

Production studies on the Ligurian continental shelf (*)

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SUMMARY. Water and bottom production studies over the Ligurian continental shelf are in progress since 1977 along the coast and in a pilot area. First year data on chlorophyll-a concentrations and zooplankton biomasses for the pilot area, at surface and through water columns, inshore and offshore, are presented. Benthic biomasses are also considered.

RESUME. Depuis octobre 1977 on a entrepris l'étude de la production des eaux et des fonds sur la marge continentale ligurienne, sur 4 radiales le long de la côte et dans une zone pilote (Chiavari). On présente les données obtenues pour la zone pilote dans la première année de recherche, relatives aux concentrations de la chlorophylle-a et de la biomasse zooplanctonique (poids secs), à la surface et sur les colonnes d'eau, près de la côte et au large. On présente aussi des données sur les biomasses benthiques.

The study of water and bottom production of the Ligurian continental shelf is being carried on by seasonal, monthly and fortnightly sampling, since October 1977.

Seasonal sampling concerns 16 stations located on 4 transects along the coast. Monthly (benthos) and fortnightly sampling (water and plankton) is carried out in a "pilot area" (Chiavari), on 2 stations, inshore and offshore, over depths of about 50 and 200 meters.

Data related to the "pilot area" and regarding the first year of research are presented (1, 3, 4).

In the water column and at surface chlorophyll-a shows the same annual trend both at the inshore (0-50) and offsho-

(*) Progetto Finalizzato "Oceanografia e Fondi marini"-C.N.R.

re(0-200 m)stations. Maximal concentrations were reached on march with values of 1.49 and 0.75 mg/cu.m.in the water columns respectively inshore and offshore,and at surface with values of 2.16 and 1.70 mg/cu.m. Maximal zooplankton biomasses(dry weight)were equal to 17.4 and 7.4 mg/cu.m.in the water columns respectively inshore and offshore,and to 31.20 and 30.52 mg/cu.m.at surface.Such maxima,however,were found in april in the water columns and in june at surface.

Benthos appears to be more abundant inshore than offshore as number of organisms(284 and 102/sq.m)as well as number of species.Such differences are reflected on the mean annual biomasses(dry weight),which were of 5.709 gr/sq.m.inshore and of 1.729 gr/sq.m.offshore.

These first data show that the mean annual biomasses in coastal water ranged from nearly two up to three times or more than those observed off coast.

The data collected during the second(2,5)and third year will provide a more accurate evaluation of the production as other researches on benthic biomass,fish eggs and larvae as well as on protein,carbohydrate and lipid content in plankton and particulate matter are in progress.

Literature

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