together, throwing the loose sand backward until a large enough space was excavated for a retreat.

A real problem presented itself at the autumn approached and insects began to disappear. Fortunately, however, there is an abundance of silverfish (*Thermobia domestica*) in my laboratory at the Museum. I trapped a dozen of these and put them in the cage for a trial meal. I am glad to say the scorpion took them without hesitation.

As already mentioned, scorpions, according to my experience, do not pursue their prey. For this reason I was forced to put my specimen into smaller quarters so that its prey would be within reach.

Judging from my experience with the sting of this species of scorpion as well as with that of the large bird spider (*Avicularia* sp.) I would say that the scorpion's sting is hardly more painful than that of the spider, yet it is a little more so than that of a hornet.

Regarding the distribution of *Vaejovis boreus* in British Columbia I believe they will be found to occur a few miles east of Kamloops, along the Canadian Pacific line, as the conditions there resemble those of the escarpment of Okanagan lake and the summer temperature is similar in the two localities.

THE JAPANESE STARLING AT ALERT BAY, BRITISH COLUMBIA

By J. A. MUNRO

ON page 24 of the current volume of *The Canadian Field-Naturalist*, Mr. W. E. Saunders, on the authority of Miss Moorhead of London, Ontario, records the Japanese Starling as very abundant at Alert Bay, British Columbia, in 1927 and 1928.

This introduced Mynah has occupied Vancouver and its environs for the past 30 years at least. During that time a great increase of the species has taken place but the centre of abundance has remained within the agricultural area adjoining the mouth of the Fraser River. The overflow from the original colony has worked east; New Westminster being the farthest point at which the species is, or has been, at all common and Chilliwack, 80 miles from Vancouver, the farthest outpost where single individuals have been observed.

That the species should suddenly appear in abundance nearly 200 miles from the parent colony, which has been in almost sedentary occupation of a limited area for over 30 years, is indeed remarkable. To the best of my knowledge none have been observed in the intervening territory, which contains agricultural areas suitable to the needs of the species. Had it appeared in the Nanaimo or Comox Districts, both of which are kept under observation by local ornithologists, the fact probably would have been noted and recorded. It was not observed at Alert Bay in the spring of 1926 when Major Allan Brooks visited that place.

Alert Bay, on Cormorant Island, is an Indian village built between the sea beach and the rough, dense forest which covers this island. There is no farm land in the vicinity and consequently no area suitable for colonization by the Japanese Starling.

In view of the above comments further information concerning this astonishing range extension would be desirable.

LATE SUMMER BIRD NOTES ALONG THE UPPER MICHIPICOTEN RIVER, ONTARIO

By WILLIAM G. FARGO and MILTON B. TRAUTMAN

MICHIPICOTEN RIVER entering Lake Superior at the northeast angle of the lake has its rise among lakes lying along the height of land dividing the watershed of the Great Lakes from that of Hudson Bay. The present notes cover an area about 24 miles in length from Missanabie on Dog Lake downstream into Whitefish Lake. Our stay in this region was from August 9th to August 27th, 1928; the major portion of this period being spent in camps on Lake Manitowik which is in north latitude 48°-10′ and west longitude 84°-20′. This is a beautiful sheet of clear water fifteen miles long flanked throughout by high rocky hills, in general forested with birch and spruce. In several places steep granitic cliffs rise from the water's edge.

At the foot of Lake Manitowik, both in Hawk

Bay and South Bay are sandy beaches, an unusual feature in this rocky region. Our main camp was at the sand beach of South Bay. Two considerable streams enter at the south end of the lake and here also is the outlet over Pigeon Falls, below which a short distance lies Whitefish Lake, some six miles long.

The year 1928 began with a rather cold and late spring, hence birds were breeding somewhat late and blackflies were numerous here until August 22nd after which due to cooler weather and rains these pests were seldom troublesome. The annexed tabulation shows in graphic form the relative numbers of different species of birds observed (98 in all) during the period of our stay.

The following notes pertain principally to evidences of breeding of certain species so observed with a few references to migration.

Pandion haliaetus carolinensis. OSPREY.—At the time of the senior author's visit to Lake Manitowik in August 1921 there was an Osprey's nest in use at the outlet of the lake. This nest at the top of a broken spruce was the usual large flat platform of sticks and two adult birds were about. In 1928 this tree was gone, but there was a nest to the west of Hawk Bay in a lone stub half way up a broad sloping hillside recently burned off and located more than a quarter mile from shore. An Osprey was seen to fly toward and settle upon this nest on August 17th. It appears to be a habit of Ospreys to remain in the immediate vicinity of their nests as long as they remain in the general region.

