

The Changes in the Fecundity of Cod from the Gdańsk Bay  
in the Years 1959 - 1961

by

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The research of the fecundity of cod was carried out in the years 1959-1961. In this period about 100 females from 33 to 87 cm in length were investigated. The estimation of the fecundity was made for cod length-classes per each 5 cm. Gonads in stages IV+ to V+ were chosen for estimation. From each of the gonads 2 samples were taken of 100 or 200 mg weight. The samples were preserved in formaline and on counting the eggs the total number of eggs in the whole gonads was calculated.

Table 1

Material for investigations		
Year	Length in cm from - to	Number of fish
1959	38 - 80	25
1960	33 - 67	37
1961	40 - 87	34

It is a well-known fact, confirmed by the present observations, that individual fecundity of fish, even of the same length, is very varied since the fish of the same length are of different age and often have different body weight and different weight of gonads. By reason of these circumstances it is not possible to state that the fish of the same body length have exactly definite contents of eggs in the gonads, but that their number is varying within more or less definite limits.

Table 2 shows the fluctuations of cod fecundity in different years. As it appears from this table, in the years 1959 - 1961 the decline in fecundity of cod the Gdańsk Bay is observed. The highest fecundity of cod is evidenced in the year 1959, both in particular length-classes and in average fecundity, whereas in subsequent years it is considerably lower. During these years we note regular and continuous fall of fecundity of investigated cod from the area in question.

This phenomenon requires further investigations in order to explain whether the fall of cod fecundity, observed in the years 1959-1961, would continue, as well as in order to establish its causes.

Table 2. Cod fecundity in the years 1959 - 1961

Year	30-35 cm	No. of fish	35-40 cm	No. of fish	41-45 cm	No. of fish	46-50 cm	No. of fish	51-55 cm	No. of fish	56-60cm	No. of fish	Above 60 cm	No. of fish	Average
1959	-	-	386.547	4	728.340	8	870.065	2	1322.021	4	1813.452	5	2717.894	2	1156.167
1960	241.512	2	436.342	8	643.679	9	1044.826	3	1031.498	8	1551.356	4	2035.929	3	904.501
1961	-	-	319.213	2	550.182	7	545.125	7	754.490	9	659.383	2	1353.602	7	761.470