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AGENCIES THROUGHOUT CANADA

THE OTTAWA NATURALIST

VOL. XXVI.

AUG.-SEPT., 1912

Nos. 5 and 6

POPULAR AND PRACTICAL ORNITHOLOGY.

III.—THE UPLAND PLOVER.

BY NORMAN CRIDDLE, TREESBANK, MAN.

When viewed from a short distance, Upland Plovers might be described, briefly, as grayish-brown above; the colour in reality, is made up of gray-brown and black markings. Beneath, they are white with black arrowhead-shaped dashes on the upper breast and along the sides. They average about twelve inches in length.

This plover, so far as Canada is concerned, is a bird of the Middle West and though it is found in migration, casually, from coast to coast, its chief breeding grounds are western Manitoba and eastern Saskatchewan, extending, however, southward to Virginia and northwesterly to Alaska. It winters in Mexico

and South America.

This bird has previously passed under a variety of names, many of them local. Until recently, it has been known as Bartiamians Sandpiper. The popular tongue however, was never able to master such a cumberous title and so the A.O.U. changed it to one more easily uttered and which was already in common use in various parts of the bird's range. The name, as it is, is also a very appropriate one, applying as it does to a bird that is decidedly upland in habit, preferring the dry prairies which are broken by small bluffs, particularly if the land be sandy. There is reason to suspect, however, that this preference for sandy soil is, after all, due not so much to an act all liking for the soil as for the food found upon it. Such soil, on account of its extra heat and inability to support as dense a vegetation as the richer land, proves much more suitable for the breeding locusts, more particularly those species that lav their eggs in the ground. Here they flourish and if not checked. often become troublesome pests. Now, the chief food of Upland Plovers is these very members of the order Orthoptera—locusts, grasshoppers or any other of the hopper tribe. Hence, the association is more than probable due to food considerations.

In Manitoba—and it is of that Province I write more particularly—this plover reaches us from the south, on an average, about the first or second of May. It comes up in a leisurely manner, often pausing to utter its quaint song, by which means and its oft-uttered call note, its arrival is easily detected and its departure southward recorded by the same means, minus the song

To begin with then, sandpipers roam the prairies in pairs, picking up most of the soft-bodied animal creation that is unfortunate enough to attract their attention. Grasshoppers, however, unquestionably form the chief article of diet at that time. as there is no mistaking the rapid runs, first one way and then another. They resemble a human being trying to catch a frog, and such actions can only be caused by an insect that hops. In June, these birds begin to seriously consider the rearing of a family and seek out a suitable tuft of grass or some other object near which to build a nest, so that there will be some sort of shelter affording protection both from the weather and enemies, though I do not think the latter precaution is a very necessary one, as the birds, with their mottled coats are admirably adapted for concealment; in fact they harmonize almost perfectly with the herbage in which they are found, and I cannot remember ever having detected a brooding bird before she left the nest, though often fully in view. nest is found in various situations from the centre of low open bushes to unbroken prairie or the tops of sand dunes where the vegetation is very scanty. The nest is sunk in the ground and is lightly built of grass with occasionally a feather or two for lining. In this the bird lays from four to five eggs of the usual sandpiper type, large and mottled. The eggs for the size of the bird are remarkably large and one wonders how such a small bird lays such large eggs. On account of the size and the long time they take to hatch, the young when they do appear are so well developed that they can run actively and immediately leave the nest. The actual brooding, so far as I am aware, is done by the female alone, but the male is seldom far away and he takes an active part in caring for the young. At this time the female is bold and wise in defence of her offspring, readily resorting to such artifices as feigning death or injury, and I have known them to fairly fly in my face as I stooped to pick up a little one, uttering weird cries meanwhile. They become very noisy as the young grow and their perpetual callings to attract attention get rather monotonous, especially when one is trying to listen for something else.

