

ART. XIII.—NOTES ON NOVA SCOTIAN ZOOLOGY.—BY HARRY PIERS.

(Received Sept. 15th, 1890).

The following notes were principally made during the past year. As they record either new or interesting facts in the zoology of our Province, I have thought that possibly they will prove useful to those who are engaged in investigating the fauna of this region.

MAMMALS.

VIRGINIAN DEER (*Cariacus virginianus*). In the middle of November, 1888, a Virginian Deer was shot by Mr. Fitch of Shubenacadie. The animal, which was a fine buck, was found among the sheep near that gentleman's place. The head was sent to Mr. Andrew Downs of this city for preservation. Although this deer is met with in the adjacent Province of New Brunswick, yet there is no previous record of its capture in Nova Scotia. Dr. J. Bernard Gilpin, in his papers on the Mammalia of Nova Scotia (*Trans. I. N. S.*, vol. III., p. 125), writes as follows: "Of animals not identified by myself, but sometimes to be found in the Province, I think the Virginian Deer (*Cervus virginianus*) will be found in the Cobequid hills, as I personally know they have been taken at Dorchester, N. B., near the boundary line." We thus see that this opinion has been confirmed. Mr. J. B. Tyrrell, in his Catalogue of the Mammals of Canada,\* gives its range as south-western New Brunswick, Central Quebec and Ontario.

GREY SQUIRREL (*Sciurus carolinensis*). On July 18th of this year (1890), a fine Grey Squirrel was brought to Mr. W. A. Purcell, taxidermist, of Halifax. It had been shot a day or two before at "the Gore," Hants County, N. S., by Mr. McDonald. The specimen was skinned and mounted, and is now in the possession of that gentleman. There were no indications that the animal had been kept in confinement, and Mr. McDonald

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\* See *Proceedings Canadian Institute*, 3rd series, Vol. VI, (1887-38), p. 69.

says that it appeared very wild, and was only shot after some difficulty. This squirrel has not previously been taken in our Province—at least I can find no such record. Dr. Gilpin, in one of his papers\* before quoted, states that “a large black squirrel skin (*Sciurus carolinensis*) with nigratism” was given him from Cumberland. He did not, however, include it in his list, probably considering that it had been obtained outside of the Province. Mr. J. B. Tyrrell, whose catalogue of mammalia is one of the latest contributions to our knowledge of Canadian zoology, speaks of it as ranging “from western New Brunswick, through southern Quebec and Ontario as far west as the north shores of Lakes Huron and Superior.”†

#### BIRDS.

**PURPLE GALLINULE** (*Ionornis martinica*). A specimen of this bird, which is very rare in Nova Scotia, was captured alive in April, 1889, and is now in the aviary of Mr. Andrew Downs. It is very healthy, washes regularly, preens its feathers, and seems perfectly at home. When first placed in confinement, it subsisted on bread and milk only. It has since, however, abandoned this diet and now lives principally on canary-seed with, at times, a little hemp. It also enjoys picking the seeds out of a cucumber, and is occasionally seen catching flies at the window. At night it perches near the top of a spruce tree which is placed in the aviary, although its immense web-feet seem but ill adapted to such a position. This is probably the only Purple Gallinule which is kept in captivity, and any notes upon its habits in this state are doubtless of interest.

**WOODCOCK** (*Philohela minor*). An albino Woodcock which was shot a year or two ago at Kentville, N. S., is now in the collection of Mr. Harry E. Austen, of Dartmouth.

**AMERICAN CROSSBILL** (*Loxia curvirostra minor*). During the spring of 1889, Mr. T. J. Egan twice noted this species breeding in the woods at Point Pleasant, Halifax. I need not at

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\* On the Mammalia of Nova Scotia. *Trans. N. S. Inst. Nat. Science*, vol. III., p. 125.

† Mammalia of Canada. *Proc. Can. Inst.*, 3rd series, vol. VI, (1887-88), p. 86.

present give any details, as I understand he intends to lay before the Institute some notes regarding the observation, in which full information will doubtless be furnished.

WHITE-WINGED CROSSBILL (*Loxia leucoptera*). This species was found breeding in the same place, and about the same time, as the American Crossbill with which it will be probably treated in Mr. Egan's notes. The nesting habits of both these birds are not at all well known and any information upon the subject is of much interest to ornithologists.

SLATE-COLOURED JUNCO (*Junco hyemalis*). On June 11th, 1889, I shot an albino Junco at Dutch Village, near Halifax. Its eyes were brown or hazel-coloured.

GOLDEN-CROWNED KINGLET (*Regulus satrapa*). Mr. Harry E. Austen obtained the nest and eggs of this Kinglet at Dartmouth shortly before the 3rd of June, 1889. The nest was found in a black spruce, fastened to a twig at a distance of about nineteen feet from the ground, and at some distance from the trunk of the tree. There were nine eggs, two of which were nearly white and the rest white marked with little dirty brown spots. The female bird was shot and served to identify the nest. The nest and eggs are now in the possession of Mr. Frank B. Webster, publisher of the *Ornithologist and Oologist*, Boston. On June 14th, 1890, the same enthusiastic collector found another nest at Dartmouth. It was hung near the top of a tall spruce and contained young birds.

