

# APPENDIX.

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## LIST OF THE FISHES OF NOVA SCOTIA.

(Corrected to date, 1879.)

BY J. MATTHEW JONES.

THE following list comprises all the Fishes recorded to date as occurring in our waters. A few other fluviatile species doubtless exist in the more remote lakes and streams of the interior, and we may look forward to the occasional occurrence of additional boreal marine forms on our northern fishing banks, brought there under the influence of the cold arctic current which bears annually its burden of icebergs from Davis' Strait; while the number of southern marine forms may also be augmented at intervals, by errant examples, thrown off during their northerly course, along the heated waters of the Gulf Stream.

In the preparation of this list the author has received the generous assistance of his much esteemed friend, Prof. G. BROWN GOODE, of the Smithsonian Institution, Assistant U. States Fish Commission, who has kindly furnished a list of hitherto unknown species, procured from our fishing banks by the Commission during the past three years, and revised in part the nomenclature.

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### Fam. GASTEROSTEIDÆ.

1. GASTEROSTEUS ACULEATUS, L. Two-spined Stickleback.  
Common.

### Fam. PERCIDÆ.

2. PERCA FLUVIATILIS, L. Perch. *Perca flavescens*, Stor.  
Common in most lakes and streams.
3. ROCCUS LINEATUS (Schn.) Gill. Striped Bass. *Labrax lineatus*, Gunth. Common.
4. MORONE AMERICANA (Gmel.) Gill. White Perch. *Labrax rufus*, Gunth. Common.

## Fam. TRIGLIDÆ.

5. SEBASTES MARINUS (*L.*) *Lutken*; *S. Norvegicus*. *Gunth.*  
Common; taken on the banks while fishing for cod.
6. COTTUS SCORPIUS, *L.* Sculpin. Very common.
7. *C. OCTODECIM-SPINOSUS*, *Mitch.* Not common.
8. CENTRIDERMICHTHYS UNCINATUS, *Reinh.* Fishing banks  
off the coast (U. S. F. C.)
9. TRIGLOPS PINGELII, *Reinh.* Fishing banks off the coast,  
(U. S. F. C.)
10. ASPIDOPHOROIDES MONOPTERYGIUS, *Bloch.*, *Storer.* Ob-  
tained from fish stomachs.

## Fam. SCOMBRIDÆ.

11. SCOMBER SCOMBRUS, *L.* Mackerel. *Scomber scomber*,  
*Gunth.* As on other coasts this fish is more abundant  
some seasons than others; attributable no doubt  
to the ample food supply, or scarcity, as the case  
may be. It generally consists of the minute fry of  
other fishes; but when that particular food fails,  
they appear to resort to the minute crustacea. *Dr.*  
*Gilpin* carefully describes this species in *Trans. N. S.*  
*Inst. Nat. Science*, vol. I., Pt. 4, p. 11.
12. ORCYNUS THYNNUS (*L.*) *Goode.* Albicore. *Thynnus*  
*thynnus*, *Gunth.* Common in the bays and harbours  
during the months of July and August.
13. *O. ALATUNGA*, (*L.*) *Gill.* *Thynnus alalonga*, *Gunth.* Ac-  
cording to Messrs. *Goode & Bean's* admirable List of  
Fishes of Massachusetts Bay, (1879) a specimen was  
obtained by *Capt. William Thompson*, of the schooner  
"Magic" of Gloucester, in the Summer of 1878, on  
*Banquereau*, at a depth of 300 fathoms.
14. SARDA PELAMYS (*L.*) *Gunth.*, *Cuv.* Bonito. *Pelamys sarda*,  
Not common. A young example captured at the  
mouth of Halifax Harbour is now in the Museum  
collection.
15. ECHENEIS ———? Suck-fish. A specimen in the Hali-  
fax Museum not yet determined.

16. PORONOTUS TRIACANTHUS (*Peck.*) *Gill.* *Stromateus triacanthus*, *Gunth.* Common.
17. LAMPRIIS LUNA, *Riss.* Very rare. A specimen was taken at Sable Island some years ago, a rough sketch of which, with the colours well depicted, was made by one of the men belonging to the establishment there, and given to Dr. Bernard Gilpin, in whose portfolio I saw it and carefully examined it. Although the sketch was rude in the extreme, the peculiar form and brilliant colours left no doubt as to the fish. The man had never seen one before.

