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ICHTHYOPLANKTON AND STATION DATA FOR SURFACE (MANTA) AND OBLIQUE (BONGO) PLANKTON TOWS FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 2005

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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ABSTRACT

This report provides ichthyoplankton data from Manta net (surface) tows and Bongo net (oblique) tows and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises conducted in the Southern California Bight region and central California in 2005. It is the 64th report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 351 stations was occupied during quarterly cruises over the survey area which extended from Point Reyes (winter, spring), and Avila Beach (summer, fall) to San Diego, California. Transects extended seaward in a southwesterly direction to a maximum of approximately 330 n. mi. The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. The data are listed in a series of eight tables; the background, methodology, and information necessary for interpretation of the data are presented in an accompanying text. All pertinent station and tow data, including volumes of water strained and standard haul factors, are listed in the first and fifth tables. Other tables list, by station and month, counts (number per 100 cubic meters of water filtered) of each of the 71 larval fish categories identified in Manta net tows and standardized counts (number under 10 square meters of sea surface) of each of the 134 larval fish categories identified in Bongo net tows. This series of reports makes the CalCOFI ichthyoplankton and station data available to all investigators and serves as a guide to the computer data base.

INTRODUCTION

This report, the 64th in the series, provides ichthyoplankton and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) joint biological-oceanographic survey cruises conducted in 2005. This program was initiated in 1949, under the sponsorship of the Marine Research Committee of the State of California, to study the population fluctuations of the Pacific sardine (*Sardinops sagax*) and the environmental factors that may play a role in these fluctuations. CalCOFI is a partnership among the Southwest Fisheries Science Center of the National Marine Fisheries Service (NMFS), the Scripps Institution of Oceanography (SIO), and the California Department of Fish and Game (CDFG). NMFS and SIO supply ships and personnel to conduct the sea surveys. NMFS processes the plankton samples and analyzes the ichthyoplankton from them. SIO processes and analyzes hydrographic and biological samples and analyzes invertebrate groups from the plankton samples.

The boundaries, station placement, and sampling frequency for the CalCOFI surveys were based on the results of joint biological-oceanographic cruises conducted by NMFS and SIO during 1939–41. Originally, CalCOFI cruises were designed to collect sardine eggs and larvae and associated hydrographic data over the entire areal and seasonal spawning range of the species. From 1951 to 1960 the surveys were annual with cruises conducted monthly. The survey area was occupied quarterly during 1961–1965 and in 1966 the surveys became triennial with monthly cruises. Beginning in 1985 annual surveys were resumed, with quarterly cruises occupying only the Southern California Bight region (see Hewitt 1988, and Moser et al. 1993, 1994, 2001a, 2002 for summaries of CalCOFI historical sampling effort). Beginning in 2003 the region surveyed was expanded northward to the Point Reyes vicinity during the winter and spring cruises. Neuston[1] sampling with the Manta net (Figure 1) was initiated in 1977–78. Alhstrom and Stevens (1976), Gruber et al. (1982), and Doyle (1992a,b) provided initial information on

[1]The term “neuston” was applied originally to organisms associated with the surface film in freshwater habitats (Naumann 1917). Banse (1975) reviewed in detail the evolution of this term, a related term “pleuston”, and the various subdivisions of each. Neuston is now used by most workers in referring to the uppermost (upper ~10 – 20 cm) layer of the sea and to the assemblage of organisms that lives in that zone, either permanently of facultatively (Zaitsev 1970; Hemple and Weikert 1972; Peres 1982; Doyle 1992b). We accept this definition and use it interchangeably with the more general term “surface” (e.g., surface waters, surface zone, surface tow, surface assemblage).

the distribution and abundance of surface ichthyoplankton in the northeastern Pacific. Moser et al. (2002) summarized the spatial and temporal distribution and abundance of ichthyoplankton collected in Manta net tows on CalCOFI survey cruises from 1977–2000.

Hydrographic and biological data from CalCOFI surveys are published by Scripps Institution of Oceanography and can be obtained on line at the CalCOFI web site <http://www.calcofi.org/newhome/publications/Data_Reports/data_reports.htm>. All available records for all four CalCOFI surveys in 2005 were verified and edited to produce this ichthyoplankton data report. These reports make the CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the computer data base. They are the basic documents against which changes in the data base can be compared as it is modified to correct errors and update earlier identifications. This report includes both Manta net tow data and Bongo net tow data. Prior to the 2001 survey these data were reported separately. Citations for other reports in this series are:

Survey	Manta Tow Report	Survey	Manta Tow Report
1977–78	Moser et al. 2001b	1992	Watson et al. 2002b
1980–81	Ambrose et al. 2002a	1993	Ambrose et al. 2002d
1984	Charter et al. 2002a	1994	Charter et al. 2002d
1985	Ambrose et al. 2002b	1995	Sandknop et al. 2002c
1986	Charter et al. 2002b	1996	Watson et al. 2002c
1987	Sandknop et al. 2002a	1997	Ambrose et al. 2002e
1988	Watson et al. 2002a	1998	Ambrose et al. 2002f
1989	Ambrose et al. 2002c	1999	Ambrose et al. 2002g
1990	Charter et al. 2002c	2000	Watson et al. 2002d
1991	Sandknop et al. 2002b		

Survey	Oblique Tow Report	Survey	Oblique Tow Report
1951	Ambrose et al. 1987a	1962	Sumida et al. 1988a
1952	Sandknop et al. 1987a	1963	Ambrose et al. 1988a
1953	Stevens et al. 1987a	1964	Sandknop et al. 1988b
1954	Sumida et al. 1987a	1965	Stevens et al. 1988a
1955	Ambrose et al. 1987b	1966	Sumida et al. 1988b
1956	Stevens et al. 1987b	1967	Ambrose et al. 1988b
1957	Sumida et al. 1987b	1968	Sandknop et al. 1988c
1958	Sandknop et al. 1987b	1969	Stevens et al. 1988b
1959	Stevens et al. 1987c	1972	Sumida et al. 1988c
1960	Ambrose et al. 1987c	1975	Ambrose et al. 1988c
1961	Sandknop et al. 1988a	1978	Sandknop et al. 1988d

Survey	Oblique Tow Report	Survey	Oblique Tow Report
1981	Ambrose et al. 1988d	1992	Watson et al. 1999b
1984	Stevens et al. 1990	1993	Ambrose et al. 1999c
1985	Ambrose et al. 1999a	1994	Charter et al. 1999c
1986	Charter et al. 1999a	1995	Sandknop et al. 1999c
1987	Sandknop et al. 1999a	1996	Watson et al. 1999c
1988	Watson et al. 1999a	1997	Ambrose et al. 1999d
1989	Ambrose et al. 1999b	1998	Charter et al. 1999d
1990	Charter et al. 1999b	1999	Ambrose et al. 2001
1991	Sandknop et al. 1999b	2000	Watson et al. 2001

Survey	Manta and Oblique Tows Report	Survey	Manta and Oblique Tows Report
2001	Ambrose et al. 2003a	2003	Acuña et al. 2005
2002	Charter et al. 2003	2004	Watson et al. 2005

Survey	Special cruises
1997–98	Ambrose et al. 2003b

SAMPLING AREA AND PATTERN

A total of 351 standard CalCOFI survey stations was occupied on four cruises in 2005, employing two research vessels:

0501, RV *David Starr Jordan*, 35 stations, January 21 – 30
RV *New Horizon*, 70 stations, January 4 – 20;

0504, RV *David Starr Jordan*, 26 stations, April 7–23
RV *New Horizon*, 75 stations, April 15 – 30;

0507, RV *New Horizon*, 75 stations, July 1 – 16;

0511, RV *New Horizon*, 70 stations, November 4 – 20.

The core survey area extended from Avila Beach to San Diego, California and seaward on six survey lines to approximately 120–330 n. mi. (Figures 2 – 4).[2] During the winter (January) and spring (April) cruises an additional five survey lines were sampled northward to the vicinity of Point Reyes, California (Figures 2–3). The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja,

[2]Beginning in 1981 we changed our designation of ordinal survey lines (those ending in "3" and "7") to an exact decimal notation. Thus, lines 77, 83, 87, 93, etc. were changed to 76.7, 83.3, 86.7, 93.3, etc. to indicate the spacing between cardinal lines (those ending in "0"). Scripps Institution of Oceanography continues to use the original designation for ordinal lines.

Baja California, Mexico. On cruises 0501 and 0504, lines 60.0 through 73.3 extended seaward to station 100, but on cruise 0504 lines 60.0 and 63.3 extended seaward only to station 80. On all cruises, lines 76.7 and 80.0 extended seaward to station 100. Lines 83.3 and 86.7 extended seaward to station 110.0, but for cruise 0511 line 83.3 extended only to station 70. On all cruises, lines 90.0 and 93.3 extended to station 120.0 (Figures 2–4). Also on all cruises, nine nearshore stations were added between lines 80.0 and 93.3.

SAMPLING GEAR AND METHODS

Surface plankton tows were made with a modified version of the Manta net originally described by Brown and Cheng (1981). It consists of a rectangular mouth 15.5 cm deep and 86 cm wide attached to a frame that supports square lateral extensions covered with plywood and urethane foam (Figure 1). These extensions stabilize the net when it is towed and keep the top of the net at the sea surface. The net is constructed of 0.505 mm nylon mesh. The towing bridle is asymmetrical with one side longer than the other; when the net is towed, this bridle arrangement forces the mouth away from the ship at a slight angle. A General Oceanics flowmeter was suspended across the center of the net mouth to measure the amount of water filtered during each tow. At each Manta net tow station the tow line from the bridle was attached to the hydrographic wire and then lowered to slightly below the surface of the water before the net was deployed. The net was towed at a ship speed of 1.0–2.0 knots for 15 minutes. Samples were preserved in 5% formalin buffered with sodium borate and returned to the plankton sorting laboratory at the SWFSC at the end of the cruise.

