

Office Memorandum • UNITED STATES GOVERNMENT

TO : Laboratory Director, Woods Hole, Mass.

DATE: February 2, 1960

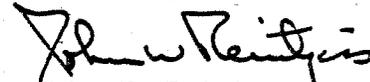
FROM : Fishery Research Biologist, Beaufort, N. C.

SUBJECT: Otter trawl study - Portland, Me. -- 11/15/55 - 9/8/56

Reference is made to our telephone conversation February 1.

To my knowledge there was no additional summary of otter trawl landings by vessel size and species composition duplicated except for 1955. Similar data were compiled for 1954. It became apparent in mid-1956 that no summary lumping of all New England otter trawl activities was going to provide a solution to the immediate problem of mesh regulation enforcement among the small and medium trawlers of Maine. Study effort, at that time, was centered on an understanding of the fishing habits, grounds, and landings of the Maine fishery. The immediate and preliminary results of this study showed that the minor importance of the haddock landings by the small, diversified Maine fleet was out of proportion to the problem of enforcement. Gloucester posed a much more important problem complicated by millions of pounds of unidentified landings. Therefore, I believe the summary material which you have is all there was. The initial and apparent objectives of the Portland assignment were fairly well dissipated with the 10 percent exemption proposal to I.C.N.A.F. The remainder of my stay in Portland was rather unproductive being devoted to some preliminary inquiries into the biology and seasonal distribution of haddock and a cruise aboard the Albatross III.

Best personal regards,


John W. Reintjes

Woods Hole Laboratory
Manuscript Report Number

56-11

The Director, FWS, Washington 25, D.C.

February 16, 1955

Chief, North Atlantic Fishery Invs., Woods Hole, Massachusetts

Study of the Maine exemption problem

The group here deliberated at some length on how to solve the problem which had arisen in Maine concerning the medium trawlers that land both redfish and haddock. We arrived at the following conclusions:

1. That the haddock mesh regulation had never been given a fair trial in that areas as it never has been enforced. No attempt at enforcement has been made. We do not know how serious enforcement could actually be.

2. We believe the wisest thing to do would be to license six boats to fish with small mesh to act as a kind of study group for comparative purposes. Concurrently with that there would have to be rigid enforcement on the rest of the fleet. Working through Dow we shall attempt to get an agreement among the fishermen on such a licensing program and on the actual boats to be licensed. This may take a bit of doing since there is no fisherman's organization in Maine.

3. We shall attempt to have two observers stationed in Portland to make regular sea sampling trips on medium trawlers to collect length frequency data on redfish and haddock and to collect the information on quantities of fish caught and quantities of fish discarded. Difficulty in recruiting personnel makes it impossible to set a definite date on this part of the program. However, at the present time haddock are not being caught by these medium trawlers so the situation is not serious.

4. Mesh selectivity experiments will be conducted on the Albatross to obtain the selectivity for redfish. Chartering vessels in Maine to use large mesh is not practical. This, if used as a subterfuge to get some vessels to fish with large mesh, probably could not be effected without causing considerable discontent on the part of vessels not so chartered. Furthermore, it would be very expensive and information obtained on selectivity would be no better than that obtained on the Albatross.

5. We will immediately begin a tabulation of the haddock landings, both small and large, in Maine by vessel size, area of capture, and port, to give us a general picture of the history of the haddock fishery in Maine. Since the interview system in Maine has been rather poor, particularly in past years, there is no point in extending this back beyond three years.

6. John Clark has the responsibility for this program. He will assign one of the haddock men, possibly John Shea, to keep his fingers on things and see to the collection of data and tabulation in preliminary reporting. Clyde Taylor, who originates in Maine, will assist Clark and Graham in making necessary contacts in the field with the fishermen and with the State representatives.

Herbert W. Graham

The Director, F&WS, Washington, D. C.
Attn: Mr. H. H. Eckles, Br. Fishery Biology

December 15, 1955

Chief, North Atlantic Fishery Investigations, Woods Hole, Massachusetts

Effect of 4-1/2-inch mesh on mixed fish fishery in Maine

Answering your query about the effect of 4-1/2-inch mesh on the mixed fish fishery in Maine, Clark says the situation has not changed. His experiments on the selectivity of various size meshes for redfish conducted on the Albatross III did not give him a figure significantly different from the estimate he made on the basis of experiments on the Priscilla V. This latter estimate was used in the computations of the effect of 4-1/2-inch mesh and included in Table 1 of his report "Analysis of Landings of Maine Small and Medium Trawlers in 1953." You will note from that table that the estimated loss to this particular group of draggers would be almost \$2,000 a year out of a gross income of \$40,000. You can be sure that they would claim this \$2,000 to be their profit.

Herbert W. Graham

Taylor
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Office Memorandum • UNITED STATES GOVERNMENTAir Mail

TO : Chief, North Atlantic Fishery Investigations DATE: March 15, 1956

FROM : Chief, Section of Marine Fisheries

SUBJECT: Gloucester Mixed Fishery

Attached are copies of a memorandum from Mr. Suomela concerning the mixed fishery at Gloucester and a report by Mr. Rollins on discussions which he and other Service members held with industry men on a proposed plan of vessel registration.

Apparently the problem of a mixed fishery at Gloucester has come to us again. Perhaps your investigation of this matter in 1953 will be of use in the re-examination of this problem as requested by Mr. Suomela.

As discussed with Mr. Edwards by telephone, we need an analysis of redfish vessel catches during the period of 1950 or 1951 and during 1953. Data on 1955 will be furnished from this office. It will be best to make a tabulation on all "excess trips", if possible, by individual trips or at least by months of each year mentioned. For each vessel list the catch of haddock reported for the trips and the total catch of all fish on the same trips. If the tabulations are on a monthly basis, list the number of trips involved during the month.

It will be very helpful if you furnish a summary text of the data, stating the approximate percentage of trips which would be in violation and hence would cause financial difficulty to the fishermen.

The problem, as we understand it, is to determine if the Gloucester fishermen are being handicapped by the haddock mesh regulation. The information will be used for basis of discussions at the forthcoming Industry Advisory Committee meeting in Boston, March 26. Since so little time remains, your immediate attention to this problem will be required.

It is very likely that you will be asked to attend the Advisory Committee meeting.

HHE
Howard H. Eckles

Attachments

out hand

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Branch of Fishery Biology
Chief, Branch of Commercial Fisheries

DATE

FROM : Assistant Director A. J. Smedley

SUBJECT: Northwest Atlantic Haddock Regulatory Program

During the course of recent visits with members of the Advisory Committee to the United States Commissioners of ICMAF, Messrs. Terry and Rollins discussed certain proposed amendments to the haddock regulation with Mr. Alphonsus Hayes, the Atlantic Fishermen's Union's delegate at Gloucester.

Mr. Hayes pointed out that in the past several years the economic situation at Gloucester has changed from what it was in 1950-51, presumably because of the development of the fish-stick trade. He was of the opinion that the application and strict enforcement of the haddock regulation would have a serious adverse effect on United States fishermen operating from Gloucester. He explained that the fish-stick trade has weakened the economic situation of the domestic fishermen at Gloucester to the point where any further interference with their activities would make the situation intolerable. He explained also that during winter months when the weather is bad and the sea rough, Gloucester vessels which might normally operate far to the east and concentrate largely on redfish found it necessary to stay closer to home and to engage in a mixed fishery. The use of small mesh gear is essential to the success of this fishery. The application of the haddock regulation, with the exceptions of 5,000 pounds or 10 percent, would eliminate this mixed fishery, and thus put the Gloucester producer out of business.

If the situation in Gloucester has in fact changed since the time when the mesh regulation was introduced, and if Mr. Hayes' analysis of the problem is a correct one, it appears to be appropriate for the Service to consider some means of applying the regulation in such a way as to reduce to a minimum the burden on the Gloucester fishermen.

It is requested, therefore, that you undertake immediately an examination of the problem. A meeting of the Advisory Committee to discuss amendments of the Haddock regulation is scheduled tentatively for late March or early April. I consider it necessary that the Service be prepared to discuss the situation in Gloucester in detail at this meeting. Accordingly, I should like to have the results of your studies by March 20.

Arnie J. Smedley

cc: Mr. Rollins

Big Vessels?
all?

Richard
Hyman

Under
10-12



Director

March 12, 1956

Chief, Section of Regulations and Permits,
Branch of Game Management

Discussions with Members of Advisory Committee, International
Commission for the Northwest Atlantic Fisheries

As requested by Assistant Director Sussala and in keeping with his letters of February 20 to each member of the Committee, discussions with individual members of the Advisory Committee to the United States Commissioners on ICHAF were held during the week of February 27 for the purpose of explaining in greater detail the reasons underlying the Service's proposal to inaugurate a licensing procedure to govern the operation of fishing vessels taking haddock within Subarea 5 of the Convention Area.

Preliminary to the discussions with individual members of the Advisory Committee, Messrs. Amocchar, Brackett and Rollins met with U. S. Commissioner Francis Sargent on the morning of February 27 to review current problems confronting the Service in its efforts to carry out an effective enforcement program to compel compliance with the haddock mesh regulation. Through this meeting it was learned that several members of the Advisory Committee and, doubtless, many fishermen had obtained an erroneous conception of the licensing proposal and were viewing it in terms of paying a fee and being restricted to the taking of haddock in specifically designated areas within Subarea 5. In subsequent meetings, the term "license" was used interchangeably with the term "registration", with emphasis on the fact that the sole function of the proposed registration requirement is to afford a means by which persons fishing for haddock in Subarea 5 may be distinguished from those who fish for haddock in nonregulated waters of the Convention Area or fish in Subarea 5 for species other than haddock. The reaction to this phase of the proposed regulation change points clearly to the desirability of revising the present draft of the regulation to refer to a haddock registration certificate or to some comparable term, rather than to a license requirement.

Discussions were held with each of the 12 members of the Advisory Committee with the exception of Mr. Thomas D. Rice (unavailable because of illness), Mr. John E. Mindloss (absent on vacation), and Mr. Ray J. Wittich (absent on a trip abroad). In Mr. Wittich's absence the proposed regulation changes were discussed with Mr. John B. Baylor, representative of General Foods Corporation in Gloucester.

