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Observation on the Italian Fishery in the ICNAF Area - Report 1962

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Being charged by the Ministry of the Mercantile Marine, I took part in a winter fishing trip in the Convention Area, from January 15th to April 12th 1962, to examine some samples of the ichthyic fauna and to establish their features in relation to the fishing zone, to the season and to the gear used.

1 - Vessel Type

The otter trawler "Genepesca I" has a gross tonnage of 1650, with an overall length of 76,5 metres. It is powered by an engine of 1251 HP. It has four refrigerated holds, each one having a capacity of 350 mc. There is also a filleting machine Baader 38, two skinnedmachines Baader 47 and a digester Vevey with a capacity of 2 mc. for the production of meal and fish oil.

The crew consists of 53 persons. The staff employed in the fishing operation, making and storing the fish products, is divided into two groups of sixteen persons, each one taking a six hour turn.

The species which are worked on on board of "Genepesca I" are the following: *Gadus morhua*, *Melanogrammus aeglefinus*, *Gadus virens*, *Hippoglossus hippoglossus*, *Sebastes mentella*. The size of the fish beheaded and tailless must be not less than 20 cm in length. All specimens which have a total length less than 35 cm are discarded.

2 - Fishing Gear

The trawl used are of the French type, manufactured of nylon; the head-line measured 25,50 m. and the group-rope 35,50 m. The size of the meshes of the cod-end was about 58 mm from knot to knot corresponding to 110-120 mm stretched measure, wet and used.

3 - Area and Season of Fishery

The fishery began the first February along the south-western edges of the Newfoundland Bank where important catches of *Melanogrammus aeglefinus* and *Gadus virens* were made. Later the fishery covered the Fletan

and St. Peters Bank region. On the 8th February, the fishery was carried out on the south coast of Newfoundland until on the 17th February, at the front of Cape Anguille, was discovered a spawning area of the *Gadus morhua* at a depth of m. 250-300, where the bottom was covered with *Ptilota plumosa*. Some trials were also made East of Scatari with modest results.

4 - Quantities caught, Yields and Discards

From the 1st of February to the 12 of March, 174 hauls were made for 378 hours of fishing and 800 tons of materials were caught with an average of 4,6 tons per haul and 2 tons for each hour of fishing.

The activity of the "Genepesca I" from February 1st to March 12th may be presented as follows:

Subarea	Division	Number of hauls	Hours of fishing	Tons of materials caught	Tons per haul	Tons per hour
3	3 O	14	33	113	8	3,4
3	3 P	112	237	383	3,4	1,6
4	4 R	35	80	276	7,9	3,4
4	4 V	13	28	30	2,3	1,07
		174	378	802	4,6	2,1

The quantities of fishes stored, divided for each species, of fillets, meals and oil, are as follows:

- <i>Gadus morhua</i>	Kg.	297.730
- <i>Melanogrammus aeglefinus</i>	"	40.650
- <i>Gadus virens</i>	"	37.590
- <i>Hippoglossus hippoglossus</i>	"	1.750
- <i>Sebastes mentella</i>	"	160
	Kg.	377.880
- Fillets	"	21.672
	Kg.	399.552
- Meal	"	23.000
- Oil	"	1.000
		423.552

The discards can be estimated at about 50% of the materials caught. In this are included: 1) the species which are not worked, like Skate, Babs, Catfish, etc.; 2) the ~~fishes~~ under sized; 3) the refuses of the work done on board for the production of frozen beheaded fish and fillets.

5 - Biological Observations

The following 11 samples were examined:

Number of the sample	Date	Division	Co-ordinates	Locality	Species	Number of specimens
1	1/2/62	3 O	43°30'N 52°05'W	S.W. Bank Newfound	Melanogr. aeglef.	199
2	3/2/62	3 O	43°23'N 52°00'W	idem	Mel. aegl. Gad. vir.	93 54
3	5/2/62	3 P	45°09'N 55°13'W	S. Fletan	G. morhua	88
4	8/2/62	3 P	47°19'N 58°35'W	Bay de la Poile	G. morhua	711
5	9/2/62	3 P	47°19'N 58°12'W	idem	G. morhua	142
6	17/2/62	4 R	47°46'N 59°28'W	Cape Anguille	G. morhua	200
7	19/2/62	4 R	47°47'N 59°30'W	idem	G. morhua	550
8	21/2/62	4 R	47°45'N 59°30'W	idem	G. morhua	152
9	27/2/62	3 P	47°31'N 58°32'W	Bay de la Poile	Sebastes mentella	107
10	27/2/62	3 P	47°18'N 58°27'W	idem	G. morhua	120
11	1/3/62	4 V	46°11'N 58°52'W	Scatari	G. morhua	636

1 - Observations on the Cod

The Cod represented the 78% in weight of the material stored. The most important catches were made along the southern coasts of Newfoundland, between Port aux Basques and Burgeo Bank and at Cape Anguille.

a) Total length

Total lengths of Cod in relation to the date of catch, locality and depth, are as follows:

Number of sample	Date	Division	Locality	Depth m.	Length	Mode cm.
1	5/2/62	3 P	S. Fletan	152-179	34 - 88	66
2	8/2/62	3 P	S. Bay Poile	195-228	31 - 87	48
3	9/2/62	3 P	idem	175-190	41 - 75	51
4	27/2/62	3 P	idem	220-272	40 - 75	48
5	17/2/62	4 R	C. Anguille	245-285	35 - 80	60
6	19/2/62	4 R	idem	170-320	36 - 71	48
7	21/2/62	4 R	idem	273-278	38 - 71	51
8	1/3/62	4 V	Scatari	140-178	30 - 74	45

b) Sex

Division 3 P

The sample caught on February 5th at 152-179 m. of depth, showed 73%

of males and 78% of females in the resting stage and only 27% of the males and 22% of the females in the developing stage. The sample caught on the 9th of February at 175-190 m. of depth, showed more specimens with gonads in the developing stage (56% of the males and 32% of the females), while 10% of both sexes were in post-spawning stage. On the sample caught on the 27th of February at 220-272 m. of depth, showed a higher percentage of specimens in the developing stage, that is to say that 63% of males and 47% of the females, while 15% and 8% respectively were in the post-spawning stage.

Division 4 R

A sample caught on February 17th at 245-285 m. of depth, showed 75% of the males and 62% of the females in an advanced developing stage, near spawning and 6% and 4% respectively in the post-spawning stage. The sample caught on the 21 of February showed a higher percentage of specimens in the resting stage (33% of the males and 56% of the females), while the specimens in the developing stage were lower respectively 50% and 31%. 14% of the males and 9% of the females were in the post-spawning stage. There was a question, evidently, of an uninterrupted afflux of specimens which were going to the spawning area.

Division 4 V

The sample caught on the 1st of March at 140-178 m. of depth, showed 46% of the males and 35% of the females with gonads in developing stage, while 36% of the males and 34% of the females were in the post-spawning stage.

c) Age-distribution

Division 3 P

At the beginning of February, in the southern part of Fletan Channel, predominated the males of the V and VI age-group and the females of the VI and VIII age-group. In the sample caught on the 9th of the same month, at southern part of the Poile Bay, predominated the males of the V, VI and VII age-group, and the females of the V and VI age-group. In the sample caught on the 27th of February in the same place, the males of the VII age-group and the females of the IV age-group, were more numerous.

Division 4 R

On the 17th of February, off Cape Anguille, predominated specimens of f

both sexes of the V and VI age-group, while in the sample caught on February 21st in almost the same area, predominated the specimens of both sexes of V age-group.

Division 4 V

In the sample caught on the 1st of March in the Scatari region predominated specimens of both sexes of VI age-group.

Year-Class	Age 1962	Measures of length on the average											
		Males						Females					
		3P 5/2	3P 9/2	3P 27/2	4R 17/2	4R 21/2	4V 1/3	3P 5/2	3P 9/2	3P 27/2	4R 17/2	4R 21/2	4V 1/3
1959	III	34,0	-	43,5	43,0	-	40,0	39,5	45,0	-	42,5	39,5	37,0
1958	IV	41,0	45,3	46,6	48,8	41,5	41,0	46,6	48,5	46,6	51,9	43,9	42,3
1957	V	52,0	52,0	48,6	52,8	47,0	45,6	60,8	50,9	48,6	51,5	47,0	46,5
1956	VI	62,0	55,3	55,0	53,2	51,6	48,4	65,0	58,0	55,7	58,0	49,8	48,0
1955	VII	65,0	61,4	59,8	61,0	56,3	53,5	72,0	67,0	60,5	64,2	53,8	52,0
1954	VIII	70,0	69,0	65,4	63,0	56,0	58,0	74,0	76,0	66,4	68,3	60,5	-
1953	IX	-	81,0	67,0	-	61,0	62,0	79,0	-	72,3	74,0	66,3	69,0
1952	X	-	-	70,5	-	68,0	-	94,0	-	-	76,0	-	-
1951	XI	-	-	-	-	-	-	-	-	-	-	68,0	-

2 - *Melanogrammus aeglefinus*

This species was found everywhere but in small quantities. The most important catches were made during the first days of February along the edges southwest of the Newfoundland Bank.

a) Total length

Total length of *Melanogrammus aeglefinus* in relation to the date of catch, locality and depth, are the follows:

Number of the sample	Date	Division	Locality	Depth m.	Length	Mode cm
1	1/6/62	3 0	Newf.Bank	155-224	32 - 57	41
2	3/2/62	3 0	idem	160-205	36 - 61	40

b) Sex

Division 3 0

The sample caught on February 1st at 155-224 m. of depth, consisted of 199 specimens of which 90 were males and 109 females. Females not only

were more numerous than males but attained also a greater size. 90 % of the males and ~~was~~ 80 % of the females were in the resting stage. The sample caught on February 3th at 160-205 m. of depth, consisted of 93 specimens 40 of which were males and 53 females. The considerations made for the preceding sample are also valid for this one.