Nuttalornis borealis. OLIVE-SIDED FLYCATCHER.—From August 14th to 20th one or two families of this species were often seen, the young being fed by the parents near suitable breeding places, so it is probable they were nesting nearby.

Corvus corax europhilus. SOUTHEASTERN RAVEN.—Dr. H. C. Oberholser has identified the one specimen of Raven collected at Lake Manitowik as this form which he described in *Ohio Journal of Science,* (Columbus, Ohio) April 1918, page 215.

Loxia curvirostra minor. AMERICAN CROSSBILL.—Both species of Crossbills were common during our stay and the males in song. Considering both species, not over 20% of the crossbills seen were females. It is probable that the females were incubating or brooding. At this time of the year only the spruce cones at the tips of tall trees in full sun light were sufficiently ripe to attract the birds. The American Crossbill was slightly more numerous than the White-winged about Lake Manitowik. We did not happen to see any young of the American Crossbill.

Loxia leucoptera. WHITE-WINGED CROSSBILL.—On August 20th about 8:30 a.m. Mr. Trautman heard young birds calling in a spruce swamp and soon located the nest 41 feet up in a 12-in. spruce, 48 feet in total height. This nest was of fine twigs lined with Usnaea moss located in the crotch formed by a small lateral branch with the stem of the tree, here about 2 in. diameter. At this time it was somewhat flattened out by the young birds. On shaking the tree a nestling White-winged Crossbill fluttered down. It was well feathered and due to leave the nest in a day or so. This nest with three young found was collected and all are now deposited in the Ohio State Museum, Columbus, Ohio, which Mr. Trautman represents as a voluntary worker.

The bill of the largest only of these three nestlings showed any tendency toward a crossing of the mandibles, and this but slight. An examination of twenty specimens of the American Crossbill and of twenty-seven specimens of White-winged Crossbills at the Museum of Zoology at Ann Arbor failed to show any uniformity of direction of crossing of the mandibles. Both species and both sexes of each showed approximately as many bills crossing to the left as to the right.

The stomachs of these nestlings contained no food at nine in the morning. All three stomachs contained sand, the first containing 81 particles countable with the naked eye, having a total weight of .055 gram. The second, 91 particles weighing .045 gram, while the third contained 153 particles weighing .093 gram. The largest sand grains were from 0.5 to 1.0 mm. in size. The sand was about three-fourths quartz, the remainder being hornblende, a little feldspar and a trace of apatite.

It would be of interest to know whether Crossbill nestlings of the age indicated by their being about ready to leave the nest are fed on insects or their larvæ or whether upon predigested vegetable food and if the former food prevailed, how the sand reached their stomachs.

Spinus pinus. PINE SISKIN.—On August 27th young Pine Siskins were seen being fed along the shores of Dog Lake. Prior to this adults were common elsewhere in the region.

Passerherbulus lecontei. LECONTE'S SPARROW.—On August 24th a single specimen of this sparrow was seen and collected on a little marsh bordering a small lake located a half mile to the northwest of Lake Manitowik near the head of the latter. This specimen is deposited in the Museum of Zoology of the University of Michigan at Ann Arbor and is a male of the year. On the same day we dragged with rope the only other marshes near

