Fish larvae from the Canary region in autumn*

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SUMMARY: In this paper, the taxonomic composition of the fish larvae community in the Canary region in autumn 1991 is presented. In total, 8699 larvae belonging to 58 fish families were studied. 176 taxonomic groups were identified, 149 at species level and the rest were identified at a higher level. The most numerous family and the one that presented the greatest number of species was Myctophidae. The most frequently caught species was *Cyclothone braueri*. The taxonomic composition (at family level) of the fish larvae community, dominated by four mesopelagic families, was typical of oceanic regions of warm waters. The most remarkable feature of the fish larvae community was its high specific diversity.

Key words: ichthyoplankton, fish larvae, taxonomic composition, Canary region.

INTRODUCTION

The study of the early stages of development of the fish community of the Canary region (Fig. 1) has received very little attention until recently. Therefore, information on the ichthyoplankton of the area is scarce. Rodríguez and Lozano-Soldevilla (1993) and Rodríguez *et al*. (1996) studied the ichthyoplankton community in a coastal area located south of the island of Tenerife. Badcock and Merrett (1976) described the taxonomic composition of the fish larvae and adults sampled in an oceanic station north of Fuerteventura. Other studies on the ichthyoplankton community of the area are those of Hempel and Weikert (1972), John (1976, 1979) and Andres and John (1984), but these are limited to brief and sparse sampling over an extended work area. They list the fish larvae collected in an exclusively oceanic region which, although it overlaps our area, does not include the island neritic regions. Therefore, they make only a small contribution to the knowledge of the early stages of development of the neritic fish populations of the Canary Islands.

In this paper the taxonomic composition of fish larvae caught during the cruise Canarias 9110 is described. It can be considered representative of the general composition of the ichthyoplankton community of the Canary region, for the sampling period, since it included both the neritic region (second part of the cruise) and typically oceanic waters (first part of the cruise).

From the taxonomic point of view, the study of the fish larvae that inhabit the Canary region presented various problems. The most important was the lack of previous studies of this type for the area. Also significant was the absence of descriptions of the early stages of development of many of the species that inhabit these waters. The most frequent fish larvae in our hauls belonged to species of oceanic-mesopelagic habitat, since most of the sam-

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pling stations were in oceanic waters. Because these species lack economic interest, they have been less studied than to those species that inhabit neritic waters and have economic-fishing interest.

MATERIAL AND METHODS

The material studied in this work was obtained during the cruise Canarias 9110 from 17 October to 5 November 1991. This cruise was divided into two parts. In the first, two transects were sampled and two fixed 24-hours stations were occupied. One transect and station were located to the north of the Canary Islands and the other transect and station to the south (Fig. 1). Seven ichthyoplankton hauls were carried out in the north 24-hours station and six hauls in the south 24-hours station. On the second part, 22 stations were sampled, these being arranged in a regular sampling grid around Gran Canaria (Fig. 1). In total, 44 hauls were carried out for ichthyoplankton.

The ichthyoplankton was collected with a Bongo gear of 40 cm in diameter fitted with nets of 250 μm of mesh size. The hauls were oblique, attempting to sample the surface layer down to 200 m depth, or to 5 m above the bottom, when the depth was less. The samples obtained were preserved in a solution of 5% buffered formalin and sea water.

From both samples obtained by the bongo net at each haul, fish larvae were sorted, identified and classified to the lowest possible taxonomic level (specific level, whenever possible). The number of larvae per taxon was transformed into percentages of the total.

The taxonomic organisation of fish larvae followed here is that of Whitehead *et al.* (1984).