In the early eighties these birds were everywhere and their cries and songs could be heard at any time of the day while

their graceful movements on the wing and the pretty habit of raising their wings above their backs when alighting was a pleasure to behold. Then, too, they were quite fearless, allowing a very close approach as if having perfect confidence in the human invader. Alas for such confidence; it was requited indeed! Yes! with a gun. So that to-day even our innocent little plovers have learnt the lesson of experience that others had learnt too late. They are, as we might expect, no longer the trusting innocents of the past, though still far from wild during the breeding season. Their lesson has been a costly one and for the thousands that previously roamed the whole country of their adoption, we now have but a few, restricted to certain districts where as vet mankind has been unable to destroy them all. Of course the rapid settling up of the land has also greatly reduced the breeding area. In the south, naturalists and sportsmen too, are beginning to become seriously alarmed at the yearly decrease of breeding birds and in consequence a permanent close season is advocated. In Manitoba, however, though progressive in most of our game laws, we still have an obnoxious law enabling the killing of Upland Plovers in July. at a time when many of the birds are still nesting and in defence of their young can actually be knocked over with a stick.

It was my good fortune some years ago to discover a nest of one of these plovers in a situation that I was obliged to visit daily. It was close to some bushes and in rather an unusual situation, being on lowland. Here I saw the bird twice or three times a day, and with patience soon taught her to have confidence so that eventually I could touch her without her leaving the nest. She also learnt to pick up the grasshoppers I threw to her. Her male, however, was absent and never showed up during the weeks we kept company, so I suspect he had fallen a prey to one of the numerous snares that are met with in nature. I do not know how long the female had been sitting when I first met her, but it was close upon four weeks from that date before the young emerged from the eggs. I found them all one afternoon, but a few feet away from the nest, perfect little striped balls of fluff on long stilt-like legs. I gathered them into my hands and here they squatted, "peeping" apparently quite contentedly as if their mother had instructed them that here was a mortal to be trusted. No doubt she had omitted to give the signal that would send the young into hiding. She stood but a few feet away quite unconcerned while I had her little ones, and when at last I let them gently down she made no effort to lead them away but stood watching me, and thus I left her to see her to recognize no more. I have often wondered since whether her confidence was extended to others and

if so whether it led, as I fear, to her losing her life as is so often the ultimate fate of wild animals, particularly the small and weak ones that are led to place reliance upon mankind.

As soon as domestic ties are over for the season our plovers pack up, so to speak, and make their way southward. The first matured are ready to depart quite early in July and after that date they may be heard nightly calling to each other as they move rapidly away. By the middle of August nearly all have vanished though a few belated individuals remain into

September, occasionally as late as the third week.

There is a strange circumstance in connection with the autumn flights in comparison with their northward movements in spring. In the spring they come up in a leisurely manner, often pausing in their wing beats to utter their peculiar but pleasing song. At this time too their forward movements seem to be largely controlled by the tips of the wings, indeed this is quite a characteristic of the spring flight. But in autumn they have quite another type of flight; then they seem to use the whole wing and fly much more like a snipe and like that bird are remarkably rapid in their movements. The sailing motion has all gone, and instead of the somewhat slow moving bird of the breeding season we have one that for quickness can vie with many of the fastest, and but for the cries, method of alighting, and vesture, would not be recognized as the same species. It is, no doubt, this strange change of habit that has given the bird a different reputation in the south, where it is spoken of as being very shy and difficult to approach. Yet another peculiarity is the fact that in the spring they are almost without exception day fliers, having a preference for the morning, while in autumn they seldom migrate at any other time but night. This curiously enough is just the opposite to the habits of night hawks which in spring move northward in the evening or at night, and south in autumn during the afternoon.

It seems unnecessary to go extensively into the food habits of Upland Plovers. I have observed them time after time picking up locusts and have also actually seen them chase a moving stone that was thrown at them, under the impression

that it also belonged to the order Orthoptera.

Some years ago owing to a controversy on the subject of food habits, relating more particularly to the capabilities of plovers being able to devour large grasshoppers, I secured a few specimens of the bird and examined them; my brother did likewise and we found them literally crammed with hoppers both large and small. The number they consume in a day must be enormous, and as they continue this diet throughout the season of their sojourn with us and do no appreciable harm their preser-

vation is surely desirable even if we only look at the question from the standpoint of dollars and cents.

EXCURSIONS.