In 1978, the standard 1-m ring net with towing bridle was replaced by a bridle-free "Bongo" net. The Bongo frame (McGowan and Brown 1966; Smith and Richardson 1977) consists of a pair of circular frames connected to a central axle. The axle is free to rotate so that the mouth openings are vertical during the tow. The standard CalCOFI net has 71 cm diameter frames and net material constructed of nylon mesh. Each net consists of a cylindrical section ~ 146 cm long, a truncated conical section ~ 161 cm long, and a detachable cod end. The starboard net, from which the standard sample is taken, is constructed of 0.505 mm mesh. The sample from the port side is used for other purposes; the mesh size is either 0.505 mm or 0.333 mm depending on sampling requirements. The cod end of each net is constructed of 0.333 mm mesh.

The standard bongo tow in 2005 was a double oblique haul to 212 m depth (to 15 m from the bottom in shallow areas) designed to filter a constant amount of water per depth interval (~ 2 m^3/m of depth) over the vertical range of most ichthyoplankters. Hauls were made at a ship speed of 1.5–2.0 knots and initiated by clamping the net to the towing cable above a 34 kg weight suspended below the surface. The net was lowered to ~ 212 m depth by paying out 300 m of wire at 50 m/minute (35 m of depth/minute). After fishing at depth for 30 seconds, the net was retrieved at 20 m/minute (14 m of depth/minute). The angle of stray was recorded every 30 seconds and maintained at 45° (± 3°) by adjusting ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. At the beginning and end of each tow, readings were made from a flow meter suspended in the mouth of the starboard net. Detailed descriptions of gear and methods are given by Kramer et al. (1972) and Smith and Richardson (1977); Ohman and Smith (1995) provided summaries of historical CalCOFI zooplankton methods and calibration factors for the various gear types.

LABORATORY PROCEDURES

The ichthyoplankton was removed from the invertebrate portion of each sample and bottled separately in 3% buffered formalin. In addition to fish eggs and larvae, some samples contained juvenile, and occasionally adult, stages of fishes; these were removed and bottled separately in 3% formalin. The volume of water filtered by each net was computed from the flowmeter readings. A “standard haul factor” is used for oblique CalCOFI net tows to calculate the total number of ichthyoplankters of a taxon per unit surface area (Kramer et al. 1972; Smith and Richardson 1977; Moser et al. 1993). A requirement for this is the entire depth distribution of the taxon must be encompassed during the tow. The Manta net samples

only the upper ~15.5 cm of the water column and most, if not all, ichthyoplankton taxa that inhabit the surface zone have a vertical range > 15.5 cm. Even taxa associated with the immediate surface layer may range deeper than 15.5 cm as a result of diel migratory patterns or vertical mixing (Hempel and Weikert 1972; Doyle 1992b). Calculation of total numbers of eggs or larvae per unit surface area from Manta net samples awaits accurate information on the fine-scale vertical distribution of these organisms in the upper region of the water column. Even if there are few species whose larvae are restricted to the upper 15.5 cm of the water column, the time series of Manta samples provides a useful index of relative abundance for species whose larvae appear in these samples. In this report we express quantities of eggs or larvae in each sample as unadjusted counts or as numbers of eggs or larvae per unit volume of water filtered by the Manta net. We determined a zooplankton displacement volume for each Bongo net sample (methods described in Staff, SPFI 1953 and Kramer et al. 1972). Samples containing > 25 ml of plankton were fractioned to ~50% of their original volume (Manta net samples are not fractioned). Aliquot percentages for fractioned samples are listed in Table 5 under the "Percent Sorted" column. The sorting process included the removal of all ichthyoplankton from the samples and identification and separation of: eggs and larvae of Pacific sardine, northern anchovy, and Pacific saury and larvae of Pacific hake. Body lengths of sardine, anchovy, and hake larvae were measured to the nearest 0.5 mm. Cephalopod paralarvae also were removed during the sorting process (not included in this report).

A standard haul factor (SHF) was calculated for each Bongo net tow to make them comparable and to allow estimation of areal abundance. The SHF is calculated by the formula:

$$SHF = \frac{10\ D}{V}$$

where D = depth of haul = cosine of the average angle of stray of the towing cable multiplied by cable length (m)

V = total volume of water (m^3) strained during the haul

$$V = R \cdot a \cdot p$$

where R = total number of revolutions of the current meter during the haul

a = area (m^2) of the mouth of the net

p = length of the column of water needed produce one revolution of the current meter

Station and tow data for Manta net tows are presented in Table 1; station data, tow depth, volume of water strained, and standard haul factor are listed in Table 5 for each Bongo tow taken during 2005. Detailed descriptions of factors involved in calculating these values are presented in Ahlstrom (1948), Kramer et al. (1972), and Smith and Richardson (1977).

IDENTIFICATION

Identification of ichthyoplankton species beyond those separated during the sorting process was done by a separate group of specialists. Early ontogenetic stages of fishes are inherently difficult to identify and this is further complicated by the large number and diversity of species which contribute to the ichthyoplankton of the California Current region. Most identifications were accomplished by establishing ontogenetic series on the basis of morphology, meristics, and pigmentation, and then linking these series through overlapping features to known metamorphic, juvenile, or adult stages (Powles and Markle 1984). Our ability to identify larvae in the California Current region improved greatly during 1988–1995 as a result of an intensive research project aimed at producing a taxonomic monograph on the ontogenetic stages of fishes of this region (Moser 1996). Except for damaged specimens, most larvae in the 2005 surveys could be identified to species. A total of 71 larval fish categories (including

unidentified) was identified in Manta net tows for 2005: 64 to species (90% of the total larvae collected in the Manta net tows) and 6 to genus (8.0% of the total larvae). A total of 134 larval fish categories (including unidentified and disintegrated) was identified in the Bongo net tows: 112 to species (84% of the total larvae collected in the Bongo net tows), 14 to genus (10% of the total larvae), 5 to family, and 1 to order. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Fisheries Resources Division by S. R. Charter, William Watson, and the senior author.

With few exceptions, taxonomic categories above species represent small specimens which were damaged and partly disintegrated during capture. The following taxonomic categories in Tables 2–4 and 6–8 require explanation:

Diaphus spp. – *Diaphus theta* is the dominant *Diaphus* species in the survey area and most, if not all, of the larvae from the Southern California Bight region are this species; the generic category is used because a small proportion of the *Diaphus* larvae captured at the outer margin of the survey pattern may represent other species whose larvae are identical to those of *D. theta*.

Disintegrated fish larvae – larvae that could not be identified because of their poor condition; these are separated from the "unidentified" category to monitor the general condition of the ichthyoplankton samples through the time series.

Lepidopsetta bilineata – see comment for Pleuronectidae.

Lyopsetta exilis – see comment for Pleuronectidae.

Melamphaes spp. – small or damaged larvae, mostly *M. lugubris* and/or *M. parvus* lacking diagnostic characters.

Microstoma spp. – larvae of a distinct but undescribed microstomatid species.

Nannobrachium – Zahuranec (2000) moved the subgroup of *Lampanyctus* characterized by small or absent pectoral fins in adults to the genus *Nannobrachium*; two *Nannobrachium* species, *N. ritteri* (formerly *L. ritteri*) and *N. regale* (formerly *L. regalis*), occur commonly in the present CalCOFI survey pattern; larvae of these species > ~ 5 mm have been identified in oblique tow samples since 1954; beginning in 1985, larvae of two other species, *N. bristori* and *N. hawaiiensis*, have been identified and included in the CalCOFI data base; in previous data reports these were referred to as *Lampanyctus* “niger” and *Lampanyctus* “no pectorals”, respectively (see Moser 1996).

Parophrys vetulus – see comment for Pleuronectidae.

Pleuronectidae – Sakamoto (1984) changed pleuronectid generic designations for species in the CalCOFI area as follows: 1) *Glyptocephalus zachirus* was changed to *Errex zachirus*; 2) *Isopsetta isolepis*, *Lepidopsetta bilineata*, and *Parophrys vetulus* were transferred into *Pleuronectes* and 3) *Lyopsetta exilis* was changed to *Eopsetta exilis*; although these changes were incorporated in the lists of Robins et al. (1991) and Eschmeyer (1998) we follow Nelson (1994) in retaining the older nomenclature because Sakamoto's (1984) changes were based on a phenetic study; also, the older names are used in the major identification guides to fishes of our region (Miller and Lea 1972, Eschmeyer et al. 1983, Moser 1996, and Matarese et al. 1989).

Rhinogobiops nicholsii – *Coryphopterus nicholsii* was removed from *Coryphopterus* and placed in *Rhinogobiops* by Thacker and Cole (2002); in CalCOFI ichthyoplankton data reports through the 2003 report *R. nicholsii* was reported as *C. nicholsii*.

Scopelosaurus spp. – according to Balanov and Savinykh (1999) there are two valid species of this genus in the subarctic and transitional waters of the north Pacific, *S. adleri* and *S. harryi*, but only the former spawns in the California Current region; the generic designation is used here since we have not yet reexamined the historical CalCOFI samples to confirm the findings of Balanov and Savinykh (1999).

Sebastolobus spp. – larvae of this genus < 10 mm in length are not identifiable to species; larvae > 10 mm are identified as *S. alascanus* or *S. altivelis*.

Unidentified fish larvae – Larvae that were generally in good condition but could not be identified because of their small size or early stage of development.

Vinciguerria lucetia – V. lucetia, an eastern tropical Pacific species, is more common in the present CalCOFI region than the central water mass species *V. poweriae*, which is encountered rarely, usually only at the most seaward CalCOFI stations; a small percentage of *V. poweriae* larvae may have been included in the *V. lucetia* category because of the difficulty in separating early larvae which often are virtually identical.