## Fam. CARANGIDÆ.

18. PARATRACTUS PISQUETUS (*Cuv. & Val.*) *Gill.* *Caranx chrysos*, *Gunth.* Not uncommon.
19. ARGYRIOSUS VOMER (*L.*) *Cuv. & Val.* Not common. Specimens are occasionally taken in shore waters.
20. POMATOMUS SALTATRIX (*L.*) *Gill.* Blue-fish. *Temnodon saltator*, *Gunth.* Inserted on the authority of Dr. Bernard Gilpin, who has seen specimens taken on this coast.

## Fam. XIPHIIDÆ.

21. XIPHIAS GLADIUS, *L.* Sword-fish. Occasionally taken in the bays and harbours.

## Fam. DISCOBOLI.

22. CYCLOPTERUS LUMPUS, *L.* Lump-fish. Very common.
23. C. SPINOSUS, *Fabr.* Very rare. Trawled off Halifax Harbour by the "Speedwell" Expedition, August, 1877. (U. S. F. C.)
24. LIPARIS VULGARIS; *Flem.* Common.
25. L. MONTAGUI, *Don.* Rare. Taken off Halifax Harbour by the "Speedwell" Expedition, Aug., 1877. (U.S.F.C.)
26. L. RANULA, *Goode & Bean.* Very rare. One specimen only has been obtained by the "Speedwell" Expedition off Chebucto Head, Halifax Harbor, at a depth of 52 fathoms. (U. S. F. C.)

## Fam. PEDICULATI.

27. *LOPHIUS PISCATORIUS*, *L.* Devil-fish. Common.

## Fam. BLENNIDÆ.

28. *ANARRHICHAS LUPUS*, *L.* Cat-fish. Common.
29. *A. MINOR*, *Olaf.* Fishing banks off the coast (U. S. F. C.)
30. *A. LATIFRONS.* *Steenst & Hallg.* Fishing banks off the coast (U. S. F. C.)
31. *LEPTOCLINUS ACULEATUS* (*Reinh.*) *Gill.* *Stichæus aculeatus*, *Gunth.* Fishing banks off the coast (U. S. F. C.)
32. *EUMESOGRAMMUS SUBBIFURCATUS* (*Storer*) *Gill.* *Pholis subbifurcatus*, *Stor.* Taken off Halifax Harbour by the "Speedwell" Expedition (U. S. F. C.)
33. *Æ. UNIMACULATUS* (*Reinh.*) *Goode & Bean.* *Stichæus unimaculatus*, *Gunth.* A specimen was forwarded by Mr. Whiteaves from the vicinity of Anticosti to the Smithsonian Institution. See Goode & Bean's List of Fishes of Mass. Bay.
34. *MURÆNOIDES GUNNELLUS* (*L.*) *Goode & Bean.* Common in shore waters. Described by the author, *Trans. N. S. Inst. Nat. Sc.* vol. I. Pt. I. p. 50.
35. *CRYPTACANTHODES MACULATUS*, *Stor.* Wrymouth. Occasionally taken. The variety *C. inornatus*, *Gill*—is not uncommon.
36. *ZOARCES ANGUILLARIS* (*Peck.*) *Storer.* Common.

## Fam. ATHERINIDÆ.

37. *CHIROSTOMA NOTATUM* (*Mitch.*) *Gill.* *Atherinichthys notata*, *Gunth.*

## Fam. FISTULARIIDÆ.

38. *FISTULARIA TABACCARIA*, *L.* Occasional specimens taken in shore waters during the summer months. A specimen in the Halifax Museum.
39. *F. SERRATA*, *Cuv.* Like the last species this is occasionally taken in shore waters. The author examined a fine specimen 31 inches in length including caudal filament in Sept. 1863, which had been taken at Portu-

guese Cove, Halifax Harbour. A small specimen is in the Halifax Museum. There can be hardly a doubt as to the distinctness of these two species.

## Fam. LABRIDÆ.

40. TAUTOGOLABRUS ADSPERSUS (Walb.) Gill. Sea Perch. *Ctenolabrus burgall*, Gunth. Very common during the summer months in harbours and bays. The variety *uninotatus*, having a black spot at the base of the two anterior soft dorsals rays, mentioned by Gunther, Cat. Fishes, vol. iv., p. 90, is found in company with it.