Copy to: Fishery Biology

Mr. Taylor has accompanied Mr. Wittick at Advisory Committee meetings and is generally familiar with the haddock mesh regulation and its application to the fishing operations of General Foods Corporation.

The meetings began on the afternoon of February 27 when Messrs. Pincusher, Brackett and Rollins conferred in Boston with Mr. Thomas A. Fulham and later with Mr. Lawrence Rosen. Mr. Terry also participated in subsequent meetings held as follows:

- February 28--Boston - Victor Turpin and his assistant "Patty" Green
- February 29--Gloucester - Alphonsus Hayes, John Dal Turchio, and John D. Taylor
- March 1--Boston - Robert L. Dow (accompanied by Dana Wallace) and John F. Linham
- March 2--Providence - Edward C. Hayes (accompanied by Thomas Wright) and Leonard Warner

It seems unnecessary to attempt to summarize the reaction of each Advisory Committee member to the Service's proposal to revise the haddock regulation to limit its application to Subarea 5 and to prescribe a haddock boat registration procedure as an essential step leading to effective enforcement. Suffice it to state that the Committee members obtained a better understanding of the problems surrounding our efforts to enforce the regulation and now appreciate the need for vessel registration as an aid to enforcement. In the absence of a workable alternative to registration (and none was advanced during the discussions), no further difficulty should be experienced in having the registration proposal accepted in principle in a full meeting of the Advisory Committee, provided some means can be found to avoid impingement on the small trawler operators who, it is reported, would find it difficult if not impossible to survive in a mixed fishery under the present trip exemption of 5,000 pounds of haddock or 10% of the total catch of fish on board.

Although not directly related to the purposes of our discussions, it should be mentioned that several members of the Committee expressed dissatisfaction over (1) the continuation of study boats (2) the delay in placing a mesh regulation in force in Subareas 3 and 4, and the alleged lack of adequate protection against imports of frozen fish blocks and fillets, particularly imports of these products from Canada where no mesh regulation is now in effect except for Subarea 5. In general, however, the mesh regulation is receiving strong support and it is the consensus of all with whom we talked that it is making a substantial contribution toward improving and conserving the haddock fishery. As tangible evidence of this support we were informed by Messrs. Turpin and Green that the Atlantic Fishermen's Union in Boston has adopted a union rule which prohibits its members from working with small gear on haddock vessels.

While no serious inconvenience or hardship for the approximately 30 large haddock trawlers operating out of Boston on Georges Bank would result from the registration of vessels, to be followed by a renewal of enforcement efforts, the situation for the Gulf of Maine fleet and other small trawler operators is not so clear. In our discussions with Mr. Dow, he re-emphasized that the Gulf of Maine essentially is a mixed fishery and that mixed catches of haddock exceeding the present trip exemption of 5,000 pounds or 10% and other species of fish, principally redfish, are essential to the economic survival of the fleet. Excess catches of haddock are said to occur principally during the period of August through October when haddock are found in the Gulf of Maine in greatest quantity. Conversion to the approved $4\frac{1}{2}$ mesh gear during this period would not provide a satisfactory answer, since it is contended that haddock are not found in the Gulf in sufficient abundance to warrant concentration of fishing effort on them alone. Mixed catches of haddock and redfish are essential to profitable fishing trips and the latter species cannot be taken when the $4\frac{1}{2}$ mesh gear is used. The haddock taken by Maine fishermen, according to Mr. Dow, constitute only 3 or 4 per cent of the total haddock landings in New England.

Although Mr. Dow's objection to applying the mesh regulation to the Gulf of Maine is based principally upon economic considerations, it should be mentioned that he again raised a number of biological questions which cast doubt upon the propriety of including the Gulf as a part of the area warranting regulation. Significant among the possibilities suggested by Mr. Dow are that the Gulf of Maine has a separate stock of haddock or, in the alternative, if the haddock found there be migrants from Georges Bank they are of a different age composition. Two points were advanced as being the basis for these possibilities; one being that records from a former study of haddock in the Gulf extending over a period of some 20 years indicated the presence of spawner haddock in the Gulf thus suggesting the presence of a separate stock. The other point is contained in the assertion that virtually all haddock taken in the Gulf of Maine are relatively large and include few, if any, sized such as was caught on Georges Bank prior to the mesh regulation.

Mr. Dow does not profess to have answers to these questions but since the Service apparently is equally lacking in conclusive answers, he contends that the mesh regulation should not arbitrarily be applied to the Gulf of Maine, with resultant financial loss to the fishermen, in the absence of a clearly demonstrated need.

A second area of possible difficulty is represented by the Gloucester fleet. Mr. Alphonsus Hayes, local representative of the Atlantic Fishermen's Union, has no objection to haddock boat registration,

as such, but fears that rigid enforcement of haddock regulations containing the present trip exemption "would ruin Gloucester". According to Mr. Hayes, the recent development of the fish-stick industry utilizing Canadian imports has so weakened the economy of the Gloucester fishermen as to place their operations in a marginal class. Any additional burden, however slight, according to Mr. Hayes, would be disastrous. More specifically, he explained that during the period of bad weather and rough seas extending from late December to early May, the Gloucester fleet engages in a mixed fishery relatively close to home port. These operations are said to be dependent for financial success upon catches of redfish and other species which often include haddock considerably in excess of the present trip exemption. Again, it is represented that conversion to large mesh gear during this seasonal operation would not be feasible because of the necessity on frequent occasions for taking both redfish and excess haddock to complete a successful trip.

On the morning of March 2, the Service visitation group reviewed with Commissioner Sargent the highlights of the discussions with the members of the Advisory Committee. Mr. Sargent expressed pleasure over the satisfactory outcome of the discussions from the standpoint that the Committee members now seem to have a sympathetic understanding of the need for enforcement and the regulation changes proposed in aid of that objective.

Copies of this memorandum have been furnished Regional Director Cascoyne, Mr. Walford, and Messrs. Anderson and Wright, for their information and files.

A. F. Rollins

REINTJES
PORTLAND, ME.

Reintjes

PROPOSED PROGRAM FOR THE GULF OF MAINE GROUND FISH STUDIES

I. Analysis of the Fishery.

A. Objectives: To provide information necessary for formulation of management policy for the haddock fishery of the Gulf of Maine in relation to the otter trawl fishery conducted in those waters.

1. Landings in terms of quantity and value of species on trip, seasonal, and annual basis.
2. Fleet composition in relation to quantity and size composition of species landed.
3. Fishing activity and grounds with special reference to "mixed fishing". Type of nets, mesh size, frequency of trips, ports of landings, etc.
4. Amount of non-marketable species and sizes of discards at sea.
5. Effect of mesh sizes on catch.

B. Sources of Data.

1. Landing statistics.
2. Port sampling and interviews.
3. Sea sampling.

II. Haddock Population Study.

A. Objectives: To investigate the following characteristics of the haddock population in the Gulf of Maine.

1. Age and length composition of discard, scrod, and large haddock.
2. Growth and mortality rates.
3. Sexual development and spawning maturity.
4. Movements and migrations by catch statistics and tagging.
5. Effort and landings by sub-area.
6. Relation of Gulf of Maine to other haddock stocks by tagging, meristics, morphometrics, and vital statistics.

B. Sources of Data.

1. Port sampling and interviews.
2. Sea sampling.
3. Tagging cruises.

III. Special Biological Studies.

A. Objectives: To investigate the important biological properties of other Gulf of Maine species, the inter-relationships of species, and the environmental and ecological influences on fish populations.

1. Accumulate vital statistics on cod, pollock, hake, cusk, wolffish, flounders, and other groundfishes of the Gulf of Maine, with special reference to length composition, spawning maturity, and relative apparent abundance.
2. Associate the distribution and abundance of species to each other, relative to seasons, temperatures, depths, and other environmental factors.
3. Investigate the ecological significance of fishing grounds and banks in terms of kinds, relative numbers, and sizes of fish taken by the commercial otter trawl.

B. Sources of Data.

1. Landing statistics.
2. Port sampling and interviews.
3. Sea sampling.

56-01

REINJES REPORT

RE 10% ANNUAL EXEMPTION

Last Report by Bentley!

FIRST DRAFT
JWR

56-0

SUMMARY AND ANALYSES OF THE NORTHERN NEW ENGLAND OTTER TRAWL
FISHERY FOR HADDOCK, 1955.

The following summary and analyses of the northern New England otter trawl fishery for haddock are presented for administrative use in order to assist in the formulation of a more equitable and reasonable regulation for the conservation of haddock stocks in sub-area 5 of ICNAF.

Substantially all of the 1955 otter trawl landings made in Maine and Massachusetts ports are represented by trip weight records. During the year 487 vessels landed at least once in these ports. It is upon these records that the following analyses were made.

The landings were summarized to ascertain the effect of the present ICNAF mesh regulation upon the fishing activities of these vessels, in order to formulate ^a ~~an alternate~~ method whereby the small and medium otter trawlers catching haddock in relatively small percentages can land amounts in excess of the present ^{exceptions} ~~restriction~~. This is proposed in order ^{not} to ~~interfere with lucrative fisheries in which haddock form an incidental and unavoidable part of the catch.~~ ^{to compensate for the uncertainties of haddock distribution and abundance within the Gulf of Maine and adjacent waters.}

In these analyses the term "excess" is used to define any otter trawl trip containing haddock in excess of 5000 pounds or 10 percent of the landing, whichever is greater. The excess trip would be in violation of the present regulation only if the vessel had an uncertified cod end aboard ~~or on~~ with mesh sizes of less than 4 1/2 inches after use.

In this analysis, for example, "excess trip" does not necessarily ~~mean~~ a violation, since the 4 1/2 inch mesh is in widespread use, notably ^{by haddock fishermen} in the entire Boston haddock fleet.

No 9

These analyses were not made to assess the extent of violations of the present regulation during 1955, but rather to summarize the otter trawl fishing activities within the area in terms that could be used to define the scope of the problem and propose a regulation that would be most in accord with the fisheries of the area without jeopardizing the conservation efforts of the haddock mesh regulation. ~~To this end the present summary and analyses have been prepared.~~

Total fish and haddock landings by otter trawlers in northern New England are shown graphically in figure 1. The relative amounts of haddock to all fish are shown for the vessels assigned to each port or group of ports, irrespective of where the landings were made in northern New England. Many of the landings of haddock assigned to Gloucester were made in Boston by vessels of the Gloucester fleet.

