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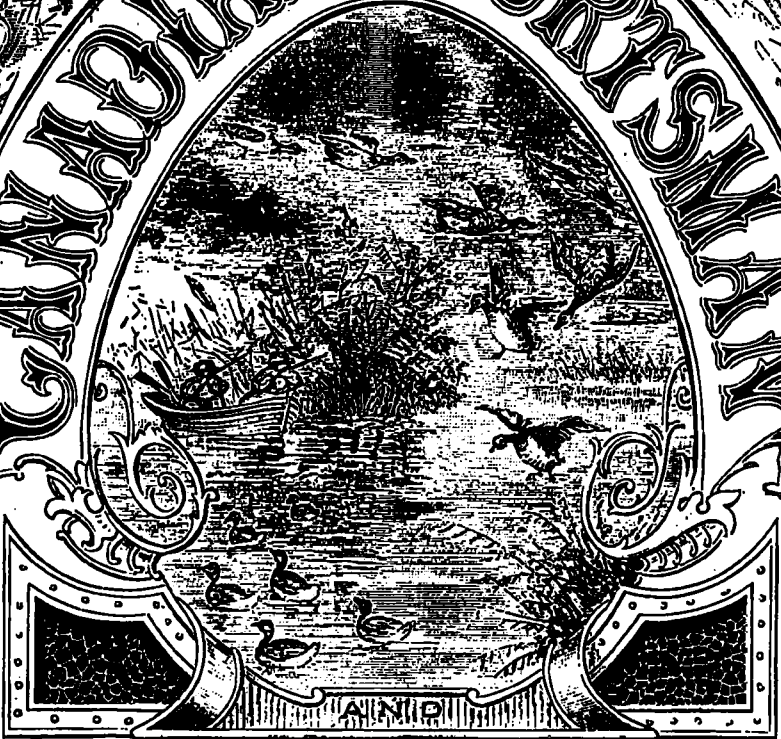
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THE

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VOL. III.
No. 10.
1883.

A. DONLUP DEL.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 10.

MONTREAL, OCTOBER, 1883.

Vol. III.

WILLIAM COUPER, Editor.

TO SUBSCRIBERS.

We are anxious to have subscriptions to this magazine sent in before the end of this year. Our patrons in arrear would do us a favour by remitting on receipt of this number. It should be cash in advance.

CATALOGUE OF CANADIAN PLANTS.

A Catalogue of Canadian Plants was wanted by our Botanical students. The Geological and Natural History Survey of Canada have recently issued the first part consisting of POLYPTERALE. The work is evidently authentic, and will be highly appreciated by Canadian Botanists. In fact the name of John Macoun is sufficient to make it reliable, and we trust that he may have health and strength to finish this good undertaking. It would be profitable to the people, and doubtless a pleasure to the Director of the Survey to see other documents emanating from it, as well examined and arranged as this work before us. The Government should give the intelligent portion of the inhabitants of Canada a chance of seeing the literature issued by each section of this Department. This is the first document from the Geological Survey, which has reached us since this magazine was issued, nearly three years ago, and we have to thank the author alone for it. The printing is by Dawson Brothers of this city, and it is done in a creditable manner.—C.

INJURIOUS AND OTHER INSECTS.

We have received the "First Report on the Injurious and other Insects of the State of New York," by J. A. Lintner, State Entomologist. The book is an octavo of 344 pages with general index. This Report is of great value to agriculturists and horticulturists, and the entomologist will find quite a study of new

material. It contains a list of the Apple-tree insects of the United States, which number one hundred and seventy-six species. Mr. Lintner purposes, as soon as practicable to present a report on Apple-tree insects, which shall contain notices of all the known North American species with figures illustrating them as far as possible, together with the most effective methods for preventing their injuries. This First Report of Mr. Lintner's is well illustrated—it contains good figures of the Vine Phylloxera; the Wheat midge in all its stages; the Cotton Moth; the Carpet-beetle; the Bag or Basket-worm (*Thyridopteryx ephemeraformis*, Haworth); the Larch Lappet (*Toxype laricis*, Fitch.) The Bronze-colored Cutworm (*Nepheleodes violans*, Guenee.) The Stalk-borer (*Gortyna metela*, Guen.) The Corn-worm (*Heliothis armiger*, Hubner. The Vagabond Grambus (*Grambus vulgivarrellus*, Clemens.) The Dried Grambus (*Grambus exsiccatus*, Zeller.) The Apple-leaf Bucculatrix and its parasites. The Apple-tree case-bearer (*Coleophora malivorella*, Riley. There are quite interesting chapters on injurious Dipterous, Coleopterous and Hemipterous insects. A figure is given of the punctured clover-leaf Weevil (*Phytonomus punctatus*, Fabr., the larva of which form a singular network cocoon, attached to the underside of leaves. Mr. Riley is now satisfied that Curculionidae have been found to spin "yellow-brown threads, loosely interwoven, so that the fabric resembles net-work." The Appendix is occupied by the titles of Dr. Fitch's Reports, and descriptions and notes of new species of Lepidoptera, all of which is extremely interesting.—C.

