

FISHERIES RESEARCH BOARD OF CANADA

MANUSCRIPT REPORT SERIES (BIOLOGICAL)

No. 314

TITLE

Operations of the 10% Exemption Clause for
Canadian Mainland Otter Trawlers in 1963

AUTHORSHIP

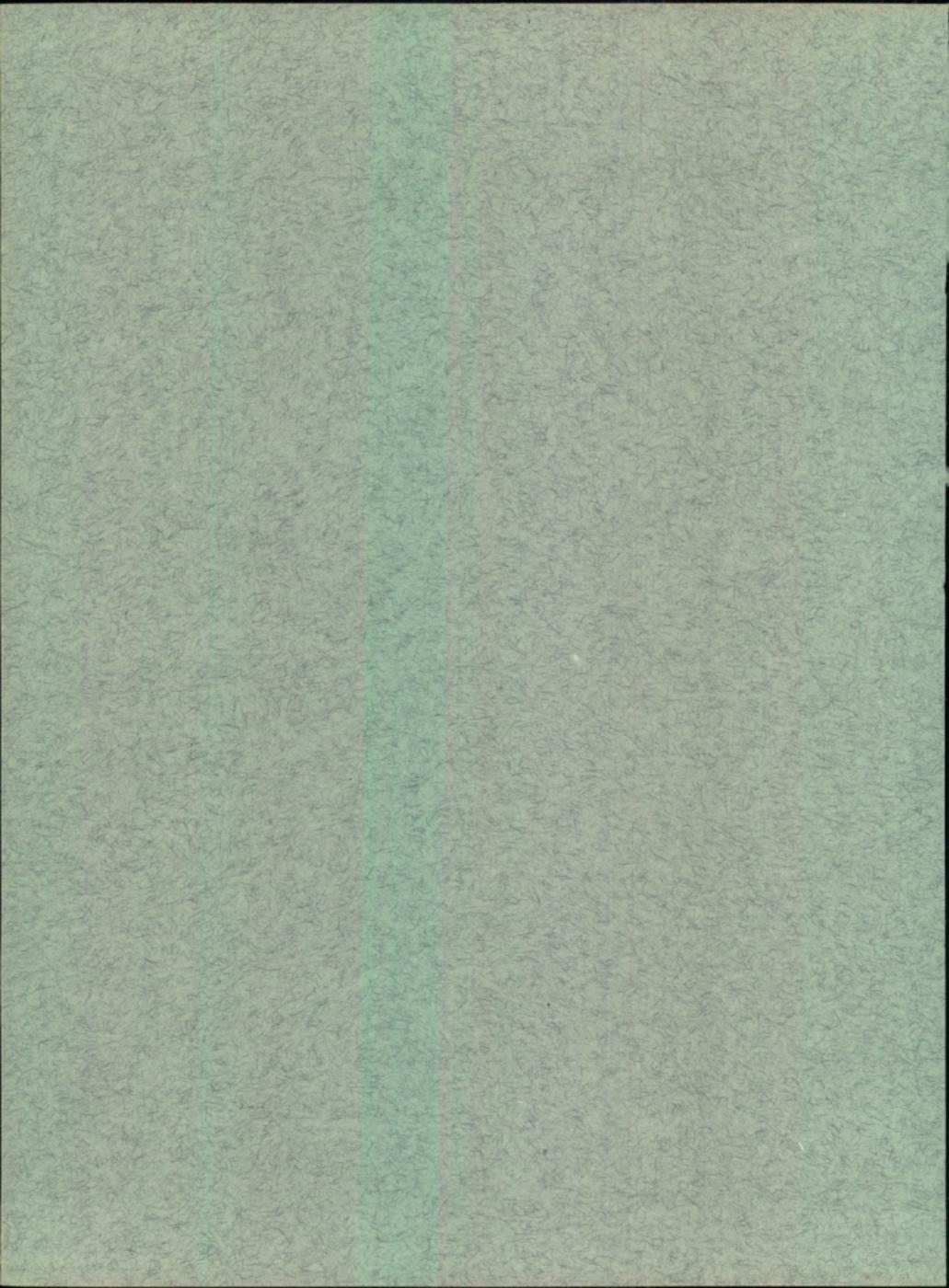
F. D. McCracken

Establishment

Biological Station,
St. Andrews, N. B.

