

- . 1951. Cumberland House Journals and Inland Journal 1775-82. Hudson's Bay Record Society, Vol. 14. London. Introduction XVIII.
- SWAINSON, W. and J. RICHARDSON. 1831. Fauna Boreali-Americana Part 2. London. pp. 350-354.
- TAVERNER, P. A. and G. M. SUTTON. 1934. The Birds of Churchill, Manitoba. Annals of the Carnegie Museum 23. 43 pp.

Received for publication 20 January 1964



## FISH COLLECTIONS FROM EASTERN HUDSON BAY

D. E. McALLISTER

National Museum of Canada, Ottawa, Ontario

### INTRODUCTION

FEW COLLECTIONS have been made in the eastern waters of Canada's inland sea, Hudson Bay. Vladykov (1933) and Dymond (1933) describe the marine fish and summarize past literature. Dunbar and Hildebrand (1952) describe the fishes of Ungava Bay. The only further marine ichthyofaunal study has been that of Edwards (1961) on the fishes of Richmond Gulf. However, reports on single species have appeared: McPhail (1961) on Arctic charr and (1963) on ninespine stickleback, Legendre (1961) on the Greenland cod and Scott (1960) on the round whitefish. McAllister (1960) provided a key to the marine Arctic Canadian fishes, including Hudson Bay. References to the literature up to 1960 on freshwater fishes may be obtained from Harper (1961) and Fowler (1961). Power and Oliver (1961) give freshwater records from the southern Ungava Bay drainage.

The area must still be considered poorly known as each study has revealed further species. In Richmond Gulf, for example, the National Museum of Canada expedition in only ten marine stations was able to add four species to Edward's (1961) list—the lumpfish, round whitefish, lake whitefish, and the Arctic sculpin. One collection by the Fisheries Research Board in 1959 has been found to contain a further species, the American plaice, *Hippoglossoides platessoides*. Further work would be worthwhile, particularly in the deeper waters.

This paper briefly reports on marine and freshwater fishes collected by the National Museum of Canada expedition to eastern Hudson Bay in the summer of 1963. The author and Dr. A. H. Clarke, Jr., assisted by Mr. H. D. Athearn, collected fishes, molluscs, and other invertebrates from Port Harrison in the north to Moosonee, James Bay, in the south. Additional collections made by John G. Robertson at Povungnituk in 1963 are also reported on. Figure 1 shows the locality of the collecting sites; Table 1 presents the field data.

### ITINERARY

The author left Ottawa on July 7, by train and arrived at Moosonee July 8. On July 10 he took off by Canso aircraft for Port Harrison and en route picked



TABLE 1.—Field Data for Collections

Coll. No.	Locality	Salinity	Temperature °C	Bottom	Capture Depth - Feet	Gear
NMC63-162	P.Q.: Povungnituk	—	16	stones, pebbles	—	seal net
NMC63-163	P.Q.: Povungnituk	—	—	algae and seaweed rocky	—	gill net
NMC63-164	P.Q.: Povungnituk	salt	—	algae and seaweed stones, pebbles	5-30	line with spoon gill net
NMC63-165	P.Q.: Povungnituk	salt	—	algae and seaweed stones, pebbles	5-30	line with spoon
NMC63-166	P.Q.: Small stream entering Povungnituk R.	fresh	—	algae, rocky	2	gill net
NMC63-167	P.Q.: Povungnituk	salt	—	algae and seaweed rocky	10-40	line with spoon
NMC63-168	P.Q.: Povungnituk	salt	—	algae and seaweed rocky	4-20	line with spoon
NMC63-169	P.Q.: Povungnituk	—	—	algae, rocky	2	3 inch gill net
NMC63-170	P.Q.: Povungnituk	—	—	algae, rocky	3-6	gill net
NMC63-171	P.Q.: Povungnituk	—	—	rocky	1-3	gill net
NMC63-172	P.Q.: Povungnituk	salt	—	algae and seaweed rocky	10-20	line with spoon
NMC63-173	P.Q.: Povungnituk	—	—	algae, rocky	$\frac{1}{2}$ -3	gill net
NMC63-174	P.Q.: Povungnituk	—	—	rocky	—	—
NMC63-175	P.Q.: Povungnituk	—	—	—	—	gill net
NMC63-176	P.Q.: Small stream entering Povungnituk R.	fresh	—	algae, rocky	$\frac{1}{2}$ -5	gill net
NMC63-177	P.Q.: Povungnituk R.	fresh	—	algae, rocky	$\frac{1}{2}$ -5	gill net
NMC63-178	P.Q.: Povungnituk R.	fresh	—	algae, rocky	$\frac{1}{2}$ -5	gill net
NMC63-179	P.Q.: Povungnituk R.	—	—	rocky	15-30	line with spoon
NMC63-180	P.Q.: Povungnituk R.	fresh	—	algae, rocky	$\frac{1}{2}$ -5	gill net
NMC63-195	P.Q.: Head Five Mile Inlet	7.9 parts per thou- sand	8.5	algae, sand	0-3	bag seine
NMC63-196	P.Q.: Head Five Mile Inlet	7.9 parts per thou- sand	9.0	rocky	0-2	rotenone
NMC63-197	P.Q.: Rivermouth, head Five Mile Inlet	probably brackish	3	boulders	8-15	3-inch gill net
NMC63-198	N.W.T.: off n. end Patterson I.	salt	ca. 4	mud	60	2-foot dredge
NMC63-199	P.Q.: rill tributary to lake 3 mi. ne. Port Harrison	fresh	10.5	grass, pebbles, mud	0-2 $\frac{1}{2}$	rotenone
NMC63-200	P.Q.: mainland opp. Hotchkiss Is.	28 parts per thou- sand	6	sand	0-3	bag seine
NMC63-201	P.Q.: mainland opp. Hotchkiss Is.	salt	6	boulders, gravel	20-40	$\frac{3}{4}$ - and 2 $\frac{1}{2}$ -inch gill net
NMC63-202	P.Q.: mainland opp. Hotchkiss Is.	salt	9.5	sand and clay few boulders	0-3	rotenone
NMC63-203	P.Q.: bay $\frac{1}{2}$ mi. off mouth Kikkerteluk R.	salt	—	—	60	$\frac{3}{4}$ - and 2 $\frac{1}{2}$ -inch gill net
NMC63-204	P.Q.: mouth Kikkerteluk R.	—	—	rock and sand	0-3	3-inch gill net
NMC63-205	P.Q.: 2 mi. above mouth Kikkerteluk R.	fresh	—	weeds	—	dipnet
NMC63-206	N.W.T.: Tottenham Bay <sup>1</sup> ne. end Broughton I.	24 parts per thousand at surface	8.5	sand	25	$\frac{3}{4}$ - and 2 $\frac{1}{2}$ -inch gill net
NMC63-207	N.S.T.: Tottenham ne. end Broughton I.	24 parts per thou- sand	8.5	fucus, boulders	0-2	rotenone
NMC63-208	N.W.T.: lakes, centre Broughton I.	fresh	14	gravel, sand, boulders	1-3	line with spinner
NMC63-209	N.W.T.: side pool, upper lake, centre Broughton I.	fresh	+14	grass, sand, silt	0- $\frac{1}{2}$	rotenone
NMC63-210-S	N.W.T.: found on shore e. central Broughton I.	—	—	—	—	—
NMC63-211	N.W.T.: bay, s. end Mowat I.	salt	10	—	40	$\frac{3}{4}$ - and 2 $\frac{1}{2}$ -inch gill net
NMC63-212	N.W.T.: bay, s. end Mowat I.	salt	10 at surface	fucus, rocky	10	jigging with spoon
NMC63-213	P.Q.: Nastapoka R. 2 mi. above mouth	fresh	—	sand, gravel	$\frac{1}{12}$	dipnet