"THE ACADIAN SCIENTIST."

It gives us pleasure to notice that the "Acadian Scientist" is now issued as a

twelve page magazine. Success to Canadian literature, say we. *The Canadian Sportsman and Naturalist* has had to work its way without Government pap; the "Scientist" may have had hard work to place itself in its present position, but such success may be attributed to positive friendship towards a good cause. Poor Provancher, the Editor of "*Le Naturaliste Canadien*" who received Government aid for fourteen years past, now says:—"Mort ressuscité, et remort, comme aurait dit un célèbre maire d'une commune de France, nous ne reparaissons aujourd'hui devant nos lecteurs, que pour leur adresser nos adieux." Poor old man, he deserved a better fate. Canadian Natural History it appears is not appreciated as it should be by the Government of Quebec.—C.

AMERICAN ORNITHOLOGISTS' UNION.

The following Canadians are members of the American Ornithologists' Union lately formed in New York:—Regular members: Mr. Montague Chamberlain, of St. John, N.B.; Mr. W. E. Saunders, of London, Ont., and Mr. Mellwraith, of Hamilton, Ont., who are also among the "founders" of the Union; Associate members:—Mr. Brodie, Toronto; Mr. Boardman, New Brunswick; Mr. William Couper, Editor of *The Canadian Sportsman and Naturalist*, Montreal; Dr. Gilpin, Halifax; Prof. Macoun, Ottawa; Mr. J. M. Lemoine, Quebec; Mr. Morden, Hyde Park, Ont., and Mr. W. L. Scott, Ottawa. The associate members have all the privileges of regular members except that of voting.

A GOOD SUGGESTION.

MR. EDITOR—Taking a great interest in the columns of the *Canadian Sportsman and Naturalist*, I thought it would not be out of place to make a few brief notes on the study of Natural History for the young. I notice that the majority of the institutions in Canada which embrace this delightful science are composed mainly of adults who are interested in discussing problems too deep for the young mind; and I also notice that our American Cousins are ahead of us in this respect. Why should it be thus? Have we not an Association in the Dominion that would be willing to

devote a little of its time and means to instil in our boys and girls a love for Natural History, and shall we allow our friends over the line to do it alone? Until very recently the American people were on a par with us, but a gentleman in Lenox, Mass., came forward and proposed to organize an American Agassiz Association (called after Prof. Louis Agassiz, who was for years professor in Harvard College) in connection with the St. Nicholas Monthly Magazine, to be devoted to boys and girls, which was accordingly done, and from the latest report I learn that it has 525 branches, and 5970 members; and it is really astonishing the interesting observations that are made by even the youngest of its members. I might mention that branches have been formed in Montreal, Toronto, Ont., and Sydney, C.B., all of which are in a flourishing condition, but without the assistance of older organizations they cannot expect to fulfil their mission. Those advanced in years know that they must be parted from their work very soon and perhaps leave it unfinished; the question here arises, who will finish it? I can easily answer no person if the young of to-day are not trained to do it. I wish not only to call the attention of scientists to this very important subject as I think all should be interested alike, fathers, mothers, teachers and even the Council of Education, because I think it is a matter of the greatest importance to the Dominion. Hoping Mr. Editor that the preceding notes may be read by the right authorities and that a reform may take place among some of our most influential institutions, and that they may organize clubs all over the country for the benefit of our young scientists and others that would study this branch, only for the difficulties it exhibits, is the most sincere wish of one of the oldest patrons to your journal, which cannot be praised too highly for the manner in which it presents to the people of Canada and the United States original observations and research on the Natural History of the country, so that even the youngest of its readers may read and understand.

Yours, &c.,

NATURALIST

Montreal, Oct. 1883.

AN ICTHYOLOGICAL QUESTION.

Can the salmon (*Salmo salar*) live and propagate in bodies of fresh water which have no communication with the sea?

This question is now agitating the minds of

many of our fish culturists, fishermen and naturalists, and in view of the efforts which are being made to increase the supply of food derivable from our numerous and extensive lakes, rivers and creeks, is one the determination of which as early as possible is very desirable, as it may have the effect either of encouraging the artificial stocking of many of our waters with this very prolific and delicate fish, or of preventing a useless expenditure of time and money in attempting that which the laws of nature and of instinct prohibit. In this connection a glance at the natural history of the salmon and its congeners may assist those of our readers who are but slightly acquainted with the subject to form a rational *prima facie* opinion upon the same.

