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St. Pierre and Miquelon Fishery

by

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CRIP

ISTPM

Sr. Pierre et Miquelon

A - Status of the fisheries.

In 1976 the catch amounted to a total of 8,330 tons of various fishes caught from Subarea 3 and 4.

We can point out an increase in the landing : 29 p.cent more than in 1975 (6,377 tons), with a total fishing effort of 2,670 D.F (2,506 in 1975) for traditional fishing (dories) and 517 D.F (548 in 1975) for trawlers.

This increase in the catch is mainly due to the increase of the catch of cod by trawlers (4,140 tons in 1976, 2,419 tons in 1975).

Once again we may point out the very small quantity of haddock (35 tons).

Cod is caught by trawlers in the Subarea 3 and 4, from November to May.

The total of the redfish catches (1,840 tons) is nearly the same than in 1976 (1,907 tons). More than half of the catches comes from the Division 3 P.

Most of the american plaice are caught in the Divisions 3 L (292 tons) and 4 T (86 tons).

There is a noticeable increase in grey sole landing : 338 tons in 1976, 115 in 1975. Grey sole is almost exclusively caught in Divisions 4 R, 4 S, 4 T in the Gulf of St. Lawrence.

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Traditional fishing was only carried out in Subdivision 3 Ps, from May to November and landed 722 tons of cod and 432 tons of squid.

B - Special research studies.

Throughout the year 1976 various investigations were carried out by R/V CRYOS in the ICNAP convention area.

1. Cod : 8 January - 10 March  
2J-3K-3L-3Pn-3Ps-4R  
285 stations = 130 hauls + 129 hydro + 26 tagging stations.
2. Herring : 15-31 March  
3P-4V-4W  
62 stations = 32 hauls + 30 hydro.
3. Squid and groundfish : 28 October - 6 December  
4W-4K-5Ze-5Zw-6  
210 stations = 105 hauls + 105 hydro.
4. Shellfish : 14-21 December  
3Ps (inshore waters).

I - Subarea 2.

1. Environmental studies.

1.1. Hydrographic studies.

The thermic conditions were observed in Subdivision 2 J during the cruise n° 1, after each trawl haul with XBT Sippican (14 stations).

2. Biological studies.

Biological study of cod was carried out in Subdivision 2 J. 14 trawl hauls have been carried out in this Division. The results of trawlings show that in this zone the best yields (920 to 2200 kg/½ h) were obtained between 290 to 450 m.

4084 specimens have been measured and sexed. 102 stomachs were collected.

II - Subarea 3.

1. Environmental studies.

1.1. Hydrographic studies.

The thermic conditions were observed in Division 3 K-3 L - 3 P during the cruises n° 1 and n° 2, after each trawl haul with XBT Sippican (82 stations).

2. Biological studies.

2.1. Cod.

Biological study of cod was continued specially on the stock submitted to French fishery effort in Subdivisions 3 Pn and 3 Ps and in Divisions 3 K and 3 L.

2.1.1. Division 3 K.

28 trawl hauls have been carried out in this Division. The best yields (450 to 1300 kg/½ h) were obtained between 300 and 430 m.

2452 specimens have been measured and sexed. 99 stomachs were collected.

2.1.2. Division 3 L.

32 trawl hauls have been carried out in this Division. The best yields (700 to 2800 kg/½ h) were obtained between 300 and 330 m.

6356 length measurements were made ; 274 otoliths and 68 stomachs were collected.

2.1.3. Division 3 Pn - 3 Ps.

20 trawl hauls have been carried out in these Divisions. The best yields (7000 to 20000 kg/½ h) were obtained between 180 and 220 m.

1498 specimens were tagged and released.

## 2.2. Redfish.

Data on length frequencies were collected in Divisions 3 K and 3 P during some of the surveys of the R/V CRYOS (2814 specimens).

## 2.3. American plaice.

American plaice was studied in Division 3 L during the first cruise of the R/V CRYOS.

In February samplings were carried out in the North of the Great Bank. The yields were generally irregular ; the best samplings were 778 and 608 kg in half an hour's time.

2178 length measurements were made.

# III - Subarea 4.

## 1. Environmental studies.

### 1.1. Hydrographic studies.

63 hydrographic stations, with XBT Sippican have permitted the study of the environmental conditions.

## 2. Biological studies.

### 2.1. Cod.

Here again, biological data were obtained on cod stocks exploited by the french fishing fleet, in Division 4 R.

The best yields were obtained between 100 and 200 m (1000 to 3780 kg/1/2 h) at a temperature of about 2° C.

6703 fishes were measured and sexed.

500 otoliths and 246 stomachs were collected. 1499 tagged fishes were released in this Division.

## 2.2. Herring.

The systematic sampling of herring populations was continued during the cruises n° 1 and 2.

5300 fishes were measured.

The meristic characteristics of the stocks are studied on 1500 specimens.

The best yields were obtained on the North Slopes of Artimon and Misaine banks and on the East Slopes of Canso bank (1700 to 3400 kg/½ h).

The modal length composition is at 32.5 cm. In the West of Artimon and Misaine banks the length composition is plurimodal with three groups which are distinguished by the following modal values : 23 cm - 28 cm - 32 cm.

## IV - Subareas 5 and 6.

### 1. Environmental studies.

#### A.1. Hydrographics studies.

Data on the hydrographic conditions have been collected during the cruise n° 3 : 105 stations.

### 2. Biological studies.

The data were collected during a cruise carried out on Northern Georges bank, Nantucket Shoals area and Mid Atlantic Shelf.

#### 2.1. Squid.

##### 2.1.1. Loligo pealei.

Some 65,200 individuals weighing 2.8 tons were caught during the whole cruise. They were distributed in the whole surveyed area, if we except two stations on the northern edge of Georges bank and some of the deepest stations.

As usual, their abundance decreases from the Mid Atlantic shelf to Georges bank and from shallow to deeper areas.

The length frequency distributions were analyzed. The usual 3 main components are present.

#### 2.1.2. *Illex illecebrosus*.

The short finned-squid *Illex illecebrosus* was present in great abundance in the whole Northwest Atlantic. 19.2 tons were caught during the cruise.

The species was distributed at every latitude with higher abundance in the deepest strata. The largest catches were performed on the deepest strata of the Mid Atlantic shelf.

The size frequency distributions in the samples were analyzed and three groups were identified.

The data of this survey are published in Res.Doc. 77/VI/4.

#### 2.2. Silver Hake.

This species was present at most of the stations. The best catch was 5 tons in half an hour's time, on the northern edge of Georges bank.

The following biostatistical data have been forwarded to the designated experts :

Morue : 2 J - 3 K - 3 L - 3 Pn - 4 R - 4 Vn - 4 Vs.

Redfish : 3 K - 3 Pn - 3 Ps.

Herring : 4 R - 4 Vn - 4 Vs - 4 W.

American plaice : 3 L.

Squid *Illex* : 3 Ps.