Dr. T. W. Stanton for aid in the study of the fossils.

FORMATIONS. The Colorado group of the Peace and Smoky valleys includes, in ascending order, the St. John and Dunvegan formations and the lower shale and Bad Heart sandstone members of the Smoky River formation (the age of the lower 100 feet of the upper shale member may be either Coloradoan or Montanan). The St. John consists

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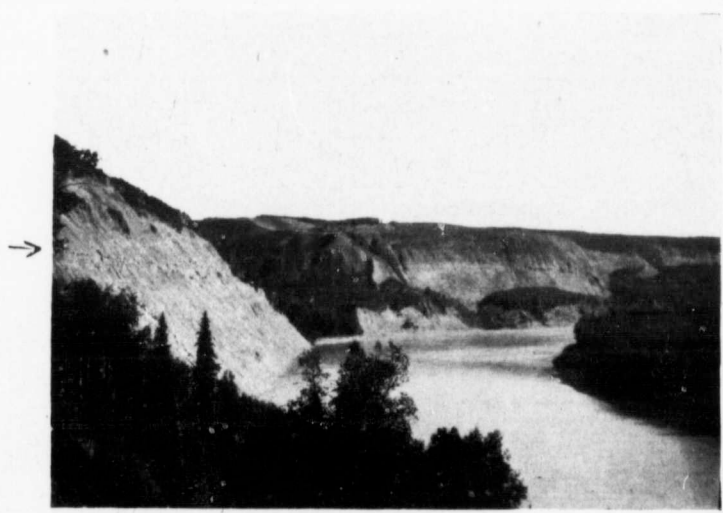
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of marine dark shale. The Dunvegan is composed of sandstone and shale; the presence of some marine shells demonstrates temporary marine conditions, but the internal structure and nonmarine fossils indicate predominantly subaerial deposition. The Smoky River is made up chiefly of marine shale, with a marine sandstone band (Bad Heart sandstone) at or near the top of the Colorado part of the formation.

**DUNVEGAN DELTA.** The subaerial character of the Dunvegan and its conformable relation to marine beds above and below identify it as a delta built out into the Colorado sea. The thinning of sandstone and its replacement by shale in an easterly direction points to a western source of sediment and the existence of high land there; it also indicates that the delta was built out from the western shore. It extended at least as far east as the Athabaska in the Pelican-House River area. Southward it is not thought to have reached far, but until the Colorado group of the Brazeau-Bighorn area is studied in detail the southerly limit cannot be determined.

**ZONAL ARRANGEMENT.** Four fossil zones are recognized in the local development of the Colorado group. The St. John contains the first fauna with *Acanthoceras cornutum* Whiteaves, large *Inoceramus*, etc.; it may be quite early Coloradoan. A part of the base of the St. John may represent a marine equivalent of the Dakota. The second or Dunvegan fauna contains, as guide fossils, *Unio dowlingi* McLearn, *Corbula pyriformis* Meek, *Brachydontes multiliniger* Meek, *Ostrea anomioides* Meek, and *Barbatia micronema* (Meek.) The third fauna is found in the lower part of the lower shale member of the Smoky River and includes *Prionotropis hyatti* Stanton, *Acanthoceras cf. coloradoensis* Henderson and *Inoceramus labiatus* Schlotheim. The difference between the second and third faunas can be explained by dissimilar environmental conditions; for the Dunvegan contains freshwater, brackish water and marine sand bottom forms, while the basal Smoky River represents a shale facies with also ammonites. For the purpose of correlation they may be treated as one fauna. The fourth and highest zone, at the top of the lower shale member and in the Bad Heart sandstone member of the Smoky River, contains *Scaphites ventricosus* M. & H., *Baculites cf. asper* Morton, *B. cf. anceps* Lamarck, *Inoceramus umbonatus* M. & H., *Oxytoma nebrascana* E. & S. and *Pteria linguiformis* E. & S.