The natural habitat of the salmon is unquestionably the sea. In the salt water it thrives and increases in bulk and weight with astonishing rapidity; but it is not a deep water fish, never venturing far from the coast, along which it ranges in search of its food, which consists of shrimps, prawns, and other small crustaceans, sandlances, and the fry of herrings and other sea fish which come in shore to breed. When spawning time arrives, the instinct of propagation prompts them to leave the salt water, and resort to the fresh water of the rivers and creeks to deposit their ova. But they do not quit the salt water for the fresh all at once; they have to undergo a process of seasoning or "acclimatizing" before making the transition, for which purpose they will, for several days, or sometimes weeks, frequent the mouths or estuaries of their favourite streams, ranging up and down with the tide and keeping in the brackish water until fully prepared for the change of medium. As soon as their preparation is complete they take advantage of the first rise of the fall floods, which assures them of a sufficiency of water for their journey, and vigorously pursue their way to their accustomed spawning-beds in the upper parts of the streams; for it is a well-established fact that salmon habitually returns to the stream in which it began its own existence. In these arduous journeys it is no trifling obstacle which will interrupt, or even delay their progress, in which they display a degree of perseverance truly remarkable, stemming the swiftest currents and the most violent rapids, and even overleaping falls of six to eight feet in height. On one occasion the writer saw a fish, apparently about ten pounds in weight, make ten successive attempts to surmount the

could, *i. e.* the mill-dam, at New Mills, on the Whitadder, a small river which joins the Tweed about two miles above the town of Berwick, and succeed on the eleventh trial. On arriving above the influence of the tides the great "school" disperses, some of the fish remaining on the lower gravels, while others persistently pursue their way to the very head waters of their favorite streams.

Having deposited their ova, they begin to fall back towards the sea; but not with the same energy and rapidity with which they made their ascent, taking several weeks to complete their passage. Indeed, many of them remain over the winter in the deeper parts of the rivers, waiting for the spring freshets to carry them down with little exertion of their own. In the fresh water they rapidly deteriorate in health and condition, and become lean, lank and ill-shaped. The silvery brightness of their scales becomes tarnished and dull, and patches of dull red color appear on their shoulders and sides, while the rich, red, firm flesh assumes a dingy yellow color and a flaccid texture, and is unwholesome and in many cases dangerous. Once restored to the salt water, they soon regain their health and condition, and in the course of six or seven months are ready again to revisit the spawning grounds, having in the mean time gained an additional weight of from 30 to 50 per cent., or even more.

The ova, which are mostly deposited in the months of October and November, remain in the gravel till the following spring, when they hatch out into the small fish known in the English and Scottish rivers as the Par or fingerling. This fish is easily distinguished by its elegant shape, its deeply forked tail-fin, and by the dark bars or "finger-marks" and the bright red spots which ornament its sides. It remains in the fresh water of its native streams for about a year, in which time it attains a length of three to five inches, and a weight of from two to four ounces. In the months of March and April a change comes over its appearance, it assumes a coat of shining silvery scales which completely conceal the bars and spots, though if the outer covering is removed the original markings will be revealed. Contemporaneously with this change in their appearance they seem to be seized with an irresistible desire to visit the salt water, and the "smolts" which were scattered as par through the whole extent of the river and its tributaries, assemble in large shoals and, as if actuated by a common in-

pulse, set out on their journey, often of a hundred miles or more, to the sea. A series of experiments carried on in the Tweed and its tributary the Whittader in the years 1841-5 in which the writer assisted, seem to indicate that the young salmon remain in the salt water until the following year, when they appear again in the rivers in the form of "grilse" with a weight of from 3 lbs. to 9 or 10 lbs. each, and in the next season they return as salmon—which makes this fish require three years to attain its maturity. The instinct which impels the smolts to seek the sea is not less powerful than that which prompts the parent fish to reach the upper waters of the rivers, and they show an equal energy in attempting to overcome every obstacle that opposes their progress. Mr. Shaw, of Stormontfield in Scotland, who was the first to identify the par as the young of the salmon, relates that in one of his experiments, he enclosed several par in a pond formed by excavating the bed of a small creek, the outlet of which was closed by a grating that formed a bar to their downward migration. When the time arrived for their migration, and they assumed the silvery livery of their species, so strong was their migratory impulse that they threw themselves in frantic leaps out of the water, and most of them perished on the dry ground on which they fell.