The second excursion was made under ideal weather conditions on May 4th. The party assembled at the Wychwood car station about 3.30 p.m., and under the guidance of the leaders for the day proceeded to study the fauna and flora of the area lying between the car station and the river at Blueberry Point. For most of the members the chief object of search was the Mayflower or Trailing Arbutus (Epigaea repens L.) which was met with in considerable quantity, few of the searchers being disappointed in obtaining specimens. From the point of view of the genuine field naturalist some members were perhaps too successful in collecting it. Amongst other ericaceous plants noticed were the Bearberry (Arctostaphylos Uva-ursi (L.) Spr.) and the common Winter Green (Gaultheria procumbens L.). The former of these was in full bloom while the latter was often conspicuous by its scarlet fruit. Hepaticas were in great abundance, and it was noticed that they were all referable to H. triloba while specimens gathered at Avlmer Park were those of H. acutiloba. The common or White Elm (Ulmus americana L.) and the Red Maple (Acer rubrum L.) were observed in flower. Amongst the conifers noticed the Red Pine (Pinus resinosa Ait.) and a variety (var. depressa Pursh) of the common Juniper are worthy of mention. In addition to the flowering plants a number of interesting cryptogams were collected. These included Lycopodium complanatum L. var flabelliforme Fernald to which is given the English name of "Ground Pine" in the new edition of Grav's Manual, although many of us have learned to know another species (L. obscurum) under this name: the Spiny and the Crested Shield Ferns (Aspidium spinulosum and A. cristatum): the so-called Reindeer "Moss" (Cladonia rangiferina (L.) Web.)—in reality a lichen and one of the most beautiful representatives of the group; and an early ascomycetous fleshy fungus (Helvella sp.).

The students of animal life were not perhaps so fortunate as the botanists, but a fair number of birds were seen, including two new arrivals, the Myrtle Warbler and the Pine Warbler, the

latter of which is an uncommon spring migrant here.

Short addresses by Mr. Calvert on the birds, Mr. Halkett on the other animals, and Dr. Malte and Mr. Eastham on the plants observed closed an excursion whose only drawback was its brevity.

J.W.E.

The third excursion was held on May 11th. A fair number of members and friends assembled at the terminus of the Britannia car line. From there one party went with Mr. Wilson to study some of the geological features of the locality as shown in sections exposed in a neighbouring gravel pit, another with Mr. Halkett to search the pools in an area of swampy land for animals, while the remainder made their way to a wood at Britannia Highlands. Here the various spring flowers were met with in great numbers, and although nothing of special botanical interest was noticed it was very pleasant to see once again so many woodland favorites not noticed previously this season. Trilliums, both white and red, were in profusion, the former being gathered in great quantity, while the ill perfume of the latter, with its flesh-coloured petals, caused it to be eschewed. Bellwort (Uvularia grandiflora) and Dog's Tooth Violet (Erythronium americanum) were also very plentiful and amongst other flovering plants noticed were the Blue Cohosh, Jack-in-the-Pulpit, Squirrel's Corn, Golden Corvdalis (C. aurea), Twisted Stalk (Streptopus roseus), Wild Strawberry, False Mitrewort, Small-flowered Crowfoot (Ranunculus abortivus), and the Dwarf or three-leaved Ginseng, also known as Ground Nut (Panax trifolium). The Crinkle-Root or Pepper Root (Dentaria diphylla) was almost in bloom and one specimen was gathered with its leaves covered with the White Rust of Crucifers (Cystopus candidus), not previously noticed this season. The fœtid or Skunk Currant (Ribes prostratum) was also plentiful in moist places and is noteworthy not only for its odour but also on account of its erect racemes of flowers. Barren Strawberry (Waldsteinia) and june berry (Amelanchier canadensis) were also seen in flower, and a little further away a swamp of Spiraea, probably the Hardtack (S. tomentosa), was observed. The Oak Fern was just opening out its fronds, while the Marsh Shield Fern was rather further advanced. The Sensitive, Christmas, and Shiny Shield Fern were also noticed and four species of Horsetail (Equisetum arvense, E. scirpoides, E. sylvaticum and E. hyemale). On returning, a pool covered with a floating Liverwort (Ricciocarpus natans) was also found. Two interesting species of fungi were seen, the Scarlet Cup (Peziza coccinea) and the Earth Star (Geaster). The former bears its cup-like fruit bodies, one or two inches in diameter with the interior of a brilliant scarlet colour, on the ground, but on carefully removing the soil from around them each will be found to be furnished with a stalk by which it is attached to a decaying branch buried below the surface of the soil.