SPECIES SUMMARY

Manta Net

In total, just over two and one-half times as many fish larvae were collected in surface samples on CalCOFI cruises during 2005 compared with 2004. Of the five most abundant taxa collected in Manta net tows in 2005, Pacific sardine (*Sardinops sagax*) ranked first in abundance, as it has each year since 1997, with 54.0% of the total fish larvae, and second in occurrence with larvae collected in 15.6% of the total samples (Tables 2 and 3). The total number of Pacific sardine larvae in the 2005 Manta net tows was over five and one-half times the 2004 value, and they occurred twice as frequently. The second most abundant species in 2005, northern anchovy (*Engraulis mordax*), accounted for 21.8% of the total larvae and was third in occurrence with 15.0% of the samples. The total number of northern anchovy larvae collected in 2005 was about four and one-half times the 2004 value. Pacific saury (*Cololabis saira*) was the third most abundant with 5.6% of the total larvae and first in total occurrence (29.3% of the samples). Two and one-half times more larval Pacific saury were collected in 2005 than in 2004, and they also occurred more than one and two-thirds times more frequently. Mussel blenny (*Hypsoblennius jenkinsi*) ranked fourth in abundance with 5.6% of the total larvae, and was sixth in frequency of occurrence with 7.3% of the samples. Nearly one and one-half times more mussel blenny larvae were collected during 2005, and they occurred in over two and one-quarter times as many samples, compared with 2004. Unidentified larvae of the rockfish genus *Sebastes* ranked fifth in abundance (3.6% of the total larvae), and was fourth in frequency of occurrence (14.6% of the samples). About one and one-half more unidentified rockfish larvae were collected during 2005 compared with 2004, and their frequency of occurrence were about one and one-third times higher. The next five most abundant taxa were jack mackerel (*Trachurus symmetricus*) with 2.0% of the total larvae, cabezon (*Scorpaenichthys marmoratus*) with 1.5% of the total, dogtooth lampfish (*Ceratoscopelus townsendi*) with 0.7% of the total, Pacific mackerel (*Scomber japonicus*) with 0.7% of the total, and jacksmelt (*Atherinopsis californiensis*) with 0.7% of the total larvae. These species ranked 7th, 5th, 9th, 11th, and tied for 13th in frequency of occurrence, respectively. The ten most abundant taxa comprised 96.2% of all the larvae collected in Manta net tows on CalCOFI cruises in 2005. The remaining 3.8% was distributed among 61 other categories. Of the ten most abundant taxa, four are coastal pelagic taxa, three are coastal demersal species, one is a nearshore schooling species, one is a mesopelagic species that migrates into the epipelagic zone at night, and one is an epipelagic species.

Bongo Net

Almost twice as many larvae (189%) were collected in the oblique samples during the 2005 CalCOFI survey than during the 2004 survey. Of the five most abundant taxa collected in the Bongo net tows during 2005, northern anchovy ranked first in abundance, which had not happened since 1996, with

56.3% of the total larvae, and was 5th in occurrence, with 25.6% positive tows (Tables 6 and 7). About eighteen times as many northern anchovy larvae were collected in the oblique tows (129% as many occurrences) during 2005 compared with 2004. The second most abundant species, Pacific sardine, accounted for 13.4% of the total larvae and was 11th in occurrence (15.2% of the samples). Larval Pacific sardine were more than one and two-thirds times more abundant during 2005 compared with 2004, and they also occurred more than one and one-half times as frequently. Unidentified rockfish larvae ranked third in abundance with 4.4% of the larvae, and were first in occurrence (32.2% of the samples). Abundance and frequency of occurrence of larval unidentified rockfish were nearly the same in 2004 and 2005. Larval Panama lightfish ranked fourth in abundance with 3.9% of the total larvae, and 9th in frequency of occurrence with 15.8% positive tows. Compared with 2004, larval abundance was about one-half (51.3%) in 2005, but frequency of larval occurrence was nearly the same. Pacific hake (*Merluccius productus*) ranked fifth in abundance (3.1% of the total larvae) and tied for 7th in frequency of occurrence (16.4% of the samples). Larval Pacific hake were about as abundant (103%) and occurred about 12% less frequently in the 2005 oblique tows compared with 2004. The next five most abundant taxa were northern lampfish (2.7% of the total larvae), California smoothtongue, *Leuroglossus stilbius* (1.8%), jack mackerel (1.7%), popeye blacksmelt, *Bathylagus ochotensis* (1.6%), and snubnose blacksmelt, *Bathylagus wesethi* (0.9%). These species ranked 2nd, 6th, 20th, 4th, and 13th in frequency of occurrence, respectively. The ten most abundant taxa comprised 89.8% of all the larvae collected in Bongo net tows on CalCOFI cruises in 2005. The remaining 10.2% was distributed among 124 other categories (including the unidentified and disintegrated categories). Of the ten most abundant taxa, two were coastal demersal taxa, three were coastal pelagic species, and five were mesopelagic species that migrate to the epipelagic zone at night.

EXPLANATION OF TABLES

Table 1. This table lists for each tow the pertinent station and tow data, the volume of water filtered, and the total number of fish eggs and larvae for Manta net tow stations occupied during the 2005 CalCOFI survey. Cruises are designated by four digits; the first two indicate the year and the second two the month. Within each cruise the data are listed in order of increasing line and station number (southerly and seaward directions); the order of station occupancy is shown on the station charts (Figures 2–4). Stations are designated by two groups of numbers; the first set indicates the line and decimal fraction and the second set indicates the station and decimal fraction. Ship codes are JD, *David Starr Jordan*, and NH, *New Horizon*. Time is listed as Pacific Standard Time (PST) at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for volume of water filtered). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast.

Table 2. Pooled occurrences of all larval fish taxa taken in Manta nets on the RV *David Starr Jordan*, and RV *New Horizon*, during the 2005 CalCOFI survey. Taxa are listed in rank order.

Table 3. Pooled counts (unadjusted for volume of water filtered) of all larval fish taxa taken in Manta net tows on the RV *David Starr Jordan* and RV *New Horizon* during the 2005 CalCOFI survey. Taxa are listed in rank order.

Table 4. Numbers of fish larvae for each taxon taken in Manta net tows on the RV *David Starr Jordan* and RV *New Horizon* during the 2005 CalCOFI survey. Numbers of larvae are listed as number per 100 m^3 of water filtered. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

Table 5. This table lists for each Bongo net tow the pertinent station and tow data, the volume of water filtered, the standard haul factor, the plankton volume, the percentage of sample sorted, and the

total number of fish eggs and larvae during the 2005 CalCOFI survey. Cruises are designated by four digits; the first two indicate the year and the second two the month. Within each cruise the data are listed in order of increasing line and station number (southerly and seaward directions); the order of station occupancy is shown on the station charts (Figures 2-4). Stations are designated by two groups of numbers; the first set indicates the line and decimal fraction and the second set indicates the station and decimal fraction. Ship codes are JD, *David Starr Jordan* and NH, *New Horizon.* Plankton displacement volumes were determined after removal of large organisms (those with individual displacement volumes > 5 ml) and expressed as ml per 1000 m^3 of water filtered. Time is listed as Pacific Standard Time (PST) at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for percent of sample sorted or standard haul factor). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast. Dates given here and in Figures 2–4 for the beginning and end of each cruise are based on PST at the first and last Bongo net tow station of the cruise and do not include transit time from port to the first station and to port after the last station. Thus, our cruise dates may differ slightly from those in SIO reports which are based on GMT prior to 1990 and include transit time to the first station and from the last station.

Table 6. Pooled occurrences of all larval fish taxa taken in Bongo net tows on CalCOFI survey cruises in 2005 listed in rank order.

Table 7. Pooled counts of all larval fish taxa taken in Bongo net tows on CalCOFI survey cruises in 2005 listed in rank order. Numbers are adjusted for percent sorted and standard haul factors.

Table 8. Numbers of fish larvae for each taxon, listed by station and calendar month of the Bongo net tow. Counts are adjusted for percentage of sample sorted and standard haul factor. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

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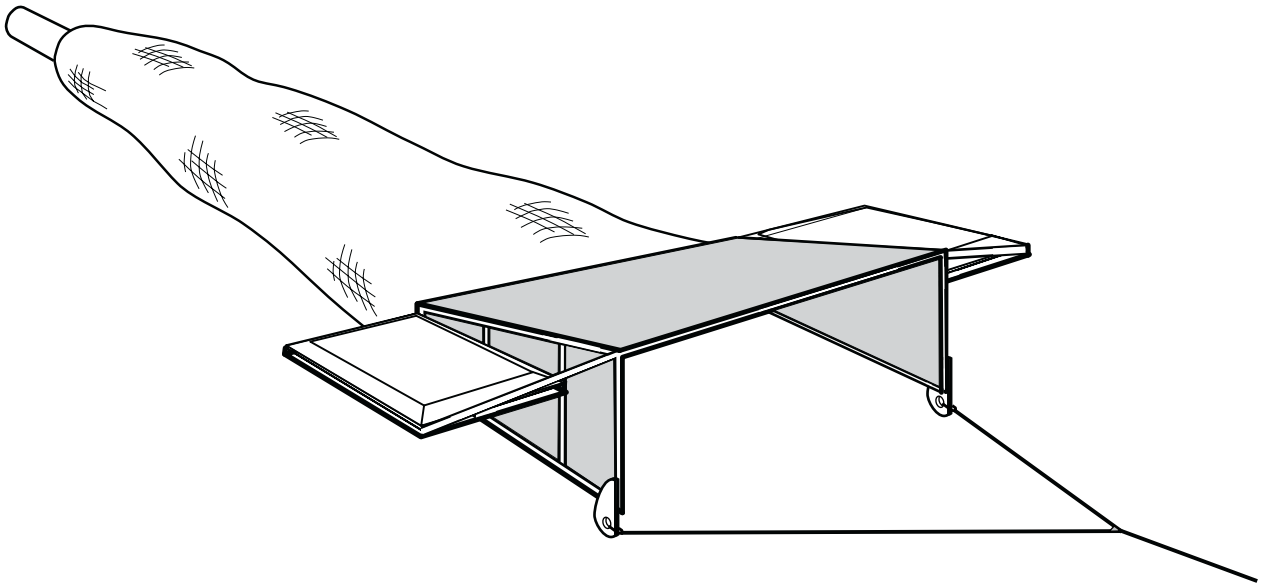

Figure 1. Diagram of the Manta net used on CalCOFI surveys.