In view of these ascertained facts, that the salmon proper (*Salmo salar*) thrives only in the sea and becomes languid, lean and unhealthy when it remains long in fresh water, and that the fry or smolts at a certain stage of their growth are seized with an over-mastering impulse to seek the salt water, it would seem to be more in accordance with the order of nature, and therefore, more likely to be successful, to place the artificially hatched fry of the salmon (*S. salar*) in those streams only which afford access to the sea, and to stock the fresh water lakes and ponds which are wholly or partially cut off from the tide-water of the ocean with the fry of such species as have their natural habitat in fresh water, such as the great Makinaw trout (*Salmo namayensh*) the Siskawitz, (*S. Siscoed*, or Lake Superior trout) and the Brook trout (*S. fontinalis*) in some of its numerous varieties.

It may be objected that our arguments are drawn from the habits of the British salmon and therefore will not apply to the American fish; but it is allowed by the naturalists and fishermen of both countries that the fish of

both localities are identical, and it is therefore fair to infer that their habits are similar, and that the argument drawn from the one will apply with equal truth to the other.

It is true that the artificially hatched fry which have been introduced into the upper lakes have lived and grown, and have even begun to propagate; but the diminution in size both of the fish and their ova, their slow growth, requiring a period of four years to attain a weight of eight pounds, while the salmon of the sea reaches about three times that weight in the same time, and the different color and flavor of the flesh, give evidence of impaired vitality. Of those which have been placed in smaller bodies of fresh water, the report in most cases is that they have "disappeared," and the few which have survived to be captured in their third or fourth year are uniformly described as presenting a large head, a long lean body, and a dull leaden color.

While we view the movement to increase our supply of fish food by artificial hatching with unmixt approbation, and esteem the cultivation of the water as a most valuable adjunct to the cultivation of the land, we repeat that it would be more in accordance with sound principle, and therefore more likely to prove beneficial, to stock our "land-locked" waters with those species whose natural habitat is fresh water, and place the fry of the true salmon (*Salmo salar*) in those waters only which afford what the lawyers call free ingress, egress and regress to the waters of the ocean, for in such enterprises it is better to follow than to force nature.—*Bellerive Intelligencer*.

NOTES ON THE NATURAL HISTORY OF LABRADOR.

(Mammals, continued.)

BY W. A. STEARNS.

ARCTOMYS MONAX, (Linné) Schreber. *Woodchuck Whistler*.—Common at Mingan, growing scarce towards Bonne Esperance.

CASTOR FIBER, Linné. *Beaver*.—Common in inland ponds all along the coast in furring season, but growing rapidly scarce.

ZAPUS HUDSONIUS, (Zimmerman) Coues. *Deer Mouse*. *Jumping Mouse*.—Not rare on the dry tops of many of the islands along the coast.

HESPEROMYS LEPICOPUS, (Raf.) Le Conte. *White-footed Mouse*.—Occurs probably about equally abundant with *Z. Hudsonius*.

A species of *ARVICOLA*, or *Meadow Mouse* is very abundant in summer.

FIBER ZIBRUCUS, (Linné) Cuvier. *Muskrat*.—Very common in the ponds inland all along the coast, at least to Belle Isle.

ERETHIZON DORSATUM, (Linné) F. Cuvier. *White-haired Canadian Porcupine*.—Very common along the coast certain years; periodical. Killed by the Indians for food.

LEPUS AMERICANUS, Erxleben, var. *AMERICANUS*. *Northern Varying Hare*.—Common, some years even abundant.

[*LEPUS AMERICANUS*, Erxleben, var. *VIRGILIANUS*. *Southern Varying Hare*.—Occurs in Newfoundland, but has not yet been recorded from Labrador.]

VESPERTILIO SUBULATUS, Say. *Little Brown Bat*.—A specimen flew on board our vessel one night, when about opposite Natashquan, and was secured. Other species doubtless occur.

BIRDS.

The following list of birds comprises those collected during a stay of twelve months on the coast in 1880-'81, and also some additions made the summer of 1882. A few are added on the authority of Dr. Coles in 1860. I think that the number of land birds will probably be largely increased by further investigation:

1. *MERULA MIGRATORIA*. *Robin*.—Saw a small flock at Old Fort Bay, October 10, 1881; shot a specimen April 26, 1882; found them breeding in the interior in June, same year.

2. *HYLOCICHLA MUSTELINA*. *Wood Thrush*.—Certainly heard this bird repeatedly—other persons present verified the same—10 miles up Esquimaux River, one day late in July.

3. *SAXICOLA OENANTHE*. *Stonechat*.—Dr. Coles procured a single specimen at Henley Harbor, August 25, 1860.

4. *REGULUS CALENDULA*. *Ruby-crowned Kinglet*.—Shot a single specimen at Old Fort Island, October 11, 1881. Dr. Coles shot one August 6, 1860, at Riguette.

5. *PARUS HUDSONIUS*. *Hudsonian Chickadee*.—Abundant everywhere along the coast all the year.