<sup>1</sup>Suggested name for unnamed bay at 57°25'N, 76°49'W, at northeast end of Broughton Island (see fig. 1 and 4). Named after Const. R. L. Tottenham of the Northwest Mounted Police.



TABLE 1.—cont'd.

Coll. No.	Locality	Salinity	Temperature °C	Bottom	Capture Depth - Feet	Gear
NMC63-214	N.W.T.: bay, ne. end Anderson I.	salt	—	sea urchins, brittle stars	30-35	gill net
NMC63-215	N.W.T.: stream, enters bay ne. end Anderson I.	fresh	6	algae clumps sand, silt, detritus	$\frac{1}{12}$ - $\frac{4}{12}$	dipnet
NMC63-216	N.W.T.: lake, 35-ft. altitude ne. end Anderson I.	fresh	—	boulders and sand	1-2	hand
NMC63-217	N.W.T.: tide pool s. tip Ross I.	salt	10	rocky with boulders and gravel	0-1	rotenone
NMC63-218	P.Q.: pool, lake outlet s. side large island, Richmond Gulf	fresh	—	weeds, sand	$\frac{2}{12}$	hand
NMC63-219	P.Q.: bay s. side large island, Richmond Gulf	ca. 14-16 parts per thousand	14	sand	1-3	bag, seine
NMC63-220	P.Q.: bay s. side large island, Richmond Gulf	+16 parts per thousand	10 at surface	sand, silt	5-20	$\frac{3}{4}$ - and $2\frac{1}{2}$ -inch gill net
NMC63-221	P.Q.: bay s. side large island, Richmond Gulf	fresh	16.5	algae, boulders	0-3 $\frac{1}{2}$	rotenone
NMC63-222	P.Q.: Deer R. 2 mi. above mouth, Richmond Gulf	fresh	16.5	algae, boulders	4	gill net
NMC63-223	P.Q.: Richmond Gulf 2 mi. w. Deer R. mouth	salt	—	mud and clay	36-90	2-foot dredge
NMC63-224	P.Q.: Richmond Gulf 3 mi. nw. Deer R. mouth	salt	—	—	—	floating 4-inch gill net
NMC63-225	P.Q.: island off Charr Lake <sup>2</sup> w. central Richmond Gulf	ca. 16 parts per thousand	18	fucus, boulders and sand, rocky	0-3	rotenone
NMC63-226	P.Q.: Charr L. <sup>2</sup> , w. central Richmond Gulf	fresh	—	—	—	—
NMC63-227	P.Q.: just outside Clearwater R. lagoon	somewhat brackish	—	sand	0-2	bag seine
NMC63-228	P.Q.: Clearwater R. just below rapids at mouth	fresh	—	boulders	0-10	2-inch gill net
NMC63-229	P.Q.: lagoon, mouth of Clearwater R.	brackish	—	—	12	$\frac{3}{4}$ - and $2\frac{1}{2}$ -inch gill net
NMC63-230	P.Q.: bog pond, shore Clearwater R. lagoon	fresh	—	grass, moss, black mud	1 $\frac{1}{2}$	dipnet
NMC63-231	P.Q.: bay, s. of e. end of Gulf Hazard, in Richmond Gulf	salt	12.5 at surface	boulders and sand	10-15	jigging with spoon
NMC63-232	P.Q.: bay, s. side of e. end of Gulf Hazard	salt	—	algae mat on gravel	0-2 $\frac{1}{2}$	bag seine
NMC63-233	P.Q.: bay, s. of e. end of Gulf Hazard, in Richmond Gulf	salt	—	sea urchins and shells	25	$\frac{3}{4}$ - and $2\frac{1}{2}$ -inch gill net
NMC63-234	P.Q.: bay, s. of e. end of Gulf Hazard, in Richmond Gulf	salt	—	boulders, sand	7-15	2-inch gill net
NMC63-235	N.W.T.: n. end of Castle I. in e. end of Boat Passage	salt	—	fucus, sea urchins mussels, rocky	15-50	$\frac{3}{4}$ - and $2\frac{1}{2}$ -inch gill net
NMC63-236	P.Q.: bay n. central shore Burton L.	fresh	ca. 18	sand and detritus patches	0-2 $\frac{1}{2}$	bag seine
NMC63-237	P.Q.: creek, n. central shore Burton L.	fresh	—	mud, gravel patches	0-3	bag seine
NMC63-238	P.Q.: middle branch Roggan R.	fresh	—	rocky	—	angling
NMC63-239	Ont.: Moose R. at Moosonee	fresh	24	mud	0-3	bag seine
NMC63-240	Ont.: creek tributary to Moosonee 3 mi. above mouth at Moosonee	fresh	20.5	mud	0-6	dipnet