x = Collected m = many c = Common f = few

	August, 1928	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total named forms observed 98	
1	Horned Grebe	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...		1
2	Pied-billed Grebe	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...		2
3	Loon	1	1	2	...	5	...	1	4	3	3	1	1	2	2	6	2	2	2	2	...		3
4	Herring Gull	f	f	...	...	...	...	...	...	...	1	...	3	...	...	5	1	...	1	1	1		4
5	Ring-billed Gull	2	2	...	...	...	...	...	1	...	...	1	...	3	1	2	...	...	...	2	...		5
6	Am. Merganser	...	...	...	...	...	...	...	...	...	10	1	...	11	...	...	...	...	...	...	...		6
7	Hooded Merganser	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...		7
8	Mallard	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...		8
9	Black Duck	...	...	2	6	...	...	2	2	...	...	1	1	1	...	...	2	1	2	9	1		9
10	xAm. Golden-eye	...	...	...	...	2	7	18	...	12	6	6	4	5	3	2	2	2	3	6	6		10
11	Great Blue Heron	...	...	...	...	...	1	1	...	...	...	...	...	1	...	3	1	1	...	...	1		11
12	Greater Yellow-legs	...	...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...		12
13	Solitary Sandpiper	...	...	3	...	...	...	2	1	1	2	2	...	1	1	1	1	1	1	...	...		13
14	Spotted Sandpiper	2	f	f	f	3	1	1	...	2	1	2	2	2	2	3	2	2	2	2	...		14
15	xCanada Spruce Partridge	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...		15
16	xCanada Ruffed Grouse	1F	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...		16
17	xSharp-shinned Hawk	...	...	...	...	...	...	...	...	1	...	...	1	1	1	2	...	...	...	...	...		17
18	Cooper's Hawk	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...		18
19	Goshawk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...		19
20	xRed-tailed Hawk	...	...	...	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...		20
21	Broad-winged Hawk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...		21
22	Duck Hawk	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...		22
23	Pigeon Hawk	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		23
24	Sparrow Hawk	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...		24
25	Osprey	2	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	1	...		25
26	Great Gray Owl	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...		26
27	Saw-whet Owl	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...		27
28	xGreat Horned Owl	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	1	...	2	...		28
29	Belted Kingfisher	...	...	1	1	1	...	2	1	...	...	...	...	...	...	...	...	1	5	8	...		29
30	N. Hairy Woodpecker	1	1	1	1	2	1	1	...	...	1	...	...	...	1	1	1	1	1	2	...		30
31	Downy Woodpecker	2	10	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	1	...	...	...		31
32	xArctic 3-Toed Woodpecker	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...		32
33	Yellow Bellied Sapsucker	c	c	c	f	1	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...		33
34	N. Pileated Woodpecker	...	...	1	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...		34
35	Northern Flicker	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...		35
36	Whip-Poor-Will	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...		36
37	Nighthawk	cF	...	...	...	1	...	12	6	3	6	8	6	3	3	2	1	2	3	2	...		37
38	Chimney Swift	f	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		38
39	Hummingbird—Ruby-throated	...	...	2	2	3	2	1	1	1	3	2	2	...	6	...	...	...	...	...	...		39
40	Kingbird	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...		40
41	xPhoebe	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...		41
42	Olive-sided Flycatcher	...	...	...	...	...	7	5	12	3	8	5	4	1	1	...	...	...	...	...	...		42
43	xYellow-bellied Flycatcher	...	...	...	1	...	5	...	6	...	2	...	3	1	2	...	...	...	...	3	...		43
44	xLeast Flycatcher	...	...	3	3	2	c	c	c	c	c	c	c	15	c	...	...	...	...	...	...		44
45	Blue Jay	...	...	...	...	...	...	3	...	...	...	1	1	...	1	1	1	1	1	1	...		45
46	xCanada Jay	...	...	...	4	1	...	...	5	...	...	...	...	...	6	...	...	1	...	...	...		46
47	xNorthern Raven	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	1	...	...	...	...		47
48	Crow	f	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...		48