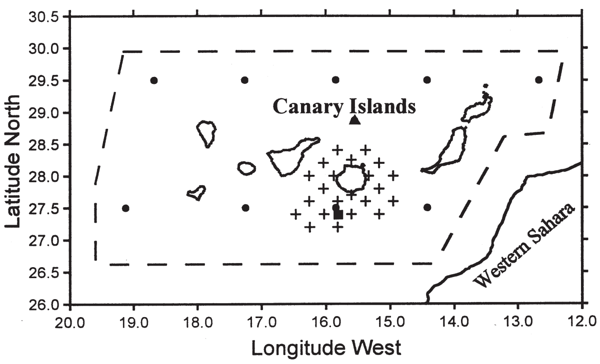

FIG. 1. – Cruise Canarias 9110. Map of stations sampled for ichthyoplankton: (●) north and south transects, (▲) north 24 hours station and (■) south 24 hours station, (+) grid of stations sampled during the second part of the cruise. The enclosed area represents the Canary region.

RESULTS

In total, 8699 larvae belonging to 58 families of fish were studied (Table 1) and 176 taxonomic groups were identified, 149 to species level and the rest to a higher level, genus and families (Table 2). The identifications carried out at specific level included three categories: a) those whose genus and species were recognised (105), b) those where the genus were identified and named, and different species were distinguished with the notation sp., or with this notation followed by a number (25), and c) those which were denominated "larval types" (19). The term "larval type" used here refers to a class of larvae in particular, which can be distinguished from other larvae on the basis of their features but which for various reasons, could not be classified to species level. In some cases, they are doubts that all the larvae included in each one of these "larval types" belong to the same species. That is to say, this term does not necessarily denote identification at specific level and it should be understood that it does not have any taxonomic implication. A total of 197 larvae (2.3% of the total of fish larvae collected) could not be identified or "typed".

It is necessary to indicate that in Table 2 early stages larvae of *Cyclothone pallida* and *C. pseudopallida* were grouped due to difficulties in differentiating them. For the same reason, we also grouped the early stage larvae of the three species of *Vinciguerria* under *Vinciguerria* spp. These two groups were not considered in the taxonomic recount.

Of the 58 families of fish larvae caught, only six of them exceeded 1% of total captures (Table 1). Of these six most frequent families, four are mesopelagic oceanics (Myctophidae, Gonostomatidae, Sternoptychidae and Photychthidae) and two are neritics (Gobiidae and Sparidae). These six families contributed 88.8% of the total fish larvae catches. The myctophids were the dominant group, they represented 60.3% of the total fish larvae catches and 28.9% of the identified species. The most captured species was *Cyclothone braueri* (11.9% of larvae catches).

Another significant characteristic of the fish larvae community was the relatively important presence (5th place in the rank of frequencies, 2.3% of the total of fish larvae catches), of the neritic family Gobiidae of which most of its species are very coastal (Hureau and Monod, 1979). Most of the larvae belonging to this family (98.1%) were collected from the grid of stations sampled around Gran

TABLE. 1. – List of the fish larvae families ranked by their percentage of contribution to the total number.

Family	%	Family	%
Family Myctophidae	60.29	Family Melanocetidae	0.10
Family Gonostomatidae	18.36	Family Serrivomeridae	0.09
Family Sternoptychidae	3.38	Family Tetraodontidae	0.09
Family Photichthydae	3.09	Family Astronesthidae	0.09
Family Gobiidae	2.32	Family Congridae	0.09
Family Sparidae	1.38	Family Evermannellidae	0.07
Family Gempylidae	0.91	Family Macrouridae	0.07
Family Macroramphosidae	0.85	Family Trachinidae	0.07
Family Paralepididae	0.66	Family Carangidae	0.07
Family Bothidae	0.55	Family Serranidae	0.07
Family Clupeidae	0.46	Family Centrolophidae	0.05
Family Melanostomiidae	0.47	Family Ophichthidae	0.04
Family Labridae	0.32	Family Cynoglossidae	0.04
Family Scopelarchidae	0.31	Family Oneirodidae	0.04
Family Scaridae	0.29	Family Scomberosocidae	0.03
Family Mugilidae	0.29	Family Scombridae	0.03
Family Tetragonuridae	0.28	Family Monacanthidae	0.02
Family Synodontidae	0.27	Family Argentinidae	0.02
Family Notosudidae	0.23	Family Alepisauridae	0.02
Family Nettastomatidae	0.22	Family Omusudidae	0.02
Family Chlorophtalmidae	0.20	Family Belonidae	0.02
Family Chauliodontidae	0.20	Family Engraulidae	0.02
Family Trichiuridae	0.20	Family Idiacanthidae	0.02
Family Ophidiidae	0.18	Family Carapidae	0.02
Family Scorpaenidae	0.16	Family Soleidae	0.02
Family Stomiidae	0.15	Family Gigantactinidae	0.02
Family Bathylagidae	0.14	Family Aulopidae	0.01
Family Nomeidae	0.13	Family Callionymidae	0.01
Family Melamphaidae	0.11	Family Caproidae	0.01

