THE NORTHWEST ATLANTIC FISHERIES
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> ANNUAL MEETING, JUNE, 1962.
> Spanish Research Report, 1961. A. Size Distribution of Cod, 1961.
> by O. Rodriguez Martin.

In 1961, as in previous years, two observers collected data aboard the trawlers "Vendaval" and "Aquilon", mainly for the study of length and age distribution of cod.

The material ${ }^{1}$ collected is summarized as follows:

| Subarea | Month | Numbers of cod measured |  |
| :---: | :---: | :---: | :---: |
|  |  | Monthly | Total by Subarea |
| 2J | V | 1894 |  |
|  | VI | 560 |  |
|  | IX | 2434 |  |
|  | X | 1574 |  |
|  | XI | 198 | 6660 |
| 3K | VI | 453 |  |
|  | VIII | 431 |  |
|  | XI | 185 | 1069 |
| 3L | III | 241 |  |
|  | IV | 1239 |  |
|  | V | 550 |  |
|  | VIII | 2615 | 4645 |
| 3M | VIII | 273 | 273 |
| 3N | III | 194 | 194 |
| 3 Ps | IV | 825 | 825 |
| 4 Vs | IV | 878 | 878 |
|  |  | and Total: | 14544 |

1) Tables including the detailed data will be published in the 1961 Sampling Yearbook.

## Subarea 2J (Fig. 1).

The Spanish fisheries do not use cod below a length of 40 cm , and the percentage quantities (as appearing from the data collected) of cod discarded in Subarea 2J were as follows:

| May $-6 \%$ |
| :--- |
| June $-9.6 \%$ |
| Sept. $-7.7 \%$ |
| Oct. $-7.8 \%$ |
| Nov. $-0.0 \%$ |
| Mean $-6.2 \%$ |

The most frequent sizes (modes of length distribution curves) caught were in the same months:

$$
\begin{aligned}
& \text { May }-57-59 \mathrm{~cm} \\
& \text { June }-54-56 \mathrm{~cm} \\
& \text { Sept. }-60-62 \mathrm{~cm} \\
& \text { Oct. }-60-62 \mathrm{~cm} \\
& \text { Nov. }-57-59 \mathrm{~cm}
\end{aligned}
$$

Subarea 3K (Fig. 2).
The percentages discarded and the modes of the length distribution curves were as follows:

| June $-2.2 \%$ |
| :--- |
| Aug. $-0.5 \%$ |
| Nov. $-1.1 \%$ |
| Mean $1.3 \%$ |

Subarea 3L (Fig. 3).

| March $-5.4 \%-57-59$ and $63-65 \mathrm{~cm}$ |
| :--- |
| April $-3.3 \%-57-59 \mathrm{~cm}$ |
| May $-1.7 \%-60-62 \mathrm{~cm}$ |
| Aug. $-3.2 \%-63-65 \mathrm{~cm}$ |
| Mean $3.4 \%$ |

Subarea 3 M (Fig. 4).
August: The sizes are very small (mode $45-47 \mathrm{~cm}$ ) and the discards are large, amounting to $36.3 \%$.

## Subarea 3N (Fig. 4).

March: The discards do not exceed $1.5 \%$ and the mode of the length distribution is $60-62 \mathrm{~cm}$.

Subarea 3 Ps (Fig. 4).
The stock of cod here presents larger individual sizes, with the mode at $69-71 \mathrm{~cm}$, the sizes up to $84-86 \mathrm{~cm}$ are almost as abundant as the size class $69-71 \mathrm{~cm}$. The discards are as low as $0.8 \%$.

Subarea 4 Vs (Fíg. 5).
April: No discards are reported although the mode of the length curve is as low as $51-53 \mathrm{~cm}$.


Fig. 1. Cod, length distribution, 3 cm -groups, Division 2 J .


Fig. 2. Cod, length distribution, 3 cm -groups, Division 3 K .


Fig. 3. Cod, length distribution, 3 cm -groups, Division 3L.


Fig. 4. Cod, length distributions, 3 cm -groups, Divisions $3 \mathrm{M}, 3 \mathrm{~N}$ and 3 Ps.


Fig. 5. Cod, length distribution, 3 cm -groups, Division 4 Vs.