**NEW SPECIES.** Of the three species described below two are from the Dunvegan formation:

*Tellina dunveganensis*, n.sp.

*Tellina (Moera) peaceriverensis*, n.sp.

One is from the Bad Heart sandstone:—

*Gervillia stantoni*, n.sp.

Phylum MOLLUSCA.

Class PELECYPODA Goldfuss.

Order PRIONDESMACEA Dall.

Family PERNIDAE Zittel.

Genus GERVILLIA DeFrance.

*Gervillia stantoni*, n. sp. FIG. 1.

This species is smaller and less oblique in outline than *Gervillia recta* var. *borealis* Whiteaves and *G. subtortuosa* Meek and Hayden. The size is about as in *G. recta* Meek and Hayden, but it is not nearly so oblique in outline and is wider proportionately on the hinge line.

The species name is given in honour of Doctor T. W. Stanton of the U. S. Geological Survey.

Height 40 m.m.; length 42 m.m.; length of hinge; line 35 m. m.

**Horizon and Locality.** Rare in the Bad Heart sandstone member of the Smoky River formation, Smoky river, Alberta.

**Collection.** Holotype Cat. No. 5669 in the Victoria Memorial Museum, Ottawa.

Order TELEODESMACEA Dall.

Family TELLINIDAE Deshayes.

Genus TELLINA Linné.

*Tellina dunveganensis*, n. sp. FIGS. 2, 4.

A trigonal, moderately depressed, shell with sub-central beaks and somewhat angular post-umbonal slope. External ligament very short; pallial sinus rounded and shallow; lateral teeth well developed and the anterior one approximate; two stout cardinal teeth in the left valve.

Height 18 m. m.; length 25 m. m.

**Horizon and Locality.** Rather rare in the Dunvegan formation, Peace and Smoky rivers, Alberta.

**Collection.** Holotype Cat. No. 5671 in the Victoria Memorial Museum, Ottawa.

*Tellina (Moera) peaceriverensis*, n. sp. FIGS. 5, 6.

Only molds of the left valve are preserved. The outline resembles that of *Donax cuneata* Stanton, but this species is not so abruptly deflected on the postumbonal slope, is not curved upward at the anterior end, and the beak is not so prominent or terminal. *Donax? oblonga* Stanton is a larger shell with more prominent beak and is more angular and abruptly deflected on the post-umbonal slope.

The form of this species suggests the genus *Donax*; but the dentition is like *Tellina* and the outline is closest to subgenus *Moera*. The left valve has two cardinal teeth, the posterior much smaller than the anterior. The lateral teeth are too well developed for *Donax*; the anterior lateral is approximate as in *Tellina*. Ligament not known.

The pallial sinus is shallow.

Height 15 m. m.; length 30 m. m.

*Horizon and Locality.* Rare in the Dunvegan formation, Peace river, Alberta.

*Collection.* Holotype Cat. No. 5670, cast of holotype No. 5670a, in the Victoria Memorial Museum, Ottawa.

#### EXPLANATION OF PLATE.

Figure 1.—*Gervillia stantoni* McLearn n. sp. Mold of interior of left valve. Geol. Surv., Can., Mus. No. 5669, holotype.

Figure 2.—*Tellina dunveganensis* McLearn n. sp. Largely exfoliated left valve, revealing mold of interior and showing muscle scars, pallial line and pallial sinus. Geol. Surv., Can., Mus. No. 5671, holotype.

Figure 3.—The same specimen. Shows dorsal view of both valves, with external ligament.

Figure 4.—The same specimen. Right valve.

Figure 5.—*Tellina (Moera) peaceriverensis* McLearn n. sp. Left valve, shell exfoliated, revealing mold of interior and showing muscle scars, pallial line and pallial sinus. Geol. Surv., Can., Mus. No. 5670, holotype.

Figure 6.—The same. Cast of part of left valve, showing hinge. Geol. Surv., Can., Mus. No. 5670a, cast of holotype.

Figure 7.—Smoky river at mouth of Bad Heart river. Cliff of Smoky River shale with band of Bad Heart sandstone.