Canaria. Thus, the fish larvae community, although dominated by mesopelagic oceanic species, also presented a relatively important component of larvae of coastal species.

DISCUSSION

The most remarkable characteristic of the fish larvae community was its high diversity, i.e. the large number of species and their relative low abundance (Margalef, 1974). This characteristic was reflected in the high number of taxa and in the low number of larvae per taxon registered (Table 2). This high diversity appears typical of a subtropical community (Longhurst and Pauly, 1987).

The taxonomic composition (at family level) of the fish larvae community, with four mesopelagic families occupying the first four positions in the rank of frequencies and contributing 85.1% of the total fish larvae catches, was similar to those found in diverse oceanic regions like the tropical Indian Ocean, the outer oceanic area of the California Current region (Ahlstrom, 1969), the eastern tropical Pacific (Ahlstrom, 1972), the North Pacific Central Gyre (Loeb, 1979a) and the NE Atlantic (Rodríguez, unpublished data) (Table 3). Therefore, the basic taxonomic composition of the ichthyoplankton can be defined as typical of oceanic warm waters regions.

The mesopelagic fish dominate the ichthyofauna in the oceanic regions, both in number of species and in number of individuals (Loeb, 1979b), and this is reflected in the ichthyoplankton community (Loeb, 1979a). In fact, the myctophids, on average, make up approximately one-half of all fish larvae taken in any oceanic plankton tow (Ahlstrom *et al.*, 1976). The data obtained in this study are in agreement with these observations. The most numerous family was Myctophidae. This family and the second most abundant, Gonostomatidae, represented 81.7% of the fish larvae catches. (The individuals of the family Photichtydae were included in the Family Gonostomatidae for comparability with the works on which the Table 3 is based. Apart from Rodríguez (unpublished data), the first family is not considered as such and the species which constitute it are integrated in the family Gonostomatidae). The adult individuals of these two families contribute between 60% and 90% of the total catches of micronektonic fishes in oceanic regions, both in weight and in number, forming the most important groups from the ecological point of

TABLE 2. – Taxonomic organisation of the fish larvae and numeric percentage of the different taxa.