RUBY-CROWNED KINGLET (*Regulus calendula*). Mr. Austen has also been so fortunate as to discover four nests of this species at Dartmouth. The first was found late in May, 1889, in a black spruce, suspended from a twig in a similar manner to that of the last mentioned bird, and at nearly the same distance from the ground. It was formed of moss and birch-bark, and was altogether different from any description which Mr. Austen has seen. It was fully identified; the male bird being shot with a catapult. Unfortunately the female deserted the nest before any eggs were laid. Mr. Webster has also possession of this nest which he highly values. On the 9th of June, 1890, Mr. Austen obtained a second nest of this species, in the same locality and similarly situated

—in a black spruce, about fifteen feet from the ground. He found that it contained eleven eggs. During the process of blowing, one of these was broken; the others are still in his collection. Not long after this he found two more nests. They contained young birds. The breeding habits of this kinglet are almost wholly unknown to naturalists and Mr. Austen is exceedingly fortunate in having obtained its nest together with eggs and young.

#### REPTILES.

LEATHER TURTLE (*Sphargis coriacea*). About August 30th, 1889, Mr. William Saul found a large turtle entangled in his mackerel net which was set a few miles from the harbour of Prospect, near Halifax. The animal was secured alive and brought to Messrs. Boak & Bennett's wharf at Halifax, where it was placed in a tank and supplied with salt water. I examined it on the 2nd and 3rd of September and found it to be the Leather Turtle, a native of tropical seas. It has never been taken so far north on this coast and therefore is entirely new to Nova Scotia. I can find no record of its capture to the northward of Massachusetts. Owing to its powerful fore-paddles this species is much given to wandering and is sometimes driven by storms far from its native seas to strange and distant lands. In this way it has been found on the shores of England and France and now on the coast of our own Province. In some details our specimen differs from any description to which I have access. This may probably be accounted for by a variation in age. For the sake of comparison I shall give the measurements of our specimen along with those of one described by Professor T. Bell: \*

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\* History of British Reptiles, London, 1849, p. 17.

	<i>Nova Scotian Specimen.</i>		<i>Bell's Specimen.</i>		
	Ft.	ins.	Ft.	Ins.	Lines.
Total length . . . . .	5	0	8	0	0
Length of head . . . . .	0	8½	0	11	4
Greatest breadth of head . . . . .	0	7	0	9	6
Breadth between the orbits . . . . .	0	3¾	0	3	4
Length of the fore-paddles . . . . .	2	0	2	10	0
Greatest breadth of the fore-paddles . . . . .	—	—	0	9	6
Length of the hinder-paddles . . . . .	0	10½	1	2	0
Greatest breadth of hinder-paddles . . . . .	0	6½	0	8	8
Length of tail . . . . .	0	4	0	3	9
Length of dorsal shell or carapace . . . . .	3	7½	6	6	0
Weight . . . . .	250 lbs.				

We thus see that, in proportion, the Nova Scotian specimen is much broader between the eyes and across the head at widest part.\* The fore-paddles are also much larger and the tail longer. The greatest difference, however, between our turtle and all figures and descriptions I have seen, lies in the shape of the hinder-paddles. In the specimen I have examined, each of these has a *well-defined notch about two inches deep* on the posterior margin. This peculiarity does not seem to have been previously noted. The best representation of the head is to be found in Professor Bell's work.† Two diverging ridges extend backward from the nostrils of our specimen. The ridges on the dorsal shell were very distinct and slightly nodulous (more so on the anterior portion). The colour of the back was black, or very dark brown, with a slight bluish tinge appearing in some lights. The head was the same colour as the back, but with whitish dashes and spots. Lip, from just in front of nostril to jaw, white. Chin, white. Throat, livid pink. Fore-paddle on top, colour of back, margined on outside with white, and obscurely spotted with soiled white at the end; beneath, black marbled and spotted with white and pink, the latter colour most conspicuous in the "arm-pits." Hind-flipper, colour of back, obscurely spotted with whitish on the inside half.

BLACK SNAKE (*Bascanion constrictor*). Three or four summers ago I captured a Black Snake as it was crossing a grassy

\* My measurements were made over the head, not through.

† History of British Reptiles, page 13.

road to the east of Blockhouse (Stanford's) Pond, near the Three-mile House. It was a couple of feet in length and answered perfectly the description of this species. I know of only one previous record of its capture in the vicinity of Halifax. Dr. J. B. Gilpin, in his paper on the Serpents of Nova Scotia,\* says that it is exceedingly rare in our Province, and he was indebted to Mr. J. M. Jones, F. L. S., for the only adult specimen he had identified. Mr. Jones' specimen was one which he had obtained many years ago from my father, Mr. Henry Piers, who had captured it in a damp place about three-quarters of a mile to the south of the locality whence my own had come.