<sup>2</sup>Unofficial local name for lake, unnamed on charts.



up Dr. Clarke and Mr. Athearn at Great Whale River. We collected in the Port Harrison area until July 13, when we left via chartered trap boat (see Figure 7) for Great Whale River. Collections were made on route to Great Whale River at numerous points. On July 23 the expedition arrived in Great Whale River; the boat and crew then returned to Port Harrison. A chartered flight was made to Burton Lake and Roggan River on July 24. The following day we left via Canso for Moosonee. Final fish collections were made on July 25 and 26 in the Moosonee area. The author then returned to Ottawa by train.

#### CONDITIONS

Ice was reported to have broken up on the Moose River at Moosonee on May 18 and on James Bay on June 18. On the trip up, little ice was seen on James Bay. In Hudson Bay there were rare patches of ice south of Great Whale River, a few broader patches northward; rivers and lakes were completely ice free, but a few ravines had snow. On the return trip by boat only a single piece of ice was seen. Weather during the boat trip varied from cool to warm, never approaching freezing. About half the days were cloudy, and most cloudy days had some rain. Winds were light, the maximum being about 40 mph. In Richmond Gulf swimming was comfortably indulged in. Water temperatures at collecting stations varied from 3° to 18° C in brackish and salt waters (the highest temperatures of 14 and 18° C in Richmond Gulf, 10° C elsewhere) and from 10.5 to ca. 18° C in freshwater (except in Moosonee area where 20.5° and 24° were recorded). In Gulf Hazard, which joins Hudson Bay to Richmond Gulf, surface temperatures were cooled to 3.5 ° C at its narrowest and most turbulent point; here mist formed above the water.

Twenty-eight species of fishes (12 marine, 5 anadromous, and 11 freshwater), belonging to 14 families were collected. These are discussed below in phylogenetic order. The collection number and the number of specimens (in parentheses) are given for each collection of that species.

#### SPECIES

##### RAJIDAE

*Raja radiata* Donovan, THORNY SKATE, raie de mer épineuse.

Collections: NMC62-233 (1)

Represented only by an egg capsule. Although the capsule is of smaller size (36x48 mm) than those given by Vladykov (1936), 48-73x66-90 mm, they are within the limits of those given by Jensen (1948), 24-41x45-66. *Raja radiata* is the only skate known from Richmond Gulf (Edwards 1961), or indeed Hudson Bay.

##### SALMONIDAE

##### Salmonineae

*Salvelinus namaycush* (Walbaum), LAKE CHARR (TROUT), touladi. Figure 2.

Collections: NMC63-208 (2).

One specimen had eaten half a dozen *Pungitius pungitius*.

*Salvelinus alpinus* (Linnaeus), ARCTIC CHARR, omble chevalier.

Collections: NMC63-162 (1); NMC63-163 (2); NMC63-170 (1); NMC63-173 (2); NMC63-178 (1); NMC 63-180 (1); NMC 63-197 (not kept); NMC 63-199 (3); NMC 63-204 (2); NMC63-226 (2).

This species is being commercially fished by Eskimos in Richmond Gulf with Department of Northern Affairs co-operation.

*Salvelinus fontinalis* (Mitchell), BROOK CHARR (TROUT), omble de la fontaine.

Collections: NMC63-169 (1); NMC63-176 (2); NMC63-177 (1); NMC63-178 (1); NMC63-205 (1); NMC63-208 (2); NMC 63-220 (2); NMC63-221 (26); NMC63-228 (22).

