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**Analysis of the French fishery for Porbeagle *Lamna nasus* (Bonnaterre, 1788)**

by

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**Abstract**

This paper is a description of the French fishery for porbeagle. Catches are mostly landed by longliners from Yeu Island, and informations on trends of French landings, fishing grounds localisation and landings by month are presented.

Some data on catch composition by month are also available (number and mean weight of fish) and discussed.

**Résumé**

Cette note présente une description de la pêche française de requin-taupe. Les captures sont effectuées essentiellement par les palangriers de l'Ile d'Yeu, et des informations sur l'évolution des débarquements, la localisation des lieux de pêche sont fournies.

De même, quelques données sur la composition des captures en nombre et en poids moyen des individus sont discutées.

**1. Introduction**

According to the FAO fishery statistics, France and Faroe Islands are the main countries involved in the porbeagle fishery.

As far as France is concerned, landings are not very important in weight, but a directed fishery exists and most vessels involved are registered in one fishing harbour, namely Yeu Island, a small island located in Bay of Biscay.

This paper is a first attempt to analyse this French fishery of porbeagle, in terms of landings, seasonality and fishing areas.

## **2. International landings**

The world production of Porbeagle was important until the middle of the 1960's (between 5000 and 15 000 tonnes per year), then dropped sharply and stabilized at about 1000 tonnes per year despite some variations from year to year.

In the first half of the 20<sup>th</sup> century, the most important part of the catch was made by Norway ; in the early 60's by Norway and the Faeroe Islands ; and by Faeroe, Belgium, Denmark, and Sweden in the 70's.

Since 1978, France shares the main part of catches with Faeroe Islands. These two countries achieved on average 68 % of world landings (respectively 47 and 21 %) during the period 1978–1987.

## **3. Analysis of the French fishery**

### **3.1 Evolution of landings**

Landings are given in Figure 1. This figure shows an increase of the landed weight until the late 70's, then a regular fall until 1986. From 1986 onwards, the French production increased again.

For the period 1985–1990, sixteen ports have reported porbeagle landings. However, during this period between 46 and 75 % of the total French catches were landed at La Rochelle as indicated in Table 1.

Although the harbour of La Rochelle provides most of the French landings, these catches are almost completely made by boats from Yeu Island. Table 1 shows that this fleet accounts for more than 80 % of the total catch, and, therefore, most of its catch is landed in La Rochelle.

The examination of individual data shows that in 1989, 19 ships from the Yeu Island have landed porbeagle. However, only 4 of them actually specialize in this activity. These 4 boats with 277 tonnes of catches account for 98 % of the landings made by Yeu Island's fleet, and almost 85 % of the French total.

Floating longlines dominate this type of fishing : in 1989 they represented 86 % of the total landings. Longliners from Yeu Island on their own ensure more than 99 % of the catches . Nets and trawls only represent respectively 9 % and 5 % of the total.

### **3.2 Monthly evolution of the catches.**

Almost all the landings from the Yeu Island vessels are made during the second and the third quarters of the year (Fig. 2).

Each year, a drop in the landings is observed during the period May–June. Fishermen seem to be very familiar with this drop. On the fishing grounds, porbeagles are seen at the surface of the sea but don't bite the hooks. This behaviour could be related with spawning which takes place during the same period.

### **3.3. Production by ICES divisions.**

Figures 3a and 3 b show the total French catches of porbeagle by ICES division for the period 1983–1989.

While at the beginning of the period considered, most catches were made in the Bay of Biscay (subdivisions VIII a–b), it seems that the fisheries have moved towards the South West and South East areas of Ireland. Indeed, the largest part of the catches in 1989 comes from subdivisions VII j–h. According to fishermen, this shift might be explained by the discovery of new fishing areas rather than the depletion of resources in the Bay of Biscay. Moreover, the fish caught in VII j–h, which are smaller than in the Bay of Biscay, have a higher market value.

It has been possible for 1989 to carry out this study by statistical rectangle (Fig. 4). Catches of porbeagle are mainly made near the continental slope. Porbeagle is also found on the continental shelf, on the borderline of subdivisions VII j and VII h, subdivisions VIII a and VIII b and to a smaller extent in subdivision VII c.