6. *EREMOPHILA ALPESTRIS*. *Shore Lark*.—Common everywhere, except in winter.

7. *ASTRUS LUDOVICIANUS*. *Titlark*.—Common everywhere, except in winter.

* More like *H. aliois* (Gray-cheeked Thrush), since the Wood Thrush is not known to occur even so far north as the southern shores of the Gulf of St. Lawrence.—R. R.

8. *DENDRÆCA CORONATA*. *Yellow-rumped Warbler*.—Common in interior. Breeds.

9. *DENDRÆCA STRIATA*. *Black-poll Warbler*.—Common in interior. Breeds.

10. *GEOTHLYPIS TRICHAS*. *Mourland Yellowthroat*.—Common at Natashquan.

11. *SICRUS AFRICAPILLUS*. *Golden-crowned Thrush*.—Not uncommon in the interior. Breeds.

12. *SICRUS XEVIUS*. *Water Thrush*. Not uncommon in the interior. Breeds.

13. *MYIODIOTES PUSILLUS*. *Green Black-capped Flycatcher*.—A specimen was shot by D. H. Talbot, Sioux City, Iowa; 10 miles up Esquimaux River; another specimen was seen and others heard. The bird cannot be rare.

14. *PIXICOLA ENCLEATOR*. *Pine Grosbeak*.—Common in fall and winter.

15. *ÆTOTIUS LINARIA*. *Red-poll Linnet*.—Rather common in the interior. Breeds.

16. *PLECTROPHANES NIVALIS*. *Snow Bunting*.—Common in large flocks in winter.

17. *CENTROPHANES LAPPONICUS*. *Lapland Longspur*.—Rather common.

18. *PASSERULUS SANDWICHENSIS SAVANNA*. *Savanna Sparrow*.—Abundant everywhere. Breeds. None seen in winter.

19. *JUNCO HYEMALIS*. *Snow Bird*.—Not rare in spring and fall. Obtained several near Old Fort.

20. *SPIZELLA MONTICOLA*. *Twee Sparrow*.—Not rare in spring and fall. With the last.

21. *ZONOTRICHIA ALBICOLLIS*. *White-throated Sparrow*.—Common everywhere. Breeds.

22. *ZONOTRICHIA LEUCOPHRYX*. *White-crowned Sparrow*.—Common everywhere. Breeds.

23. *PASSERELLA ILIACA*. *Four-colored Sparrow*.—Common at least as far as Red Bay in spring and fall, it not in summer. (This sparrow breeds abundantly along the coast from Mingan to Belle Isle—C.)

24. *SPOLECOPHAGUS FERRUGINEUS*. *Rusty Blackbird*.—Common and breeds at least as far as L'Anse Amour.

25. *CORVUS CORAX*. *Raven*.—Abundant all the year.

26. *CORVUS AMERICANUS*. *Common Crow*.—A few are occasionally seen as far north as Esquimaux River.

27. *PERISOREUS CANADENSIS*. *Canada Jay*.—Abundant inland all the year.

28. *GEORGELEUS POPETUE*. *Night Hawk*.—Common at Natashquan.

29. *CERYLE ALCYON*. *Kingfisher*.—Com-

mon at least as far as Esquimaux River. Breeds.

30. *PICTUS VILLOSIUS*, *Hairy Woodpecker*.—Common inland in winter at least about Esquimaux River.

31. *PICTUS PUBESCENS*, *Downy Woodpecker*.—I found this common with the last.

32. *PICTIDES ARCTICUS*, *Black-backed three-toed Woodpecker*.—On authority quoted by Cones. (Accidental behind the City of Quebec—C.)

33. *COLAPTES AURATUS*, *Golden-winged Woodpecker*.—Not rare, at least as far as L'Anse Claire.

34. *BUBO VIRGINIANUS*, *Great Horned Owl*.—Not rare in neighbourhood of Esquimaux River.

35. *ASIO ACCIPETRINUS*, *Short-eared Owl*.—A specimen was brought to me by one of the young fellows at Old Fort.

36. *NYCTEA SCANDIACA*, *Snowy Owl*.—Not rare in winter. All along the coast to Red Bay, at least, if not further.

37. *CIRCUS HUDSONIUS*, *Marsh Hawk*.—One specimen found at Dead Island Harbor.

38. *ACCIPITER COOPERI*, *Cooper's Hawk*.—Seen several times.

39. *ASTUR ATRICAPILLUS*, *Goshawk*.—Dr. Cones obtained one specimen.

40. *HIEROPALCO GYRFALCO OBSOLETUS?* *Labrador Gyr Falcon!*—Saw the bird, and have no doubt but that he had a nest on an inaccessible crag near the house, but was unable to obtain it.