At five o'clock the several parties reunited in the park, and the leaders gave a brief account of what had been observed or gathered. Mr. Halkett showed zoological specimens gathered and spoke of the convenience of a Latin name which is the same in all countries. Mr. Calvert, for the ornithologists, told of the birds that had been observed. Dr. Malte determined many plants which had been collected, and Mr. A. Gibson showed mosquitoes in their larval stage, and spoke of the life-history of these insects.

There was no excursion on Saturday, May 18th. The steamer on Lake Deschenes was not yet running, and the boat-trip had to be cancelled, and as it was tag-day for the city hospitals it was decided to omit the excursion altogether.

There was no excursion on Saturday, May 25th, the day after Empire day.

E.H.B.

THE OCCURRENCE OF OSTREA IN THE PLEISTOCENE DEPOSITS OF THE VICINITY OF MONTREAL

By Edward Ardley, Peter Redpath Museum, McGill University.

Sir William Dawson in his list of Pleistocene Fossils published in his volume entitled "The Canadian Ice Age," records that he collected a loose specimen of Ostrea virginiana at Saco. This he states was apparently derived from the Leda Clay, and he also states that he had received from Mr. Paisley specimens of the same species which had been found at the Baie des Chaleurs, and which were also said to have come from the Pleistocene Beds in that district at a depth of 16 feet below the surface.

The late Mr. E. T. Chambers, some years ago, presented to the Peter Redpath Museum of McGill University, a specimen of Ostrea which he had collected at Beauport, Quebec, and which he believed had been derived from the Pleistocene of that locality.

During the present summer the writer has collected Pleistocene Fossils from the Leda Clay and Saxicava Sand, exposed in an excavation made for a drain in the Town of De Lorimier, near Montreal, found at a depth of 9 feet below the surface specimens of Ostrea associated with Mya truncata, Macoma calcarea, Astarle, Laurentiana and Saxicava rugosa, this last mentioned species being found in great numbers. This occurrence in the vicinity of Montreal proves definitely that this genus occurs in the Pleistocene Molluscan Fauna in the extreme western portion of the Province of Quebec.

A FEW DAYS' WORK AND PLAY IN CANADA.

BY E. P. VAN DUZEE, BUFFALO, N.Y.

In late June and early July, 1912. I had occasion to attend a meeting of the American Library Association at Ottawa and improved the opportunity to do a little collecting for Hemiptera about the city and to meet a few of my entomological friends there. At the Central Experimental Farm I found Dr. Hewitt, Mr. Arthur Gibson and Mr. Germain Beaulieu and later had the pleasure of taking two very profitable collecting trips with Mr. Wm. Metcalfe. Our first trip was to Beaver Meadow, near Hull, and on the next day he piloted me to a still better collecting ground at Blueberry Point, near Aylmer. At Hull, I was particularly pleased to take a fine series of both sexes of my new Criocoris canadensis. These were swept from grass on the dryer meadows in considerable numbers. On a damper weedy spot I found several examples of a Lygus allied to tenellus and fasciatus which I believe to be still undescribed. It occurs rarely at Buffalo, but I have seen numbers taken by Mr. Metcalfe at Ottawa, and by Mr. Moore at Montreal. Other captures interesting to me were Microphylellus modestus Reut. in a good series from grassy lowlands, Tropidosteptes canadensis Van D. from an ash tree, and Athysanus chlamydatus described as a Deltocephalus by Provancher and later as Thamnotettix injuscata by Gillette and Baker. I was also pleased to obtain here a typical specimen from its type locality of Gypona hullensis Prov. which had previously been described as pectoralis by Spangberg. Labops hesperius Uhler was common here as it is everywhere in eastern Canada and northern New York and New England. I secured a single specimen of Dichrooscytus elegans Uhler from a cedar tree and Mr. Metcalfe pointed out to me that the plants of a Senecio which was abundant there were infested by a pretty fulvous Psyllid new to me.

Our work next day was done under entirely different conditions. The ground was very dry in the open woods at Blueberry Point, but I took a few very interesting species, chief of which was a series of four specimens of Amblytylus 6-guitatus Prov., an elegant little velvety-black Capsid with olive head and three conspicuous white spots at the tip of each elytron, the anterior of which was pale yellow in one of my examples. It was the first time I had ever seen the species, which appears to be a Macrotylus and is probably very local in its distribution. Here I also took several specimens of Bank's recently described Pindus audax, a species I have long known from western New York.