#### **3.4. Average weight per individual caught.**

Before being sold in La Rochelle fishmarket, porbeagles are presented in groups of 4 to 8 fish. Since 1980 the weight of these groups and the number of individuals per group are recorded. The 250 data collected have been used to obtain monthly mean weights of individuals in the landings for the period 1980-1989 (Fig.5). These mean weights increase from January to July, decrease drastically between July and August and increase again. A yearly analysis of these data shows that this phenomenon is observed each year.

This pattern seems to be correlated with the growth in weight and the recruitment to the fishery of young porbeagles in August, but changes in fishing area according to the season cannot be completely excluded, and further detailed analysis of the data will be necessary to explain this evolution.

	1985	1986	1987	1988	1989	1990
French landings (t)	195,7	207,6	238,8	341,2	326,9	546,2
% landed in La Rochelle	57	47	46	64	73	75
% fished by Yeu Island fleet	79	79	69	83	88	91

Table 1. French landings in tonnes of Porbeagle for the period 1985–1990, proportion of landings in La Rochelle harbour (all fleets combined) and proportion of the total French landings caught by the Yeu Island fleet.

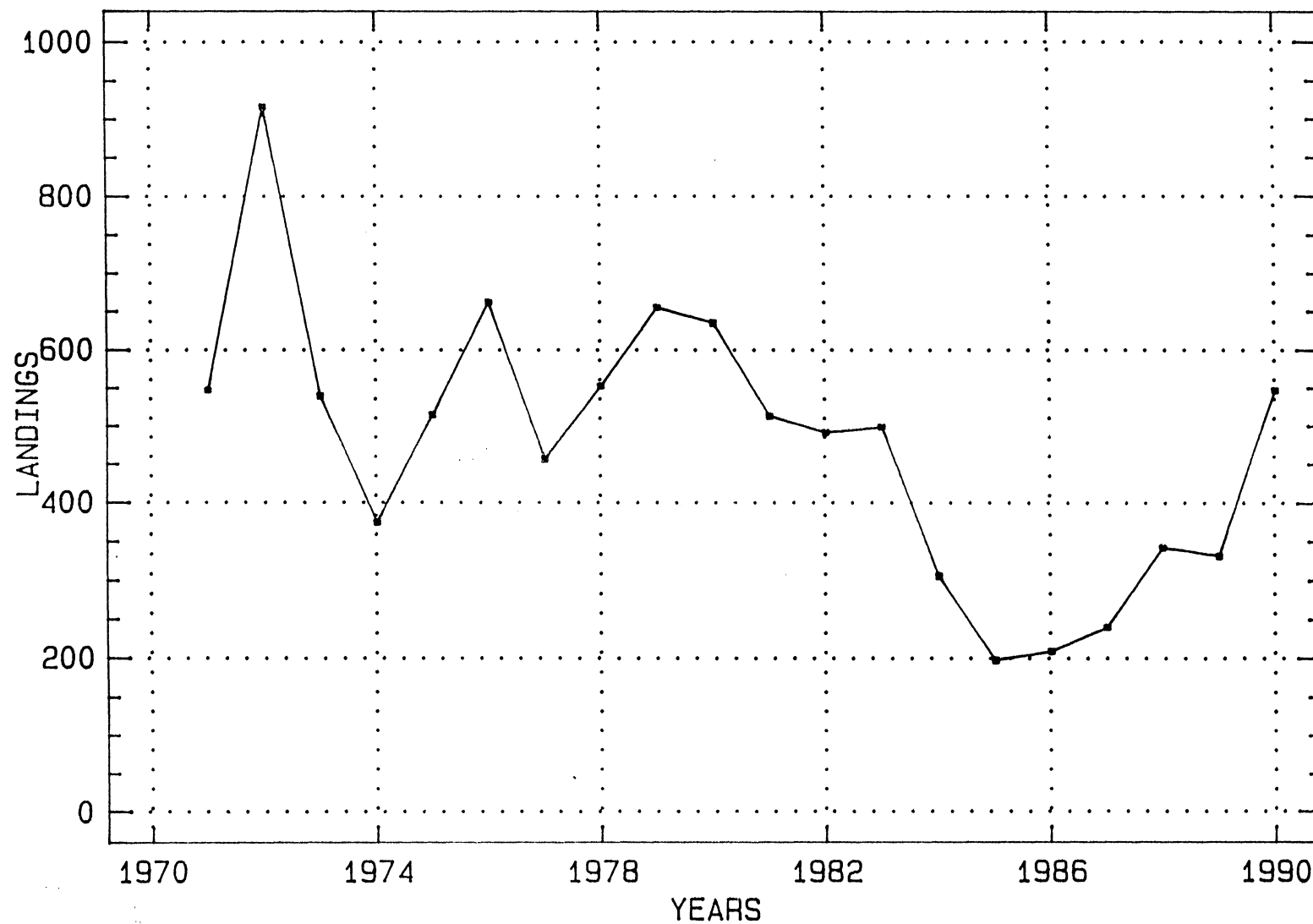


Figure 1 : Evolution of French landings of Porbeagle from 1970 to 1990. (tonnes)