### OBITUARY.

#### LAWRENCE M. LAMBE.

By the death of Lawrence Lambe, which occurred on March 12th, 1919, the Canadian Geological Survey lost one of its best known scientists. Mr. Lambe was the Vertebrate Palaeontologist of the Geological Survey of Canada.

Lawrence M. Lambe was born in Montreal, on August 27th, 1863. His father, Wm. B. Lambe, was an Englishman who came to Canada when a young man. His mother was of Scotch descent, the daughter of Hon. Wm. Morris, of Montreal.

Lambe's college training was taken with a view to entering the profession of civil engineer. He secured shortly after his graduation from college a position with the engineers of the mountain division of the C. P. R. It is most probable that he would have remained a civil engineer but for the fact that an attack of typhoid fever compelled his return home. Although offered, after his recovery, another position on the engineering staff of the C.P.R. he preferred an appointment to the Canadian Geological Survey.

Much of Mr. Lambe's training in zoology and palaeontology was acquired chiefly through his association with that keen naturalist and palaeontologist, Dr. J. F. Whiteaves. This association began when Lambe, at the age of twenty-two, received his first appointment to the Canadian Geological Survey as artist and assistant to Dr. Whiteaves. At a considerably later period he studied with Dr. H. F. Osborne at Columbia University. Concerning this period of Mr. Lambe's career, Dr. Osborne writes as follows:—

"When I was appointed in April, 1900, on the Geological Survey of Canada, as palaeontologist,

to succeed Professor Edward D. Cope, I chose Mr. Lawrence M. Lambe as my chief associate and I immediately engaged with him in the study of the fauna of the Belly River, which was published in 1902 (see Osborn *Bibliography* 1902. 217). He afterward came to Columbia University and took my full course in vertebrate palaeontology."

Analysis of Lambe's publications shows three distinct stages in his development as a scientific worker. His first three papers dealt with living marine sponges. His contributions to zoology all relate to sponges and extend over a period of thirteen years, beginning in 1892. His first contribution to invertebrate palaeontology appeared in 1896, four years after he had begun publishing on sponges. Two years later his first paper on vertebrate fossils was published. His papers published since 1900 relate with few exceptions to vertebrate palaeontology, the subject with which his name in recent years has been chiefly associated. Lambe's most important work on invertebrate fossils relates to the corals. For a short period after the death of Dr. J. F. Whiteaves, the determination of all of the palaeontological collections of the Canadian Geological Survey fell to Mr. Lambe,—a task which few palaeontologists could have ventured to undertake. After 1910, Lambe was able to devote his energies exclusively to vertebrate palaeontology. He had, too, during the later part of his career the good fortune to have the assistance of the Sternbergs who collected for him a wealth of dinosaurs and other material from the Alberta Cretaceous.

Lambe's interest centered in the office elaboration and description rather than in the collection of fos-

sils. Being an accomplished artist, he took the greatest care in supervising the execution of the drawings which illustrated the remarkable series of fossils which he has described during the last eight years. Among these were the first specimens of horned dinosaurs which had ever been found showing the character of the skin. The vertebrate fauna described by Lambe included many enormous heavy boned reptilian creatures of most fantastic appearance. One of these which bears the name of *Styracosaurus albertensis* possessed a skull six feet in length. The top of the skull extended backward from the great hooked mandibles, expanded like a shield over the neck where it was bordered by six powerful horns projecting from its posterior margin.

Among the important papers which he prepared in recent years were those describing the Triassic fishes of the Rocky Mountains. We are also indebted to him for important contributions to our knowledge of the Devonian fishes of New Brunswick. But it is with the wonderfully rich and varied vertebrate fauna of the Red Deer River valley of Alberta collected by the Sternbergs that

Lambe was chiefly occupied in recent years. His various papers dealing with the Cretaceous faunas of the west show admirable illustrations of many of these bizarre creatures of the Canadian Cretaceous. Several new genera were described from the Alberta material.