3 - *Gadus virens*

This species was found sporadically and in small quantities. The most important catches were made at the beginning of February along the south-western edges of the Newfoundland Bank.

a) Total length

The total length of *Gadus virens* in the sample caught on February 2 in the Division 3 O at 160-205 m. of depth, was ~~was~~ ranging between 74 and 100 cm. with mode of 87 cm.

b) Sex

The sample examined consisted of 54 specimens 21 of which were males and 33 females. Females not only were more numerous than males but presented larger size too. Many specimens showed gonads in the developing stage.

4 - *Sebastes mentella*

This species was found almost always during the fishing trip but in small quantities. The most important catches were made along the southern coast of Newfoundland ~~Isle~~. Only one sample of *Sebastes mentella* was examined. It consisted of 107 specimens caught on the 27th of February in the Division 3 P, off Port aux Basques, at 218-236 m. of depth.

a) Total length

The total lengths were between 28 and 39 cm. with mode at 32 cm. Females were larger.

b) Sex

In the sample examined, 80 specimens were males and 27 females. In this species the males were more numerous than females. (males 75%; females 25%). Almost all the males showed the gonads in an advanced developing stage; the females were in spawning stage.

Other data will be published later.

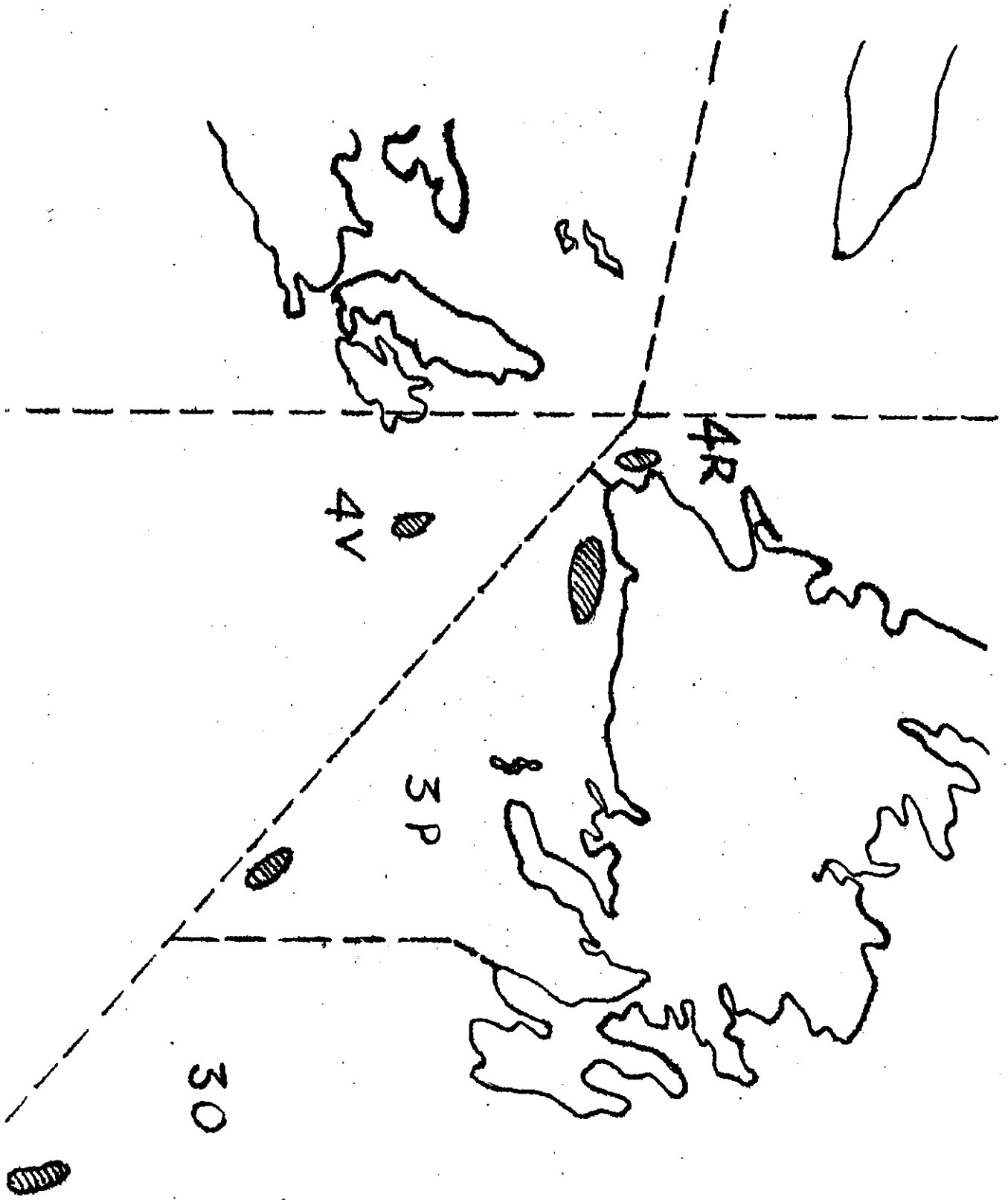


Fig. 1 - Zones of fishing during a cruise with a Italian deep sea trawler off Newfoundland. February-March 1962