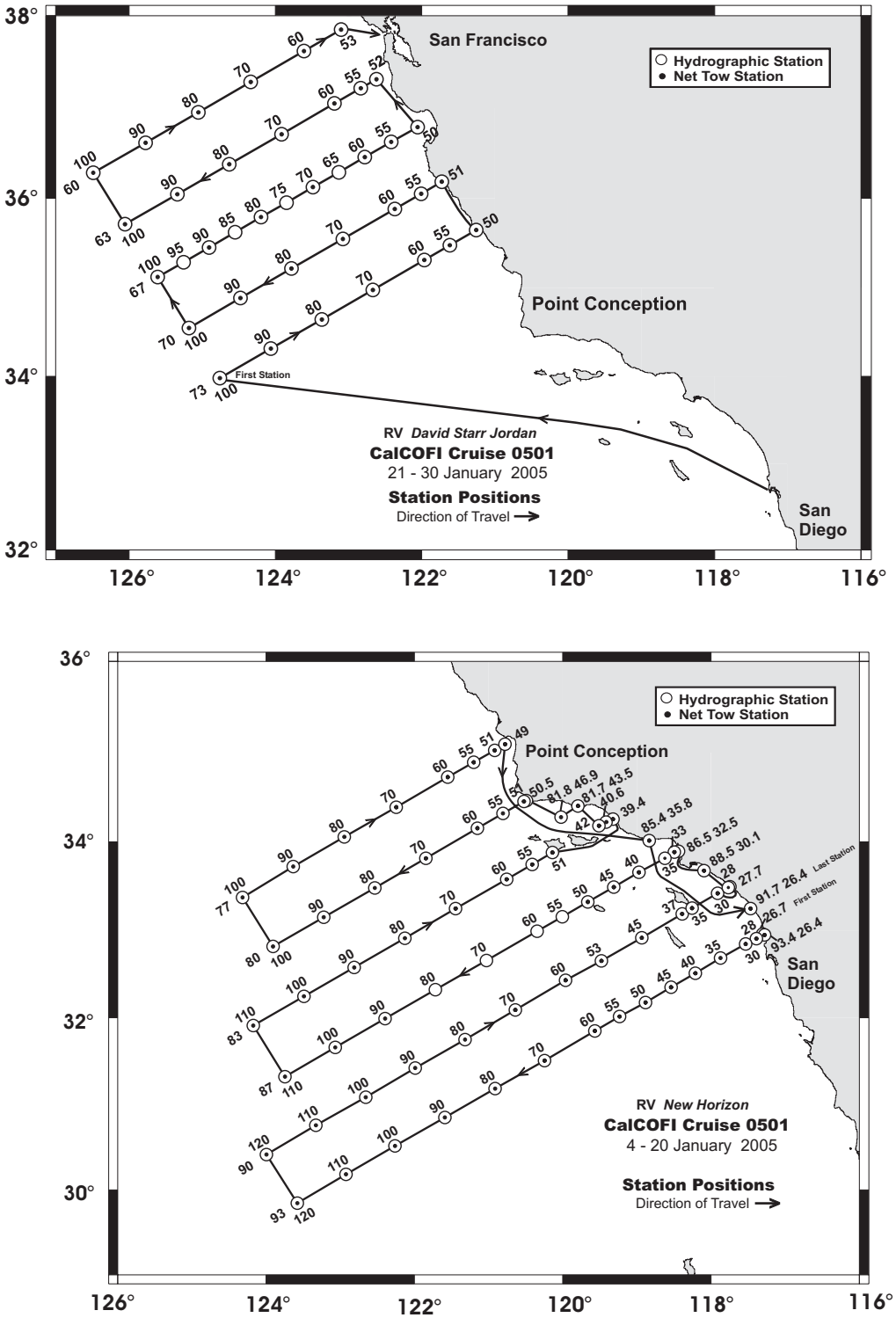

Figure 2. Stations and cruise tracks for CalCOFI cruise 0501JD (above) and 0501NH (below). Circles indicate hydrographic stations; dots indicate net tow stations. 0n cruise 0501NH, a Bongo tow was taken unaccompanied by a Manta tow at station 93.3 110.0 and on all cruises at the nine added inshore stations: 80.0 50.5, 81.7 43.5, 83.3 39.4, 85.4 35.8, 86.8 32.5, 88.5 30.1, 90.0 27.7, 91.7 26.4, 93.4 26.4. On cruise 0501NH, a Manta tow was taken unaccompanied by a Bongo tow at stations 80.0 55.0 and 93.3 35.0.

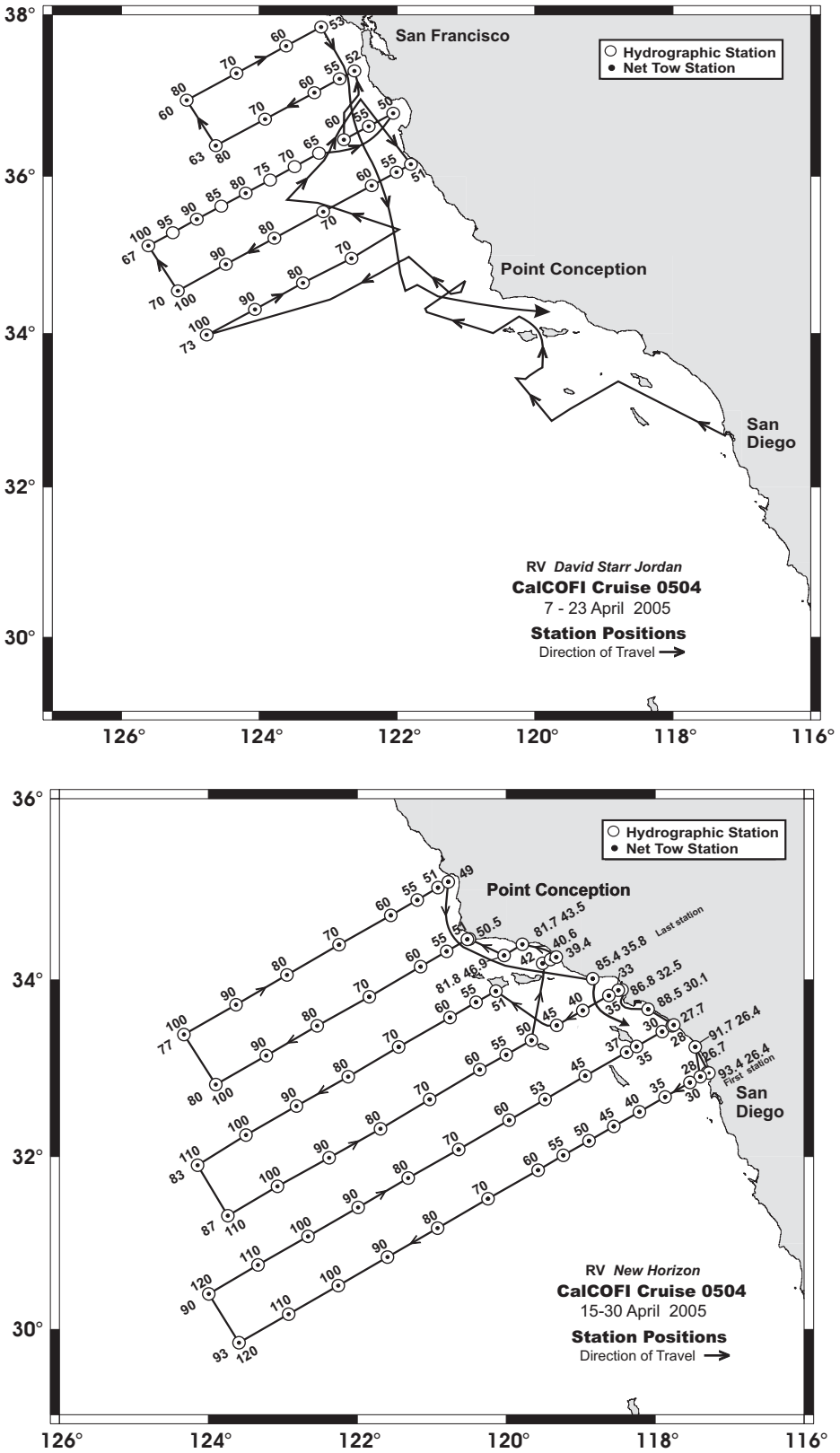

Figure 3. Stations and cruise tracks for CalCOFI cruise 0504JD (above) and 0504NH (below). On cruise 0504NH, a Bongo tow was taken unaccompanied by a Manta tow on the nine added inshore stations (see Figure 2 for station designations). Symbols are as in Figure 2.