A complete list of the papers of Lawrence Lambe will be published in an early number of the Bulletin of the Geological Society of America.

Mr. Lambe was elected a Fellow of the Royal Society of Canada in 1901, and was a member of various other scientific societies.

Lawrence Lambe belonged to that small group of men who find in their work their greatest pleasure. Palaeontological work was to him indeed a labour of love. The little worries of life seemed never to penetrate his optimistic temperament. His friends will long remember the cheery smile and kindly word with which he always greeted them. Lambe accomplished much toward revealing Canada's early vertebrate life, and wherever such knowledge is cherished his passing will be deeply regretted.

E. M. KINDLE.

#### WALTER R. BILLINGS.

Through the death of Walter R. Billings, Canada has lost a citizen of unusual attainments. His death occurred on March 1st, in his 71st year at his home in Ottawa. Mr. Billings was an architect by profession and a palaeontologist by natural taste and inclination. Although palaeontology was an avocation with Mr. Billings which he actively followed during only a portion of his mature life, the work which he has left forms a substantial and valuable contribution to the science.

The ancestry of Walter R. Billings on the paternal side was rather complex including Welsh, English, Scotch and Irish elements. The family seemed to have, as tersely stated by Chas. Billings, "nearly the whole British Empire" at their backs. The grandfather of Walter R. Billings was born in Massachusetts; the grandmother in New York. Braddish Billings, grandfather of Walter, was the first white settler in Ottawa. The grandparents of Walter came to Ottawa when there was nothing to suggest the future city of Ottawa which developed later over a part of the 1000 acre tract of land which they acquired. The mother of Walter Billings was a daughter of Capt. Walter Ross. Walter R. Billings was a nephew of Elkanah Billings the distinguished first palaeontologist of the Canadian Geological Survey. To palaeontologists the death of the nephew will recall the birthday of palaeontological science in Canada, which may be said to coincide with the publication of Elkanah Billings' first paper on the Cystidea. To this able and

remarkable man Canadian naturalists owe a debt of gratitude for starting at his own expense the first magazine devoted to natural history published in Canada. The eloquent declaration of E. Billings in a letter to Sir Wm. Logan at the time of sending him the first copy of the Canadian Naturalist and Geologist, is worth recording here as evidence of the fine courage and enthusiasm which dominated the father of Canadian palaeontology. To Sir William he wrote, "I have abandoned my profession, (journalism) and intend to devote the rest of my life to the study of natural history." One purpose of the new magazine he stated in this letter was to arouse "if possible the youth of this country to pursuits for which they have everywhere most unrivalled facilities."

With such a sponsor in E. Billings it is small wonder that palaeontology made a strong appeal to the subject of this sketch. Inspired no doubt by the work of his uncle, Walter R. Billings became an ardent collector of fossils. That his collections came to include many rare and beautifully preserved specimens is sufficiently attested by the published references of foreign palaeontologists to them. Dr. Bather of the British Museum has referred in various papers to specimens collected by W. R. Billings. The generous spirit of Billings led him to loan his collections freely to those prepared to make use of them and some of his rarest specimens were presented to the British Museum.

His own published studies were confined chiefly to the Crinoidea. He is known to students of the Crinoidea for his valuable work on the Trenton crinoidal fauna of Ontario. Walter R. Billings during the period from 1881 to 1887 described in the Transactions of the Ottawa Field-Naturalists' Club, several new species and one new genus from Ottawa and Belleville.

During this period Billings took an active part in the excursions of the Ottawa Field-Naturalists' Club sharing the leadership of field parties with such naturalists as James Fletcher, J. F. Whiteaves, W. R. Ells and H. M. Ami.

Many important additions to the knowledge of the Crinoidea have been made by Dr. Bather from studies of material collected by W. R. Billings. The very valuable collection of fossils left by Mr. Billings has been presented to the Canadian Geological Survey by his sister, Miss Myra, in accordance with his wishes. Besides the crinoids described by Billings, it includes much valuable material from other groups of fossils and many specimens from other countries.