I again visited this locality on July 3rd, working then on

the dryer fields outside the woods and was delighted at finding four examples of an undescribed *Spherobius* quite new to my collection although if my memory is not at fault I have seen one specimen in some collection sent to me for names. Here also I took large numbers of my *Criocoris canadensis* and on the dryer knolls found *Oncotylus punctipes* Reut. in great numbers

and Mimoceps gracilis on the sedges.

On July 2nd I went to Chelsea for a day as the guest of Mr. Gibson, where I found conditions quite different. My first surprise was to find Stenotus binotatus Fabr. in great abundance in the grassy openings in the woods. Another common species was a Strongylocoris of which I had seen a few specimens but which I have not yet been able to determine. Laccocera vittipennis VanD. was abundant here as it is everywhere in the more ctoney regions of Canada and New England. Philaronia bilineata Say was taken here in company with the ubiquitous Philanus lineatus Linn., a species which seems to be spreading slowly westward and I fear in time may prove a real pest. It has long been common in northern New England and New York but has only recently reached Buffalo, where it is still rare. Along the Gatineau River I secured a fine series of Oncopsis variabilis Fh. and a few sobrius, fenestratus and pruni. Pacilocapsus dislocatus was common here and presented one or two fairly distinct varieties which I had never before seen.

On the 4th I did a little work in a swampy wooded pasture by the trolley track beyond Rockcliffe Park and was lucky enough to obtain from the willows there four examples of a Lygus near pratensis which is entirely new to me unless it prove to be a very dark form of rubicundus Fallen. Macropsis viridis Fh. was very common here and was pairing as was also canadensis VanD. I was surprised to find that the black males of these two species were absolutely indistinguishable and I believe canadensis will prove to be but a dimorphic form of the female viridis. I might add here that unfortunately we must change the generic names in this family so Pediopsis becomes Macropsis, the old Bythoscopus becomes Oncopsis and our Macropsis must

hereafter be Bythoscopus.

On July 5th I went on to Quebec for the purpose of studying the Provancher collection of Hemiptera now in the Museum of Public Instruction there. Rev. V. A. Huard very courteously gave me free access to the collection and did everything possible to assist me in my work. A report on my study of this collection will probably appear in an early number of the Canadian Entomologist.

Returning, I stopped off at Montreal for a day's visit with Mr. G. A. Moore, who showed me his excellent collection of local

Hemiptera and piloted me to an interesting collecting ground on Mount Royal. I was delighted to take here a fine series of Tropidosteptes palmeri which Reuter now places as a variety of amoenus but which I believe will prove to be a distinct species. With these I also took T. pettiti, amænus and canadensis, and one example of Lygidea rubecula Uhler from what I took to be a wild plum tree. My little Criocoris canadensis was common here as was also Philanus spumarius with which I took its variety leucocephala Linn. described as albiceps by Provancher.

Altogether I found this a very pleasant and profitable trip

and one I will long remember with pleasure.

UNUSUAL NESTING SITE OF THE PIGEON HAWK IN NEWFOUNDLAND.

BY W. J. BROWN, WESTMOUNT, QUE.

Various situations are chosen by the Pigeon Hawk for nesting purposes. For instance, sets of eggs of this species have been found in holes in trees and banks, in deserted nests of crows, on cliffs along the sea coast, etc., and occasionally the bird is not averse to building a well constructed nest in a tree in deep woods. In certain portions of Newfoundland owls, hawks and crows are not plentiful, consequently, old nests

are seldom met with.