Why?
How assigned
to a port?
Home port?

No 10

These data are shown in table 1 along with the number of vessels and the total number of trips for each locality.

The landings of each port or group of ports in northern New England shows the effect of species abundance and distribution, fishing grounds, seasons, fleet and vessel size, and available market. The accumulative results of these effects substantially define the fishery or fisheries for each locality in the area.

Fleet composition in vessel size differs among ports or groups of ports. Figures 2 through 6 give the frequency distribution of vessel to size in gross tons for the ports concerned.

No 11

The principal fleets in Maine are the smaller vessels of the inshore flounder and whiting fisheries and the larger vessels of the redfish fishery.

No. 17 Fleet distribution at Gloucester is similar to that in Maine with an additional group of medium sized vessels in the groundfish fishery. Boston is characterized by moderately sized groups of small and medium vessels and a dominant group of larger vessels of the offshore haddock fishery. Smaller vessels of the inshore fisheries dominate the fleets in the Cape Cod Ports and in New Bedford. The latter port has a greater number of medium sized vessels in the offshore fisheries, however.

Due to the characteristic differences of each port no summary analysis of all northern New England trawlers can be made without accompanying explanations.

The summarized data will be presented by locality. The vessels were grouped according to the port or group of ports where the greatest number of landings were made. Vessels from southern New England and the Middle Atlantic area were assigned on the basis of the landings made in northern New England ports.

1. All Maine Ports:

Landings by vessels assigned to Maine ports amounted to 95.2 million pounds during 1955, of which 3.3 million pounds were haddock. In addition to Portland and Rockland, otter trawl landings were reported by individual vessel from 10 other Maine ports.

The principal otter trawl fisheries are based on redfish, whiting, flounders, haddock, and pollock. Haddock usually is taken in conjunction with redfish or flounders and does not solely support an otter trawl fishery.

The vessels are grouped according to size, a factor affecting the fishing activities. The number of vessels, pounds of haddock and all fish, number of trips, and number of excess trips are shown in table 2.

The majority of the smaller vessels, 30 gross tons or less, comprise the inshore fleet of the whiting, flounders, and other groundfish fisheries. These vessels landed 13.7 million pounds of fish, of which 552,000 pounds were haddock, with 13 excess trips.

The vessels of more than 30 and less than 151 gross tons, landed 30.5 million pounds of which 2.5 million were haddock, with 132 excess trips. This represents 77 percent of the haddock attributed to the otter trawl vessels landing principally at Maine ports. Thirty vessels were in this size category, of these, 11 had no excess trips, 8 had 1 or 2, and the remaining 11 vessels had 121, or 92 percent of the excess trips.

The bulk of the redfish were landed by larger otter trawlers fishing on the Nova Scotian and Grand Banks. Twenty vessels, of more than 150 gross tons, landed 51.1 million pounds, of which only 205,000 pounds were haddock, with 3 excess trips.

All vessels, assigned to Maine ports, have been summarized according to the percentage of haddock in the total annual catch (see table 3). Of the 28 vessels, ^{landing} with 5 percent or more haddock, with 132 excess trips, 17 vessels made 2 or less excess trips each, for a total of only 11 excess trips.

2. Gloucester:

Landings by vessels assigned to Gloucester amounted to 191.9 million pounds during 1955, of which 12.2 million pounds were haddock. As mentioned before, these landings were made by vessels assigned to the Gloucester fleet because the greatest number of landings were made in that port. It should be noted that more than 5 million, of the more than 12 million pounds of haddock, were landed by these vessels in Boston.

The principal otter trawl fisheries are based upon redfish, whiting, flounders, and mixed groundfish. Haddock is taken in conjunction with redfish, whiting and flounders, but does support an otter trawl fishery with landings at Gloucester and Boston.

The vessels are grouped according to size (see table 4.).

The smaller vessels, 30 gross tons or less, comprise the inshore fleet of the whiting, flounders, and groundfish fishery. These vessels landed 12.1 million pounds of fish, of which only 47,000 pounds were haddock, with no excess trips.

The vessels of more than 30 and less than 150 gross tons landed 128.0 million pounds of fish, of which 10.1 million pounds were haddock, with 494 excess trips. This represents 87.9 percent of the haddock attributed to the otter trawl vessels landing principally at Gloucester.

Twenty larger vessels, more than 150 gross tons, are principally concerned with the redfish fishery. These landed 51.8 million pounds, of which 2.1 million were haddock with 55 excess trips.

All vessels assigned to Gloucester have been summarized according to the percentage of haddock in the total annual landings (see table 5). Of the 62 vessels, landing 5 percent or more haddock, with 509 excess trips, only 9 vessels made 2 or less excess trips each.

3. Boston:

Landings by vessels assigned to Boston amounted to 132.8 million pounds during 1955, of which 89.5 million pounds were haddock. The principal otter trawl fishery is based on haddock and other similar groundfish. Other fisheries for whiting and flounders are conducted by the smaller vessels of the inshore fleet. The vessels are grouped according to size (see table 6).

The smaller vessels, 30 gross tons or less, comprise a small inshore fleet of only 7 vessels. These landed 622,000 pounds, of which 62,000 pounds were haddock, with 3 excess trips.

The vessels of more than 30 and less than 150 gross tons landed 46.8 million pounds, of which 27.4 million were haddock, with 944 excess trips.

The larger vessels, more than 150 gross tons, landed 85.3 million pounds, of which 62.0 million were haddock, with 722 excess trips.

The summary data demonstrate that most of the vessels assigned to Boston are engaged in a fishery that depends principally on haddock for the bulk of its landings. No marked difference is shown in fleet activity according to vessel size, as is apparent in the other ports.

ⓧ All vessels assigned to Boston have been summarized according to the percentage of haddock in the total amount landed (see table 7). Of the 84 vessels, 77 landed haddock in excess of 15 percent of the total annual landings. These vessels landed 99.3 percent of all fish and 99.9 percent of all haddock for the Boston fleet. In addition, these landings of haddock represent 78.2 percent of all otter trawl landings of this species for northern New England.

4. Cape Cod Ports:

Landings by vessels assigned to Cape Cod ports amounted to 32.2 million pounds during 1955, of which 1.6 million pounds were haddock. The principal otter trawl fisheries are based upon whiting, flounders, and mixed groundfish. The nearness of haddock fishing grounds in Cape Cod Bay and the Channel area account for a small haddock fishery by these vessels. The vessels are grouped according to size (see table 8).

The smaller vessels, 30 gross tons or less, landed 5.0 million pounds, of which only 17,000 pounds were haddock, with no excess trips.

The remaining 31 vessels that comprise the fleet were between 31 and 90 gross tons, with only 4 of these over 50 tons. This group landed 27.2 million pounds, of which 1.6 million pounds were haddock, with 89 excess trips.

All vessels assigned to Cape Cod ports have been summarized according to the percentage of haddock in the total annual landings (see table 9). Of the 13 vessels, landing 5 percent or more haddock, with 76 excess trips, only 4 vessels made 2 or less excess trips each.

5. New Bedford:

Landings by vessels assigned to New Bedford amounted to 63.2 million pounds during 1955, of which 7.9 million pounds were haddock. The principal otter trawl fisheries are based upon flounders, whiting, and groundfish, with haddock comprising much of the latter group of fishes. The vessels are grouped according to size (see table 10).

The smaller vessels of the inshore fleet, 30 gross tons or less, landed 12.9 million pounds, of which only 36,000 pounds were haddock, with no excess trips.

The vessels of more than 30 and less than 151 gross tons landed 50.3 million pounds, of which 7.9 million pounds were haddock, with 330 excess trips. In this group no vessel was over 130 gross tons.

All vessels assigned to New Bedford have been summarized according to the percentage of haddock in the total annual landings (see table 11). Of the 45 vessels landing 5 percent or more haddock, with 321 excess trips, 16 made 2 or less excess trips each. The bulk of the haddock, more than 81 percent, were landed by 17 vessels each landing more than 15 percent haddock annually, with 248 excess trips.

Summary:

During 1955, 487 vessels landed fish taken by otter trawling in norther New England ports. Vessels, 30 gross tons or less, made 6869 trips during the year with only 16 excess trips.

The number of vessels benefitted by a change in the present regulations permitting individual landings of haddock in excess of 5000 pounds or 10 percent of the total fish, insofar as the annual percentage of haddock landed did not exceed 10 percent, is shown in table 12. According to the 1955 landings, 105 vessels would have been able to comply with the new regulation without changing their fishing habits or materially affecting the effectiveness of the mesh regulation on conserving the haddock stocks. On the other hand, the 140 vessels landing haddock in excess of 10 percent annually would either use a 4 1/2 inch cod end or change their fishing habits. According to the landings made during 1955 these vessels would not be affected by a change in the present regulation. Furthermore as these vessels account for more than 92 percent of the haddock landed, a regulation change would not affect the vast majority of the ^{haddock} population