Specimens from the lower lake Broughton Island (NMC63-208) were apparently sea-



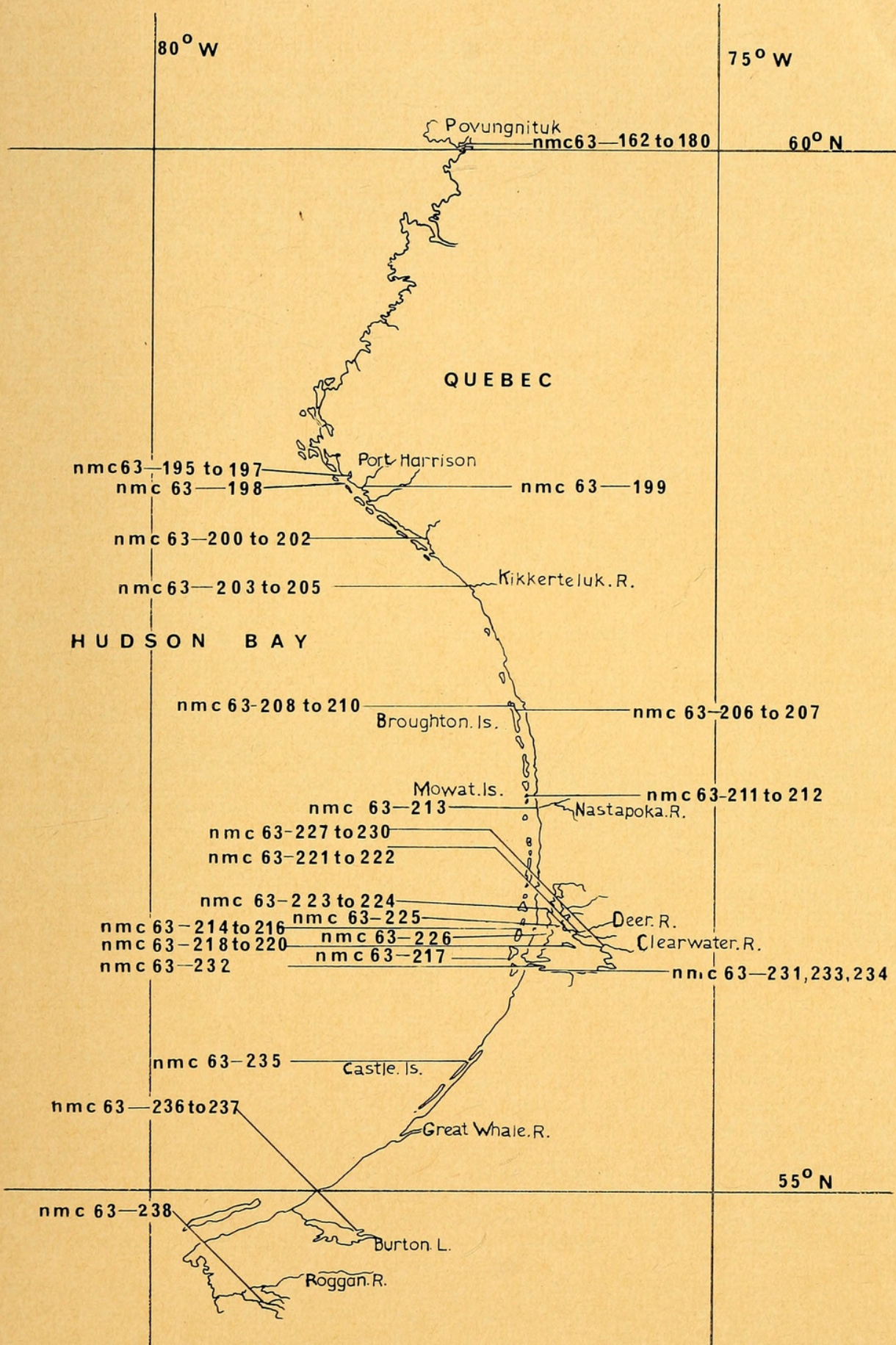


FIGURE 1. Map of eastern Hudson Bay showing collection sites of 1963 National Museum of Canada expedition. The Moosonee sites in southern James Bay are not shown. Numbers preceded by NMC are catalogue numbers.



run, as evidenced by copepods in their mouths. The Povungnituk specimens apparently extend the known range northward over 50 miles from the previous northernmost point of Payne Lake, mouth of outlet, reported by Legendre and Rousseau (1949). Brook charr specimens from 15 miles inland were also seen at Port Harrison (but not preserved).

#### Coregoninae

*Prosopium cylindraceum* (Pallas), ROUND WHITEFISH, ménomini.

*Collections:* NMC63-178 (1); NMC63-180 (1); NMC63-228 (3); NMC63-229 (1).

All collections were from fresh water, except NMC63-229 which was brackish. The northernmost Quebec record in the literature appears to be Bateman's (*in* Harper, 1961) at Iron Lake south of Leaf Bay. The Povungnituk specimens are from over 75 miles north of this point. The species is known north of Povungnituk in the western Arctic, however.

*Coregonus artedii* Lesueur, CISCO, cisco. Figure 3.

*Collections:* NMC63-171 (1); NMC63-220 (11); NMC63-225 (1); NMC63-229 (2).

This species has apparently been known north only to Fort Chimo, in Quebec. The Povungnituk specimens are from over 130 miles north of that point. The species is known to range further north than Povungnituk in central Arctic Canada.

*Coregonus clupeaformis* (Mitchell), LAKE WHITEFISH, corégone de lac. Figure 8.

*Collections:* NMC63-171 (1); NMC63-176 (3); NMC63-177 (9); NMC63-178 (4); NMC63-180 (5); NMC63-204 (6); NMC 63-220 (1); NMC63-229 (1); NMC 63-236 (104); NMC63-239 (1).

The northernmost Quebec record appears to be the lower Leaf River. The Povungnituk specimens recorded here extend the known Quebec range over 75 miles further north. The species does occur further north than Povungnituk in the western Arctic. This species is being commercially caught in Richmond Gulf by Eskimos with Department of Northern Affairs' cooperation.

#### OSMERIDAE

*Mallotus villosus* (Müller), CAPELIN, capelan.

*Collections:* NMC63-220 (60).

About a thousand capelin were caught in one overnight set of a 30x6 feet panel of  $\frac{3}{4}$ -inch mesh; 60 were kept.

#### ESOCIDAE

*Esox lucius* Linnaeus, NORTHERN PIKE, grand brochet.

*Collections:* NMC63-238 (2).

Pike were reported in Clearwater Lake, inland from Richmond Gulf.

#### CATOSTOMIDAE

*Catostomus catostomus* (Forster), LONGNOSE SUCKER, meunier.

*Collections:* NMC63-166 (1); NMC63-176 (4); NMC63-178 (4); NMC63-180 (1); NMC63-221 (29); NMC63-222 (2); NMC 63-237 (1).