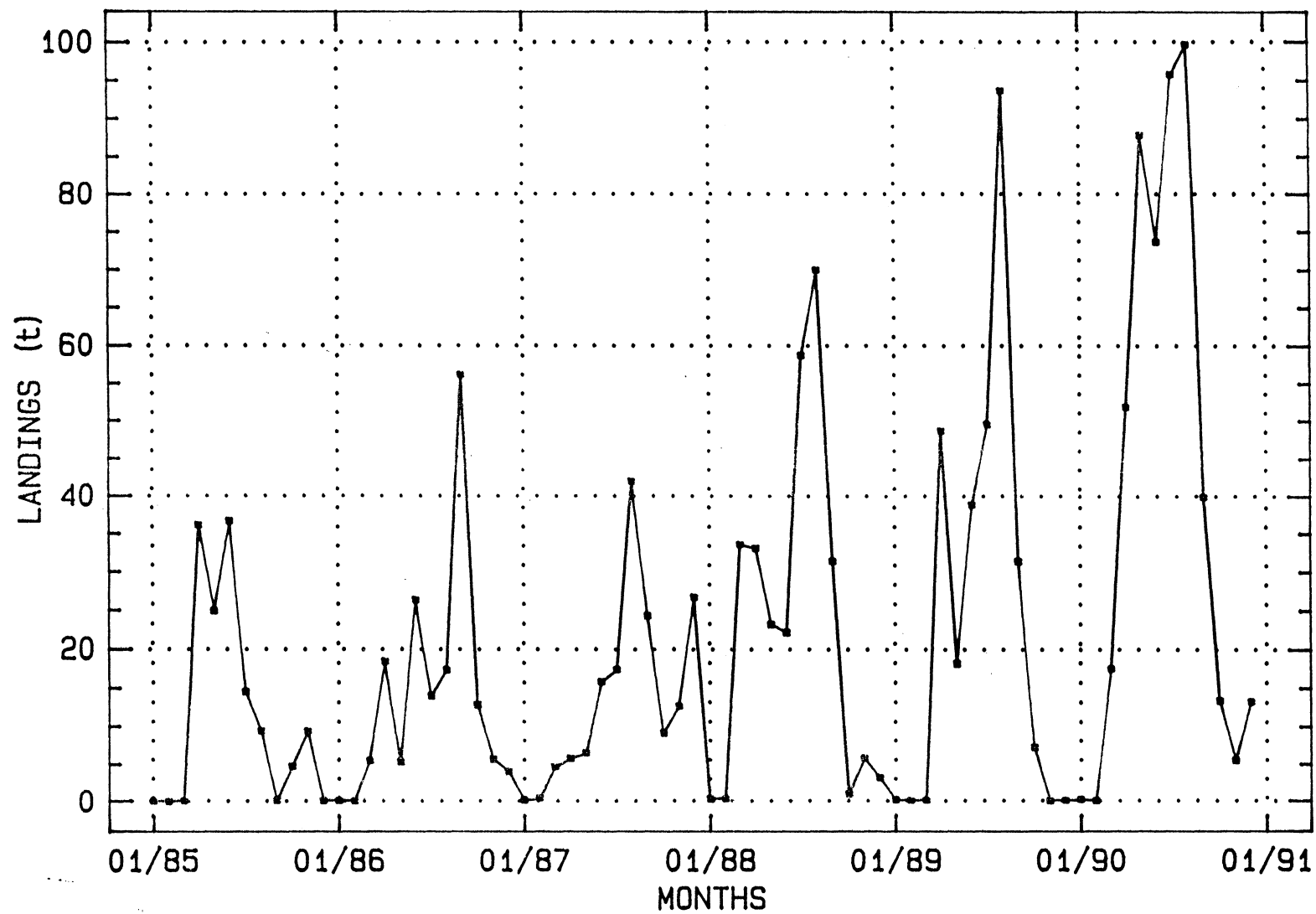


Figure 2 : Evolution of the monthly catches of Porbeagle by the Yeu Island fleet from 1985 to 1990.