1955 LANDINGS OF ALL FISH AND OF HADDOCK BY OTTER TRAWLER
 FIGURE 1 ASSIGNED TO NEW ENGLAND PORTS

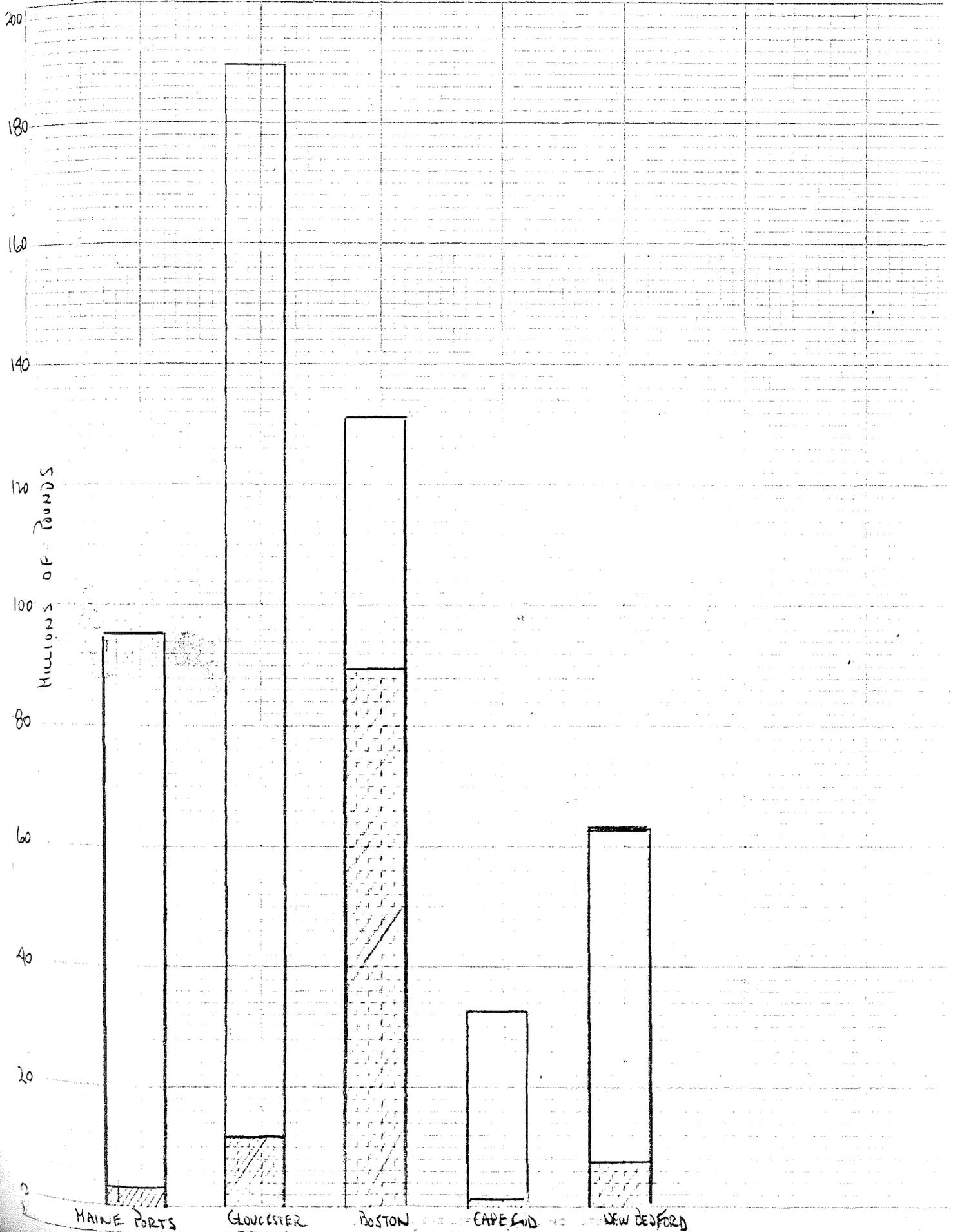


FIG. 3 FREQUENCY DISTRIBUTION OF VESSEL TO SIZE IN GROSS TONS FOR GLOUCESTER

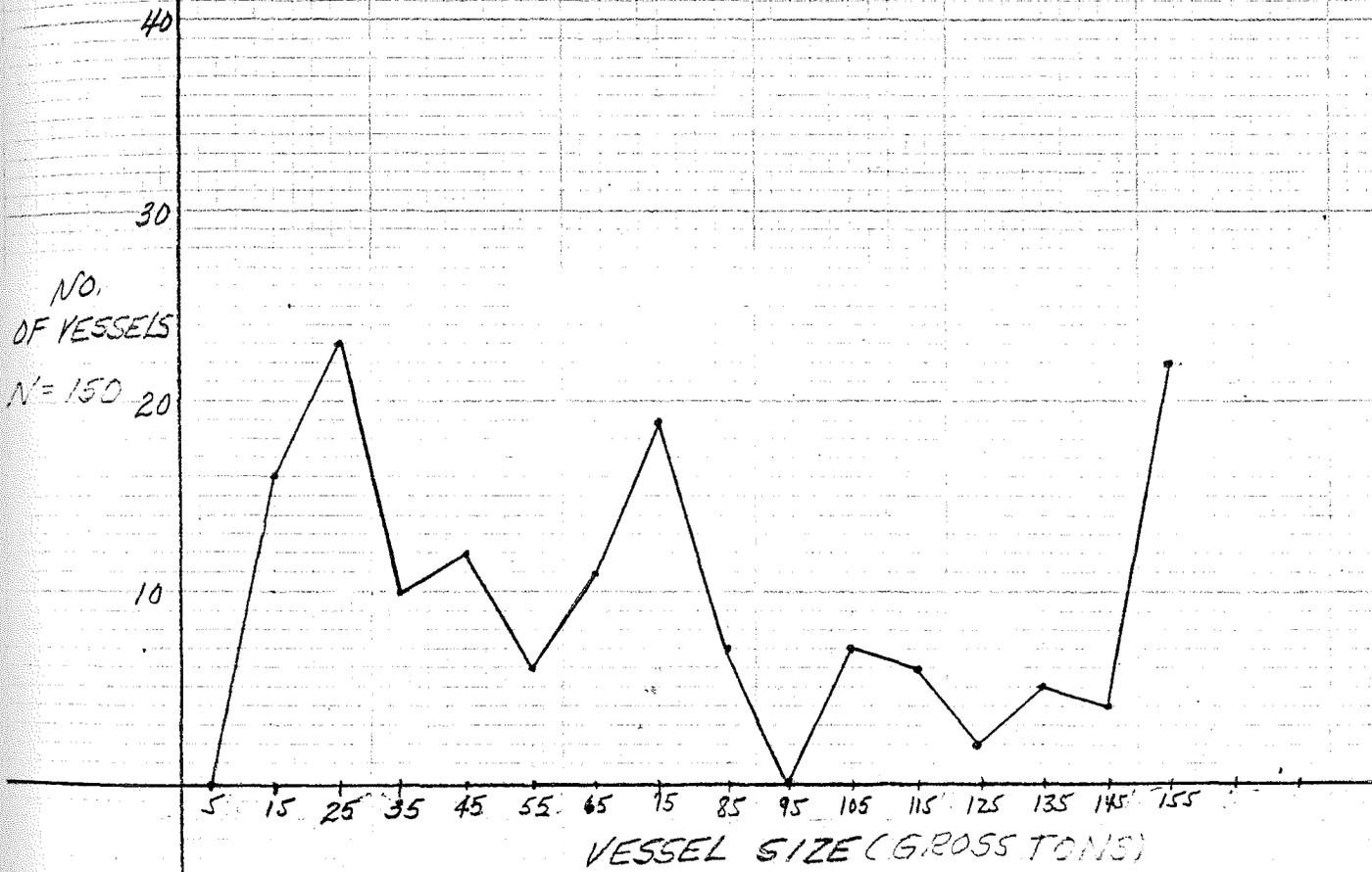


FIG. 5 FREQUENCY DISTRIBUTION OF
VESSEL TO SIZE IN GROSS TONS
FOR CAPE COD PORTS

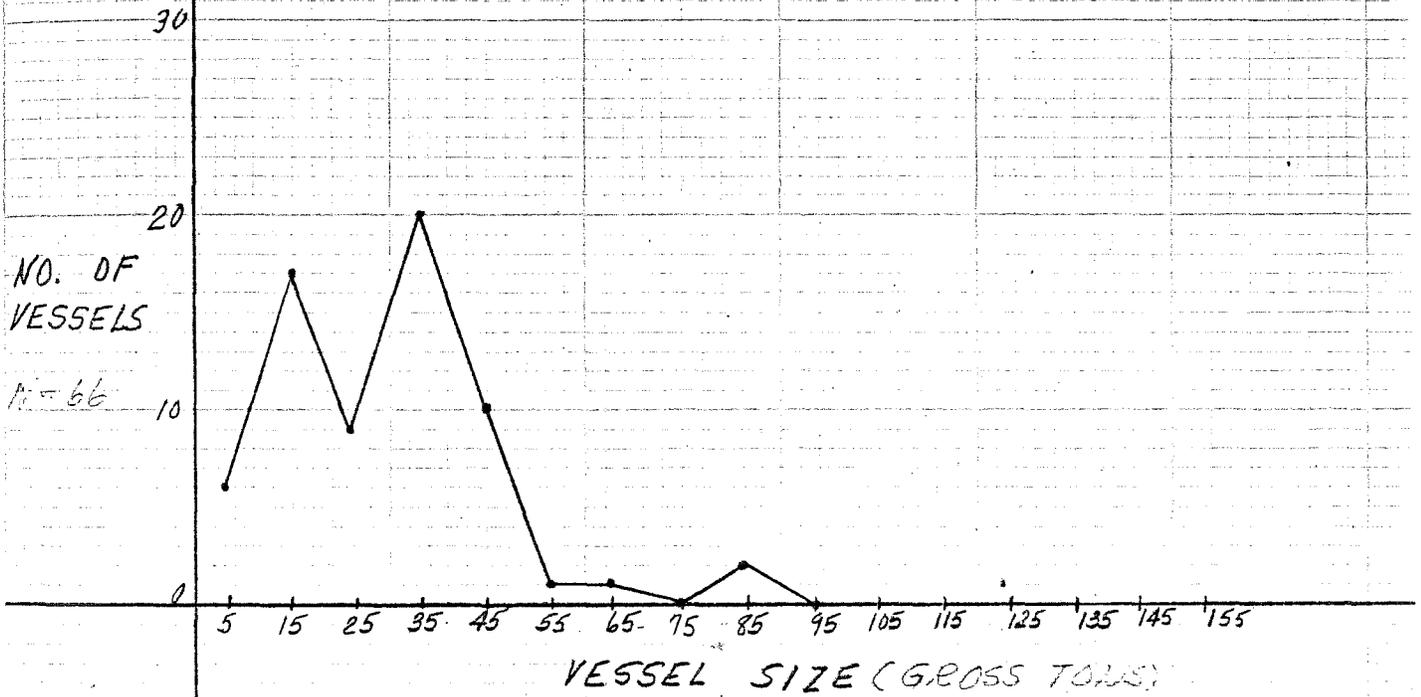
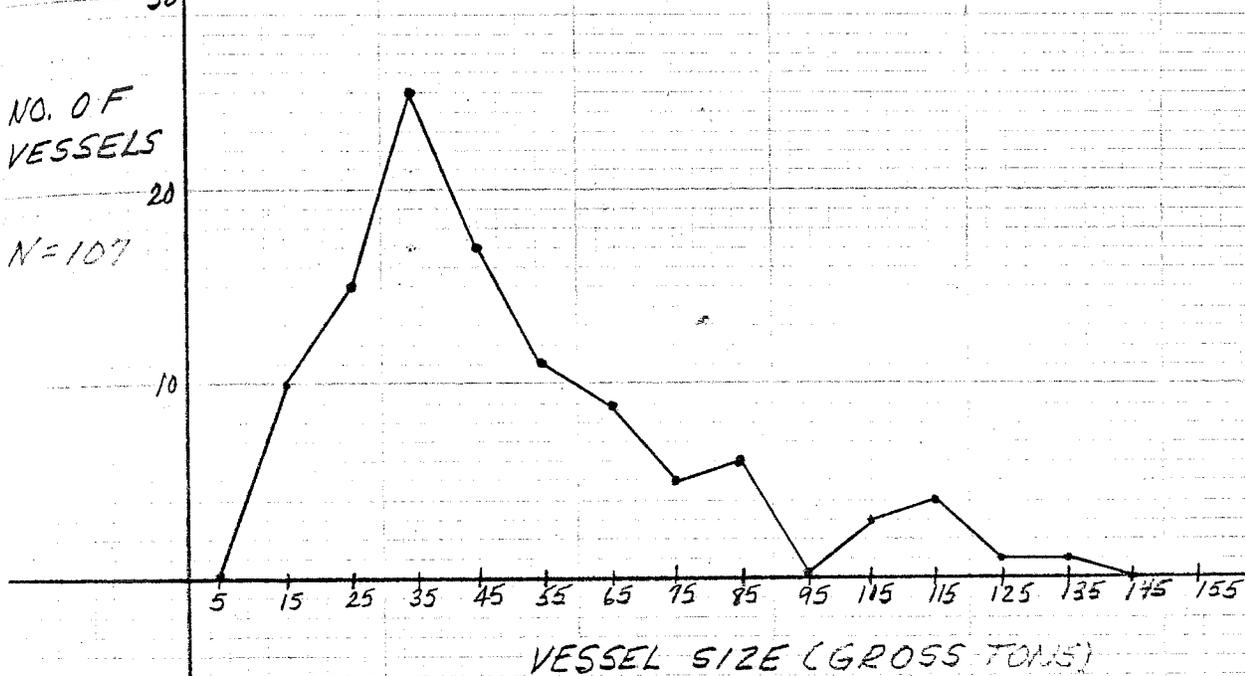