41. *ESALON COLUMBARIUS*, *Pigeon Hawk*.—Seen several times on our way down the coast.

42. *CANACE CANADENSIS*, *Spruce Partridge*.—Common all the year around.

43. *LAGOPUS ALBUS*, *Willow Ptarmigan*.—Not rare. In winter generally common.

44. *LAGOPUS RUPESTRIS*, *Rock Ptarmigan*.—Not rare. Generally common in winter.

45. *SQUATAROLA HELVETICA*, *Black-bellied Plover*.—Common in spring and fall.

46. *CHARADRIUS DOMINICUS*, *Golden Plover*.—A specimen of this bird was obtained at Fox Island, Saint Lewis Sound.

47. *AGALITES SEMIPALMATUS*, *Semipalmated Plover*.—Common. Breeds everywhere.

48. *STREPSILAS INTERPRES*, *Turnstone*.—Common at Dead Island and along the coast in small flocks.

49. *PHALAROPUS FULCARIUS*, *Red Phalarope*.—Given by Dr. Cones, who procured them from off Belle Isle.

50. *GALLINAGO WILSONI*, *American Snipe*.—Given by Dr. Cones. A single specimen secured.

51. *MACRORHAMPHUS GRISEUS*, *Red-breasted Snipe*.—Given by Dr. Cones. A single specimen secured.

52. *EREUNETES PUSILLUS*, *Semipalmated Sandpiper*.—Common in spring and fall.

53. *ACTODROMAS MINUTILLA*, *Least Sandpiper*.—Common in spring and fall. Breeds in summer.

54. *ACTODROMAS MACULATA*, *Pectoral Sandpiper*.—Occasional in fall.

55. *ACTODROMAS BONAPARTEI*, *Bonaparte's Sandpiper*.—Abundant in large flocks in spring and fall. A few breed.

56. *TRINGA CANUTUS*, *Knot*.—Not very common in fall.

57. *CALIDRIS ARENARIA*, *Sanderling*.—Common in flocks of 20 and 30 at Old Fort Island.

58. *LIMOSA HEMASTICA*, *Hudsonian Godwit*.—I obtained a single specimen at Old Fort Island. It is said to be very rare.

59. *TOTANUS MELANOLEUCUS*, *Greater Yellowlegs*.—Not rare in fall and spring. I think breeds. Have found it late into breeding season.

60. *RHYACOPHILUS SOLITARIUS*, *Solitary Sandpiper*.—Not rare in spring and fall. Breeds.

61. *TRINGOIDES MACULARIUS*, *Spotted Sandpiper*.—Not rare. Breeds.

62. *NUMENIUS HUDSONIUS*, *Hudsonian or Jack Curlew*.—Not rare in fall.

63. *NUMENIUS BOREALIS*, *Esquimaux Curlew*.—Formerly abundant; now common in the interior in fall.

64. *BOTANUS LESTIGINOSUS*, *American Bittern*.—Authority of Dr. Cones. One specimen.

65. *BERNICIA CANADENSIS*, *Canada Goose*.—Not rare in spring and fall.

66. *BERNICIA BRENTA*, *Brant Goose*.—Rather common at least as far north as Cape Whittle.

67. *ANAS OBSCURA*, *Black Duck*.—Common; said to breed.

68. *FAFILA ACUTA*, *Pintail Duck*.—Rare. I obtained one specimen of a pair seen at Old Fort Island. One taken a short time before near same place.

69. *MARECA AMERICANA*, *Widgeon*.—Occurs as far as Natashquan; said to occur inland at Esquimaux River.

70. *NETTION CRECCA*, *English Teal*.—Au-

thority of Dr. Coues, who obtained one specimen.

71. *NETION CAROLINENSIS*. *Green Winged Teal*.—Dr Coues obtained one single specimen at Rigoulette.

72. *AIX SPONSA*. *Wood Duck*.—Not rare in interior. Breeds in hollow trees

73. *AYTHYA AMERICANA*. *Redhead*.—I saw a single specimen in the water at Baie des Roches, 23 September. Am told that it is common.

74. *CLANGULA ISLANDICA*. *Barrow's Golden Eye*.—Common in rivers as far as Natashquan. Said to occur in Esquimaux River in mild winters.

Nests of this species have been found in the woods near Lake Champlain, and the ducklings were seen commonly on the Godbout River during summer.—C.

75. *CLANGULA ALBEOLA*. *Buffle-head Duck*.—Common in fall.

76. *HAREIDA GLACIALIS*. *Long-tailed Duck*.—Common in mouths of rivers in spring and fall.