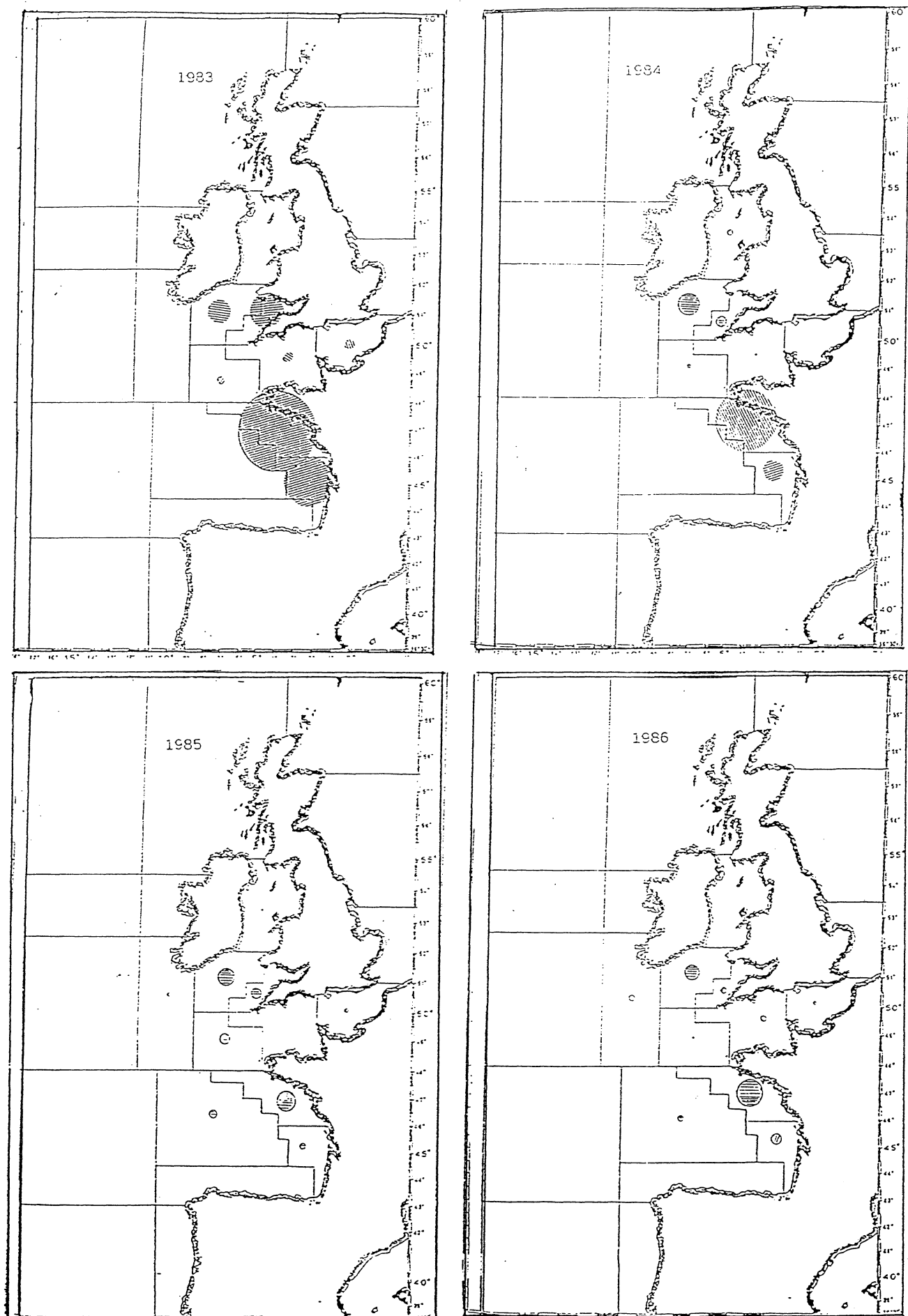
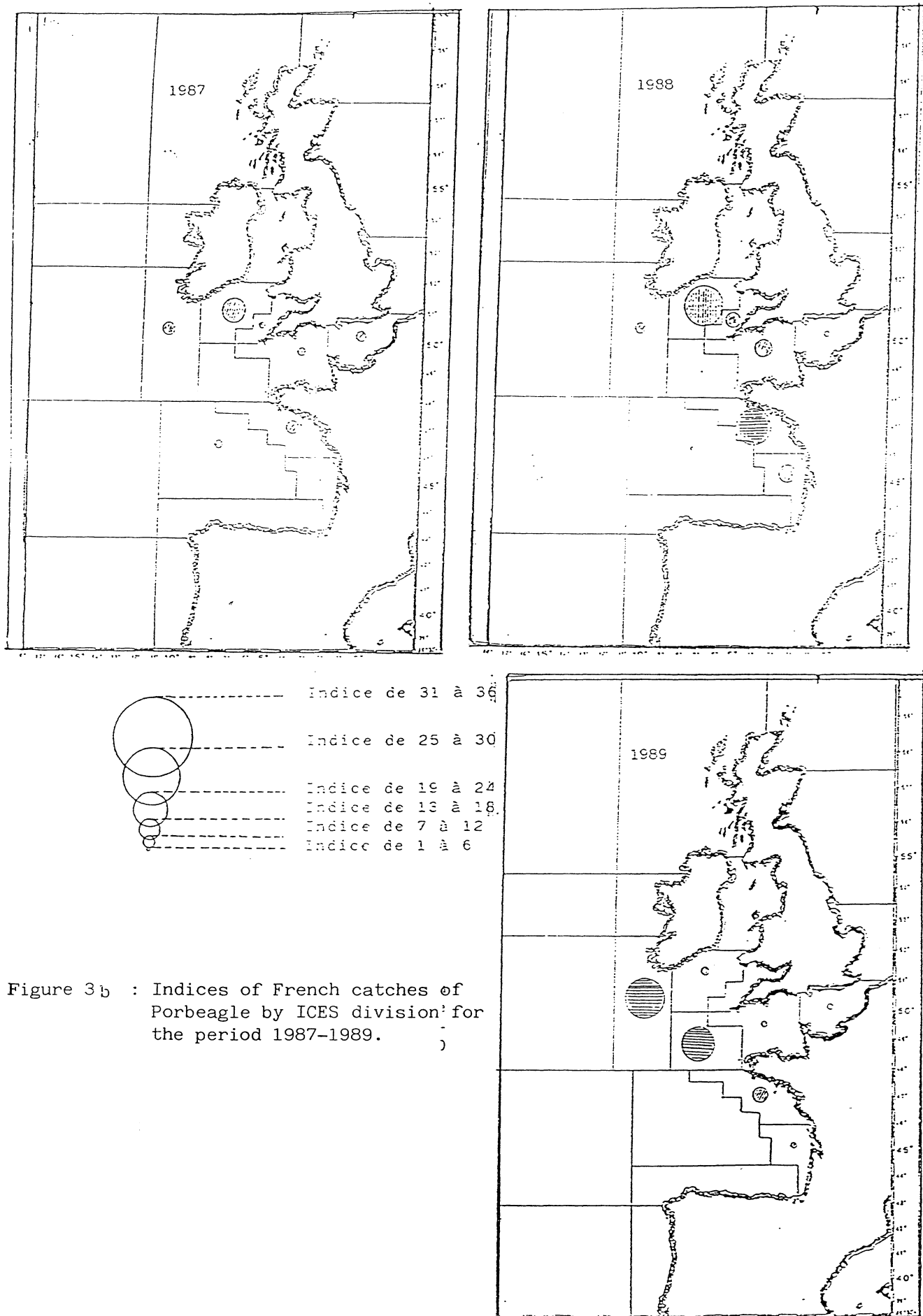


Figure 3a : Indices of French catches of Porbeagle by ICES division for the period 1983-1986.