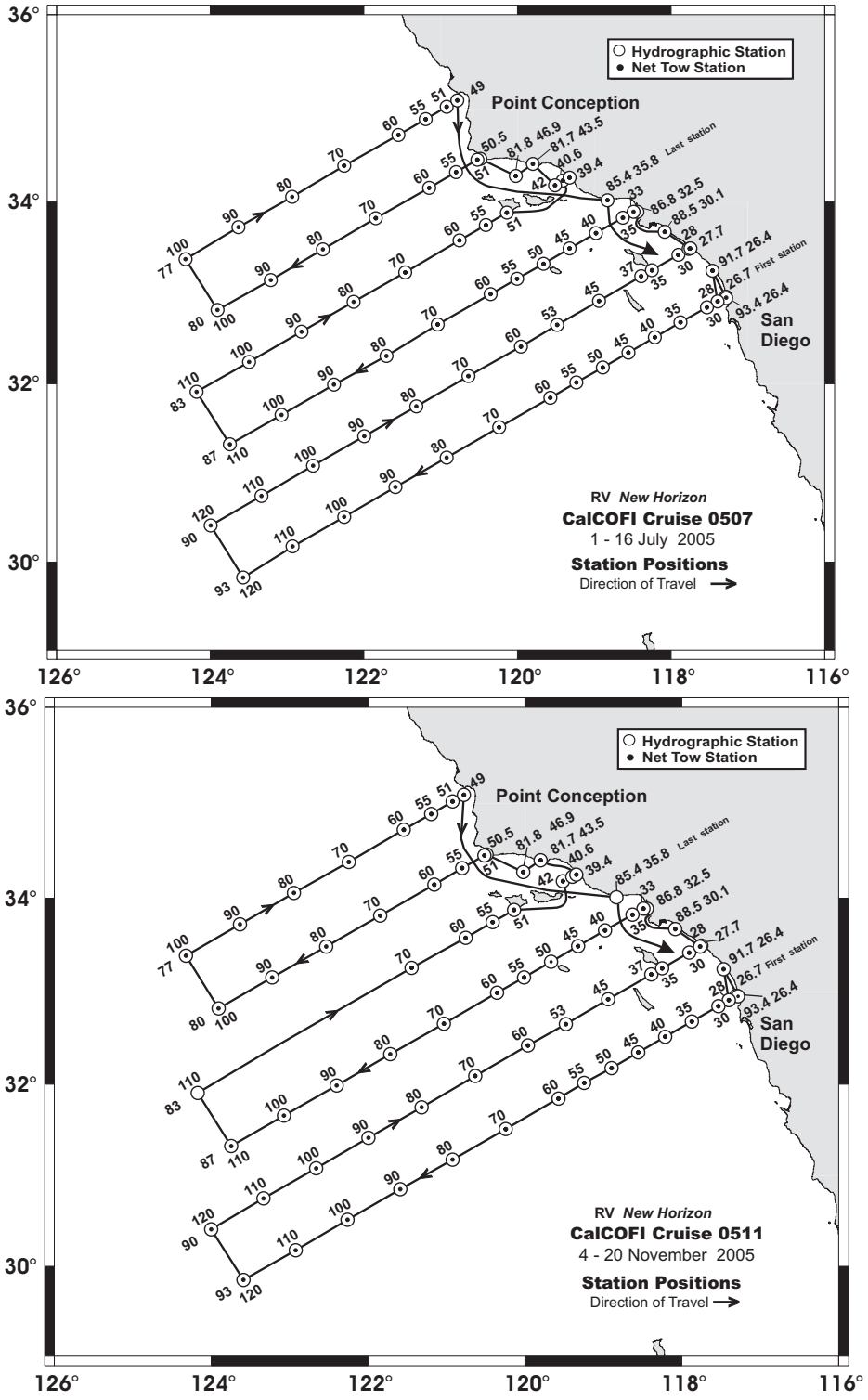

Figure 4. Stations and cruise tracks for CalCOFI cruise 0507NH (above) and 0511NH (below). On both cruises, a Bongo tow was taken unaccompanied by a Manta tow at the nine added inshore stations (see Figure 2 for station designations) except no net tows were taken on 0511NH at inshore station 85.4 35.8. On cruise 0511NH, a Bongo tow was taken unaccompanied by a Manta tow on station 86.7 60.0 and a Manta tow was taken unaccompanied by a Bongo tow at station 86.7 50.0. Symbols are as in Figure 2.

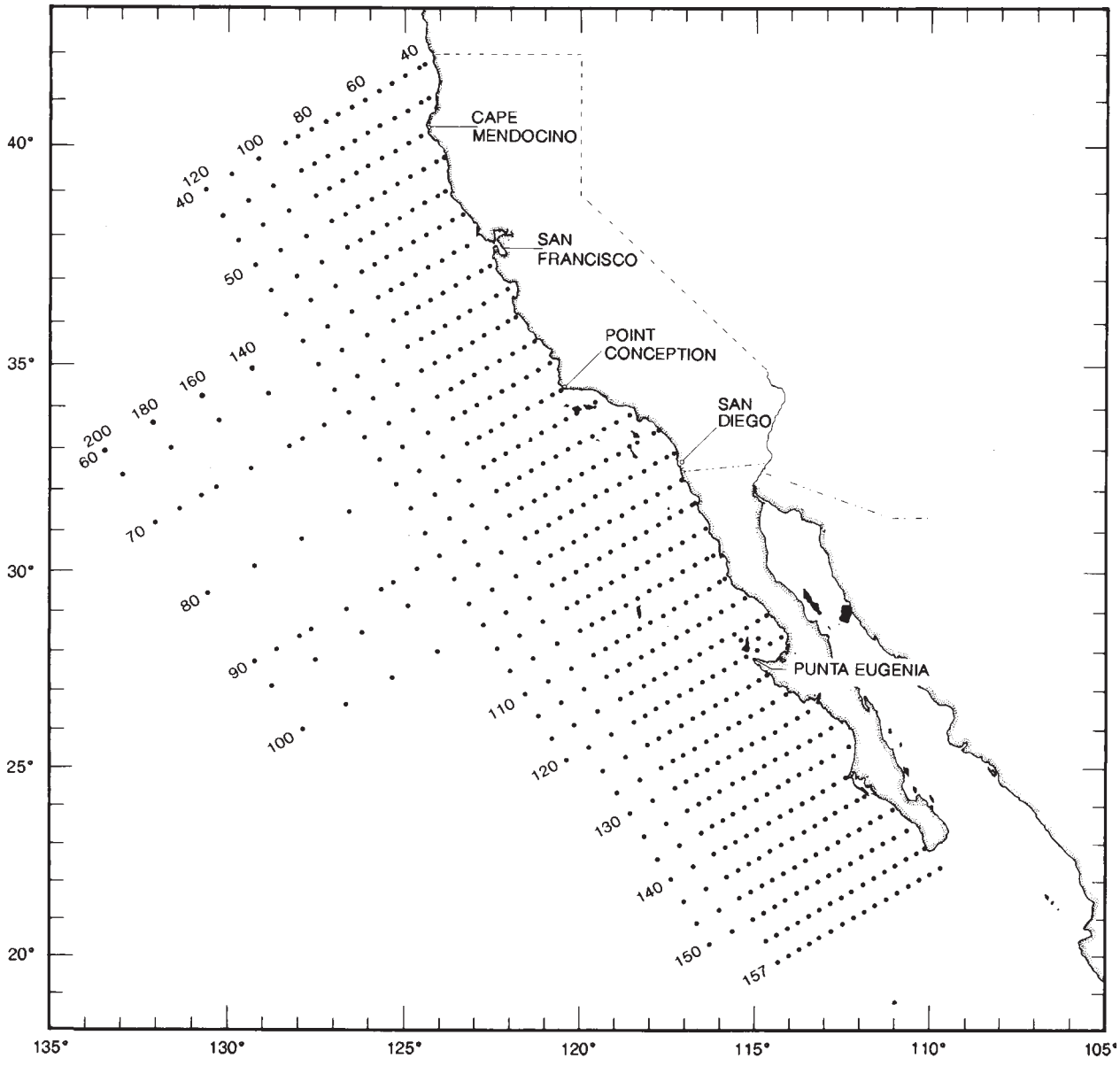

Figure 5. The basic CalCOFI station pattern occupied, in part, by cruises during 1951-1984.

Table 1. Station and plankton tow data for Manta tows taken on the 2005 CalCOFI survey. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 0501

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
60.0	53.0	37	50.9	123	06.0	JD	05	01	30	0452	62	12	179
60.0	60.0	37	36.8	123	36.6	JD	05	01	30	0010	64	2	0
60.0	70.0	37	16.8	124	20.0	JD	05	01	29	1720	65	1	2
60.0	80.0	36	56.9	125	03.2	JD	05	01	29	1114	65	0	1
60.0	90.0	36	36.8	125	46.4	JD	05	01	29	0526	64	1	3
60.0	100.0	36	16.8	126	29.2	JD	05	01	28	2350	62	1	3
63.3	52.0	37	18.5	122	37.2	JD	05	01	26	0255	69	1	9
63.3	55.0	37	12.6	122	50.1	JD	05	01	26	2211	72	1	0
63.3	60.0	37	02.7	123	11.7	JD	05	01	27	1533	71	0	0
63.3	70.0	36	42.5	123	54.8	JD	05	01	27	2250	50	0	5
63.3	80.0	36	22.6	124	37.8	JD	05	01	28	0443	62	1	0
63.3	90.0	36	02.7	125	20.3	JD	05	01	28	1041	60	0	1
63.3	100.0	35	42.6	126	03.0	JD	05	01	28	1717	60	0	1
66.7	50.0	36	47.2	122	03.5	JD	05	01	25	1748	78	0	0
66.7	55.0	36	37.2	122	24.9	JD	05	01	25	1347	69	1	0
66.7	60.0	36	27.2	122	46.5	JD	05	01	25	0911	58	0	0
66.7	70.0	36	07.3	123	29.2	JD	05	01	25	0156	61	0	1
66.7	80.0	35	47.3	124	11.8	JD	05	01	24	1832	67	0	3
66.7	90.0	35	27.2	124	54.1	JD	05	01	24	1052	70	0	1
66.7	100.0	35	07.2	125	36.4	JD	05	01	24	0333	68	0	0
70.0	51.0	36	10.9	121	43.7	JD	05	01	22	1438	76	5	13
70.0	55.0	36	02.9	122	00.6	JD	05	01	22	1802	75	10	0
70.0	60.0	35	52.9	122	21.9	JD	05	01	22	2152	66	0	0
70.0	70.0	35	32.9	123	04.6	JD	05	01	23	0332	64	0	0
70.0	80.0	35	12.9	123	46.7	JD	05	01	23	0903	71	0	1
70.0	90.0	34	52.9	124	28.6	JD	05	01	23	1515	60	0	1
70.0	100.0	34	32.8	125	10.9	JD	05	01	23	2118	57	0	1
73.3	50.0	35	38.8	121	15.4	JD	05	01	22	0919	69	11	15
73.3	55.0	35	28.6	121	36.8	JD	05	01	22	0554	71	0	1
73.3	60.0	35	18.7	121	57.7	JD	05	01	22	0205	69	0	3
73.3	70.0	34	58.6	122	39.9	JD	05	01	21	2038	67	0	0
73.3	80.0	34	38.6	123	21.9	JD	05	01	21	1328	71	0	1
73.3	90.0	34	18.7	124	03.6	JD	05	01	21	0833	75	10	4
73.3	100.0	33	58.6	124	45.4	JD	05	01	21	0244	68	10	15
76.7	49.0	35	05.3	120	46.8	NH	05	01	18	2119	92	0	261
76.7	51.0	35	01.2	120	55.1	NH	05	01	18	1906	95	30	26
76.7	55.0	34	53.3	121	11.9	NH	05	01	18	1601	96	17	29
76.7	60.0	34	43.4	121	33.0	NH	05	01	18	1127	86	2	6
76.7	70.0	34	23.2	122	14.7	NH	05	01	18	0509	69	0	2
76.7	80.0	34	03.3	122	56.5	NH	05	01	17	2251	74	0	1
76.7	90.0	33	43.2	123	38.1	NH	05	01	17	1640	70	8	0
76.7	100.0	33	22.5	124	19.0	NH	05	01	17	0904	87	4	2
80.0	51.0	34	27.0	120	31.4	NH	05	01	15	2118	85	14	45
80.0	55.0	34	19.2	120	48.4	NH	05	01	16	0102	82	6	2
80.0	60.0	34	09.1	121	09.1	NH	05	01	16	0445	85	0	2
80.0	70.0	33	49.0	121	50.5	NH	05	01	16	1047	90	0	1
80.0	80.0	33	28.9	122	32.1	NH	05	01	16	1643	81	0	1
80.0	90.0	33	09.0	123	13.4	NH	05	01	16	2225	72	4	2
80.0	100.0	32	48.9	123	54.5	NH	05	01	17	0411	78	17	2