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Dated June 2, 1965



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Operations of the 10% Exemption Clause for
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by F. D. McCracken

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Exemption clauses were added to the regulations currently in effect for Subareas 3, 4 and 5 to avoid impairment of fisheries which are conducted primarily for other species and which take small quantities of cod and haddock incidentally. For Canadian vessels the principal species fished for in 1963 by vessels using small-mesh nets was redfish. In Subareas 3 and 4 the exemption applicable to these redfish vessels allowed 10% per trip for each regulated species to be landed. The following account documents the landings of Canadian vessels fishing redfish in 1963.

Proportion of groundfish landed by redfish vessels

It is obvious from Table I that landings of cod and haddock by vessels fishing primarily for redfish are a very small proportion of the total Canadian landings (Maritimes and Quebec) of these species. In 1963, for cod, it was about 1.0% and for haddock less than 1%. It is also clear that there is no great variation between regions. Information on proportion of total flatfish landings taken by redfishing vessels is included in Table I, since it is expected that regulations will eventually apply to flatfish as well as to cod and haddock. The proportion of flatfish taken by these vessels is also small compared to total flatfish landed (about 1.6%).

Table I. Proportion of total Canadian mainland groundfish landings taken by vessels fishing redfish in 1963.

Species	Subarea 3	Region		Total
		4RST	4VW*	
	%	%	%	%
Cod	2.0	0.6	1.7	1.0
Haddock	0.1	1.6	0.8	0.8
Flatfish	5.0	0.4	1.8	1.6

*no Canadian vessels fished redfish in Division 4X

Trip exemptions, 1963

Records of landings by redfish vessels in 1963 related to the 10% exemption allowance for cod and haddock are presented in Table II. It is clear that the greatest difficulty occurred with cod which were landed in quantities greater than that exempted in about 23% of the redfish trips. A few trips (1%) landed haddock in excess of that stated in the exemption clause.

Table II. Redfish vessel landings in relation to 10% exemption allowance, by size of vessel, in 1963.

Vessel size tons	No. vessels	No. trips	No. trips over 10% allowance	
			Cod	Haddock
26 - 50	2	6	0	0
51 - 150	8	65	23	1
151 - 500	17	120	21	1
	27	191	44	2

Although flatfish were not regulated, it may be noted that about 20% of the trips landed more than 10% flatfish by weight.

Size of cod and witch landed by redfish vessels

Measurements of species landed along with redfish are not available for 1963. However, in 1964, five samples of cod and two of witch were taken from redfish vessels fishing in Subarea 4. These data have been summarized in Fig. 1. Both the cod and witch landed were relatively large, with a mean size of about 58 cm for cod and 42 cm for witch. Few of either species would have been released by a $4\frac{1}{2}$ -inch mesh.

Comparison of landings and possible annual exemptions

Experience in the United States Subarea 5 fishery (as recorded in annual documents) has been that granting an annual exemption along with a trip exemption made little change in their fishing practices. It is likely that such would also be the case for the Canadian fishery in Subareas 3 and 4, if an annual exemption was put into effect. It seems worth while then to summarize landings on an annual basis by vessels fishing redfish.

From Table III it appears that during 1963 landings of cod, haddock and flatfish for Canadian mainland vessels fishing primarily for redfish were each less than 10% of the total fish landed by these redfish vessels. From Table IV it is seen that a total of 7 vessels of 27 landed more than 10% of cod or haddock in total. These would have been in violation even on the basis of an annual exemption, as well as for the trip exemption.

Table III. Proportion of regulated species and flatfish in landings by redfishing vessels during 1963.

Vessel size tons	No. trips	Cod	Haddock	Flatfish	Total weight all species
		%	%	%	'000 lb
26 - 50	6	1.5	0	1.7	207
51 - 150	65	6.9	1.4	4.0	4528
151 - 500	120	6.1	0.6	4.6	16477

Table IV. Number of vessels landing more than 10% cod or haddock in the redfishing season, 1963.

Vessel size tons	No. vessels fishing redfish	Number vessels landing more than 10% regulated species	
		Cod	Haddock
26 - 50	2	0	0
51 - 150	8	3*	1*
151 - 500	17	3*	0

*5 of the 7 vessels landed less than 11% and were just over the exemption on an annual basis

Summary

1. Canadian mainland otter trawlers which use small-mesh nets fish mainly for redfish and, in doing so, land a minor portion of the regulated species in Subareas 3 and 4, about 1% of the total Canadian landings of cod and haddock from these regions.
2. Despite the low levels of these incidental landings, a fairly high proportion of individual trips, about 20% in 1963, land regulated species (mainly cod) in excess of 10% of the total landings for the trip.

3. Usually the cod and other fish landed incidentally are of a relatively large size.
4. Based on experience in the U.S.A., it is not expected that a change to an annual exemption would materially alter current fishing practices. However, it would provide a more realistic approach to the problem of incidental catches of regulated species.