77. *HISTRIONICUS MINUTUS*. *Harlequin Duck*.—Rather rare. Mouths of rivers, spring and fall. Probably breeds

78. *SOMATERIA MOLLISSIMA DRESSERI*. *American Eider Duck*.—Abundant everywhere. Breeds.

79. *SOMATERIA SPECTABILIS*. *King Eider*.—Abundant in spring in large flocks. I shot a great many of them. It is said to breed in this region occasionally. In *The Canadian Sportsman and Naturalist*, vol. 1, No. 7, July 15th, 1881, p. 51, in an article headed "Bird-nesting in Labrador," Mr. Napoleon A. Comenau, the writer, whom I know personally and who spoke with me personally to the same purport, says that on a small island opposite Mingan: "Indeed, one small island, visited by us, was almost covered with the nests of this species (*S. mollissima*), and here we first found the nest of its congener, the King Eider (*S. spectabilis*)." "This is, I believe, the first record of this rare nest found on the Atlantic.

"Bird-nesting in Labrador" was written by Mr. William Couper, the Editor of this Journal.

SOMATERIA V-NIGRA. *Pacific Eider*.—Abundant in large flocks in spring. I myself obtained specimens that had the decided "V-shaped black mark" on the chin, and was told by the natives that there were "three different species of spring ducks so near alike that you could hardly tell the difference." This species has been doubted by several authorities. I still believe that I can secure specimens and prove its occurrence unquestionably.

80. *CEDEMIA AMERICANA*. *Black Scoter*.—Abundant. Breeds by inland ponds.

81. *MELANETTA VRIIVETINA*. *White-winged Coot*.—Common in fall, rare in spring. Not known to breed.

82. *PELIONETTA PERSPICILLATA*. *Sea Coot*.—Common in spring, rare in late fall. Not known to breed

83. *MERCUS MERGANSER AMERICANUS*. *Fish Duck*.—I have seen one specimen taken near Fort Island.

84. *MERCUS SERRATOR*. *Red-breasted Merganser*.—Common in spring and fall. Breeds occasionally.

85. *LOPHODYTES CUCULLATUS*. *Hooded Merganser*.—Rather rare but occasional.

86. *SULA BARRHANA*. *Garnet*.—Common in Gulf of Saint Lawrence. Occasionally seen near the Labrador coast.

87. *PHALACROCORAX CARBO*. *Common Cormorant*.—Abundant off Meccattin Islands. Breeds.

88. *PHALACROCORAX DIOPHUS*. *Double-crested Cormorant*.—Common with the former.

89. *STERCORARIUS POMATORHINUS*. *Pomarine Jaeger*.—I have seen a specimen of this species I think taken near the mouth of Esquimaux River. Dr. Coues also obtained it.

90. *STERCORARIUS PARASITICUS*. *Richardson's Jaeger*.—Shot a specimen in St. Lawrence River, about opposite Point des Monts.

91. *STERCORARIUS BUFFONI*. *Buffon's Jaeger*.—Seen by Dr. Coues.

92. *LARUS GLAUCUS*. *Burgomaster*.—Not rare. I obtained several specimens. Breeds.

93. *LARUS MARINUS*. *Great Black-backed Gull*.—Abundant and breeds all along the Labrador coast.

94. *LARUS ARGENTATUS SMITHSONIANUS*. *Herring Gull*.—Common. Breeds everywhere.

95. *RISSA TRIDACTYLA*. *Kittiwake Gull*.—Common in spring and fall. Breeds occasionally.

96. *LARUS PHILADELPHICUS*. *Nonparle's Gull*.—Common in large flocks in fall, perhaps spring, but not known to breed on the Labrador coast.

97. *STERNA MACRURA*. *Arctic Tern*.—An abundant spring and fall migrant in the Gulf. (I found nests of this Tern abundant on islands near Natashquan.—C.)

98. *STERNA FLUVIATILIS*. *Common Tern*.—Seen at Rigoulette by Dr. Coues.

99. *FULMAREX GLACIALIS*. *Fulmar*.—Recorded by Dr. Coues off Belle Isle.

100. *CYMBORHORA LEUCORHONA*. *Leach's Petrel*.—Common off coast as far at least as to Belle Isle.

101. *PUFFINUS MAJOR*. *Greater Shearwater*.—Not rare off shore along the whole coast.

102. *PUFFINUS FULIGINOSUS*. *Sooty Shearwater*.—A few were seen by Dr. Cones in company with *P. major*.

103. *COLYMBUS TORQUATUS*. *Loon*.—Abundant. Breeds inland.

104. *COLYMBUS SEPTENTRIONALIS*. *Red-throated Diver*.—Dr. Cones obtained "two eggs supposed to be of this species at Sloop Harbor, on the 4th of July."