Table 1. (cont.) CalCOFI Cruise 0501 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
81.8	46.9	34	16.6	120	01.5	NH	05	01	15	1644	94	0	4
83.3	40.6	34	13.4	119	24.6	NH	05	01	15	0822	116	0	87
83.3	42.0	34	10.7	119	30.6	NH	05	01	15	1116	84	0	396
83.3	51.0	33	52.7	120	08.2	NH	05	01	15	0051	61	6	152
83.3	55.0	33	44.6	120	24.7	NH	05	01	14	2134	76	4	2
83.3	60.0	33	34.7	120	45.2	NH	05	01	14	1719	90	12	2
83.3	70.0	33	14.7	121	26.6	NH	05	01	14	1122	67	0	0
83.3	80.0	32	54.7	122	07.7	NH	05	01	14	0425	86	6	0
83.3	90.0	32	34.6	122	48.7	NH	05	01	13	2222	60	5	5
83.3	100.0	32	14.7	123	29.4	NH	05	01	13	1642	89	6	7
83.3	110.0	31	54.6	124	10.2	NH	05	01	13	1036	85	5	0
86.7	33.0	33	53.0	118	29.8	NH	05	01	10	2017	75	8	613
86.7	35.0	33	48.9	118	37.4	NH	05	01	10	2225	63	3	64
86.7	40.0	33	39.3	118	58.2	NH	05	01	11	0433	64	6	3
86.7	45.0	33	29.3	119	18.6	NH	05	01	11	0839	78	2	2
86.7	50.0	33	19.4	119	39.8	NH	05	01	11	1210	67	11	4
86.7	90.0	31	59.5	122	23.8	NH	05	01	12	1612	74	2	1
86.7	100.0	31	39.5	123	04.1	NH	05	01	12	2204	70	19	0
86.7	110.0	31	19.4	123	44.5	NH	05	01	13	0408	72	34	0
90.0	28.0	33	29.1	117	46.1	NH	05	01	10	1240	92	3	253
90.0	30.0	33	25.1	117	54.6	NH	05	01	10	0808	84	1	1
90.0	35.0	33	15.1	118	15.5	NH	05	01	10	0515	87	7	1
90.0	37.0	33	11.3	118	23.3	NH	05	01	10	0236	79	6	0
90.0	45.0	32	55.0	118	56.0	NH	05	01	09	2117	65	4	2
90.0	53.0	32	39.2	119	28.7	NH	05	01	09	1526	80	4	2
90.0	60.0	32	25.8	119	57.7	NH	05	01	09	0902	78	0	2
90.0	70.0	32	05.4	120	38.4	NH	05	01	09	0408	66	0	0
90.0	80.0	31	45.1	121	19.0	NH	05	01	08	2157	67	2	3
90.0	90.0	31	25.2	121	59.3	NH	05	01	08	1549	76	1	2
90.0	100.0	31	04.9	122	39.4	NH	05	01	08	0804	78	4	0
90.0	110.0	30	45.3	123	19.7	NH	05	01	08	0136	81	15	4
90.0	120.0	30	25.0	123	59.8	NH	05	01	07	1918	77	21	3
93.3	26.7	32	57.4	117	18.4	NH	05	01	04	1220	87	8	12
93.3	28.0	32	54.3	117	23.4	NH	05	01	04	1653	76	8	0
93.3	30.0	32	50.8	117	31.9	NH	05	01	04	2001	52	6	0
93.3	35.0	32	41.0	117	52.5	NH	05	01	05	0024	79	11	0
93.3	40.0	32	30.6	118	12.6	NH	05	01	05	0501	84	2	2
93.3	45.0	32	21.1	118	32.4	NH	05	01	05	0809	67	1	2
93.3	50.0	32	10.7	118	53.1	NH	05	01	05	1341	96	0	3
93.3	55.0	32	00.9	119	13.9	NH	05	01	05	1746	107	8	12
93.3	60.0	31	51.0	119	34.1	NH	05	01	05	2139	60	0	12
93.3	70.0	31	30.6	120	14.5	NH	05	01	06	0340	98	17	28
93.3	80.0	31	11.1	120	54.7	NH	05	01	06	0839	93	1	20
93.3	90.0	30	51.0	121	35.2	NH	05	01	06	1615	101	2	3
93.3	100.0	30	31.1	122	15.6	NH	05	01	06	2222	73	4	4
93.3	120.0	29	50.8	123	34.8	NH	05	01	07	1221	74	1	0

Table 1. (cont.)

CalCOFI Cruise 0504

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
60.0	53.0	37	50.8	123	06.0	JD	05	04	23	0930	61	0	33
60.0	60.0	37	36.8	123	36.6	JD	05	04	23	0506	65	0	0
60.0	70.0	37	16.8	124	19.9	JD	05	04	22	2135	61	0	9
60.0	80.0	36	56.8	125	03.2	JD	05	04	22	1543	63	0	22
63.3	52.0	37	18.6	122	37.2	JD	05	04	21	1557	66	7	12
63.3	55.0	37	12.6	122	50.1	JD	05	04	21	1826	71	119	21
63.3	60.0	37	02.5	123	11.8	JD	05	04	21	2153	58	10	109
63.3	70.0	36	42.6	123	54.8	JD	05	04	22	0343	68	1	12
63.3	80.0	36	22.7	124	37.7	JD	05	04	22	0934	67	0	0
66.7	50.0	36	47.2	122	03.4	JD	05	04	20	1025	74	1	3112
66.7	55.0	36	37.3	122	24.8	JD	05	04	20	1454	64	1	25
66.7	60.0	36	27.3	122	46.2	JD	05	04	20	1932	69	5	10
66.7	80.0	35	47.2	124	11.7	JD	05	04	17	1006	67	0	0
66.7	90.0	35	27.2	124	54.2	JD	05	04	17	0152	62	0	3
66.7	100.0	35	07.1	125	36.4	JD	05	04	16	1816	61	0	2
70.0	51.0	36	09.0	121	47.9	JD	05	04	15	0139	64	0	3
70.0	55.0	36	02.8	122	00.6	JD	05	04	15	0603	72	1	14
70.0	60.0	35	52.8	122	22.1	JD	05	04	15	1022	62	3	5
70.0	70.0	35	32.9	123	04.4	JD	05	04	15	1656	67	1	2
70.0	80.0	35	12.8	123	46.7	JD	05	04	15	2310	79	15	8
70.0	90.0	34	53.0	124	28.9	JD	05	04	16	0530	70	0	0
70.0	100.0	34	32.8	125	10.8	JD	05	04	16	1137	54	0	0
73.3	70.0	34	57.7	122	39.7	JD	05	04	08	1454	59	0	3
73.3	80.0	34	38.7	123	21.9	JD	05	04	08	0833	63	0	4
73.3	90.0	34	18.5	124	03.7	JD	05	04	08	0218	54	2	1
73.3	100.0	33	58.6	124	45.3	JD	05	04	07	2010	66	0	5
76.7	49.0	35	05.3	120	46.6	NH	05	04	30	0610	86	10	1355
76.7	51.0	35	01.4	120	54.9	NH	05	04	30	0424	55	4	2361
76.7	55.0	34	53.4	121	11.5	NH	05	04	30	0115	78	9	18439
76.7	60.0	34	43.2	121	33.1	NH	05	04	29	2108	71	3	921
76.7	70.0	34	23.5	122	14.5	NH	05	04	29	1526	69	1	545
76.7	80.0	34	03.3	122	56.5	NH	05	04	29	0816	78	15	38
76.7	90.0	33	43.4	123	37.8	NH	05	04	29	0337	68	243	117
76.7	100.0	33	23.3	124	19.6	NH	05	04	28	2130	73	40	25
80.0	51.0	34	27.0	120	31.4	NH	05	04	27	0320	79	5	2426
80.0	55.0	34	19.0	120	48.0	NH	05	04	27	0651	70	72	1099
80.0	60.0	34	09.0	121	09.0	NH	05	04	27	1128	73	13	2445
80.0	70.0	33	48.7	121	50.3	NH	05	04	27	1820	67	19	500
80.0	80.0	33	29.0	122	32.2	NH	05	04	28	0052	77	213	138
80.0	90.0	33	09.0	123	13.4	NH	05	04	28	0703	76	3	4
80.0	100.0	32	49.2	123	54.0	NH	05	04	28	1452	70	1	66
81.8	46.9	34	16.4	120	01.6	NH	05	04	26	2237	64	4	4677
83.3	40.6	34	13.7	119	24.4	NH	05	04	26	1507	78	0	8569
83.3	42.0	34	11.0	119	30.6	NH	05	04	26	1218	75	5	67
83.3	51.0	33	52.6	120	08.3	NH	05	04	22	1843	70	15	362
83.3	55.0	33	44.9	120	24.3	NH	05	04	22	2158	81	7	1015
83.3	60.0	33	34.7	120	45.2	NH	05	04	23	0209	79	277	3554
83.3	70.0	33	14.7	121	26.6	NH	05	04	23	0748	78	20	1037
83.3	80.0	32	54.5	122	07.3	NH	05	04	23	1534	67	85	1790
83.3	90.0	32	34.7	122	48.9	NH	05	04	23	2054	87	12	104