Billings was always ready to place at the disposal of visiting geologists his intimate knowledge of collecting localities in the Ottawa district. Many geologists have been indebted to him for guidance to the interesting localities for collecting near Ottawa.

Palaeontology was as already stated an avocation with Walter R. Billings. He represented a type of man far too rare in Canada but more common in England, who finds the time and shows the ability to make worthy contributions to pure science while following a profession in no way allied to the science in which he delves.

Walter Billings was a man of broad interests and for many years took a keen interest in athletics. In his younger days he took an active part in the water sports for which Ottawa is noted. Many of his vacations were spent on his luxuriously furnished house boat.

The palaeontological studies of Walter R. Billings had enabled him to "peer far back into the night of time" but he claimed no such insight into the future as the great majority of men believe they have. His keen analytical mind had given him little if any knowledge of the uncharted seas of the Great Beyond. He was too frank and honest a man to lay claim to knowledge or beliefs which he had never acquired. It was therefore in deference to his modest views regarding the limitations of the human mind that the ceremonies usually observed, were omitted at the passing of Walter R. Billings. In his request that his remains be cremated we glimpse the fact that his concern was more for the welfare of those he left behind than for himself.

E. M. KINDLE.

#### BOOK NOTICES AND REVIEWS.

The library of McGill University has been enriched by a collection of text books, monographs, and sets of periodicals (in English, French, Italian and German) devoted to birds; constituting the Emma Shearer Wood Library of Ornithology. This library, the gift of Colonel Casey A. Wood of Chicago, to his Alma Mater, will be endowed by the donor, and is intended to serve not only as a reference collection for the use of college students and research workers but it will be available, so far as its more popular books are concerned, to readers, interested in birds, outside the University precincts.

It may be added that Dr. Casey Wood is an old Ottawa boy, having graduated as prizeman from the Collegiate Institute about 1875. He visited the Capital in 1918 as representative of the Surveyor General of the U. S. Army on a tour of inspection of our hospitals and other institutions engaged in the rehabilitation of our disabled soldiers. Col. Wood has retired from practice and is now engaged, in California, on the Medical and Surgical (Ameri-

can) History of the War and other literary tasks. He was the Secretary of the Committee that published the Anniversary Volumes dedicated to the late Sir William Osler.

In 1917, just before Dr. Wood took up his military duties he published his *Fundus Oculi of Birds*. This is an important study of a neglected subject. It is profusely illustrated with a wealth of coloured plates and line drawings and is a most valuable addition to avian anatomy in general and bird optics in particular. It also offers suggestions that may be of great value in the classification of birds.

NOTES ON SOME OF THE MORE COMMON ANIMALS AND BIRDS OF THE CANADIAN ROCKIES. By William Spreadborough. *Canadian Alpine Journal*, Vol. X., 1919, pp. 51-65. Mr. Spreadborough, the veteran naturalist and field collector, who has spent nearly every summer for the past thirty years with field parties of the Geological Survey of Canada, accompanying Mr. James McEvoy, Professor John Macoun, and the late Mr. James M. Macoun,



relates some of his interesting field experiences. Of mammals, he gives notes on grizzly bear, hoary marmot, Columbian ground squirrel, little chief hare, bushy-tailed woodrat or pack-rat, mountain flying squirrel, and Hudson Bay red squirrel.

Of birds, he gives many interesting notes on the habits of Richardson's grouse, grey ruffed grouse, Franklin's grouse or fool-hen, white-tailed ptarmigan, and golden eagle. Though he has written little, Mr. Spreadborough has a keen eye and ear for natural history work, and his wide journeyings into some of the most inaccessible parts of Canada have given him a wide knowledge of the habits of beasts and birds. It is to be hoped that he will put more of his observations on record.