The most northerly record previously reported appears to be that of Dunbar and Hildebrand (1952) for the Leaf River. The Povungnituk specimens reported here are at least 75 miles north of this point.

#### CYPRINIDAE

*Rhinichthys cataractae* (Valenciennes), LONG-NOSE DACE, goujon à long nez.

*Collections:* NMC63-213 (27); NMC63-221 (13).

The upper lip and lower fins of the Deer River specimens were red. The Nastopoka River specimens, though not constituting a northern record (they extend north in the interior to Whale River (Power and Oliver, 1961), are further north on the Hudson Bay coast than previous records.

*Couesius plumbeus* (Agassiz), LAKE CHUB, méné de lac.

*Collections:* NMC63-239 (1).

*Notropis* sp.

*Collections:* NMC63-239 (1).

#### GADIDAE

*Gadus ogac* Richardson, GREENLAND COD, ogac. Figure 6.

*Collections:* NMC63-162 (1); NMC 63-164 (8); NMC63-165 (16); NMC 63-167 (22); NMC63-168 (6); NMC63-172 (4); NMC63-179 (4); NMC63-197 (8); NMC 63-201 (26); NMC 63-206 (4); NMC 63-120-S (skeleton on beach); NMC63-212 (1); NMC63-214 (2); NMC 63-233 (3); NMC 63-245 (13).

This was one of the most commonly caught marine species. Its numbers might well provide the basis for local fisheries.



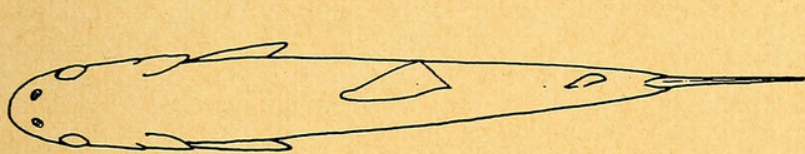
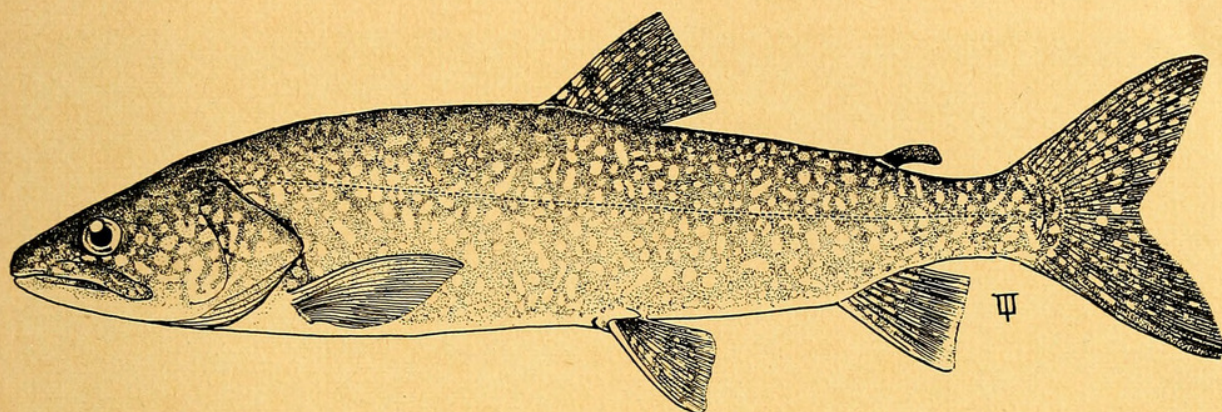


FIGURE 2. A lake charr, *Salvelinus namaycush*, 360 mm in standard length, from NMC 63-208, a lake on Broughton Island.

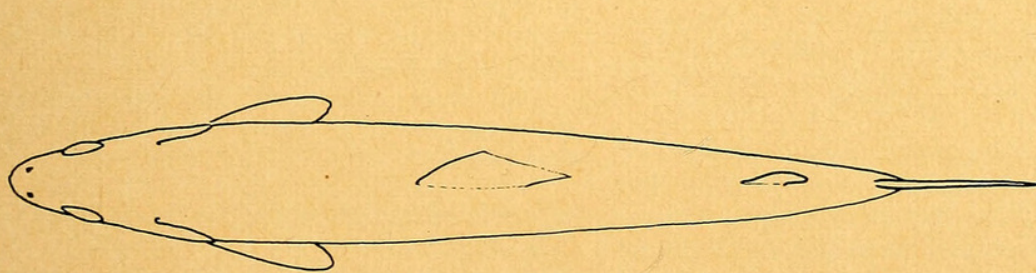
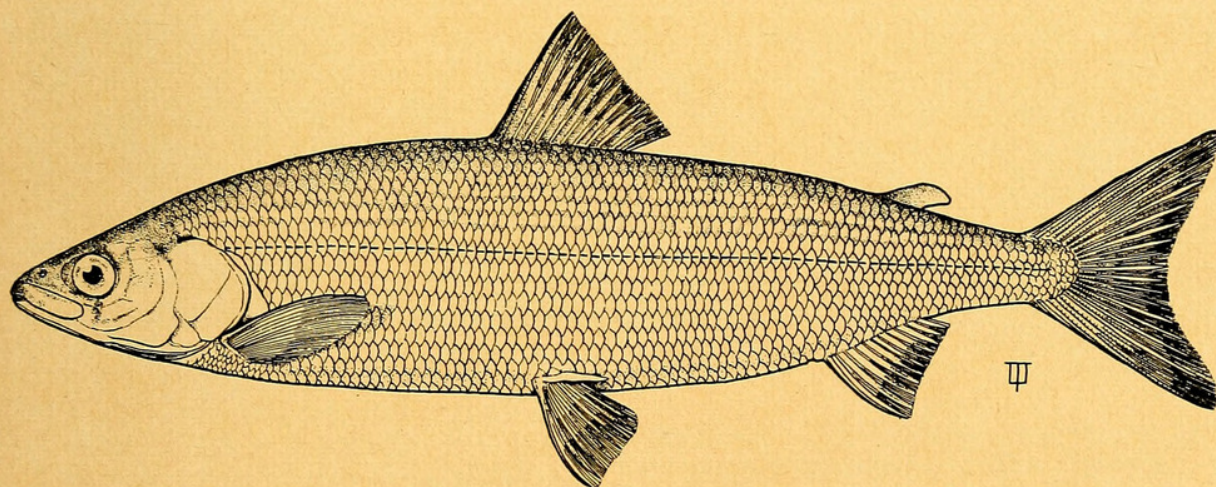