49	xRusty Blackbird	...	...	...	...	...	2	...	7	10	7	5	2	...	1	...	...	...	...	10	...		49
50	Bronzed Grackle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...		50
51	xPurple Finch	...	...	...	...	...	m	c	24	25	24	c	f	3	15	1	2	2	3	5	...		51
52	English Sparrow	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	f	...		52
53	xAmerican Crossbill	...	c	c	c	c	c	c	c	f	c	2	c	1	10	c	c	c	10	3	...		53
54	xWhite-winged Crossbill	...	c	c	c	f	c	c	c	c	f	2	c	2	6	c	5	c	2	1	....		54
55	American Goldfinch	c	...	...	...	3	2	...	...	...	2	...	...	1	2	...	...	...	...	...	...		55
56	xPine Siskin	...	...	1	6	...	c	c	c	c	c	c	c	...	25	10	10	10	5	10	3		56
57	Savannah Sparrow	c	...	...	...	...	...	...	f	...	...	...	...	...	...	...	...	...	...	...	...		57
58	xLeconte's Sparrow	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...		58
59	White-throated Sparrow	c	c	c	c	f	m	m	c	c	c	c	m	c	c	c	10	15	15	m	3		59
60	Slate Coloured Junco	f	f	c	c	c	...	c	c	c	c	c	m	m	c	2	4	3	3	c	c		60
61	xSong Sparrow	f	f	...	...	1	...	...	5	...	...	...	2	2	...	...	3	2	1	3	2		61
62	xSwamp Sparrow	...	...	...	c	...	m	c	c	c	c	c	c	c	10	...	5	3	...	...	...		62
63	Barn Swallow	...	f	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		63
64	Cedar Waxwing	m	m	...	...	c	c	c	c	c	c	c	c	c	c	c	3	1	3	5	c		64
65	Red-eyed Vireo	c	f	c	c	c	c	c	c	2	c	c	c	1	c	1	1	12	10	10	2		65
66	xPhiladelphia Vireo	...	...	...	...	...	...	...	...	...	2	...	3	...	6	1	...	10	3	10	2		66
67	Blue-headed Vireo	...	1	...	...	...	...	3	2	...	1	1	...	...	1	...	...	...	...	...	...		67
68	Black and White Warbler	...	...	f	f	...	1	1	5	1	1	1	...	...	1	...	...	1	1	2	...		68
69	Nashville Warbler	3	c	c	3	...	2	8	10	c	5	2	2	...	3	2	...	...	...	...	...		69
70	Tennessee Warbler	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	2	...		70
71	Cape May Warbler	...	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		71
72	Yellow Warbler	3	...	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	...	...	...		72
73	Black-throated Blue Warbler	...	3	4	1	1	...	...	2	...	...	1	...	...	...	1	...	...	...	1	...		73
74	xMyrtle Warbler	...	...	c	...	1	...	f	10	...	f	3	...	m	m	10	2	...	3	1	10		74
75	Magnolia Warbler	2	c	f	...	...	1	...	2	...	...	c	c	2	10	...	...	3	2	2	...		75
76	Bay-breasted Warbler	...	...	f	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...		76
77	Black-poll Warbler	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...		77
78	Blackburnian Warbler	...	1	f	...	...	...	...	6	...	...	1	...	...	1	...	...	...	...	...	...		78
79	xBlack-throated Green Warbler	...	1	c	c	...	...	1	2	...	m	1	...	...	12	1	1	12	5	2	...		79
80	Pine Warbler	...	...	...	...	...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...		80
81	Palm Warbler	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...		81
82	Oven-bird	...	...	f	1	...	...	...	...	...	...	4	...	...	1	...	1	...	1	2	...		82
83	xWater-thrush	1	f	f	f	f	...	c	c	f	f	f	1	3	3	1	1	1	2	8	...		83
84	Mourning Warbler	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...		84
85	Wilson Warbler	...	1	...	...	2	...	...	5	...	5	...	1	1	1	1	...	...	...	3	...		85
86	Canadian Warbler	5	1	f	f	...	...	c	c	f	3	3	5	1	3	1	...	...	...	10	...		86
87	American Redstart	...	2	3	1	...	2	...	7	f	2	...	...	2	5	3	...	...	2	15	...		87
88	Winter Wren	2	1	...	...	...	1	...	...	...	1	1	1	1	2	...	...	...	...	...	1		88
89	Brown Creeper	...	...	2	...	...	...	...	1	...	4	...	...	...	1	...	...	2	...	...	...		89
90	Red-breasted Nuthatch	...	...	c	c	c	1	...	5	2	2	1	1	2	4	1	1	2	2	3	...		90
91	xBlack-capped Chickadee	m	m	m	m	c	1	c	c	c	c	f	f	f	10	30	10	10	15	10	5		91
92	xHudsonian Chickadee	...	f	f	6	...	15	c	20	m	m	f	c	c	m	m	5	5	10	2	...		92
93	Golden-crowned Kinglet	...	...	c	c	c	4	c	m	m	c	c	c	c	c	3	m	mm	mm	m	10		93
94	Ruby-crowned Kinglet	...	...	...	...	...	...	...	1	1	...	...	...	12	...	...	...	...	...	...	...		94
95	Gray-cheeked Thrush	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...		95
96	xOlive-backed Thrush	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	c	...	...	...		96
97	xHermit Thrush	...	...	...	...	1	f	f	...	1	f	3	c	2	7	3	7	5	...	...	...		97
98	Robin	6	f	f	1	2	c	c	c	f	f	f	3	1	12	1	...	...	...	...	10		98