R. M. ANDERSON.

MIGRATIONS OF THE GRAY SQUIRREL (*Sciurus carolinensis*). By Ernest Thompson Seton, *Journal of Mammalogy*, Vol. I., No. 2, February, 1920, pp. 53-58. Mr. Seton quotes from early accounts of "incredible" migrations before the eastern wooded area was thickly settled. Robert Kennicott records a migration from Canada across the Niagara River into western New York. As corroboration of the high figures given by the old naturalists, from which may be deduced a gray squirrel population of several billions at one time in the area inhabited by the species in 1800, Mr. Seton states that recently it was necessary to thin out the gray squirrels in the protected area of Central Park, New York, and 300 were shot without making much perceptible difference. That is, there were over 1000 to the 300 acres of timber. "In my recollection of a squirrel woods in Ontario, 1887, the numbers in Central Park are not to be compared to those in the northern woods. They were at least three times as numerous in the latter and yet we knew that there were about three to the acre in the park."

Mr. Seton asks young naturalists to render service now by interviewing all available old-timers who hunted squirrels in the 60's, and make a record of the time, place, extent, direction, etc., of every emigration that can be traced, together with facts that bear upon the causes and results or that in any way offer interesting light.

R. M. ANDERSON.

The Condor, Vol. XXI., ending Dec., 1919. During the past year there has appeared in this publication the following papers and articles of interest to Canadian readers:

P. 42, Sapsuckers and Hummingbirds, a short note by H. H. Mitchell, Provincial Museum, Regina, Sask. In this is described the visits of at least seven Ruby-throated Hummingbirds that successive-

ly came to drink sap flowing from the drilling made by a Yellow-bellied Sapsucker in a birch tree.

Pp. 57-60. Notes on the Breeding Habits of the Red Crossbill in the Okanagan Valley, British Columbia, by J. A. Munro, Okanagan Landing, B.C. This is an interesting paper on a little known subject. The author states that he secured specimens "which plainly show reversion from the yellow plumage to the red," thus giving evidence supporting the much disputed view that the red plumage is not the livery of the most mature birds.

Pp. 80-86. The Summer Birds of Hazelton, British Columbia, by P. A. Taverner, Geological Survey, Ottawa. This is an annotated list of 69 species noted or collected, in the summer of 1917, at Hazelton, on the Grand Trunk Pacific at its most northern point in British Columbia, by Wm. Spreadborough and the author.

Pp. 91-92. Letter by Mr. A. B. Howell, continuing the discussion started by Mr. Taverner's use of binomials.

P. 124. Mr. J. H. Fleming, of Toronto, has a note giving measurements and descriptions of Trumpeter Swans from California, the St. Clair Flats, Mich., and the State of Washington. Mainly details of a specimen in the British Museum, supplementary to its citation in *The Game Birds of California*.

Pp. 175. Editorial notice of the departure—May 14th, of a zoological collecting expedition from the Museum of Vertebrate Zoology, University of California, into Alaska and British Columbia, entering in the vicinity of Wrangell to proceed up the Stikine River to the neighborhood of Telegraph Creek. The party was composed of Mr. Harry S. Swarth, Curator of Birds in the museum and Mr. Joseph Dixon, Economic Mammalogist, and local assistants. It may here be noted that they returned in October with a large collection of important material. The expedition and the report that is planned to be published on its results was made possible through the financial interest of Miss Annie Alexander who has done so much to further zoological investigation on the Alaskan and British Columbian coast. It is well recognized in California, more perhaps, than anywhere else in this country that it is impossible to truly understand local zoological problems without studying adjacent extralimital territory.