FIG. 2. FREQUENCY DISTRIBUTION OF
VESSEL TO SIZE IN GROSS TONS
FOR NEW BEDFORD



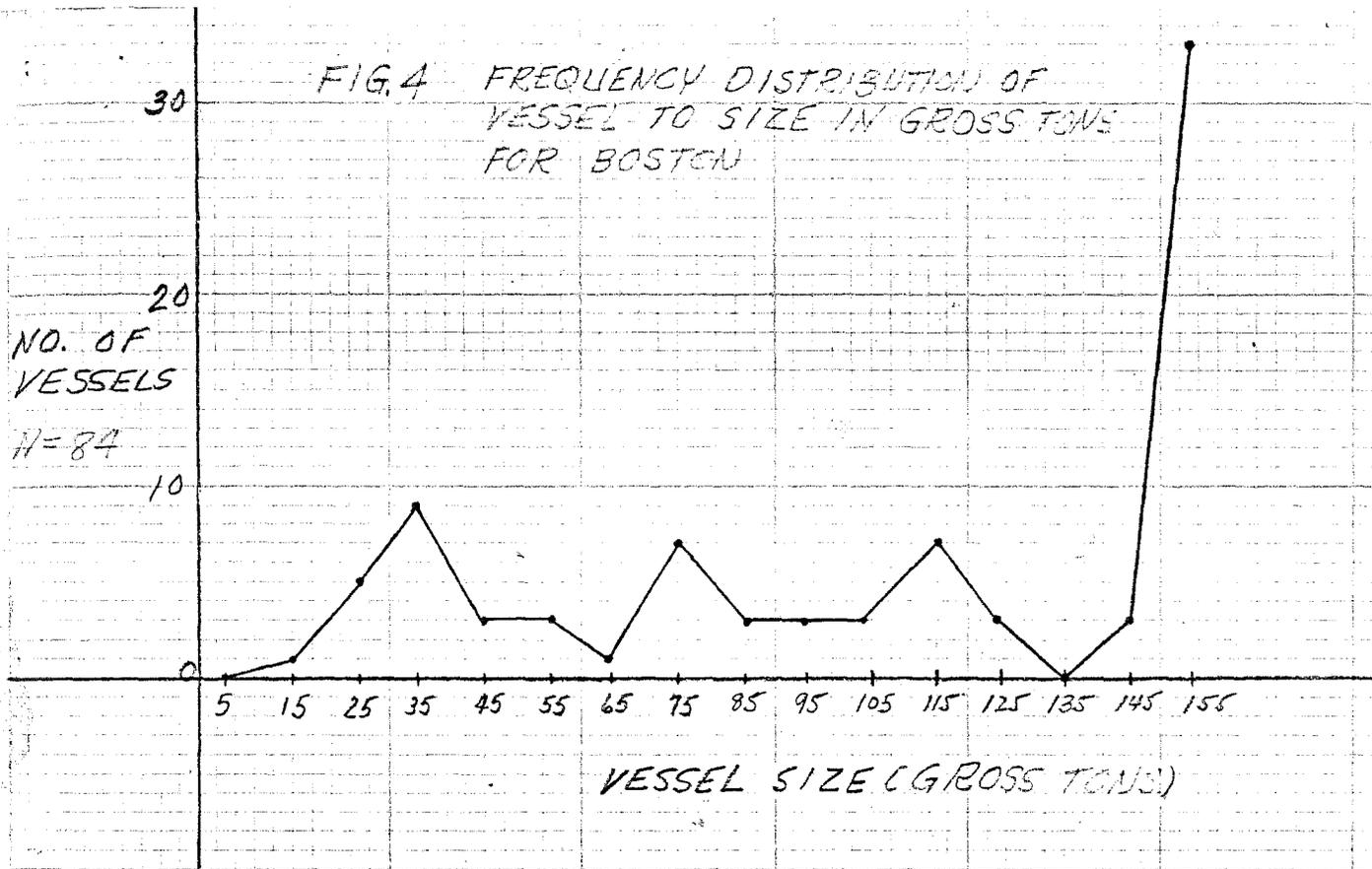


FIG. 2. FREQUENCY DISTRIBUTION OF VESSEL TO SIZE IN GROSS TONS FOR MAINE PORTS

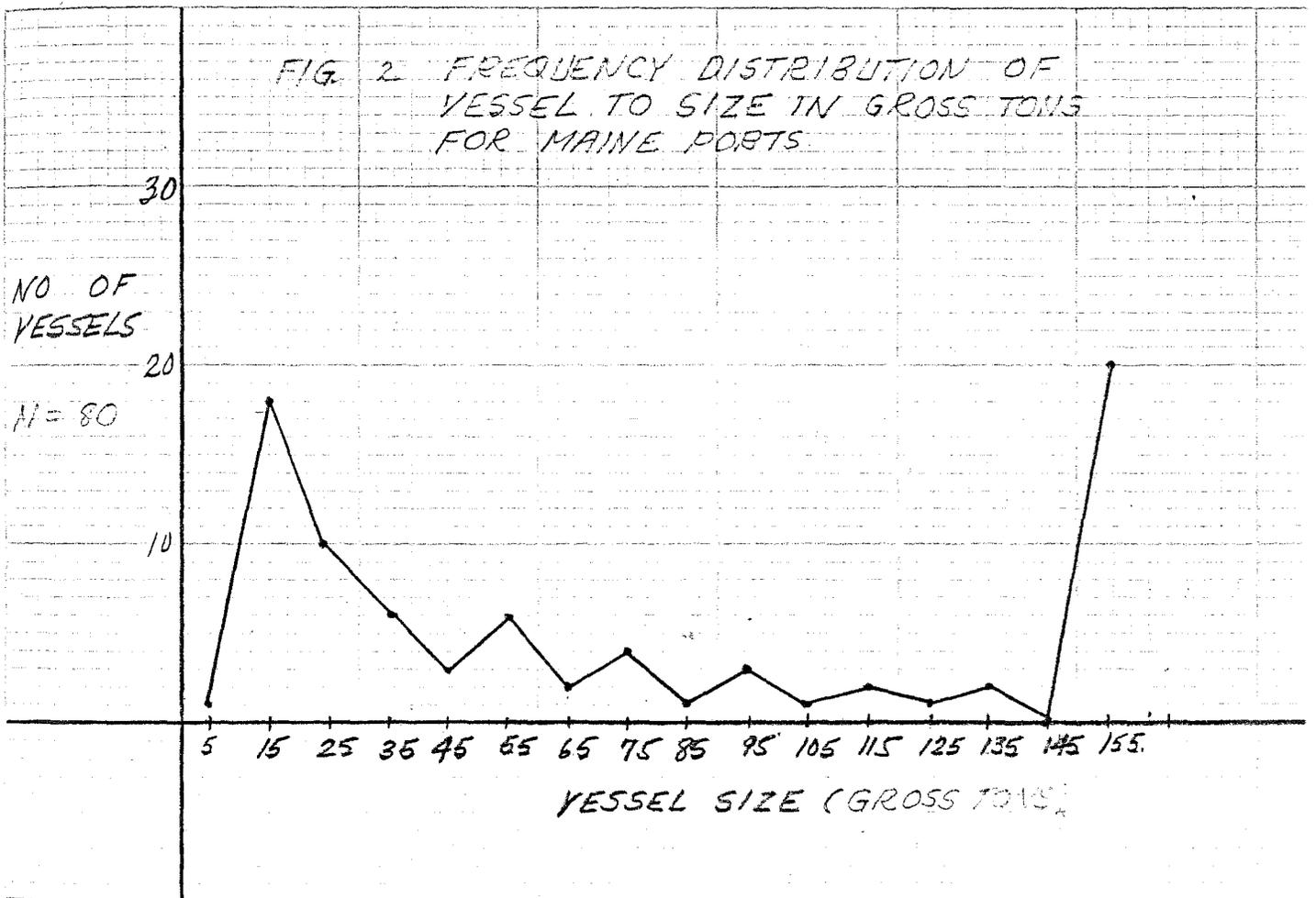


Table 1
1955

Table 1 Northern New England Otter Trawl Landings, 1955

<u>Port</u>	<u>Vessels</u>	<u>Trips</u>	<u>HADDOCK ALL FISH</u> <u>(Thousands of lbs.)</u>		<u>%</u> <u>Haddock</u>
Maine Ports	80	2,532	3,267	95,230	3.4
Gloucester	150	7,455	12,186	191,908	6.3
Boston	84	2,182	89,481	132,806	67.4
Cape Cod Ports	66	3,612	1,612	32,225	5.0
New Bedford	107	2,672	7,910	63,177	12.5
<hr/>					
TOTALS	487	18,453	114,456	515,346	22.2
<hr/>					