#### FISHES.

SUNFISH (*Orthogoriscus mola*). On August 11th, 1889, while walking on the shore of Bedford Basin, near the Four-mile House (Rockingham), I saw a dark-coloured object bobbing up and down in the smooth water, about half or three-quarters of a mile from the land. It appeared and disappeared at pretty regular intervals and at the same time progressed slowly through the water. After some delay several men left the shore in a boat and succeeded in securing the animal. It was brought to land and, to my surprise, proved to be a Sunfish. This is a rare fish in Nova Scotian waters. Mr. J. M. Jones in his list of the fish of our Province,† mentions only one specimen which has been taken here. This was an individual five feet six inches in length, which was taken in Halifax harbour, October 1873, and was described by Dr. J. B. Gilpin in the Transactions of the Institute.‡ It is the only recorded specimen. Another, however, was taken many years ago by Mr. James Doyle near the Mill Cove at Bedford.

The Sunfish, it is said, is very fond of feeding upon Jelly-fish (*Medusæ*). The specimen recently captured must have been attracted by these animals, myriads of which were in the Basin at the time. On examining the fish as it lay upon the shore immediately after it was taken from the water, I noticed upon the sides

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\*Transactions of N. S. Institute of Natural Science, Vol. IV, p. 84.

†Trans. N. S. Inst. Nat. Sc., Vol. V, p. 95.

‡Vol. III, p. 343.

groups of tubercles or blisters, each tubercle about an inch in diameter and each group consisting of about five tubercles. I did not examine them very closely, but they appeared to be filled with a semi-fluid matter. The presence of these tubercles is not noticed in any description which I have seen.

On August 12th and 13th I made a minute examination of the animal. The tubercles had then disappeared. They were probably only present during life. In most particulars, both external and internal, our specimen agreed with Dr. Gilpin's description as given in his paper before referred to. The broad, dark band round the posterior part mentioned by DeKay and other writers was not apparent during life; but after death it became noticeable, although not distinct. DeKay likewise says that the dorsal and anal fins are connected with the caudal fin. I do not find this to be so—there was not the slightest connection whatever. Owing to the thickness of the fins there have been great discrepancies as regards the radial formula. After thoroughly drying the dorsal, pectoral and anal fins of the specimen now under consideration, I found that the rays stood out very clearly from beneath the shrunken membrane. This has enabled me to give the following enumeration with certainty:—dorsal, 17; pectoral, 12; anal, 16. Nothing could be more beautiful than the pure, pearly whiteness of a piece of the flesh when just cut from the body. It soon, however, dissolved away, leaving only the rasp-like skin. From the liver may be easily obtained\* a clear, reddish oil, which is of use as a remedy for rheumatic affections. This I have seen tried with the greatest success.

The following are some of the principal measurements of the fish:—

Total length from tip of snout to the end of the most remote digitation of the tail † . . . . .	61½ inches.
Depth of body half way between tip of snout and dorsal fin . . . . .	39 “

\* A piece of the liver dissolved almost entirely to oil in a few days.

† These measurements were mostly made with a measuring-tape, and therefore follow somewhat the contour of the body.

Tip of dorsal to tip of anal fin.....	73½ inches-
Dorsal fin, height..	21½ "
"    length.....	about 14 "
Anal fin, height.....	20½ "
"    length.....	12 "
Pectoral fin, length.....	7 "
"    breadth.....	5¾ "
Snout to anterior part of pectoral fin .....	20 "
Snout to nearest corner of eye .....	8¾ "
Eye, diameter .....	2½ "
Snout to branchial opening.....	17 "
Mouth, across.....	3½ "

From this Sunfish I obtained a number of curious PARASITES which answered the description and figure of *Pennella filosa* given in Cuvier's Animal Kingdom.\* The head and neck of these torturing enemies had penetrated from two to three inches into the sides of their victim—indeed, in some places I think the most anterior parts must have bored entirely through the flesh, as the belly averaged only two inches in thickness. The bushy posterior portions when seen hanging from the body of the fish, had much the appearance of pieces of seaweed. In extracting some from their burrows the heads were broken off and blood trickled abundantly from the ruptured parts. A perfect specimen (in alcohol) measures as follows:—

- Total length when straightened out, 6 inches ;
- Length of portion in fish, about 2·6 inches ;
- Length of plumose portion, 1 inch ;
- Length of the two filaments arising from near the posterior end, 5·8 inches.

\*The Animal Kingdom, 4 v. with 4 v. of plates by Latreille, London, 1834-7. Vol. IV (text), p. 410, and vol. IV. (plates), Zoophytes, pl. 9, fig. 3.