Items in Column 9 marked with subscript F, also Col. 28 were observed at Franz.

that end of Lake Manitowik without finding any more birds of this species. This location is some 200 miles eastward of the point where Walter N. Koelz collected a single specimen July 27, 1922 as reported in *The Canadian Field-Naturalist* of 1923, page 118.

Melospiza melodia melodia. SONG SPARROW.—This species was occasionally seen throughout our stay, but nowhere was it common for the habitat in general is not to its liking. On August 9th at Franz a nest with well feathered young was found in a bush three feet above ground near the bank of the lake. The nest was discovered by noticing the parents carrying food.

Dendroica caerulescens caerulescens. BLACK-THROATED BLUE WARBLER.—This species was seen occasionally and on August 16th parents were seen feeding young in a jackpine forest.

Dendroica virens. BLACK-THROATED GREEN WARBLER.—This species was more common than the last and on August 18th young birds were seen being fed.

Dendroica vigorsi vigorsi. PINE WARBLER.—On August 16th in the jackpine forest bordering the little river entering South Bay of Lake Manitowik were seen the parents of this species feeding young not long from the nest. Others of the species were heard here, but all had left the locality on the 21st. This is well to the north of the published range and we regret that none were collected.

Setophaga ruticilla. REDSTART.—This species was seen in small numbers during our stay and on August 27th was plentiful in migration, at which time young were seen being still fed by the parents.

Penthestes hudsonicus hudsonicus. HUDSONIAN CHICKADEE.—From August 10th for about two weeks Hudsonian Chickadees were common, the young birds were with the adults but beginning to shift for themselves. Both young and old were in nearly complete molt. Toward the end of the month they were much less common and it is probable that they had completed their molt and moved southward.

In 1926 while the senior author was located some 70 miles further south (Agawa Bay) no Hudsonian Chickadees were seen until August 29th at which time the molt was practically completed. See *Canadian Field-Naturalist*, Vol XLI, No. 1, page 7. (January, 1927).

In the Lake Manitowik region during the middle of August the only thrushes seen were Hermit Thrushes, *Hylocichla guttata pallasi* which were commonly seen feeding young too small to have flown from any distance. Between August 22-25, Olive-backed Thrushes, *Hylocichla ustulata swainsoni* and Gray-cheeked Thrushes, *Hylocichla aliciae aliciae* appeared as migrants.

The accompanying tabulation exhibits a daily record of the birds observed along the Upper Michipicoten River by the authors from August 9th to 28th, 1928.

SOME INTRODUCED MOLLUSCS

By F. R. LATCHFORD

Helix nemoralis Linn.—By a round-about route, there reached me recently a full-grown living specimen of this foreign mollusc, which had been collected climbing a raspberry cane in a garden at Owen Sound. So far as I am aware, it is the first of the species ever found in this province. The collector was Mr. Arthur E. Rankin, who sent it to Mr. J. Roland Brown, the well known naturalist of Hamilton, who sent it to me about two months after its capture. The apicial whorls are bright yellow in color, beautifully banded, while the body is of a rich brown and dark lipped.

In my note on "Land and Fluviatile Shells of Anticosti", published in the American Naturalist for October, 1884, I recorded it under the name *hortensis*, then commonly applied to the pale-lipped variety of *nemoralis*, as among the molluscs on that lone island collected in the previous year by my friend, the late distinguished field-naturalist, John Macoun.

The shell had long been known to occur along the lower St. Lawrence from Quebec to Gaspé, and in the coastal region of Maine and Massachusetts. A large introduced colony exists in the interior of Virginia, from which I have many specimens, a few yellow "selfs", but nearly all zoned with dark lines of varying widths.

In my cabinet, from Wood's Hole, Mass., is the small, pale greenish form which Dr. Binney thought distinct and named *sub-globosa*. It is, however, merely a variety.

H. nemoralis is widely distributed in western Europe. It does not burrow like our native helices, but is a surface feeder and a climber. The latter habit and its brilliant coloring render it easily visible to its principal enemies, the birds of the thrush family. However great its numbers, it does little injury in gardens and is not likely to become a pest anywhere in Canada. My specimen seems to thrive on a lettuce diet, but may feel lonely for lack of company.