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Table 2 Summary Analysis by Vessel Size for Maine Ports

<u>Size</u>	<u>Vessels</u>	<u>Total Trips</u>	<u>Total Excess Trips</u>	<u>HADDOCK (Thousands of lbs.)</u>	<u>ALL FISH</u>	<u>% Haddock</u>
OTS	40	1783	56	1305	22,266	5.9
OTM	20	494	92	1757	21,884	8.0
OTL	20	255	3	204	51,080	0.4
TOTALS	80	2532	151	3266	95,230	3.4

Table 3 Summary Analysis by Percentage of Haddock in Annual Landings for Maine Ports.

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	52	1446	21
5.0 - 9.9	14	606	40
10.0 - 14.9	7	165	39
15.0 - 19.9	2	83	35
20.0 - 24.9	1	18	0
25.0 - 29.9	0	0	0
30.0 - 34.9	1	28	15
35.0 - 39.9	2	103	1
40.0 - 44.9	0	0	0
45.0 - 49.9	1	83	0
50.0 -			
TOTALS	80	2532	151

Table 4 Summary Analysis by Vessel Size for Boston

<u>Size</u>	<u>Vessels</u>	<u>Total Trips</u>	<u>Total Excess Trips</u>	<u>HADDOCK (Thousands of lbs.)</u>	<u>ALL FISH</u>	<u>% of Haddock</u>
OTS	18	427	87	1298	4155	31.2
OTM	33	1020	860	26,172	43,317	60.4
OTL	33	735	722	62,010	85,335	72.7
TOTALS	84	2182	1669	89,480	132,807	67.4

Table 5 Summary Analysis by Percentage of Haddock in Annual Landings for Boston

See corrected table on next page

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	4	54	0
5.0 - 9.9	1	18	0
10.0 - 14.9	2	45	2
15.0 - 19.9	--	--	--
20.0 - 24.9	1	36	2
25.0 - 29.9	3	95	21
30.0 - 34.9	1	40	6
35.0 - 39.9	4	68	19
40.0 - 44.9	4	125	53
45.0 - 49.9	5	159	91
50.0 +	58	1526	386
TOTALS	83	2166	580

Dietsch

REVISED

Table 5. Summary Analysis by Percentage of Haddock in Annual Landings for Boston, 1955.

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	4	54	0
5.0 - 9.9	1	18	0
10.0 - 14.9	2	45	2
15.0 - 19.9	1	11	3
20.0 - 24.9	1	36	2
25.0 - 29.9	3	95	21
30.0 - 34.9	1	40	6
35.0 - 39.9	4	68	36
40.0 - 44.9	4	125	53
45.0 - 49.9	5	159	105
50.0 - - -	58	1531	1441
Totals	84	2182	1669

Table 6 Summary Analysis by Vessel Size for Gloucester.

<u>Size</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>	<u>HADDOCK (Thousands of lbs.)</u>	<u>ALL FISH</u>	<u>% Haddock</u>
OTS	63	5,032	97	1,816	37,997	4.8
OTM	65	2,105	400	8,298	102,097	8.1
OTL	22	319	55	2,081	51,815	4.0
TOTALS	150	7,456	552	12,195	191,908	6.4

Table 7 Summary Analysis by Percentage of Haddock in Annual Landings for Gloucester.

See summary page 7 in report

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	88	5,258	43
5.0 - 9.9	34	1,338	213
10.0 - 14.9	10	317	88
15.0 - 19.9	5	96	40
20.0 - 24.9	6	202	73
25.0 - 29.9	6	244	94
50.0 +	1	1	1
TOTALS	150	7,456	552

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REVISED

Table 7. Summary Analysis by Percentage of Haddock in Annual Landings for Gloucester Fleet, 1955.

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	88	5,258	43
5.0 - 9.9	34	1,338	213
10.0 - 14.9	10	317	88
15.0 - 19.9	5	96	40
20.0 - 24.9	6	202	73
25.0 - 29.9	6	244	94
30.0 - 34.9	0	0	0
35.0 - 39.9	0	0	0
40.0 - 44.9	0	0	0
45.0 - 49.9	0	0	0
50.0 - - -	1	1	1
Totals	150	7,456	552

Table 8 Summary Analysis by Vessel Size for Cape Cod

<u>Size</u>	<u>Vessels</u>	<u>Total Trips</u>	<u>Total Excess Trips</u>	<u>HADDOCK ALL FISH (Thousands of lbs)</u>		<u>% Haddock</u>
OTS	62	3,326	67	1,134	25,604	4.4
OTM	4	293	30	478	6,621	7.2
OTL	--	--	--	--	--	--
<hr/>						
TOTALS	66	3,619	97	1,612	32,225	5.0

Table 9 Summary Analysis by Percentage of Haddock in Annual Landings for ~~New Bedford~~

Cape Cod

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	53	2,576	14
5.0 - 9.9	8	559	30
10.0 - 14.9	2	283	15
15.0 - 19.9	1	129	22
20.0 - 24.9	--	--	--
25.0 - 29.9	--	--	--
30.0 - 34.9	2	72	16
35.0 - 39.9	--	--	--
40.0 - 44.9	--	--	--
45.0 - 49.9	--	--	--
50.0 +	--	--	--
<hr/>			
TOTALS	66	3,619	97

Table 10 Summary Analysis by Vessel Size for New Bedford.

<u>Size</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>	<u>HADDOCK (Thousands of lbs)</u>	<u>ALL FISH</u>	<u>% Haddock</u>
OTS	55	1,583	33	679	30,616	2.2
OTM	52	1,089	297	7,231	32,561	22.2
OTL	--	--	--	--	--	--
TOTALS	107	2,672	330	7,910	63,177	12.5

Table 11 Summary Analysis by Percentage of Haddock in Annual Landings for New Bedford.

<u>Percent Haddock</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>
0 - 4.9	62	1,542	9
5.0 - 9.9	23	526	42
10.0 - 14.9	5	141	31
15.0 - 19.9	4	119	38
20.0 - 24.9	1	32	12
25.0 - 29.9	1	31	11
30.0 - 34.9	1	25	14
35.0 - 39.9	1	24	16
40.0 - 44.9	2	65	39
45.0 - 49.9	5	113	79
50.0 - 54.9	2	54	39
TOTALS	107	2,672	330

Table 11a Frequency Distribution of Excess Trips.

<u>No. of Excess Trips</u>	<u>Number of Vessels and Port</u>				
	<u>Maine</u>	<u>Boston</u>	<u>Gloucester</u>	<u>Cape Ports</u>	<u>New Bedford</u>
0	51	5	70	49	61
1	10	3	15	4	10
2	7	1	6	2	7
3	0	2	6	0	5
4	2	0	9	4	6
5	2	0	4	2	0
6 +	8	72	40	5	18
<hr/>					
Total Vessels	80	83	150	66	107
<hr/>					

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Table 12 Rhode Island Otter Trawl Landings by Months, 1955

(in thousands of pounds)

<u>Month</u>	<u>Haddock</u>	<u>Foodfish</u>	<u>[%]Haddock</u>	<u>All fish</u>	<u>[%]Haddock</u>
January	1.7	1,401.0	0.1	2,698.1	0.0
February	8.6	1,697.0	0.5	3,575.3	0.2
March	10.3	935.0	1.1	2,609.4	0.4
April	32.9	866.5	3.8	7,855.3	0.4
May	79.8	986.6	8.1	14,891.1	5.4
June	73.5	1,330.3	5.5	12,771.7	0.6
July	34.5	1,046.7	3.3	4,819.6	0.7
August	16.3	1,133.6	1.4	5,267.7	0.3
September	53.8	3,587.2	1.5	12,640.0	0.4
October	4.8	1,279.5	0.4	9,174.7	0.0
November	1.7	1,211.0	0.1	7,497.2	0.0
December	2.1	1,186.5	0.2	4,970.9	0.0
TOTALS	320.0	16,660.9	1.9	88,771.0	0.4

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Table 13 Stonington, Connecticut Otter Trawl Landings by Months, 1955

(in thousands of pounds)

<u>Month</u>	<u>Haddock</u>	<u>Foodfish</u>	<u>% Haddock</u>	<u>All fish</u>	<u>% Haddock</u>
January		75.0		575.5	
February		70.3		402.8	
March		101.8		487.9	
April	13.9	47.6	29.2	337.8	4.1
May	16.8	201.9	8.2	757.9	2.2
June		415.2		415.2	
July		505.7		505.7	
August		418.5		418.5	
September		206.2		206.2	
October		417.5		417.5	
November		285.8		285.8	
December	2.0	157.3	1.3	165.4	1.2
<hr/>					
TOTALS	32.5	2,902.8	1.1	4,958.0	0.8
<hr/>					

Table 14 New York Otter Trawl Landings by Months, 1955.