Table 1. (cont.) CalCOFI Cruise 0504 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
83.3	100.0	32	14.7	123	29.5	NH	05	04	24	0227	77	5	13
83.3	110.0	31	54.2	124	08.7	NH	05	04	24	0736	68	2	15
86.7	33.0	33	53.0	118	29.6	NH	05	04	21	2319	66	26	10151
86.7	35.0	33	49.5	118	37.5	NH	05	04	22	0217	93	262	3641
86.7	40.0	33	39.4	118	58.4	NH	05	04	22	0705	77	720	20
86.7	45.0	33	29.3	119	19.3	NH	05	04	22	1121	79	7	54551
86.7	50.0	33	19.4	119	39.8	NH	05	04	26	0508	68	45	10066
86.7	55.0	33	09.5	120	00.1	NH	05	04	26	0136	76	39	2013
86.7	60.0	32	59.3	120	21.3	NH	05	04	25	2110	71	95	24
86.7	70.0	32	39.2	121	01.7	NH	05	04	25	1453	75	5	476
86.7	80.0	32	19.1	121	41.4	NH	05	04	25	0734	86	1	52
86.7	90.0	31	59.2	122	22.8	NH	05	04	25	0232	77	0	53
86.7	100.0	31	39.5	123	04.5	NH	05	04	24	2034	90	1	134
86.7	110.0	31	19.3	123	44.3	NH	05	04	24	1441	73	1	60
90.0	28.0	33	29.2	117	46.3	NH	05	04	21	1427	88	0	645
90.0	30.0	33	25.2	117	54.3	NH	05	04	21	1133	102	1	21
90.0	35.0	33	15.2	118	15.1	NH	05	04	21	0738	92	20	1180
90.0	37.0	33	11.2	118	23.1	NH	05	04	21	0431	71	705	8
90.0	45.0	32	55.1	118	56.2	NH	05	04	20	2236	69	118	1889
90.0	53.0	32	39.1	119	28.8	NH	05	04	20	1657	78	5	150
90.0	60.0	32	25.1	119	57.7	NH	05	04	20	1102	80	1	35
90.0	70.0	32	05.0	120	38.2	NH	05	04	20	0434	68	26	14
90.0	80.0	31	45.2	121	19.1	NH	05	04	19	2207	75	18	0
90.0	90.0	31	25.0	121	59.2	NH	05	04	19	1537	85	0	0
90.0	100.0	31	05.1	122	39.7	NH	05	04	19	0650	73	1	90
90.0	110.0	30	45.1	123	19.9	NH	05	04	19	0127	74	1	71
90.0	120.0	30	25.1	123	59.8	NH	05	04	18	1908	78	18	36
93.3	26.7	32	57.5	117	18.1	NH	05	04	15	1050	81	15	1642
93.3	28.0	32	54.6	117	23.7	NH	05	04	15	1944	93	909	1785
93.3	30.0	32	50.8	117	32.0	NH	05	04	15	2222	80	64	165
93.3	35.0	32	40.8	117	52.1	NH	05	04	16	0209	83	81	20
93.3	40.0	32	30.8	118	12.7	NH	05	04	16	0625	79	25	39
93.3	45.0	32	20.8	118	33.3	NH	05	04	16	1034	82	2	174
93.3	50.0	32	10.9	118	53.4	NH	05	04	16	1439	76	15	491
93.3	55.0	32	00.8	119	14.0	NH	05	04	16	1858	72	1736	149
93.3	60.0	31	50.8	119	34.3	NH	05	04	16	2258	66	70	81
93.3	70.0	31	31.0	120	14.7	NH	05	04	17	0513	61	76	9
93.3	80.0	31	10.8	120	55.2	NH	05	04	17	1219	62	2	3
93.3	90.0	30	50.7	121	35.6	NH	05	04	17	1816	71	6	5
93.3	100.0	30	30.8	122	15.5	NH	05	04	18	0015	67	3	27
93.3	110.0	30	10.8	122	55.3	NH	05	04	18	0620	69	10	134
93.3	120.0	29	50.9	123	35.3	NH	05	04	18	1221	71	0	16

CalCOFI Cruise 0507

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.9	NH	05	07	16	0134	81	1	2411
76.7	51.0	35	01.3	120	55.2	NH	05	07	15	2249	66	8	104
76.7	55.0	34	53.3	121	11.8	NH	05	07	15	1924	68	2	0
76.7	60.0	34	43.2	121	33.1	NH	05	07	15	1505	77	0	4

Table 1. (cont.) CalCOFI Cruise 0507 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	70.0	34	23.2	122	15.3	NH	05	07	15	0807	59	8	36
76.7	80.0	34	03.1	122	56.0	NH	05	07	15	0052	68	1	0
76.7	90.0	33	43.2	123	38.0	NH	05	07	14	1839	69	0	1
76.7	100.0	33	22.5	124	19.3	NH	05	07	14	1222	59	0	16
80.0	51.0	34	27.1	120	31.3	NH	05	07	12	2131	67	2	151
80.0	55.0	34	19.0	120	48.0	NH	05	07	13	0101	73	1	1
80.0	60.0	34	09.0	121	09.0	NH	05	07	13	0527	70	1	0
80.0	70.0	33	49.2	121	50.7	NH	05	07	13	1130	70	0	47
80.0	80.0	33	28.9	122	31.9	NH	05	07	13	1751	70	1	4
80.0	90.0	33	08.6	123	12.8	NH	05	07	13	2355	64	11	59
80.0	100.0	32	49.1	123	54.4	NH	05	07	14	0624	68	13	251
81.8	46.9	34	16.6	120	01.4	NH	05	07	12	1634	81	3	10
83.3	40.6	34	13.5	119	24.6	NH	05	07	12	0659	123	0	3530
83.3	42.0	34	10.6	119	30.6	NH	05	07	12	0939	124	1	645
83.3	51.0	33	52.7	120	08.2	NH	05	07	12	0012	49	6	175
83.3	55.0	33	44.6	120	24.6	NH	05	07	11	2037	59	2	1
83.3	60.0	33	34.7	120	45.4	NH	05	07	11	1623	69	0	1
83.3	70.0	33	13.8	121	27.7	NH	05	07	11	0847	72	0	37
83.3	80.0	32	54.3	122	07.9	NH	05	07	11	0323	71	4	14
83.3	90.0	32	34.7	122	48.8	NH	05	07	10	2108	59	3	34
83.3	100.0	32	14.6	123	29.7	NH	05	07	10	1453	72	1	296
83.3	110.0	31	54.7	124	10.7	NH	05	07	10	0744	63	0	158
86.7	33.0	33	53.4	118	29.4	NH	05	07	07	1954	51	203	112
86.7	35.0	33	49.4	118	37.7	NH	05	07	07	2243	84	62	33
86.7	40.0	33	39.4	118	58.5	NH	05	07	08	0310	79	15	3
86.7	45.0	33	29.4	119	19.2	NH	05	07	08	0727	81	2	37
86.7	50.0	33	19.4	119	39.8	NH	05	07	08	1109	56	2	20
86.7	55.0	33	09.4	120	00.2	NH	05	07	08	1518	64	0	1
86.7	60.0	32	59.4	120	20.9	NH	05	07	08	1952	49	61	0
86.7	70.0	32	39.3	121	02.2	NH	05	07	09	0213	64	4	7
86.7	80.0	32	18.5	121	42.2	NH	05	07	09	0735	78	1	173
86.7	90.0	31	59.4	122	23.4	NH	05	07	09	1442	76	4	2
86.7	100.0	31	39.4	123	04.2	NH	05	07	09	2023	51	1	240
86.7	110.0	31	19.5	123	44.6	NH	05	07	10	0207	70	0	224
90.0	28.0	33	29.2	117	46.2	NH	05	07	07	1049	85	9	1197
90.0	30.0	33	25.1	117	54.3	NH	05	07	07	0813	82	4	223
90.0	35.0	33	15.1	118	15.0	NH	05	07	07	0323	85	74	11
90.0	37.0	33	11.1	118	23.2	NH	05	07	07	0007	66	72	2
90.0	45.0	32	55.0	118	56.3	NH	05	07	06	1836	73	3	0
90.0	53.0	32	39.0	119	29.0	NH	05	07	06	1250	54	1	3
90.0	60.0	32	24.8	119	57.3	NH	05	07	06	0732	66	1	0
90.0	70.0	32	05.1	120	38.4	NH	05	07	06	0108	57	1	29
90.0	80.0	31	45.1	121	19.0	NH	05	07	05	1831	80	4	11
90.0	90.0	31	25.0	121	59.5	NH	05	07	05	1207	64	1	516
90.0	100.0	31	05.4	122	39.7	NH	05	07	05	0545	63	1	365
90.0	110.0	30	45.0	123	20.0	NH	05	07	04	2157	59	0	506
90.0	120.0	30	24.9	123	59.7	NH	05	07	04	1549	71	2	119
93.3	26.7	32	57.3	117	17.8	NH	05	07	01	1058	78	5	225
93.3	28.0	32	54.6	117	23.6	NH	05	07	01	1852	89	6	36
93.3	30.0	32	50.8	117	31.9	NH	05	07	01	2147	91	61	8

Table 1. (cont.) CalCOFI Cruise 0507 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
93.3	35.0	32	40.9	117	52.6	NH	05	07	02	0150	76	102	3
93.3	40.0	32	30.9	118	12.6	NH	05	07	02	0549	72	2	0
93.3	45.0	32	20.8	118	33.3	NH	05	07	02	0853	79	1	88
93.3	50.0	32	10.8	118	53.2	NH	05	07	02	1424	71	1	2
93.3	55.0	32	00.8	119	13.9	NH	05	07	02	1829	74	2	6
93.3	60.0	31	50.8	119	34.2	NH	05	07	02	2224	50	6	0
93.3	70.0	31	30.9	120	14.4	NH	05	07	03	0413	58	10	1
93.3	80.0	31	10.8	120	55.2	NH	05	07	03	1028	54	0	398
93.3	90.0	30	50.9	121	35.4	NH	05	07	03	1623	74	2	1855
93.3	100.0	30	30.8	122	15.4	NH	05	07	03	2203	59	0	362
93.3	110.0	30	10.8	122	55.5	NH	05	07	04	0354	61	1	630
93.3	120.0	29	49.5	123	34.3	NH	05	07	04	0815	62	0	268