Pp. 222-225. Bird Notes from Saskatchewan, by Mr. H. H. Mitchell, with three photographic illustrations. This consists of annotations on several species of birds. Brewer's Sparrow was found in some numbers in the valley of the Frenchman river, taken June 16, 1919, and fairly common between Eastend and Ravenscrag. Specimens identi-



fied by J. H. Fleming. The White-crowned Sparrow, the eastern form, breeding June 18, 1919, near Eastend. It has been previously been reported from the Cypress Hills by A. C. Bent and Wm. Spreadborough apparently breeding but without definite substantiation. The Chipping Sparrow is reported as breeding in the Cypress Hills but is declared to be "not common in any part of the province." The breeding form of the Horned Lark in the Cypress Hills is declared to be the Desert Horned Lark, *Otocoris alpestris leucolaema*. It is not evident from the context whether Mr. Mitchell regards Mr. Oberholser's *Enthemia* as a separable race which would be the expected form if it is. The Whip-poor-will was heard near the juncture of the North and South Saskatchewan rivers, about thirty miles east of Prince Albert, on July 15, 1919. This forms the first record for the province and the farthest west for Canada. Whether there is any likelihood that one familiar with the call of the Whip-poor-will of the East could mistake that of the Poor-will, can best be judged by those who are

acquainted with both. Either species would be important.

P. 239. An amusing reason for the elimination of the subspecies is reported by J. H. Fleming from the suggestion of the editors of the London Catalogue of British Plants, third edition, who oppose plant splitting on the grounds that it would make the catalogue unduly bulky and raise the postage on it beyond the limits of a blue (two penny) stamp.

P. 240. In a short note we are informed that Mr. Geo. Willet has established himself on Prince of Wales Island, Alaska; for the winter and expects to devote practically his entire time to ornithology. Prince of Wales Island is on the Pacific Coast just across Dixon Channel from the Queen Charlotte Islands and hence so close to British Columbian waters as to be of great interest to Canadian ornithologists. Information of this coast is not very complete and there is probably no place on the continent where a winter's work could be put in to better scientific advantage.

P. A. TAVERNER.

#### NOTES AND OBSERVATIONS.

A CANADIAN NATIONAL MUSEUM.—The following is a copy of a resolution passed by the Council of The Ottawa Field-Naturalists' Club, on March 12, 1920.

"Whereas all important civilized nations have found it desirable and necessary to establish national museums as storehouses and repositories for historic artistic and scientific treasures, safe from the ravages of time or accident, or the exploitation or caprice of private ownership, and where they will be available for the study or contemplation of the whole nation rather than of the favored few, and

"Whereas Canada has at this time no such national museum definitely established as such,—

"Be it resolved that the Council of The Ottawa Field-Naturalists' Club recommends that for the purpose of the safe-keeping of specimens of national importance, as an aid to and encouragement of Canadian scientists, to act as a general clearing house of scientific endeavors, for the general education of the public and as a monument to Canada's intellectual life, the present museum organizations under the Federal Government of Canada be re-established as a Canadian National Museum. And, further, that the Council urge upon Parliament that steps be immediately taken to establish such a museum as will worthily and creditably represent the Dominion amongst like institutions of the world. And further,

that a copy of this resolution be given to the press, and also published in *The Canadian Field-Naturalist*."

"PRAIRIE" FRINGED ORCHID. Mr. F. MORRIS, 643 Aylmer St., Peterboro, would be glad to hear from any reader of the NATURALIST who knows of a station in Ontario for the so-called "Prairie" Fringed Orchid (*Habenaria leucophaea*). It was found by him on the margin of a mud lake near Smith's Falls some 20 years ago, and in the moist heart of a tamarac swamp near Port Hope, 10 years ago, growing in Sphagnum moss with pogonias and cranberry vines close to standing water and cattails. It is a tall handsome plant with large creamy white flowers having a three-parted lip of fanlike and fringed divisions and a very long curving spur; the plants stand from 2 to 3½ feet high."

THE PROVINCE OF QUEBEC SOCIETY FOR THE PROTECTION OF BIRDS, MONTREAL, recently held meetings as follows:—

Jan. 12. Annual Meeting—Report—Election of Officers. Address: Mr. Napier Smith.

Feb. 9. The Traditions and Superstitions of Birds and Insects. Speakers, Miss M. Hadrill and Mr. A. F. Winn.

G. M. Dyer, Hon. Corres. Secy.