(in thousands of pounds)

<u>Month</u>	<u>Haddock</u>	<u>Foodfish</u>	<u>% Haddock</u>	<u>All fish</u>	<u>% Haddock</u>
January	.1	1,391.7	0.0	1,553.4	0.0
February	1.4	3,122.4	0.0	3,157.8	0.0
March	.2	3,346.5	0.0	3,369.4	0.0
April		2,880.7		3,162.3	
May		1,669.5		1,925.7	
June		2,393.9		2,456.4	
July		1,514.4		1,554.5	
August		904.7		917.7	
September		1,358.1		1,506.1	
October		1,252.0		1,468.0	
November	1.0	1,616.7	0.6	1,920.4	0.5
December	2.3	1,007.2	0.2	1,372.1	0.2
<hr/>					
TOTALS	5.0	22,457.8	0.0	24,363.8	0.0
<hr/>					

Table 15 Trip Analysis of all New England Otter Trawl Landings in 1955.

<u>Port</u>	<u>Vessels</u>	<u>Trips</u>	<u>Excess Trips</u>	<u>Vessels with Excess Trips</u>	<u>Vessels landing more than 10% haddock</u>	<u>Vessels Benefited</u>
Maine	80	2,532	150	28	8	20
Gloucester	150	7,455	549	77	27	50
Boston	84	2,182	1,669	78	78	0
Cape Cod	66	3,612	89	16	5	11
New Bedford	107	2,672	330	46	22	24
<hr/>						
TOTALS	487	18,453	2,787	245	140	105
<hr/>						

Table 16 Summary Analysis by Percentage of Haddock in Annual Landings for All Northern New England 1/

<u>% Haddock to All Fish</u>	<u>No. of Vessels</u>	<u>Accumulative Totals</u>	
		<u>Vessels</u>	<u>% Haddock to Total Haddock</u>
0 - 4.9	259	259	2.4
5.0 - 9.9	80	339	7.9
10.0 - 14.9	26	365	11.0
15.0 - 19.9	12	377	13.6
20.0 - 24.9	9	386	15.2
25.0 - 29.9	10	396	17.5
30.0 +	91	487	100.0

1/ This table does not show effect of a percentage exemption.
See Table 17.

Table 17 Effect of 10 percent exemption on landings of vessels exceeding 10 percent haddock in 1955 and total exemption for all vessels landing at New England Ports 1/

	Mesh Size	<u>Vessels Exceeding 10 percent</u>				<u>All Vessels</u>			
		All Fish	Total Haddock	10% Exemption	Landings in Excess of Exemption 2/	Total Haddock	Total 3/ Exemption	Percent Haddock	4/ All Fish
Maine	L								
	S	9,322	1,595	932	663	3,267	2,604	79.7	2.7
Boston	L	122,633	85,645						
	S	9,651	3,817	965	2,952	89,481	884	1.0	0.7
Gloucester	L	2,526	318						
	S	34,669	6,199	3,467	2,732	12,186	9,136	75.0	4.8
Cape Cod	L								
	S	5,284	825	528	297	1,612	1,315	81.6	4.1
New Bedford	L	19,204	6,862						
	S	638	122	64	58	7,910	990	1.2	1.6
TOTALS		203,927	105,383	5,956	6,702	114,456	14,929	13.04	2.90

1/ In thousands of pounds.

2/ Total haddock minus large mesh landings minus 10 percent exemption.

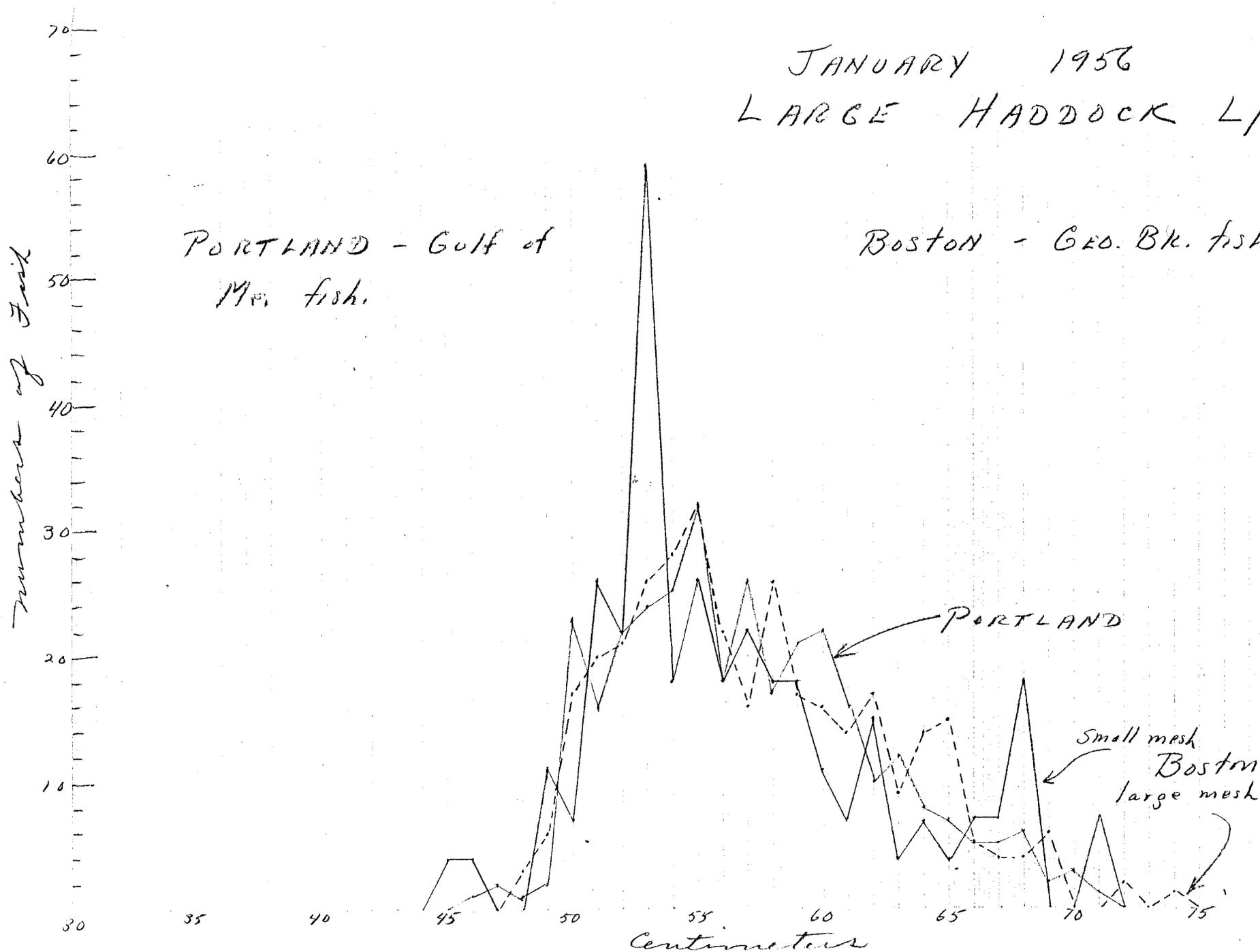
3/ The amount of haddock landed by vessels catching less than 10 percent haddock on an annual basis plus the 10 percent exemption of vessels landing more than 10 percent annually.

4/ See Table 1

JANUARY 1956
LARGE HADDOCK L/F

PORTLAND - Gulf of
Me. fish.

BOSTON - GEO. BK. fish



L/F SAMPLES - JANUARY '56 LARGE HADDOCK

PORTLAND					ROCKLAND	GLOUCESTER	BOSTON			
ID	IF	ID	IF	TOTAL	T	(No samples)	(No samples)	Small mesh	(6EO, 13K)	LARGE mesh
1/23	1/24	1/25	1/31					1 TRIP		5 TRIPS
35										
6										
7										
8										
9										
40										
1										
2										
3										
4										
5										
6				1				1	4	
7				2				1	4	
8				1				-	-	3
9			1	2				-	11	6
50	7		8	23				3	7	17
1	5		3	16				7	26	20
2	5		12	22				6	22	21
3	5		6	24				16	59	26
4	9		4	25				5	18	28
5	8		9	32				7	26	32
6	5		4	18				5	18	22
7	3		7	26				6	22	16
8	3		5	17				5	18	26
9	5		7	21				5	18	17
60	5		6	22				3	11	16
1	4		2	16				2	7	14
2	3		1	10				4	15	17
3	1		4	12				1	4	9
4	1		1	8				2	7	14
5			1	7				1	4	15
6			1	5				2	7	5
7	1		3	5				2	7	4
8	1		1	6				5	18	4
9			1	2				-	-	6
70			1	3				-	-	-
1				1				2	7	-
2										2
3										-
4										1
5										
6				1				1		
7										
								X3.7		
								93		
								341		
								3.7		
								93, 341.0		
								93		
								341		