Species	%
Order **ISOPONDYLI** (CLUPEIFORMES)	
SubOrder **Clupeoidei**	
Family CLUPEIDAE	
Sardina pilchardus (Walbaum, 1792)	0.01
Sardinella aurita Valenciennes, 1847	0.26
Sardinella maderensis (Lowe, 1838)	0.17
Family ENGRAULIDAE	
Engraulis encrasicolus (Linnaeus, 1758)	0.02
SubOrder **Stomiatoidei**	
Family GONOSTOMATIDAE	
Bonapartia pedaliota Goode & Bean, 1896	0.02
Cyclothone acclinidens Garman, 1899	0.74
Cyclothone alba? Brauer, 1906	0.43
Cyclothone braueri Jespersen & Tåning, 1926	11.92
Cyclothone pallida Brauer, 1902	0.47
Cyclothone pseudopallida Mukhacheva, 1964	0.28
Cyclothone pallida and/or *pseudopallida*	0.24
Cyclothone sp	0.02
Diplophos maderensis? (Johnson, 1890)	0.02
Diplophos taenia Günther, 1873	0.05
Gonostoma atlanticum Norman, 1930	0.43
Gonostoma denudatum Rafinesque, 1810	0.47
Gonostoma elongatum Günther, 1878	2.13
Gonostoma sp 1	0.01
Gonostoma sp 4	0.36
Margrethia obtusirostra Jespersen & Tåning, 1919	0.05
"*Maurolicine alpha*"	0.02
Unidentified spp	0.71
Family STERNOPTYCHIDAE	
Argyropelecus hemigymnus Cocco, 1829	0.18
Argiropelecus sp 1	2.82
Sternoptyx pseudobscura Baird, 1791	0.05
Sternoptyx spp	0.22
Valenciennellus tripunctulatus (Esmark, 1871)	0.11
Family PHOTICHTHYDAE	
Ichthyococcus ovatus Cocco, 1838	0.02
Vinciguerria attenuata (Cocco, 1838)	0.07
Vinciguerria nimbaria (Jordan & Williams, 1895)	0.43
Vinciguerria poweriae (Cocco, 1838)	0.38
Vinciguerria spp	2.20
Family ASTRONESTHIDAE	
Astronesthidae sp 1	0.05
Astronesthidae sp 2	0.02
Unidentified spp	0.02
Family CHAULIODONTIDAE	
Chauliodus sloani Schneider, 1801	0.20
Family STOMIIDAE	
Stomias boa (Risso, 1810)	0.05
Stomiidae sp 1	0.02
Unidentified spp	0.08
Family MELANOSTOMIIDAE	
Eustomias sp	0.02
Melanostomiidae sp 1	0.02
Melanostomiidae sp 2	0.07
Unidentified spp	0.36
Family IDIACANTHIDAE	
Idiacanthus fasciola Peters, 1877	0.02
SubOrder **Salmonoidei**	
Family ARGENTINIDAE	
Nansenia oblita (Facciolà, 1887)	0.02
Family BATHYLAGIDAE	
Bathylagus longirostris Maul, 1948	0.07
Unidentified spp	0.07
Order **INIOMI** (SCOPELIFORMES)	
SubOrder **Myctophoidei**	
Family AULOPIDAE	
Aulopus filamentosus? (Bloch 1792)	0.01
Family SYNODONTIDAE	
Synodus saurus (Linnaeus, 1758)	0.20
Synodus synodus (Linnaeus, 1758)	0.07
Family CHLOROPHTHALMIDAE	
Chlorophthamus agassizii Bonaparte, 1840	0.20