FIGURE 3. A cisco, *Coregonus artedii*, 262 mm in standard length, from NMC63-171, a stream at Povungnituk.





FIGURE 4. Tottenham Bay, Broughton Island, site of collections NMC63-206—gill net in 25 feet of water, sand, out from lefthand man—*Gadus ogac*, *Myoxocephalus scorpius*, *Lumpenus fabricii* and NMC63-207 rotenone among boulders with *Fucus*, near right-hand man—*Myoxocephalus scorpioides*, *M. scorpius*, *Stichaeus punctatus*.

#### PERCIDAE

*Stizostedion vitreum vitreum* (Mitchell),  
WALLEYE, doré jaune.

Collections: NMC63-237 (1).

#### COTTIDAE

*Myoxocephalus quadricornis* (Linnaeus),  
FOURHORN SCULPIN, chaboisseau à quatre cornes.

Collections: NMC63-164 (1); NMC 63-174 (1); NMC63-175 (1); NMC 63-195 (11); NMC63-196 (5); NMC63-200 (2); NMC63-201 (1); NMC63-202 (6); NMC63-220 (10); NMC63-229 (4); NMC63-232 (1); NMC 63-234 (3).

This was the most common species of *Myoxocephalus* caught, *scorpioides* the rarest. The three species of *Myoxocephalus* rarely may be caught in the same gill net set (NMC63-234). *M. quadricornis* is generally caught in more brackish water (7.9–28‰) and in shallower depths (0–40 feet), *scorpius* in more saline water (16+ to 24+‰) and

in deeper depths usually 5 to 50 feet deep. *Myoxocephalus scorpius* (Linnaeus), SHORT-HORN SCULPIN, chabolsseau espines.

Collections: NMC63-201 (2); NMC63-203 (1); NMC63-206 (12); NMC63-207 (19); NMC63-211 (2); NMC63-214 (5); NMC 63-220 (1); NMC63-231 (4); NMC63-234 (1); NMC63-235 (8).

*Myoxocephalus scorpioides* (Fabricius),  
ARCTIC SCULPIN, chaboisseau artique.

Collections: NMC63-207 (2); NMC63-217 (13); NMC63-234 (1).

The three collections of *M. scorpioides* were caught in generally saline water 0–15 feet deep.

*Gymnocanthus tricusps* (Reinhardt), ARCTIC STAGHORN SCULPIN, tricorne arctique.

Collections: NMC63-211 (2); NMC63-233 (1).

In a male specimen, NMC63-211, there are bright white spots on the abdomen, on





FIGURE 5. Crew of cruise, left to right, Joe, Lasarus, Charlie and below, Judd.

the inside of pectoral fins and on both sides of the pelvic fins; these spots turn yellowish on the posterior of the body. The vertical fins are striped black and yellowish; the chin is yellowish; the head and most of the body are dark brown; the pineal region is white; the eyes are bronze coloured; the buccal cavity is white.

*Cottus bairdii* Girard, MOTTLED SCULPIN, chabot.

Collections: NMC63-221 (2); NMC63-237 (3); NMC63-240 (1).

The Deer River collection extends the known coastal distribution considerably to the north, although it is known to extend almost to Ungava Bay in central Quebec.

*Cottus cognatus* Richardson, SLIMY SCULPIN, chabot visqueux.

Collections: NMC63-221 (35); NMC63-240 (4).

#### AGONIDAE

*Aspidophoroides olrikii* Lütkin, ARCTIC ALLIGATORFISH, poisson alligator arctique.

Collections: NMC63-198 (1).

#### CYCLOPTERIDAE

*Cyclopterus lumpus* Linnaeus, LUMPFISH, grosse poule l'eau.

Collections: NMC63-224 (1).

This specimen represents the first specimen for eastern Hudson Bay. Lumpfish were caught fairly commonly in floating gill nets set for Arctic charr in Richmond Gulf by





FIGURE 6. *Gadus ogac*, collection NMC63-201, from east side of Hopewell Channel, opposite Hotchkiss Island. Note the absence of a prominent white lateral band which is found in the related species, *Gadus morhua*.

