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Relation Weight-Size of Haddock in Subarea 3
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The material of haddock Melanogrammus aeglefinus ( $L_{.}$) used for the present study was collected from Spanish fishing vessels operating on the Grand Bank in 1955.

The results of the weighings carried out on board the fishing vessels at sea were found to be too inaccurate to furnish a satisfactory base for the determination of the relation weightsize. Therefore they were discarded and substituted by welghings carried out in the laboratory (onshore). The smaller haddock were weighed on a small scale allowing an exactitude of around 1 gram, the larger on a bigger scale and with an exactitude of around 14 , grans. The number of specimens weighed and measured is 1,583 .

The table below gives the weight in grams corresponding to each centimeter length, and the difference in weight between males and females of the same centimeter length (from 29 cm . and upwards)。

Based on the data in the tables the curve: relation weight-length presented in the figure attached has been elaborited. The relation curve has the form of a parabola, with some small deviations for the sizes $54-62 \mathrm{~cm}$; these deviations are, however, so insignificant that they do not affect the main resuit.

The smallest male found weighed 210 g , and the largest 2,721; for the females the corresponding figures are 240 g. and 2,040 g.

Table: Haddock. Relation Weight-Size

| $\begin{aligned} & \text { Length } \\ & \text { Cms. } \end{aligned}$ | Weights Grams |  |  | Extreme Variation |
| :---: | :---: | :---: | :---: | :---: |
|  | Minimum | Mean | Maximum |  |
| 12 | 22 | 25 | 28 | 6 |
| 13 | 25 | 26 | 27 | 2 |
| 14 | 27 | 31 | 35 | 8 |
| 15 | 33 | 35 | 38 | 5 |
| 16 | 40 | 42 | 45 | 5 |
| 18 |  | 52 |  |  |
| 22 |  | 99 |  |  |
| 26 | 180 | 231 | 283 | 103 |
| 27 | 180 | 185 | 190 | 10 |
| 28 | 187 | 215 | 227 | 40 |
| 29 | 112 | 218 | 255 | 143 |
| 30 | 143 | 234 | 285 | 142 |
| 31 | 153 | 2.54 | 397 | 244 |
| 32 | 278 | 320 | 368 | 90 |
| 33 <br> 34 | 290 | 352 | 398 | 108 |
| 35 | 320 | 382 | 482 482 | 235 |
| 36 | 326 | 411 | 510 | 184 |
| 37 | 368 | 460 | 623 | 255 |
| 38 | 31.1 | 498 | 652 | 341 |

Table (continued)

| Length Cms. | Weights Grams |  |  | ExtremeVariation |
| :---: | :---: | :---: | :---: | :---: |
|  | Minimum | Mean | Maximum |  |
| 39 | 300 | 515 | 623 | 323 |
| 40 | 397 | 570 | 708 | 311 |
| 41 | 453 | 598 | 772 | 319 |
| 42 | 481 | 673 | 879 | 398 |
| 43 | 538 | 707 | 849 | 311 |
| 44 | 500 | 752 | 906 | 406 |
| 45 | 567 | 822 | 1,049 | 482 |
| 46 | 679 | 866 | 992 | 313 |
| 47 | 800 | 944 | 1,105 | 305 |
| 48 | 906 | 1,066 | 1,105 | 299 |
| 49 | 973 | 1,122 | 1,500 | 527 |
| 50 | 1,020 | 1,042 | 1,049 | 29 |
| 51 | 1,219 | 1,285 | 1,334 | 115 |
| 52 | 1,2 | 1,389 | 1,334 | 115 |
| 53 |  | 1,360 |  |  |
| 55 |  | 1,360 |  |  |
| 56 | 1,559 | 1,780 | 2,000 | 441 |
| 57 | 1,332 | 1,403 | 1,474 | 142 |
| 59 | 1,644 | 1,644 | 1,870 | 226 |
| 60 |  | 2,182 |  |  |
| 62 |  | 2,040 |  |  |
| 64 |  | 2,721 |  |  |
| 67 |  | 3,000 |  |  |
| 72 |  | 4,500 |  |  |

Average Weights of Males and Females

| Cms. | Males | Females | Cms. | Males | Females |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 29 | 223.5 |  | 46 | 884 | 859 |
| 30 | 232 | 254 | 47 | 878 | 913 |
| 31 | 227 | 265 | 48 | 963 | 991 |
| 32 | 353 | 317 | 49 | 1,048 | 1,162 |
| 33 |  | 372 | 50 |  | 1,049 |
| 34 35 | 390 | 391 | 51 | 1,038 | 1,205 |
| 35 | 416 | 430 453 | 52 | 1,000 | 1,389 |
| 36 37 | 422 482 | 453 495 | 53 54 |  | 1,38 |
| 38 | 522 | 368 | 55 | 1,359 | 1,360 |
| 39 | 518 | 554 | 56 | 1,559 | 1,360 |
| 40 | 605 | 583 | 57 | 1,403 |  |
| 41 | 651 | 628 | 58 | 1,403 | 1,644 |
| 42 | 664 | 670 | 59 |  | 1,871 |
| 43 | 674 | 725 | 60 |  | 2,182 |
| 44 | 749 | 778 | 62 |  | 2,040 |
| 45 | 794 | 779 | 64 | 2,721 | 2,040 |