## Fam. LYCODIDÆ.

41. LYCODES VAHLII, Reinh. Fishing banks off the coast, (U. S. F. C.)  
 42. L. VERRILLII, Goode & Bean. Fishing banks off the coast, (U. S. F. C.)  
 43. L. PAXILLUS, Goode & Bean. A single specimen obtained between La Have and Sable Island Banks, recorded in Messrs. Goode and Bean's List of N. E. Am. Fishes (1879) p. 9.

## Fam. GADIDÆ.

44. GADUS MORRHUA, L. Cod. Very common.  
 45. G. TOMCODUS, Mitch. Frost-fish. Very common.  
 46. G. ÆGLEFINUS, L. Haddock. Very common.  
 47. G. POLLACHIUS, L. Pollack. Very common. Large schools come into Halifax Harbour about the latter end of June or beginning of July, to feed upon the fry of the common hake.  
 48. MERLUCIUS BILINEARIS (Mitch.) Gill. Whiting. *Merlucius vulgaris*, Gunth. Not common.  
 49. PHYCIS CHUSS (Walb.) Gill.  
 50. P. TENUIS (Mitch.) De Kay. Hake. *Phycis americanus*, Gunth. Very common.  
 51. P. REGIUS (Walb.) Jord. & Gilb. *Phycis regalis*, Gunth. Sir John Richardson gives Halifax as a locality for this species. *Faun. Bor. Am.*

52. HALOPORPHYRUS VIOLA, *Goode & Bean*. Fishing banks off the coast (U. S. F. C.)
53. ONOS (RHINONEMUS) CIMBRIUS (*L.*) *Goode & Bean*. *Mottella cimbria*, *Gunth*. Fishing banks off the coast (U. S. F. C.)
54. BROSMIUS BROSME (*Mull.*) *White*. Cusk. Common.
55. AMMODYTES AMERICANUS, *De Kay*. Sand Eel. Common; burying in the sand at ebb of tide, and going in schools at high water.

## Fam. PLEURONECTIDÆ.

56. HIPPOGLOSSUS VULGARIS, *Flem.* Halibut. Very common on the fishing banks off the coast.
57. HIPPOGLOSSOIDES PLATESSOIDES (*Fabr.*) *Gill*. Arctic Flounder. *Hippoglossoides limandoides*, *Gunth*. Not uncommon. Of two specimens forwarded by the Rev. J. Ambrose from St. Margaret's Bay, the largest measured twenty-two inches in length.
58. PSEUDOPLEURONECTES AMERICANUS (*Walb.*) *Gill*. Flounder. *Platessa plana*, *Stor*. Very common in shore waters. Described by the author, *Trans. N. S. Inst. Nat. Sc.*, Vol. I., Pt. I., p. 51.
59. LIMANDA FERRUGINEA (*Storer.*) *Goode & Bean*. *Pleuronectes ferrugineus*, *Gunth*.
60. PLATYSOMATICHTHYS HIPPOGLOSSOIDES (*Walb.*) *Goode & Bean*. Turbot. *Hippoglossus groenlandicus*, *Gunth*. Occasional specimens are brought in from the northern fishing banks, but it is more common off Newfoundland. It is a very oily fish when cooked.
61. GLYPTOCEPHALUS CYNOGLOSSUS (*L.*) *Gill*. *Pleuronectes cynoglossus*, *Gunth*. La Have fishing bank (U.S.F.C.)

## Fam. SILURIDÆ.

62. AMIURUS CATUS (*L.*) *Gill*. Not common. This fish is very tenacious of life, for a specimen survived being carried wrapped up in paper in a pocket for two hours.