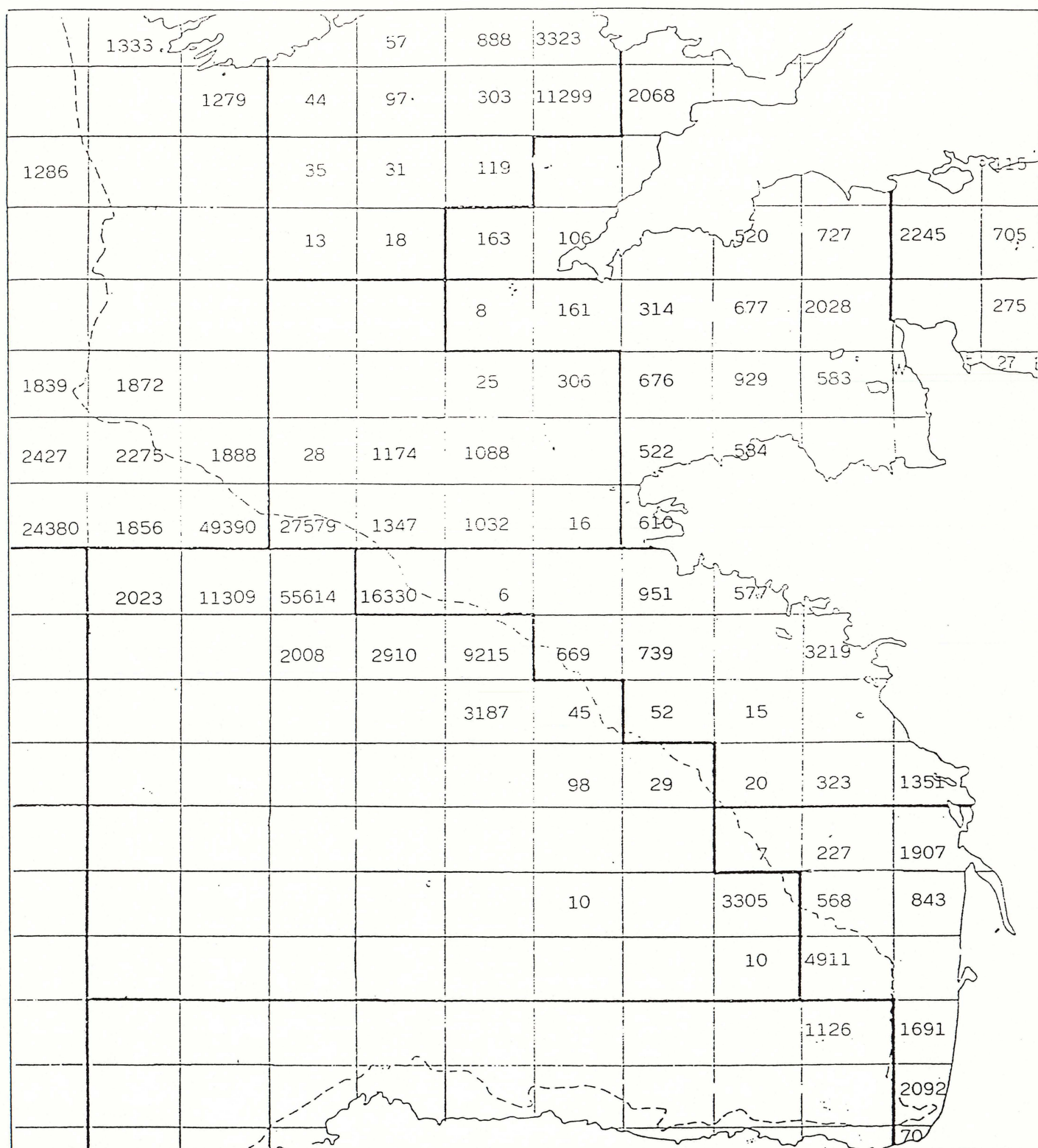


Figure 4 : Annual catches of Porbeagle by statistical rectangle in the French fishery in 1989. (values in kg)