Family NOTOSUDIDAE	
Ahliesaurus berryi Bertelsen, Kreft & Marshall, 1976	0.07
Scopelosaurus argenteus (Maul, 1954)	0.02
Scopelosaurus lepidus (Krefft & Maul, 1955)	0.14
Family MYCTOPHIDAE	
Benthosema suborbitale (Gilbert, 1913)	1.54
Ceratoscopelus maderensis (Lowe, 1839)	0.76
Ceratoscopelus warmingii (Lütken, 1892)	7.33
Diaphus holti Tåning, 1918	4.78
Diaphus metopoclampus (Cocco, 1829)	0.33
Diaphus rafinesquei (Cocco, 1838)	1.99
Diaphus sp	0.14
Diaphus sp 1	0.94
Diaphus sp 3	0.31
Diaphus sp 6	0.02
Diaphus sp 8	0.25
Diaphus sp 9	0.07
Diaphus sp 12	0.07
Diaphus sp 13	0.17
Diaphus spp	1.87
Diogenichthys atlanticus (Tåning, 1928)	4.74
Electrona rissoi (Cocco, 1829)	0.05
Hygophum benoiti (Cocco, 1838)	4.74
Hygophum hygomii (Lütken, 1892)	0.87
Hygophum macrochir (Günther, 1864)	0.26
Hygophum reinhardtii (Lütken, 1892)	0.55
Hygophum taaningi Bekker, 1965	0.20
Lampanyctus ater Tåning, 1928	0.29
Lampanyctus crocodilus (Risso, 1810)	0.05
Lampanyctus pusillus (Johnson, 1890)	0.83
Lampanyctus sp 1	0.18
Lampanyctus sp 3	0.09
Lampanyctus sp 4	0.15
Lampanyctus sp 5	0.02
Lampanyctus sp 7	0.02
Lampanyctus spp	7.98
Lepidophanes gaussi (Brauer, 1906)	1.77
Lobianchia dofleini (Zugmayer, 1911)	0.07
Lobianchia gemellarii (Cocco, 1838)	0.05
Myctophum nitidulum Garman, 1899	0.33
Myctophum punctatum Rafinesque, 1810	0.40
Myctophum selenops Tåning, 1928	0.99
Notolychnus valdiviae (Brauer, 1904)	3.15
Notoscopelus (Not.) resplendens (Johnson, 1863)	0.20
Notoscopelus sp	0.21
Symbolophorus rufinus (Tåning, 1928)	0.68
Symbolophorus veranyi (Moreau, 1888)	0.05
Taaningichthys minimus (Tåning, 1928)	0.02
Myctophidae sp 1	0.11
Myctophidae sp 2	0.09
Unidentified spp	10.58
SubOrder **Alepisauroidei**	
Family SCOPELARCHIDAE	
Benthalbella infans Zugmayer, 1911	0.29
Unidentified spp	0.02
Family EVERMANNELLIDAE	
Evermannella balbo (Risso, 1820)	0.07
Family ALEPISAURIDAE	
Alepisaurus ferox Lowe, 1833	0.02
Family OMUSUDIDAE	
Omosudis lowei Günther, 1887	0.02
Family PARALEPIDIDAE	
Lestidiops affinis Ege, 1930	0.07
Lestidiops jayakari (Boulenger, 1889)	0.14
Lestidiops sphyrenoides (Risso, 1820)	0.02
Macroparalepis affinis Ege, 1933	0.05
Paralepis atlantica Krøyer, 1868	0.26
Sudis hyalina Rafinesque, 1810	0.05
Unidentified spp	0.07
Order **APODES** (ANGUILLIFORMES)	
Family NETTASTOMATIDAE	
Unidentified spp	0.22

