GENERAL CHARACTERISTICS OF THE NERITIC ICHTHYOPLANKTON OF THE NORTHWESTERN SECTOR OF THE ALBORAN SEA IN AUGUST, 1982
I. GENERAL COMPOSITION

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ABSTRACT.- The general composition and abundances of the neritic ichthyoplankton of the northwestern sector of the Alboran Sea is studied.

Résumé.- La composition générale et l'abondance de l'ichthyoplancton néritique dans le secteur nord-occidental de la mer d'Alboran sont développées à travers cette étude.

The following data presented derive from planktonic samples taken during the fish egg and larval survey, "Chanquete II-82", carried on during the month of August, 1982. This study comprises 16 stations covering the western coastal area of the Alboran Sea, from the localities of Estepona to Málaga (Fig.1).

The stations are spaced in regular distances, alternating litoral stations with others of a more oceanic character situated 3 miles farther offshore.

These two station transects, perpendicular to the coast, were carried on with a 40 cm. Ø Bongo plankton net for oblique horizontal tows, equipped with a 250 and 335 µ mesh. Between these transects, neustonic hauls were taken on stations close to shore, by means of a Sameomoto neustonic net (250 µ mesh). Information on stations 14 and 16 proceed from Hensen vertical tows (250 µ mesh) and a Juday-Bogorov plankton net for the horizontal tows (335 µ mesh).

The depths covered by the station grid varied from 29-196m., while the water column sampled varies in function of depth from 15-57 m..

Exhaustive information on the biological and hidrological parameters, such as sea water temperature, salinity and chlorophyll "a" values by means of Niskin bottles samplers at the 1, 10, 20, 50 and bottom meter levels were also undertaken, as well as zooplanktonic biomass values calculated from the 250 µ mesh Bongo net hauls.

A total of 1,991 larvae were collected comprising 35 species and 12 family taxonomic groups, and 14,437 eggs belonging to 23 species and 4 family groups. Nine other indetermined types of eggs were also found.

Due to the season in which the survey was carried on and the particular litoral distribution of the stations studied, the most representative larvae collected correspond to summer spawning species such as Engraulis encrasicholus (292 larvae), Sardinella aurita (46), Sparids (418) manily represented by Pagellus erythrinus (214) and Diplodus sp.(132). Coastal bentonic groups such as the Gobidae family (240) and the Blennidae, mainly represented by Blennius tentacularis (186) have also been quite important in the catches.

However, in offshore stations, a significant abundance of myctophids (250) have appeared represented by the species Myctophum punctatum, Benthosema glaciale, Ceratoscopelus maderensis and Diaphus holti.

The major abundances in fish eggs correspond to the Sparidae family with 5,720 eggs, Scorpaena sp. (2,050), Centracanthus cirrus (1,245), Arnoglossus sp. (2,040) and Callyonimus sp. (1,065). The catches of Engraulis encrasicholus and Sardinella aurita have represented 305 and 46, respectively.

The relative percentage composition comparing the Bongo and Neuston samples (Table I) show significant differences in fish larvae catches where groups such as Sparidae, Gobiidae and Blennidae tend to occupy the more neustonic layers, unlike Engraulis encrasicholus, that is on the contrary, while in fish egg catches these differences are slighter.

The richest litoral spawning areas found during the survey, considering the ichthyoplankton as a whole, were constricted to the bays of Marbella and Fuengirola, as is shown in Figs. 2 & 3, where the fish egg and larvae concentrations are represented.

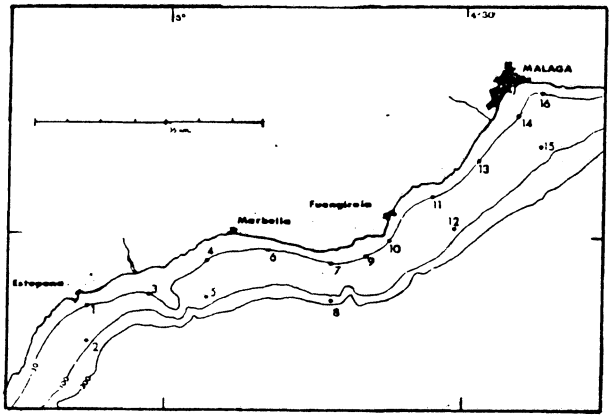

Fig. 1.- Station chart.

EGGS		
Species	% Bon.	% Neus.
Engraulis encrasicholus	1.5	1.1
Sparidae	32.5	41.5
Arnoglossus sp.	16.0	13.4
Centracanthus cirrus	14.7	6.9
Callyonimus spp.	8.9	6.0
Mugilidae	2.6	4.7
Scorpaena sp.	1.1	21.7
Others	22.6	4.8
LARVAE		
Engraulis encrasicholus	23.6	5.2
Sparidae	14.9	32.8
Gobiidae	7.2	23.7
Blenniidae	4.5	26.9
Sardinella aurita	2.4	3.2
Others	47.4	8.2

Table I.- Ichthyoplankton catch composition.

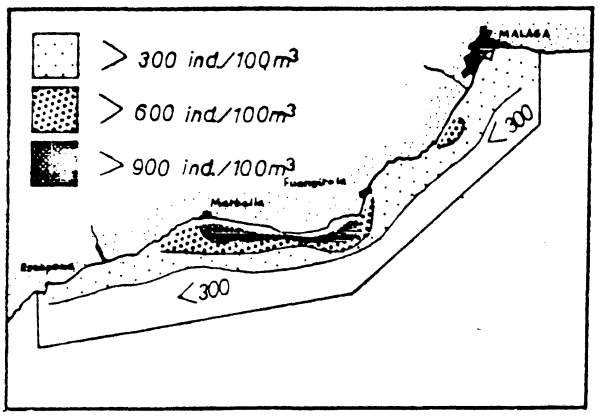

Fig. 2.- General distribution of eggs.

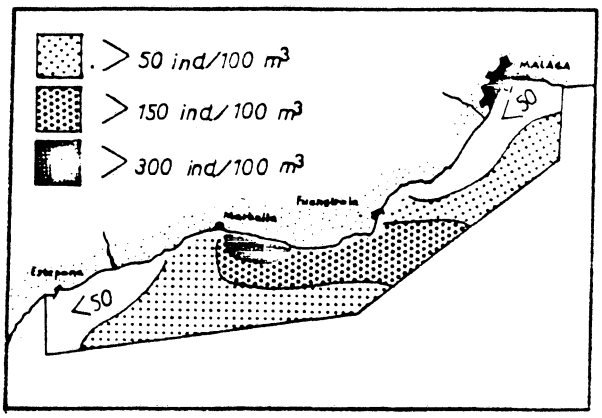

Fig. 3.- General distribution of larvae.