Some distance up the Reid-Newfoundland Railway there is a large tableland, or topsail (the latter term being applied by the residents), at the base of which an extensive area of thick spruce woods is located. While passing along the edge of this timber on June 6th, 1912, an anxious male Pigeon Hawk flew in circles over my head, cackling incessantly. This was sufficient evidence that a nest was nearby. In a few minutes the female joined in the noisy demonstrations, having apparently just left the nest, but the underbrush was so heavy it was difficult to tell from what direction she had come. After considerable time had been spent in the examination of likely spruces for old nests or cavities. I came to the conclusion that the nest was on the ground. The birds were much attached to a section of dead spruces and rocky ground in the centre of the woods. The male and female, particularly the latter, were diving and screaming a few feet overhead and it was apparent that I was not more than a stone's throw from a well concealed nest. An exhaustive search, however, failed to reveal it. I retired to a large boulder, about two hundred yards away, to give the female an opportunity to return to the nest. In twenty minutes

the birds were quiet and they were evidently satisfied that all cause for disturbance had been removed and that I had left the neighbourhood. Approaching the same locality again as noiselessly as possible, I saw the female flush out of the ground some thirty yards ahead. It only took a moment to find the nest, which contained five fresh eggs. These were laid underneath a decayed spruce stump, a few pieces of bark and some feathers forming the lining. The nesting site was well hidden by a dense growth of stunted spruce, and a large snowbank, several feet deep, was within ten yards of it.

I might here state that the Pigeon Hawk is probably the most curious and inquisitive of the Raptores. The sectionmen on the railway told me that they were always greeted by a pair of Pigeon Hawks when they passed down on the hand car, although the nest was a quarter of a mile off in the woods. My personal experiences with the species in Newfoundland have certainly brought these facts to light. One day in June, 1911, we pitched our camp out on the barrens. A pair of Pigeon Hawks, which had their nest on the side of a mountain one mile away, observed the smoke from our fire and immediately came over our heads, uttering alarm notes. During the second week in June, 1912, near Bay of Islands, my attention was drawn to a male Pigeon Hawk overhead. Five hundred vards further on the female was flushed from a hole, about twenty feet up, in a dead pine. At this time the nest contained three fresh eggs. It can thus be seen that if Pigeon Hawks were less concerned and demonstrative during the breeding season, fewer nests would be found.

BIRD NOTES.

By L. McI. TERRILL, St. LAMBERT, OUE.

During December, 1911, the weather was exceptionally mild, the considerable fall of snow melting almost as fast as it fell, filling the swamps with water. With the commencement of January, 1912, came a change, with an unusual continuation of very cold weather, almost without a break, lasting until the end of March.

During this period, January 1st to March 31st, practically the only birds noted were winter visitors, such as Redpolls. Snowbirds and Pine Grosbeaks. These birds were more noticeable during March and were all scarce, with the exception of Redpolls during January and February. The Grosbeaks movements in the vicinity of Montreal were apparently governed

by the supply of Mountain Ash berries. Further north, in the Laurentians, they were better distributed and with the Blue Jay and other permanent residents, such as various woodpeckers, were commonly noted.

During the second week of February I noticed four Snowy Owls in the market and was informed that they had been shot at St. Jacques le Mineur, Laprairie County, about the 3rd of February.

The first migrants to appear were a few Crows and Prairie Horned Larks on March 10th.

Good Friday, April 5th, was the first truly springlike day, but still little sign of the delayed migration. The following day, however, brought several arrivals, the Song Sparrows being conspicuous. I had not the leisure for an extended walk until the 7th, which proved fine in the morning, though a west wind springing up toward noon brought colder weather with heavy showers of rain. In the early morning I heard several species singing from my window, the songs becoming more frequent about 6 o'clock, when a Phoebe joined the chorus of Song Sparrows, Juncos and Robins. During a six hours' walk, from 8 a.m. to 2 p.m., covering swampy and upland fields, river shore and edge of woods, the day revealed an unusual mixture of early and late arrivals. Though in the locality visited, Isle Jesus, Laval County, most of the fields were still covered with snow, many Prairie Horned Larks had commenced nesting, several nests being found in places where the snow had disappeared. These were in various stages of construction; one, a large saucer-shaped cavity, recently excavated, contrasted strongly with the small deep interior of a thick-walled completed nest.

Following is a summary of migration to date, the 8th of April:—

- March 10. Crow—ten seen.
 Prairie Horned Lark—twelve seen.
- March 31. Pigeon Hawk—one seen. Red-shouldered Hawk—one seen.
- April 5. Bronzed Grackles—one flock seen.

 April 6. Song Sparrow—numerous and singing.
- Song Sparrow—numerous and singing.
 Savannah Sparrow—six seen.
 Slate Colored Junco—one flock, 4 or 5 birds.
 Robin—fairly common, heard singing.
- April 7. Duck, sp.?—flock of 25 in open water of Riviere des Prairies, continually shifting position possibly on account of floating ice.