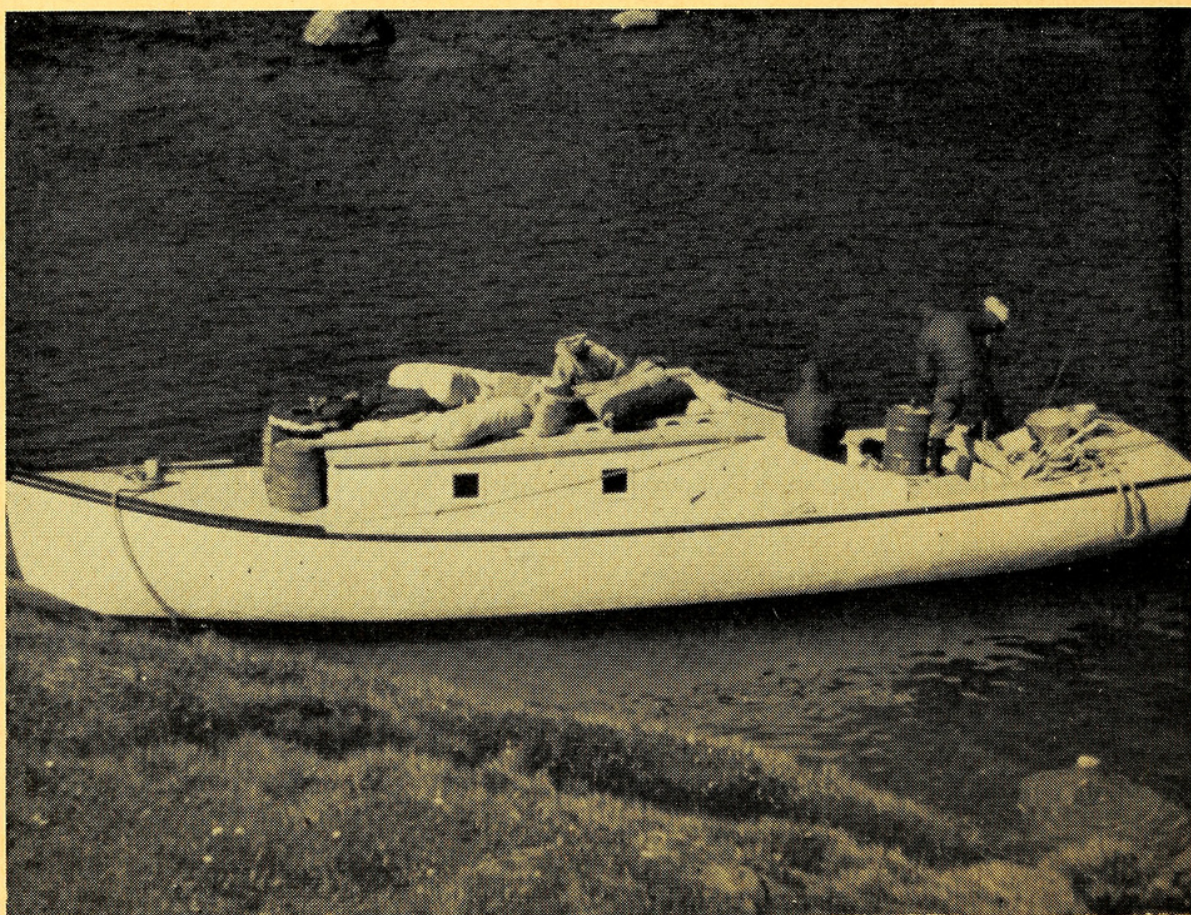


FIGURE 7. The motor launch used on the cruise.



the Eskimo commercial fishing camp being started by the Department of Northern Affairs.

#### STICHAEIDAE

*Stichaeus punctatus* (Fabricius), ARCTIC SHANNY, stichée arctique.

*Collections:* NMC63-207 (3).

These specimens were brown bodied and had a reddish eye, the edge of dorsal and anal white, the pectoral and caudal with red-brown stripes, the anal with yellow and charcoal stripes, the dorsal yellow brown with black spots having yellow ocelli, and the chin with black stripes. They represent the first record for eastern Hudson Bay.

*Lumpenus fabricii* (Valenciennes), SLENDER EELBLENNY.

*Collections:* NMC63-206 (1).

#### AMMODYTIDAE

*Ammodytes hexapterus* Pallas, SAND LANCE, lançon d'Amérique.

*Collections:* NMC63-195 (15); NMC63-219 (16); NMC63-227 (54).

#### GASTEROSTEIDAE

*Pungitius pungitius* (Linnaeus), NINESPINE STICKLEBACK, épinoche à neuf épines.

*Collections:* NMC63-195 (1); NMC63-199 (6); NMC63-208 (6 in stomach of lake charr); NMC63-209 (50); NMC63-215 (15); NMC63-219 (23); NMC63-226 (1); NMC 63-227 (12); NMC63-232 (9); NMC 63-236 (4); NMC63-247 (11).

*Gasterosteus aculeatus* Linnaeus.

THREESPINE STICKLEBACK, épinoche à trois épines.

*Collections:* NMC63-215 (8); NMC63-216 (4); NMC63-218 (15); NMC63-219 (185); NMC63-221 (2); NMC63-226 (18); NMC 63-227 (73); NMC63-230 (21); NMC 63-232 (32); NMC63-237 (9).

The collections consist mainly of the *semiarmata* type, with a few of the *trachura* type.

