

## Y-II3

### Investigation on the Abundance and Distribution of Pelagic Eggs and Larvae of Teleost Fishes from Izmir Bay

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**Summary :** The data on the abundance and distribution of pelagic eggs and larvae of teleost fishes collected in 1989 from Izmir Bay were evaluated and compared with a previous (1979) investigation. According to the 1979 data ; 42 different Teleost eggs and 34 larvae were present in the pelagic waters of Izmir Bay; but today, these numbers are regressed to 27 and 25 respectively. It is strongly probable that, this regression stems from gradually increasing pollution in the bay waters.

**Methods :** Monthly samples were collected during daytime from 10 stations chosen according to their pollution in levels. The first 6 stations display gradually decreasing pollution levels from west to east, while the last 4 stations have no pollution. The samples were taken with a UNESCO WP - 2 Model plankton net having a mesh-size of 200 micrometers and a diameter of 0.57 meters. Vertical hauls were made.

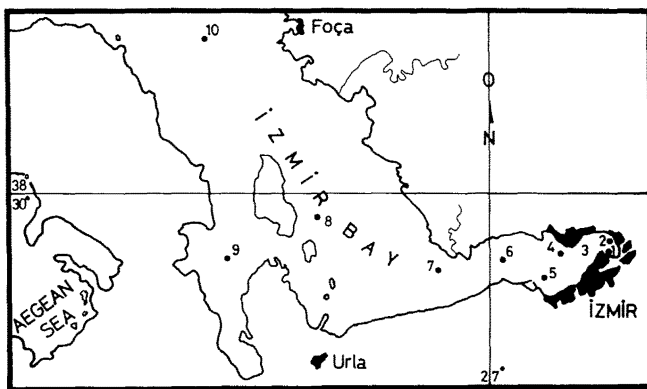


Fig. Location of Stations.

**Results :** The total material collected in 1989 is 17426 eggs and 304 larvae. 62,3 % of the eggs, 32,1 % and 28.% of the larvae belong to Engraulis encrasicolus, Sardina pilchardus and Gobius niger, respectively. A qualitative reduction observed in the bay from west towards east shows that the breeding of the Teleost is under the influence of pollution. The richest stations both qualitatively and quantitatively are situated in the middle and western regions, while eastern stations are quite poor; i.e., while eggs of only one species (E. encrasicolus) were collected from station no.1, egg samples from 18 different species were obtained from station no.7. The situation is same with respect to the larvae. In station no.1, postlarvae of only E. encrasicolus is found while beginning from 2nd and 3rd stations, it became possible to find G. niger larvae as well.

Compared with the 1979 period ; of that material, 75,4 % of the total number of collected eggs (21473) belong to E. encrasicolus and 6,57 % to S. pilchardus. Number of eggs collected in the polluted zone (Station no:1-3) was 4756, belonging only to 5 different species.

In station no.1, no eggs except those of E. encrasicolus are found. Samples collected in 1-3 stations in 1989 belong to two species. The situation is similar in larvae ; two species in stations 1-3 in 1979 and seven species in the same area in 1989 were found.

Seasonally, spring and summer periods are richer both qualitatively and quantitatively than autumn and winter periods. While in September and October, a renewal is evident in ichthyoplankton correlated with temperature.

Summarily, the abundance and distribution of the ichthyoplankton in the bay is mainly influenced by pollution. The investigated two yearly periods ten years apart show that the increasing pollution in the Izmir Bay reduced the species number of Teleost fishes spawning in the region.

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