- Kildeer Plover-well distributed in pairs throughout April 7. their accustomed haunts.
 - Red-shouldered Hawk-commonly seen and heard.
 - Sharp-shinned Hawk-one seen in erratic flight. Crow-flocks disbanded, commencing nesting operations.
 - Red-winged Blackbird—commonly noted.
 - Cowbird-two seen following flock of Grackles, four others noted later.
 - Meadowlark—common, about 15 seen and heard.
 - Prairie Horned Lark—commonly in song, five nests
 - Phoebe Flycatcher-well distributed in pairs, about ten noted.
 - Snowbird-one mixed flock of Lapland Longspurs and Snowbirds watched for ten minutes in a continuous and almost circular flight, at length alighting in a ploughed field, the occasional tremulo of the Snowbird contrasting with the single note of the Longspur.
 - Lapland Longspur-seen with Snowbirds.
 - Redpoll-many large flocks noted.
 - Song Sparrow—abundant, singing constantly during sunshine and rain.
 - Savanna Sparrow-one in song, about 20 noted in small flocks.
 - Vesper Sparrow-commonly noted, several singing from tops of hedge-row trees.
 - Tree Sparrow-two heard singing, apparently the bulk has not vet arrived.
 - Slate Colored Junco-common, numbers singing.
 - Migrant Shrike—one seen in flight.
 - White-bellied Swallow-two seen in flight about a boggy willow swamp, marked by a few dead ash stubs, probably their selected nesting-site.
 - House Wren-one pair noted in woodpile near farmhouse.
 - Robin-fairly common, a few in song.
 - Bluebird-numerous.

AVERAGE TEMPERATURE.

- April 1st was 21° Far., wind N.E.-S.E., with snow at night.
 - 3rd " 27° " " N.-N.W., snow in morning. 4th " 26° "
 - " N.W.-S.W., fair. 5th " 39° " " high S.W.-W., a little snow.
 - .. " S.W.-N.W., fair. 6th " 46° "

April 7th was 44° Far., wind S.W.-N.W., heavy rain in afternoon coming with strong westerly wind.

8th " 24° " " N.W., snow flurries.

OBITUARY.

REV. GEORGE W. TAYLOR, F.R.S.C., NANAIMO, B.C.

In the death of the Rev. George W. Taylor, on August 22nd, Canadian zoology loses one of its most distinguished workers. To a great many of his friends in eastern Canada, especially in Ottawa, the announcement must have come with a shock of surprise, for when last in the Capital, five years ago, attending the Royal Society meetings, as a Fellow, he was full of vigour and activity. He received something like an ovation from his brother scientists here, as his visits, owing to his residence on the Pacific coast, were of rare occurrence. With his great friend, the late Dr. James Fletcher, he spent much time on his last visit, but he had hosts of other friends who were delighted to see him once more in Ottawa. Born in Derby, England, in 1854, he became connected with the excellent Natural History Museum in that busy railway centre, and acquired a reputation as an original observer, but on coming to Canada in 1882 he applied himself, with such vigour and success, to work in conchology and entomology that he soon took a first place as an authority; his collections of land and freshwater shells, and of marine mollusca, and his collection of N. A. Geometridae are amongst the finest in existence.

As a clergyman of the Church of England much of his time was taken up with parish work in Ottawa. Ont., and in Victoria, Nanaimo, and Wellington, B.C., but he never abated in his devotion to scientific studies. For some years he gave up clerical work, and resided in a lovely but lonely spot at the north end of Gabriola Island, in the Straits of Georgia, in order to investigate the marine zoology of the nearby marvellously rich waters. and in the hope that a biological station would be founded there by the Dominion Government. This long cherished ambition was at last gratified when, in 1909, laboratory buildings were erected at Departure Bay, and the Board of Management, composed of professors in the chief universities of the Dominion chose him as the first curator, a position he held until his death. He threw himself with all his energy into his new duties, and by constant dredging expeditions and shore collecting accumulated a vast collection of marine fishes and invertebrates.

which excited the wonder of a party of British and foreign scientists, who paid a visit to this British Columbia Station in September, 1909, at the close of the meeting of the British Association in Winnipeg. The party included famous men from the British Museum, from Cambridge University, Copenhagen, Sheffield, Leeds, London and other universities, and like President Starr Jordan, Professor C. H. Gilbert, and Dr. Barton Evermann, who made short visits to the station, they declared it to be one of the best marine laboratories on the continent. The location is very beautiful, but the rich marine life in the waters of Departure Bay, and above all, the enthusiasm and profound knowledge of the curator himself, delighted all scientific visitors.