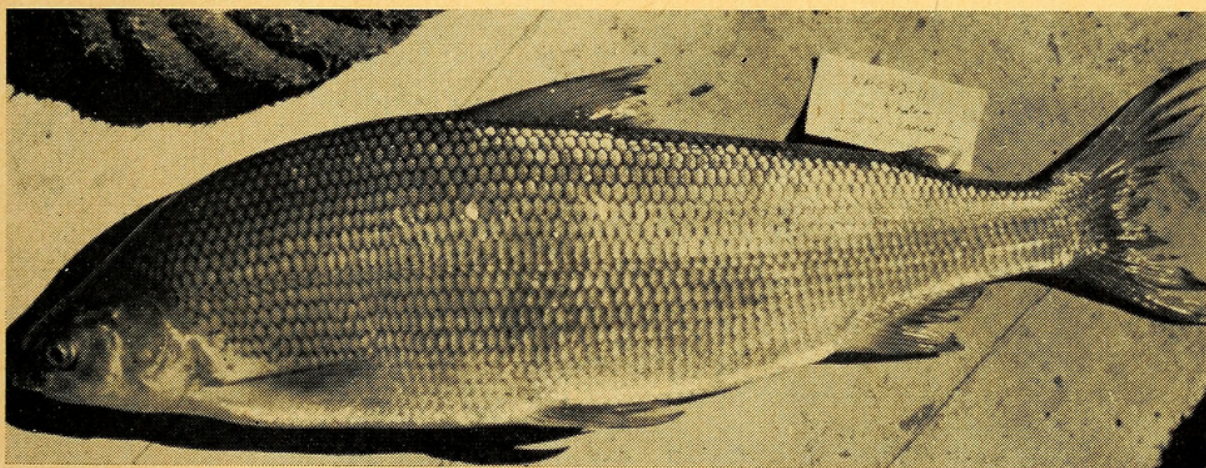


FIGURE 8. *Coregonus clupeaformis*, collection NMC63-204, from mouth of Kikkerteluk River.

#### ACKNOWLEDGMENTS

The cooperation and assistance of Dr. A. H. Clarke and Mr. H. D. Athearn, who accompanied the author on the expedition and of the able Eskimo crew Lasarus, Charlie, Judd, and Joe who selflessly worked long hours, greatly contributed to the success of the expedition. To the director of the Protection Service, Jean Duguay, Département des Pêcheries et de la Chasse, is due thanks for authorization to collect fish specimens. Howard Dove, Hudson's Bay Company, and Rodney Evans, Department of Northern Affairs, of Povungnituk, assisted greatly in organization of the expedition. Dave Price contributed a specimen of lumpfish from Richmond Gulf, and David Neave two pike from Roggan River (both of the Department of Northern Affairs). The



elegant drawings and map are by John Tottenham. To all these persons the author is very grateful.

#### SUMMARY

Distribution and ecological data are presented from the 1963 National Museum of Canada expedition to eastern Hudson Bay. Twenty-eight marine and freshwater fishes are reported. The known northern limits in Quebec of *Salvelinus fontinalis*, *Prosopium cylindraceum*, *Coregonus artedii*, *Coregonus clupeaformis*, and *Catostomus catostomus* are extended. *Cyclopterus lumpus* and *Stichaeus punctatus* are reported for the first time from eastern Hudson Bay.

#### REFERENCES

- DUNBAR, M. J., and H. H. HILDEBRAND. 1952. Contribution to the study of the fishes of Ungava Bay. *Journal of the Fisheries Research Board of Canada* 9(2): 83-128, 1 fig.
- DYMOND, J. R. 1933. The coregonine fishes of Hudson and James Bays. *Contributions to Canadian Biology and Fisheries, New Series* 8(2):1-12.
- EDWARDS, ROBERT L. 1961. The fishes of Richmond Gulf, Ungava, Canada. *Proceedings of the American Philosophical Society* 105(2):196-205, 2 fig.
- FOWLER, HENRY W. 1961. Taxonomic notes on fishes of the interior of the Ungava Peninsula. *Journal Elisha Mitchell Scientific Society* 77(2):309-311, 2 fig.
- HARPER, FRANCIS. 1961. Field and historical notes on fresh-water fishes of the Ungava Peninsula and on certain marine fishes of the north side shore of the Gulf of St. Lawrence. *Journal Elisha Mitchell Scientific Society* 77(2):312-342, 20 maps, 2 pl.
- JENSEN, A. S. 1948. Contributions to the ichthyofauna of Greenland, 8-24. *Skrifter udgivet af Universitetets zoologiske Museum København* 9:1-182.
- LEGENDRE, VIANNEY. 1961. Ogac ou morue de roche, *Gadus ogac* Richardson 1836: Synonymie et bibliographie. *Naturaliste Canadien* 88(4):85-93.
- LEGENDRE, VIANNEY, and JACQUES ROUSSEAU. 1949. La distribution de quelques-uns de nos poissons dans le Québec Arctique. *Annales de l'ACFAS* 15:133-135, 1 fig.
- MCALLISTER, D. E. 1960. Keys to the marine fishes of Arctic Canada. *Natural History Papers, National Museum of Canada* (5):1-21.
- MCPHAIL, J. D. 1961. A systematic study of the *Salvelinus alpinus* complex in North America. *Journal of the Fisheries Research Board of Canada* 18(5):793-816, 6 fig.
- . 1963. Geographic variation in North American ninespine sticklebacks *Pungitius pungitius*. *Journal of the Fisheries Research Board of Canada* 20(1): 27-44, 6 fig.
- POWER, G. F., and D. R. OLIVER. 1961. Notes on the distribution and relative abundance of fresh-water fish in Ungava. *Canadian Field-Naturalist* 75(4):221-224, 1 fig.
- SCOTT, W. B. 1960. Summaries of current information on round whitefish and mountain whitefish. Ontario Department of Lands and Forests. *Research Information Paper (Fisheries)* (8):1-19.
- VLADYKOV, VADIM D. 1933. Fishes from the Hudson Bay region (except the Coregonidae). *Contribution to Canadian Biology and Fisheries, New Series* 9(2): 13-61, 5 fig.
- . 1936. Capsules d'oeufs de raies d'Atlantique Canadian appartenant au genre *Raja*. *Naturaliste Canadien* 63: 211-231, illus.

Received for publication 19 February 1964







McAllister, Don E. 1964. "Fish Collections from Eastern Hudson Bay." *The Canadian field-naturalist* 78(3), 167–178. <https://doi.org/10.5962/p.342173>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/89058>

**DOI:** <https://doi.org/10.5962/p.342173>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/342173>

#### **Holding Institution**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

#### **Sponsored by**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

#### **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Ottawa Field-Naturalists' Club

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.