TABLE 2. (Cont.) – Taxonomic organisation of the fish larvae and numeric percentage of the different taxa.

Species	%
Family SERRIVOMERIDAE	
Serrivomer beani Gill & Rider, 1884	0.09
Family: CONGRIDAE	
Ariosoma balearicum (Delaroche, 1809)	0.02
Unidentified spp	0.07
Family OPHICHTHIDAE	
Ophichthidae sp 2	0.02
Unidentified spp	0.02
Order **SYNETOGNATHI** (BEOLONIFORMES)	
SubOrder **Scomberesocoidei**	
Family BELONIDAE	
Platybelone argalus (Le Sueur, 1821)	0.03
Family SCOMBEROSOCIDAE	
Scomberosox saurus (Walbaum, 1792)	0.03
Order **SOLENICHTHYES** (SYNGNATHIFORMES)	
SubOrder **Centriscoidei**	
Family MACRORAMPHOSIDAE	
Macroramphosus scolopax (Linnaeus, 1758)	0.85
Order **ANACANTHINI** (GADIFORMES)	
Family MACROURIDAE	
Unidentified spp	0.07
Order **BERYCOMORPHI** (BERYCIFORMES)	
Family MELAMPHAIDAE	
Melamphaes simus Ebeling, 1962	0.05
Melamphaes thyplops? (Lowe, 1843)	0.05
Melamphaes sp 1	0.02
Order **ZEOMORPHI** (ZEIFORMES)	
Family CAPROIDAE	
Antigonia capros Lowe, 1843	0.01
Order **PERCOMORPHI** (PERICIFORMES)	
SubOrder **Percoidei**	
Family SERRANIDAE	
Anthias anthias (Linnaeus, 1758)	0.05
Epinephelus sp	0.02
Family CARANGIDAE	
Carangidae sp 1	0.02
Unidentified spp	0.05
Famila SPARIDAE	
Pagellus acarne? (Risso, 1826)	1.05
Pagellus bogaraveo? (Brünnich, 1768)	0.02
Pagellus sp	0.02
Unidentified spp	0.29
Family LABRIDAE	
SubFamily Corinae	
Coris julis (Linnaeus, 1758)	0.07
Thalassoma pavo (Linnaeus, 1758)	0.14
Xyrichthys novacula (Linnaeus, 1758)	0.09
Unidentified spp	0.02
Family SCARIDAE	
Sparisoma (Euscarus) cretense (Linnaeus, 1758)	0.29
Family TRACHINIDAE	
Trachinus draco Linnaeus, 1758	0.07
SubOrder **Trichiuroidei**	
Family GEMPYLIDAE	
Diplospinus multistriatus Maul, 1948	0.60
Nesiarchus nasutus Johnson, 1862	0.31
Family TRICHIURIDAE	
Benthosdemus elongatus simonyi (Steindachner, 1891)	0.09
Lepidopus caudatus (Eupharsen, 1788)	0.07
Trichiuridae sp 1	0.02
Unidentified spp	0.02
SubOrder **Scombroidei**	
Family SCOMBRIDAE	
Unidentified spp	0.03
SubOrder **Gobiodei**	
Family GOBIIDAE	
Unidentified spp	2.32
SubOrder **Callionymoidei**	
Family CALLIONYMIDAE	
Callionymus sp	0.01
SubOrder **Ophidioidei**	
Family: OPHIDIIDAE	
Parophidion vassali (Rissso, 1810)	0.07
Ophidiidae sp 1	0.02
Ophidiidae sp 2	0.05
Unidentified spp	0.05
Family CARAPIDAE	
Carapus acus (Brünnich, 1768)	0.02
SubOrder **Stromateoidei**	
Family: CENTROLOPHIDAE	
?*Schedophilus ovalis* (Valenciennes, in Cuv. Val., 1833)	0.05
Family: NOMEIDAE	
Nomeidae sp 1	0.11
Unidentified spp	0.02
Family TETRAGONURIDAE	
Tetragonurus atlanticus Lowe, 1939	0.09
Tetragonurus cuvieri Risso, 1810	0.18
SubOrder **Mugiloidei**	
Family MUGILIDAE	
Unidentified spp	0.29
Order **SCLEROPAREI** (SCORPAENIFORMES)	
SubOrder **Scorpaenoidei**	
Family SCORPAENIDAE	
Scorpaena scrofa? Linnaeus, 1758	0.02
Scorpaenidae sp 1	0.02
Scorpaenidae sp 2	0.02
Scorpaenidae sp 3	0.07
Scorpaenidae sp 5	0.02
Order **HETEROSTOMA** (PLEURONECTIFORMES)	
SubOrder **Pleuronectoidei**	
Family BOTHIDAE	
Arnoglossus thori Kyle, 1913	0.17
Bothus podas maderensis (Lowe, 1834)	0.38
Family SOLEIDAE	
Unidentified spp	0.02
Family CYNOGLOSSIDAE	
Symphurus nigrescens Raffinesque, 1810	0.05
Order **PLECTOGNATIHI** (TETRAODONTIFORMES)	
SubOrder **Balistoidei**	
Family MONACANTHIDAE	
Stephanolepis hispidus (Linnaeus, 1766)	0.02
Family TETRAODONTIDAE	
Sphoeroides spp	0.05
Tetraodontidae sp 1	0.02
Tetraodontidae sp 2	0.02
Order **PEDICULATI** (LOPHIIFORMES)	
SubOrder **Ceratioidei**	
Family MELANOCETIDAE	
Melanocetus murrayi Günther, 1887	0.05
Melanocetus spp	0.05
Family ONEIRODIDAE	
Chaenoprhyne draco Beebe, 1932	0.02
Dolopichthys sp	0.02
Family GIGANTACTINIDAE	
Gigantactis sp 1	0.02