59

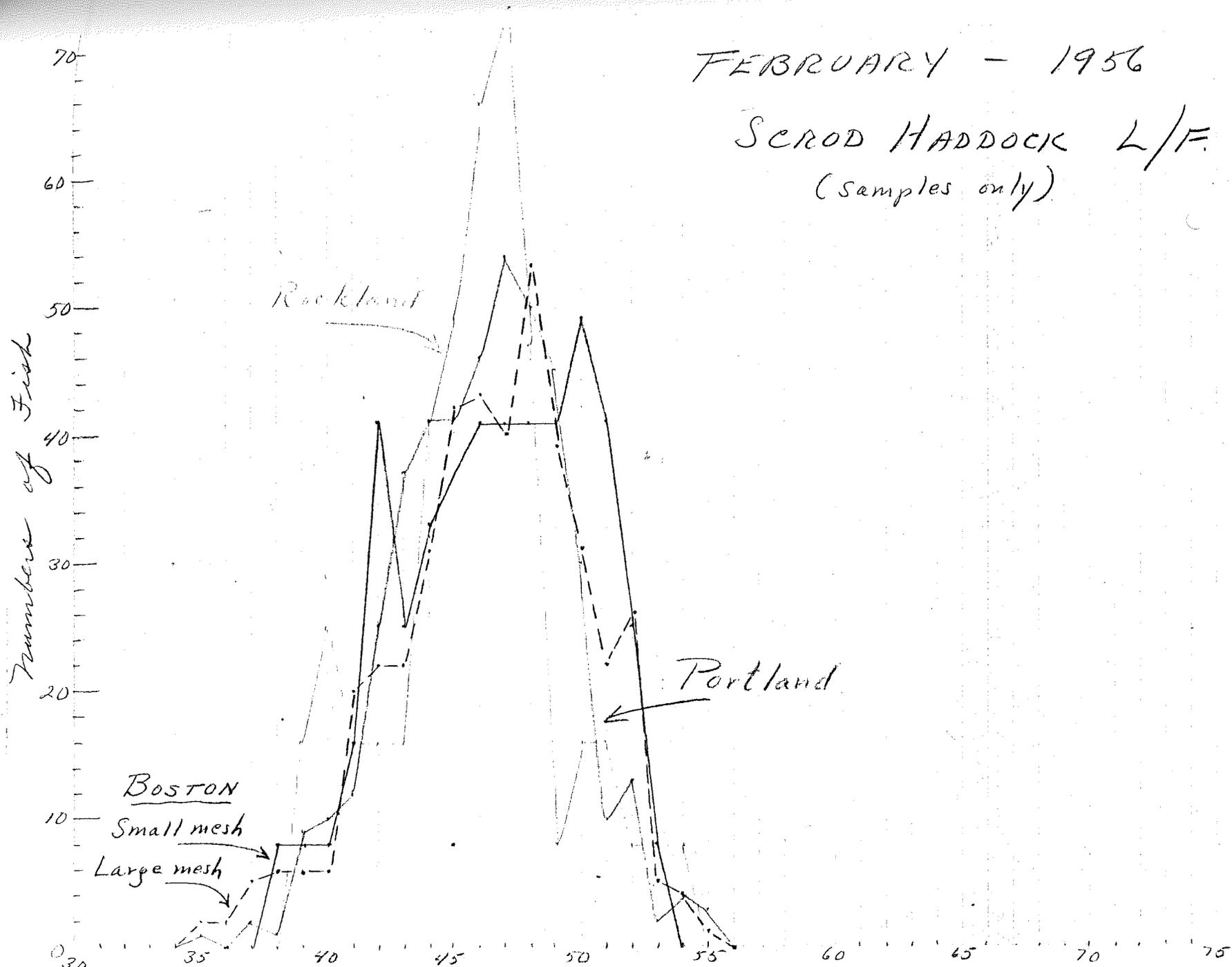
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FEBRUARY - 1956

SCROD HADDOCK L/F.
(samples only)



L/F SAMPLES - FEBRUARY 1952

SCROD HADDOCK

PORTLAND						ROCK-LAND	GLOUCESTER	BOSTON				
ID	ID	ID	FF	ID	TOTAL	IC	(NO SAMPLES)	TRIPS SEA SAND (sm. mesh)	1 TRIP	6 TRIPS	11.3	
2/3	2/3	2/3	2/2/	2/2/8		2/2/						
35	1				1		x8.2			x8.2	1	1
6	-										1	1
7	1	1			2			2			4	5
8	-	-	1		1			9	1	8	5	6
9	1	7	1	-	9	2	16	14	1	8	5	6
40	4	4	-	-	2	3	25	32	1	8	5	6
1	4	5	1	1	12	2	16	40	2	16	15	20
2	10	6	3	2	25	2	16	53	5	41	17	22
3	9	15	-	6	37	2	16	70	3	25	17	26
4	11	11	6	6	41	5	41	111	4	33	24	31
5	10	11	8	8	41	6	49	136	1	8	32	42
6	14	19	3	4	46	8	66	157	5	41	33	43
7	22	19	6	3	54	9	74	181	5	41	31	40
8	21	17	5	1	50	6	49	200	5	41	41	53
9	15	11	5	6	45	1	8	178	5	41	30	39
50	6	13	4	2	30	2	16	185	6	49	24	31
1	4	1	2	1	10	2	16	178	5	41	17	22
2	1	2	2	3	13	1	8	118	3	25	20	26
3	-	2	1	1	2	1	8	92	1	8	4	5
4	1		2	1	4	1	8	54			3	4
5			1	2	3			31			1	1
6								17				
7								6				
8								1				
9								-				
60								-				
1								1				
2												
3												
4												
5												
6												
7												
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9												
20												
1												
2												
3												
4												
5												

$$53 \overline{) 437.0}$$

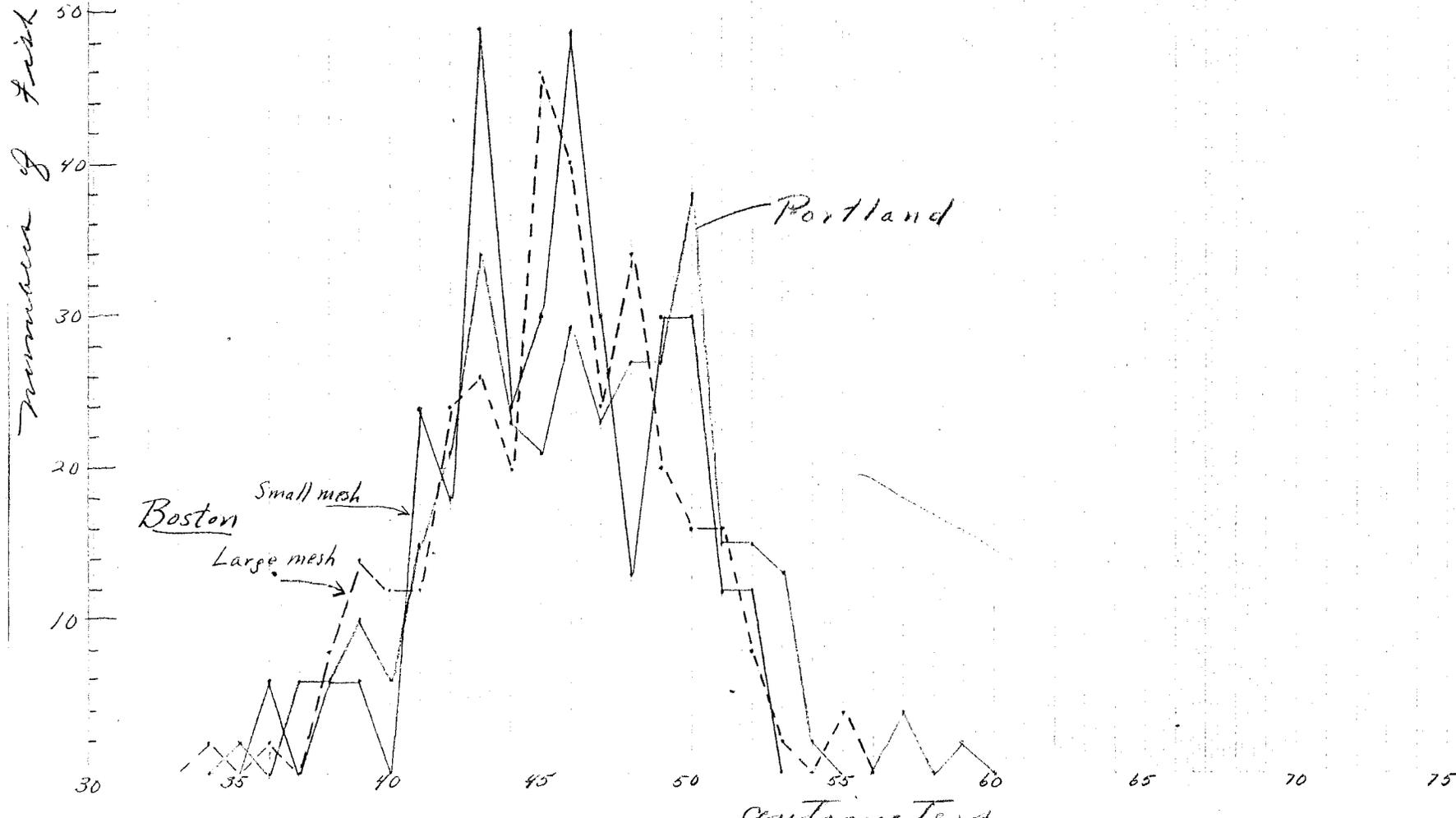
$$\underline{8.2}$$

132 144 47 49 65 437
53
53
330

JANUARY 1956
SCROD HADDOCK L/F

Portland - Gulf of
Me. fish

Boston - GEO. Bk. fish



L/F SAMPLES - JANUARY '62

SCROD HADDOCK

BOSTON

PORTLAND

ROCKLAND

GLOUCESTER

small (GEO.) mesh (BK) LARGE MESH

PORTLAND			ROCKLAND		GLOUCESTER		BOSTON	
IID	IF	IID	TOTAL			TRIP	TRIPS	X2.0
1/23	1/24	1/25		(NO SAMPLES)	(NO SAMPLES)			
4								
35		1	1	2			X6.1	1
6			-	-		1	6	1
7	1	2	3	6		-	-	-
8	1	1	3	6		1	6	4
9	2	-	3	5	10	1	6	7
40	1	-	2	3	6	-	-	6
1	3	-	4	7	15	4	24	6
2	5	1	4	10	21	3	18	12
3	6	3	7	16	34	8	49	13
4	5	1	5	11	23	4	24	10
5	6	3	1	10	21	5	30	23
6	8	6	0	14	29	8	49	20
7	3	3	5	11	23	5	30	12
8	5	4	4	13	27	2	13	17
9	2	5	6	13	27	5	30	10
50	2	10	6	18	38	5	30	8
1	3	2	2	7	15	2	12	8
2	2	3	2	7	15	2	12	4
3	4	2	6	13				1
4	1		1	2				-
5	-		-	-				2
6	-		-	-				
7	2		2	4				
8	-		-	-				
9	1		1	2				
60								
1								
2								
3								
4								
5								
6								
7								
8								
9								
70								
1								
2								
3								
4								
5								
6								
7								
8								
9								
80								
1								
2								

49

162 $\frac{2.1}{341.0}$

56 $\frac{6.1}{341.0}$

55 50 57 162

56

165