Those privileged to go with him on dredging trips will not soon forget his scientific devotion. The writer sailed with him. in 1906, on the Dominion cruiser "Kestrel." along the British Columbia coast from Vancouver to Alaska, including Queen Charlotte Islands and Ouatsino Sound in the cruise, and at every point where hauls of the dredge were made myriads of strange creatures were brought up from the depths below. morning to night Mr. Taylor sorted out and named the specimens, usually working on deck till long after dark, aided by the light of a ship's lantern. He had such an unusual knowledge of marine zoology that he could name without difficulty a vast proportion of the hosts of molluses, echinoderms, zoophytes, etc., and very fine collections resulted. He was for some time at work on a list of small shore fishes, so abundant in British Columbia, but the list was never completed. It included many new forms. One named Asemichthys taylori has been described in a paper, now being printed by the King's Printer, Ottawa. the author being the eminent United States ichthyologist. Professor C. H. Gilbert, Stanford University, who says, "I take pleasure in naming this interesting species for its discoverer. Rev. G. W. Taylor, Nanaimo, B.C." A list of British Columbia Copepod Parasites is also now in course of publication by the Biological Board, the result of Mr. Taylor's assiduous collecting. and the author, Professor C. B. Wilson, the well-known specialist. says that eight out of fourteen species are wholly new to science. Mr. Taylor made a study of Pacific Crustacea, and completed a report, to be issued shortly, by the Biological Board, with the title "Preliminary List of One Hundred and Twenty-nine Species of British Columbia Decapod Crustaceans." In the report of the British Columbia Fisheries Commission, of which Mr. Taylor was appointed a member by the Dominion Government, he gave a list of no less than thirty species of edible molluscs occurring on the British Columbia coast, of which three only,

the oyster, the clam, and the abalone or Haliotis, are at present used for food.

It would take many pages to tell of his numerous papers contributed to scientific journals, from the time of his early papers in the Nautilus, and later in the Canadian Entomologist, and especially in The Ottawa Naturalist, which for nearly twenty years he has enriched with able notes and papers. One of general interest is a sketch of Canadian Conchology (March, 1895), an admirable summary with a valuable bibliography of the principal papers on the subject. He made many additions to our molluscan fauna, such as the two land shells, Punctum clappii and P. taylori, the latter being new to science, and named by Dr. Pils-bery after him.

His splendid entomological labours which brought him into contact with leading authorities in France, Germany and Britain, as well as in this continent, will be adequately treated elsewhere, but reference may be made to such papers as "Notes for April in Vancouver Island," published in these pages in 1898, in which he told of forty species of Coleoptera secured in an afternoon walk, besides Cicadas, and specimens of Lepidoptera, Hymenoptera and Orthoptera, some of them rare. A valuable list of Pacific Marine Mollusca, covering over eighty pages of the Royal Society's Transactions, 1895, must not be omitted; but it is not possible to name, even by title, the many scientific contributions bearing this indefatigable worker's name.

He was chosen a member of the Biological Board of Canada, and was a Fellow of the Zoological Society of London, and of the Entomological Society of London, while for a time he was an associate editor (in zoology) of The Ottawa Naturalist. He himself especially valued the mark of appreciation on the part of his brother naturalists in Ottawa, when he was chosen as a Corresponding Member of the Ottawa Field-Naturalists' Club.

High as was his rank amongst entomologists, he held a hardly less eminent position amongst marine biologists and conchologists, but he was also well versed in botany and geology, and his mathematical abilities were such that had he gone to Cambridge University, as in early life was intended, he would have, without doubt, gained high academic distinction in the mathematical tripos. His genial personal qualities and his self-denying devotion to science, especially work in the field and at sea, attracted all who were privileged to know him. Numerous as are his scientific papers, his labours and influence cannot be adequately measured by them.

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