view (Gjøsaeter and Kawaguchi, 1980). Moreover, according to these authors, it is in the tropical and subtropical regions where the number of species and, in general, their annual production is highest. Likewise, according to Horn (1980), the mesopelagic fishes, especially the myctophids, seem to occupy a position in the trophic structure of oceanic waters similar to that of the northern anchovy (*Engraulis*

TABLE 3. – Percentage of the fish larvae catches for the three most frequent mesopelagic fish families in different marine regions.

	Canary region	Indian Ocean	East tropical Pacific	California Current	North Central Pacific	NE Atlantic
F. Myctophidae	**60.26**	47.6	52.0	46.7	45.90	44.71
F. Gonostomatidae + F. Photichtydae	**21.47**	30.5	19.7	34.8	32.40	35.20
F. Sternoptychidae	**3.38**		6.0		5.05	5.29
Total	**85.11**	78.1	77.7	81.5	83.35	85.20

mordax) in more shallow and coastal waters of the California Current region.

The family Myctophidae was the one that presented the highest specific diversity. This family contributes the greatest number of species to the mesopelagic fish community. Of the approximately 700 species of fish that inhabit the mesopelagic region (Parin, 1984), around 235 are myctophids (Nelson, 1994). At the larval level, this family has frequently been referred to as the one that presents the greatest number of species in different marine regions, eg. in NW Africa (Palomera and Rubies, 1982; Sabatés and Rubies, 1985), the western Mediterranean (Massó and Palomera, 1984) and in the North Pacific Central Gyre (Loeb, 1979a and b).

Moreover, the most frequently caught species, *Cyclothone braueri*, has often also been the most numerous in oceanic hauls, both larvae and adults. In studies carried out in a zone near our study area, to the north of the island of Fuerteventura, the adults of this species were the most abundant (Badcock, 1970, Badcock and Merrett, 1976). In the NE Atlantic the larvae of this species (Rodríguez, unpublished data) and in the Sargasso Sea, their adults (Backus *et al*., 1969), were the most captured species. The same is true of the larvae in the western Mediterranean (Massó and Palomera, 1984) and both of larvae and adults of this species in the whole of the Mediterranean (Goodyear *et al*., 1972; Jespersen and Tåning, 1926). In the North Pacific Central Gyre the larvae of *C. alba* (Loeb, 1979b, 1980), and also in the South Pacific Central Gyre, the adults of *C. alba* (Barnett, 1983, 1984) replaced *C. braueri* as the most captured species.

A possible explanation for the presence in the ichthyoplankton community of a typical oceanic ichthyoplankton species together with relatively abundant larvae of very coastal species (family Gobiidae) could be the virtual absence of an island shelf around Gran Canaria. Because of this, typically oceanic conditions would occur very near the coast and their influence would be felt there. In fact, the two stations with the greatest concentration of gobid larvae and a smaller percentage of oceanic larvae were two coastal stations sampled during the second leg of this cruise with one located to the north and the other to the south of this island. These two stations, because of particular conditions of water circulation around Gran Canaria (Van Camp *et al*., 1991; Hernández-Guerra *et al*., 1993; Arístegui *et al*., 1994, 1997; Barton *et al*., 1998; Martínez *et al*., 1999; Rodríguez *et al*., unpublished data) would have been those that presented more neritic characteristics.

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