105. *COLYMBUS ARCTICUS*. *Black-throated Diver*.—Two specimens were obtained of this rare bird off the Labrador coast by one of the French priests at Bersimis, one in 1880.

106. *PODICEPS HOLBOELLI*. *American Red-necked Grebe*.—Not rare in spring and fall. Occasionally breeds.

107. *UTAMANIA TORVA*. *Razor-billed Auk*.—Abundant, more so north of Esquimaux River. Breeds.

108. *FRATERCULA ARCTICA*. *Puffin*.—Abundant on one or two islands near Bradore; not rare in other localities along the coast.

109. *ALLE NIGRICANS*. *Sea Dove*.—Abundant certain seasons. Occasional all along the coast.

110. *URIA GRYPPE*. *Black Guillemot*.—Common everywhere in spring and fall. Breeds in certain localities abundantly, though not so much so as either *U. torva*, or *F. arctica*, or *L. troile*.

111. *LOMYIA TROILE*. *Foalish Guillemot*.—Abundant; more so south of Esquimaux River. Breeds like *U. torva* in vast colonies on the islands along the coast.

FISHES.

A very few of the species in this most important department have been secured this year, 1882; and though they are only the most common and abundant species, they will perhaps serve to show a part of the characteristic fish fauna of this region.

TENOLABRUS ADSPERSUS. *Common Blue Perch*.—Was very common all about Cape Britain.

GASTEROSTEUS ACULEATUS. *Common Stickleback*.—Abundant in large swarms everywhere about the shoal waters of Cape Britain. I saw two specimens of *Gasterosteus biaculeatus*, taken off coast in the midst of a large sea, sporting in immense areas close by the vessel.

GASTEROSTEUS PENGICUS. Was found occasionally off Cape Breton coast.

OSMERUS MOROAX. *Smelt*.—Common in August, all along the shoal water off the wharves of Cape Britain.

SCOMBER SCOMBERUS. *Mackerel*.—Seldom taken at all on the Labrador coast, except as isolated individuals or by twos and threes. One per-

son at Triangle Harbor took eight while we were there, but said that he had not taken as many before in as many years.

SALMO SALAL. *Salmon*.—Common everywhere in the mouths of rivers all along the Labrador coast. The most abundant species of the family.

SALVELINUS FONTINALIS. *Speckled Brook-trout*.—Abundant in all the streams along the coast, seldom growing large. Is said not to be found in the ponds or far from the mouths of the streams, not mingling much if any with the large sea trout.

MALLOTUS VILLOSUM. *Capelin*.—Abundant in large colonies in shoal water all along the coast. Used for cod bait, and pursued and fed on by the codfish in the water. When traveling in these large bodies the movements of the whole body seem to be almost simultaneous, and though the front of the phalanx is generally composed of a single fish, the two sides fall off triangularly, so that strange to say, the change of direction appears, if it is not in reality, to be simply the assuming the chief position by any fish, in any position along the line, while all the others immediately fall into their proper place, and the whole body moves off as an acute triangular shaped mass of living Capelin. When few in number, they delight to swim singly, or by twos or threes in a long line, repeatedly sinking and swimming under the vessel from side to side, shortly returning again.

CLUPEA HARENGUS. *English Herring*.—Abundant north of Blanc Sablon, growing more and more so all along the Labrador coast, the further down which are the greatest catches. The young fish remain about in the waters all the year, if the reports of several different individuals can be credited. The people tell me that they refrain from catching the fish until September, so that the young may have a chance to grow to the fine, large fish for which this region is so celebrated, but that the nets might be drawn full of small fish in any month of the year when the ice did not interfere.

GADUS MORRHUA. *Common Cod*.—Abundant everywhere; but usually the fish are small, and seldom the size of those taken off the Grand Banks. Most of them go to France, where they seem to be preferred to the larger fish. The larger fish are taken chiefly in the fall, in deep water—70 to 100 fathoms—the spring and summer fish average 3 to 8 and 10 pounds, and are taken in about 8 to 15 fathoms of water. The Squid is not common nor even "not rare" along the Labrador coast. Although it is an abundant bait off Newfoundland, it is very rare along the Labrador coast

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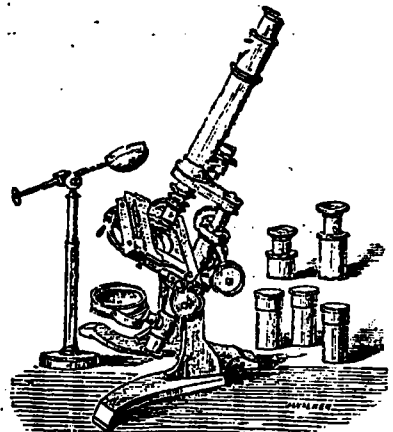
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