## Fam. SALMONIDÆ.

63. SALMO SALAR, *L.* Salmon. More abundant some years

- than others. Described by Dr. Gilpin, Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 76.
64. *S. CANADENSIS*, *Hamilton Smith*. Sea Trout. Very common at the mouths of rivers, May to August. Dr. Gilpin has described the species, Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 84.
65. *S. GLOVERII*, *Gir.* This fish under the name of "Grayling" is known in most rivers and lakes. It is probably from its light colour that it obtained the name, for it does not belong to the genus *Thymallus*. Described by Dr. Gilpin, Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 86.
66. *CRISTIVOMER NAMAYCUSH* (*Penn.*) *Gill & Jordan*. Lake Trout. *Salmo namaycush*, *Gunth.* Common in the larger lakes where it is known to the countrymen as the "pickerel." It is well described by Dr. Gilpin in Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 88.
67. *SALVELINUS FONTINALIS* (*Mitch.*) *Gill & Jordan*. Brook Trout. *Salmo fontinalis*, *Gunth.* Very common in all lakes and streams. Described by Dr. Gilpin, Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 81.
68. *OSMERUS MORDAX*, *Mitch.* Smelt. *Osmerus viridescens*, *Gunth.* Very abundant in January and February, when they are taken through holes in the ice in great quantities.
69. *MALLOTUS VILLOSUS*, *Cuv. & Val.* Capelin. Occurs as far south as Halifax only occasionally, when the temperature of the shore waters is lower than usual. Its proper habitat is further north, on the coasts of Newfoundland and Labrador. Described by the author, Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 2, p. 5.

## Fam. SCOMBRESOCIDÆ.

70. *SCOMBRESOX SAURUS*, *Flem.* Bill Fish. Not uncommon during the summer months. A specimen preserved in the Halifax Museum jumped out of the water into a fishing-boat. The fishermen say it comes with

the mackerel. We are informed by Mr. Robert Morrow that it is seen on the coast of Cape Breton in schules during the month of August.

71. EXOCÆTUS ———? Flying-fish. A specimen was taken at Sable Island in 1859, but the species was not determined.

Fam. CYPRINODONTIDÆ.

72. FUNDULUS ——— sp.? Minnow. A species not yet determined; in all lakes and streams.

Fam. CYPRINIDÆ.

73. CATOSTOMUS TERES (*Mitch.*) *Les.* Sucker. Common in most streams.
74. ERIMYZON SUCETTA (*Les.*) *Jordan.* *Moxostoma sucetta*, *Gunth.*

Fam. CLUPEIDÆ.

75. CLUPEA HARENGUS, *L.* Herring. More plentiful some seasons than others. Described by Dr. Gilpin, *Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 1, p. 4.*
76. ALOSA SAPIDISSIMA (*Wilson*) *Storer.* Shad. Abundant on the west coast Bay of Fundy. Described by Dr. Gilpin, *Trans. N. S. Inst. Nat. Sc., Vol. I., Pt. 4, p. 107.*
77. POMOLOBUS VERNALIS (*Mitch.*) *Goode & Bean.* Gaspereau. Very abundant.
78. BREVOORTIA TYRANNUS (*Latrobe*) *Goode.* Menhaden. Or the authority of Dr. Gilpin.

Fam. MURÆNIDÆ.

79. NEMICHTHYS SCOLOPACEUS, *Rich.* *Nemichthys scolopacea*, *Gunth.* Fishing banks off the coast, (U. S. F. C.)
80. SYNAPHOBRANCHUS PINNATUS (*Gronow*) *Gunth.* Fishing banks off the coast (U. S. F. C.)
81. ANGUILLA VULGARIS, *L.* Eel. Very common.

Fam. SYNGNATHIDÆ.

82. SYNGNATHUS PECKIANUS, *Storer.* Pipe-fish. Common in shore waters.



83. *HIPPOCAMPUS ANTIQUORUM*, *Leach*. Occasionally taken during the summer months; a Gulf-stream migrant no doubt.

## Fam. SCLERODERMI.

84. *BALISTES CAPRISCUS*, *Gm.* A specimen taken at St. Margaret's Bay, is in the Halifax Museum.
85. *STEPHANOLEPIS SETIFER*, *Bean*. *Monocanthus setifer*. *Gunth.* Occasional specimens are taken in shore waters. The Rev. John Ambrose kindly forwarded one to the author about twelve years ago which was secured at St. Margaret's Bay. It is described in *Trans. N. S. Inst. Nat. Sc.*, Vol. I., Pt. 1, p. 53.

## Fam. GYMNODONTES.

86. *MOLA ROTUNDA*, *Cuv.* Sun-fish. *Orthogoriscus mola*, *Gunth.* Rare. A specimen five feet six inches in length taken in Halifax Harbour, October, 1873. Described by Dr. Gilpin, *Trans. N. S. Inst. Nat. Sc.*, Vol. III., p. 343.

## Fam. ACIPENSERIDÆ.

87. *ACIPENSER STURIO*, *L.* Sturgeon. Occasionally taken.