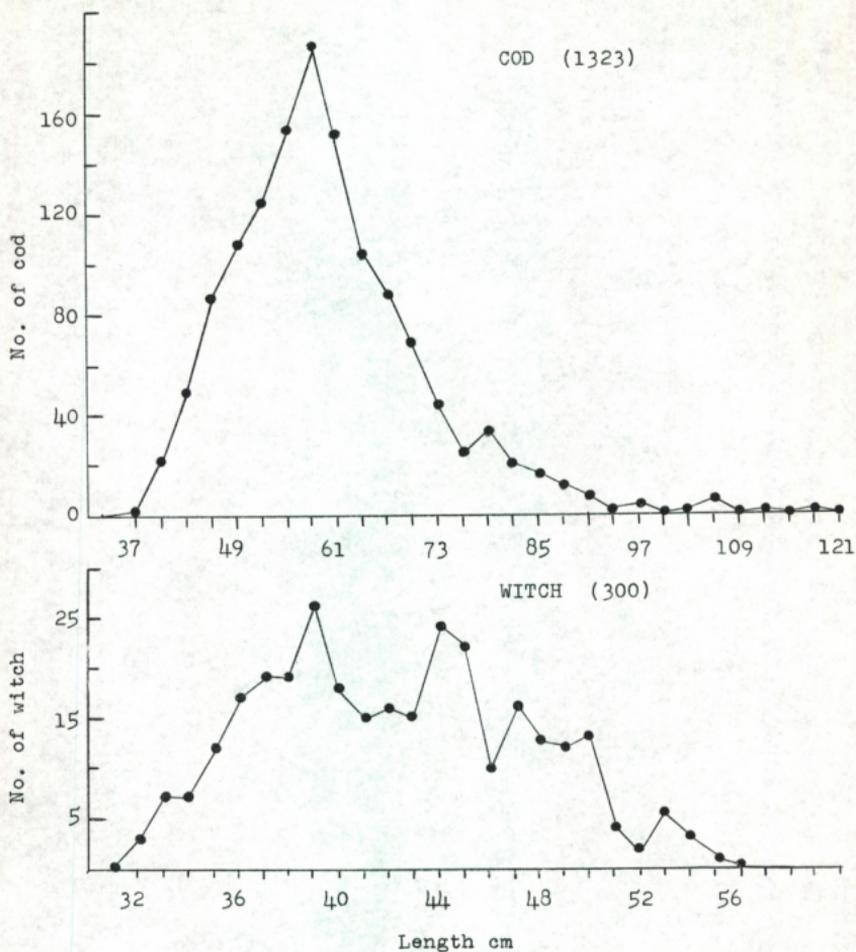


Fig. 1. Length frequencies of cod and witch landed incidentally from redfish trips in 1964; number fish measured in brackets.

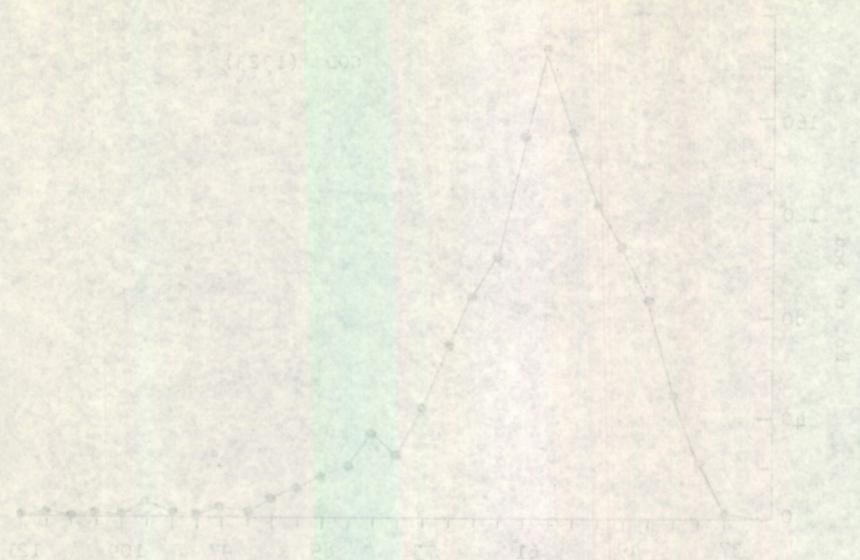


Fig. 1. Length-Weight relationships of two and three-lined flatfishes from the coast of the Gulf of Mexico. The species are: (top) *Paralichthys lethostigma* and (bottom) *Paralichthys lethostigma*.