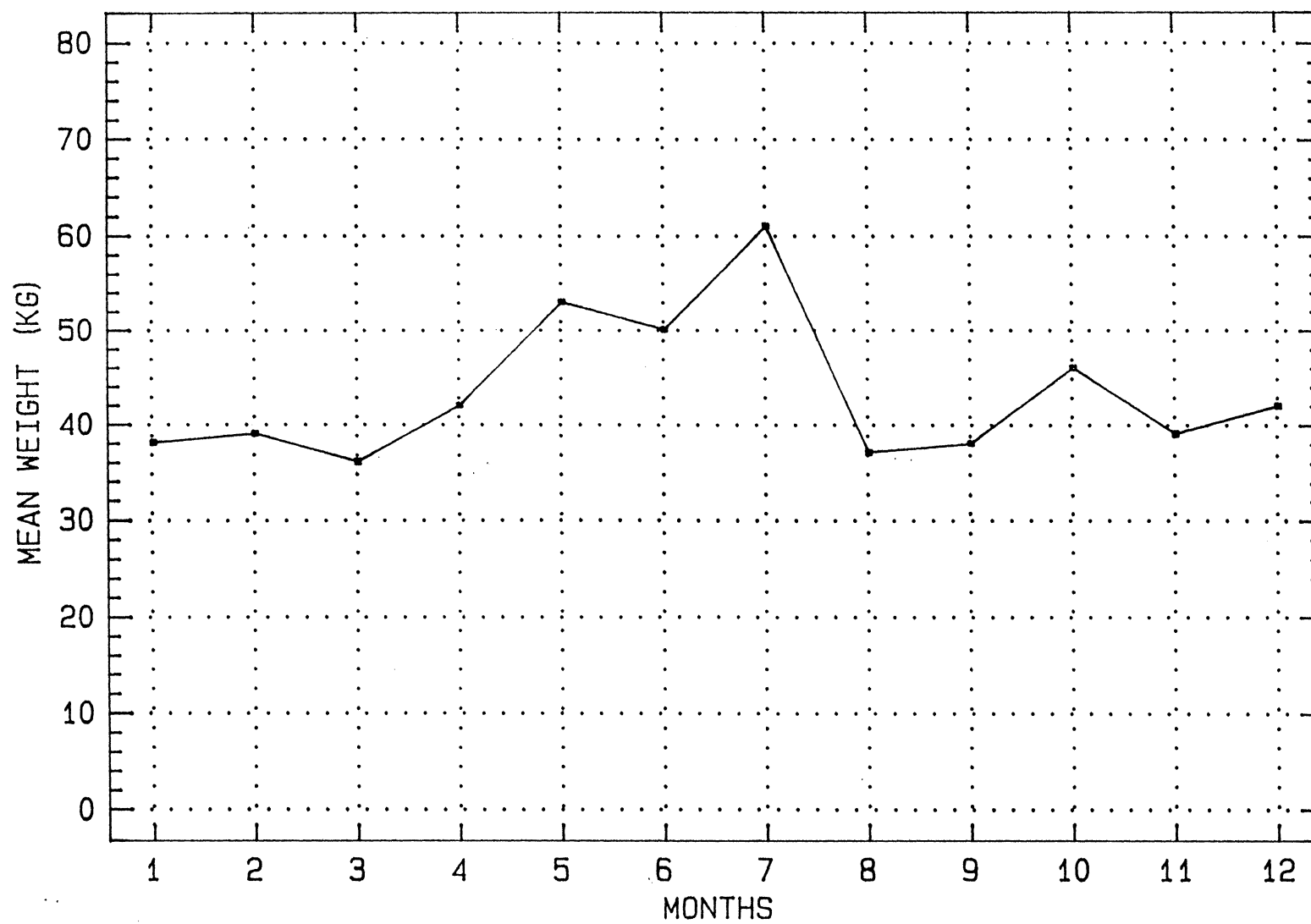


Figure 5 : Mean weight (kg) of Porbeagles landed in La Rochelle in the period 1980-1989.