## Fam. LAMNIDÆ.

88. *ALOPIAS VULPES* (*L.*) *Bon.* *Alopecias vulpes*, *Gunth.* Thresher. Occasionally taken in fishing nets, to their great detriment. A fine specimen in the collection of King's College, Windsor, N. S.
89. *CETORHINUS MAXIMUS* (*L.*) *Blainv.* Basking Shark. *Selache maxima*, *Gunth.* From descriptions given by different observers we have no doubt as to the occurrence of this species on the coast.

## Fam. SPINACIDÆ.

90. *SQUALUS ACANTHIAS*, *L.* Dog-fish. *Acanthias vulgaris*, *Gunth.* Common on the fishing grounds.
91. *CENTROSCYLLIUM FABRICII* (*Rein.*) *Mull. & Henle.* Fishing-banks off the coast (U. S. F. C.)

92. *CENTROSCYMNUS CŒLOLEPIS*, *Bocage & Capello*. Abundant on the fishing banks off the coast (U. S. F. C.)
93. *LÆMARGUS BOREALIS*, *Mull. & Henle*. Greenland Shark. The only specimen of this rare northern form the author has had the opportunity of examining, was taken off Halifax Harbour in February, 1863, and afforded the following description:—Body fusiform, narrow at the tail. Extent from tip of snout to caudal extreme 11 ft. 3 in. Depth at deepest part, a distance of 1 ft. from posterior branchial aperture, 2 ft. 4 in.; at posterior extreme of first dorsal 1 ft. 10 in.; from posterior extreme of second dorsal 8½ in.; at caudal base, 6 in. Skin covered with osseous tubercles. Snout obtuse, bearing above a series of small mucous pores, extending back 11 inches from snout, over which lay the transparent jelly-like fluid they usually emit. Head; breadth over eyes, 1 ft. 5 in. Eyes, diameter 2 in., bearing no pupillary appendages, and distant from point of snout 11 in., and from temporal orifices, 3½ in. Temporal orifices, situate on a line with upper rim of eye cup, and distant from point of snout 1 ft. 3 in.; extent 1½ in.; width ¾ in. Bronchial apertures, five in number, the posterior opening situate at the base of pectorals, and distant from frontal extreme 2 ft. 4 in., is 4 in. long and situate 14 in. from the eyes. Nostrils: situate beneath and distant from snout point, 6 in.; extent, 3 in. Mouth: vertical gape, 8½ in.; horizontal gape, 12 in. Back: carinated from anterior base of first dorsal to an extent of 1 ft. 4 in. forwards. Pectorals commence immediately behind posterior branchial aperture; width at base, 9 in.; extent 1 ft. 4 in. Ventrals commence 3 ft. 6 in. from posterior base of pectorals; width at base, 6 in.; extent, 8 in. First dorsal commences 4 ft. 7 in. from snout point; width at base, 11 in.; extent from anterior base to extremity, 18 in.; from posterior base to summit, 5½ in.;

loose, flapper-like extreme of fin extends 7 in. beyond the posterior base, and lies close upon the back. Second dorsal commences 2 ft. 2 in. from posterior base of first dorsal; height at posterior base, 4 in.; length, 14 in.; width at base, 7 in.; loose flapper-like extreme extends  $6\frac{1}{2}$  in. beyond the posterior base, and lies close upon the back, as the first. Caudal commences 12 in. from posterior base of second dorsal; extreme span, 2 ft. 7 in.; upper lobe, extent, 23 in.; lower lobe,  $16\frac{1}{2}$  in. Lower lobe commences 3 in. in advance of upper; carinated at base; carinal ridge, two inches from lower surface, and four inches from the upper surface.

## Fam. RAIIDÆ.

94. *RAIA RADIATA*, *Don.*  
 95. *R. GRANULATA*, *Gill.* M. S. This new species is given in Messrs. Goode & Bean's List of N. E. American Fishes (1879) as occurring on LaHave fishing-bank.  
 96. *R. LÆVIS*, *Mitch.* Barn-door skate. Dr. Gilpin informs us that this species occurs on the west coast; Bay of Fundy.

## Fam. PETROMYZONTIDÆ.

97. *PETROMYZON MARINUS*, *L.* Lamprey. Not uncommon; generally found as a parasite on the gadoids.