CalCOFI Cruise 0511

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	NH	05	11	20	0341	93	0	56
76.7	51.0	35	01.3	120	55.3	NH	05	11	20	0119	87	8	227
76.7	55.0	34	53.4	121	11.7	NH	05	11	19	2154	69	2	2
76.7	60.0	34	43.5	121	32.8	NH	05	11	19	1754	88	3	0
76.7	70.0	34	23.0	122	14.7	NH	05	11	19	1146	86	0	11
76.7	80.0	34	03.4	122	56.5	NH	05	11	19	0530	92	1	3
76.7	90.0	33	43.4	123	37.9	NH	05	11	18	2336	87	1	1
76.7	100.0	33	23.1	124	19.4	NH	05	11	18	1736	84	18	5
80.0	51.0	34	27.0	120	31.0	NH	05	11	17	0147	87	7	32
80.0	55.0	34	19.0	120	47.9	NH	05	11	17	0551	87	22	0
80.0	60.0	34	08.7	121	09.4	NH	05	11	17	0908	77	0	0
80.0	70.0	33	48.9	121	50.7	NH	05	11	17	1644	82	1	4
80.0	80.0	33	29.1	122	32.0	NH	05	11	17	2252	73	5	1
80.0	90.0	33	09.1	123	13.3	NH	05	11	18	0514	78	1	0
80.0	100.0	32	49.2	123	54.5	NH	05	11	18	1139	96	0	4
81.8	46.9	34	16.5	120	01.4	NH	05	11	16	2019	89	7	43
83.3	40.6	34	13.7	119	23.6	NH	05	11	16	1146	97	0	234
83.3	42.0	34	10.9	119	31.0	NH	05	11	16	0854	79	0	59
83.3	51.0	33	52.6	120	08.3	NH	05	11	16	0252	80	3	83
83.3	55.0	33	44.8	120	24.7	NH	05	11	15	2250	94	0	0
83.3	60.0	33	34.7	120	45.5	NH	05	11	15	1641	88	9	0
83.3	70.0	33	15.3	121	26.6	NH	05	11	15	0856	65	0	4
86.7	33.0	33	53.4	118	29.4	NH	05	11	11	0213	71	4	40
86.7	35.0	33	49.4	118	37.8	NH	05	11	11	0558	76	1	1
86.7	40.0	33	39.4	118	58.5	NH	05	11	11	1051	77	0	3
86.7	45.0	33	29.5	119	19.2	NH	05	11	11	1503	62	1	787
86.7	50.0	33	19.2	119	39.9	NH	05	11	11	1948	65	2	3
86.7	55.0	33	09.2	120	00.6	NH	05	11	12	0014	69	0	0
86.7	70.0	32	39.3	121	02.0	NH	05	11	12	1200	66	0	0
86.7	80.0	32	19.6	121	42.9	NH	05	11	12	1823	82	1	6
86.7	90.0	31	59.2	122	23.9	NH	05	11	13	0118	66	3	1
86.7	100.0	31	39.6	123	04.3	NH	05	11	13	0802	80	1	0
86.7	110.0	31	19.5	123	44.8	NH	05	11	13	1628	104	8	3
90.0	28.0	33	29.1	117	46.0	NH	05	11	10	1838	75	1	368

Table 1. (cont.) CalCOFI Cruise 0511 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
90.0	30.0	33	25.1	117	54.2	NH	05	11	10	1514	78	2	4
90.0	35.0	33	15.1	118	15.0	NH	05	11	10	1050	70	0	34
90.0	37.0	33	11.1	118	23.2	NH	05	11	10	0757	70	0	5
90.0	45.0	32	55.2	118	56.2	NH	05	11	10	0236	80	0	0
90.0	53.0	32	39.1	119	28.6	NH	05	11	09	2120	81	0	5
90.0	60.0	32	25.4	119	57.8	NH	05	11	09	1626	72	2	4
90.0	70.0	32	05.4	120	38.0	NH	05	11	09	0902	73	0	0
90.0	80.0	31	45.1	121	18.9	NH	05	11	09	0334	71	13	0
90.0	90.0	31	25.1	121	59.6	NH	05	11	08	2025	57	4	0
90.0	100.0	31	05.0	122	39.6	NH	05	11	08	1254	69	1	0
90.0	110.0	30	45.1	123	19.9	NH	05	11	08	0601	83	17	2
90.0	120.0	30	24.8	123	59.9	NH	05	11	07	2336	72	3	21
93.3	26.7	32	57.4	117	18.3	NH	05	11	04	1225	89	2	150
93.3	28.0	32	54.6	117	23.9	NH	05	11	04	2122	77	6	0
93.3	30.0	32	50.7	117	32.0	NH	05	11	05	0007	92	0	0
93.3	35.0	32	40.9	117	52.5	NH	05	11	05	0406	85	9	1
93.3	40.0	32	30.9	118	12.8	NH	05	11	05	0809	83	0	1
93.3	45.0	32	20.8	118	33.2	NH	05	11	05	1223	75	0	3
93.3	50.0	32	10.6	118	53.8	NH	05	11	05	1644	85	0	5
93.3	55.0	32	00.9	119	14.8	NH	05	11	05	2126	76	1	4
93.3	60.0	31	50.7	119	34.5	NH	05	11	06	0059	72	0	0
93.3	70.0	31	30.8	120	14.7	NH	05	11	06	0815	82	0	1
93.3	80.0	31	10.8	120	55.2	NH	05	11	06	1601	80	3	1
93.3	90.0	30	51.1	121	35.4	NH	05	11	06	2211	69	1	11
93.3	100.0	30	31.0	122	15.6	NH	05	11	07	0419	98	0	0
93.3	110.0	30	10.9	122	55.3	NH	05	11	07	1042	96	0	133
93.3	120.0	29	51.0	123	35.3	NH	05	11	07	1656	98	1	5

Table 2. Pooled occurrences of fish larvae taken in Manta net tows on the 2005 CalCOFI survey.

Rank	Taxon	Occurrences
1	*Cololabis saira*	92
2	*Sardinops sagax*	49
3	*Engraulis mordax*	47
4	*Sebastes* spp.	46
5	*Scorpaenichthys marmoratus*	32
6	*Hypsoblennius jenkinsi*	23
7	*Trachurus symmetricus*	16
8	*Vinciguerria lucetia*	13
9	*Ceratoscopelus townsendi*	12
10	*Tetragonurus cuvieri*	11
11	*Hypsoblennius gilberti*	10
11	*Scomber japonicus*	10
13	*Sebastes diploproa*	8
13	*Atherinopsis californiensis*	8
15	*Merluccius productus*	7
16	*Pleuronichthys coenosus*	5
16	*Hexagrammos decagrammus*	5
16	*Oxylebius pictus*	5
16	*Medialuna californiensis*	5
16	*Hypsoblennius gentilis*	5
16	*Oxyjulis californica*	5
16	*Cheilopogon pinnatibarbatus*	5
16	*Leuresthes tenuis*	5
24	*Sebastes jordani*	4
24	*Lampadena urophaos*	4
24	*Stenobrachius leucopsarus*	4
24	*Triphoturus mexicanus*	4
24	*Ophiodon elongatus*	4
24	*Aristostomias scintillans*	4
24	*Girella nigricans*	4
31	*Cyclothone signata*	3
31	*Parophrys vetulus*	3
31	*Nannobrachium ritteri*	3
31	*Hypsypops rubicundus*	3
35	*Hypsoblennius* spp.	2
35	*Pleuronichthys verticalis*	2
35	*Nannobrachium* spp.	2
35	*Citharichthys stigmaeus*	2
35	*Protomyctophum crockeri*	2
35	*Hemilepidotus spinosus*	2
35	*Sphyraena argentea*	2
35	*Coryphaena hippurus*	2
35	*Sebastes aurora*	2
35	*Hermosilla azurea*	2
35	*Chromis punctipinnis*	2
35	*Paralabrax* spp.	2
35	*Genyonemus lineatus*	2
35	*Scorpaena guttata*	2
49	*Paralichthys californicus*	1
49	*Microstomus pacificus*	1
49	*Scopelosaurus* spp.	1
49	*Liparis fucensis*	1
49	*Stomias atriventer*	1

Table 2. (cont.)

Rank	Taxon	Occurrences
49	*Peprilus simillimus*	1
49	*Pleuronichthys decurrens*	1
49	*Cyclothone acclinidens*	1
49	*Bathylagus wesethi*	1
49	*Seriola lalandi*	1
49	*Liparis mucosus*	1
49	*Neoclinus stephensae*	1
49	*Atractoscion nobilis*	1
49	*Diogenichthys laternatus*	1
49	*Icichthys lockingtoni*	1
49	*Atherinops affinis*	1
49	*Hexagrammos lagocephalus*	1
49	*Neoclinus blanchardi*	1
49	*Alloclinus holderi*	1
49	*Sebastolobus* spp.	1
49	*Sebastes paucispinis*	1
49	*Sebastes goodei*	1
49	Unidentified fish larvae	1
	Total	515

Table 3. Pooled raw counts of fish larvae taken in Manta net tows on the 2005 CalCOFI survey.

Rank	Taxon	Count
1	*Sardinops sagax*	4205
2	*Engraulis mordax*	1701
3	*Cololabis saira*	438
4	*Hypsoblennius jenkinsi*	437
5	*Sebastes* spp.	278
6	*Trachurus symmetricus*	152
7	*Scorpaenichthys marmoratus*	117
8	*Ceratoscopelus townsendi*	57
9	*Scomber japonicus*	55
10	*Atherinopsis californiensis*	51
11	*Hypsoblennius gilberti*	32
12	*Vinciguerria lucetia*	22
13	*Sebastes diploproa*	20
14	*Lampadena urophaos*	16
15	*Merluccius productus*	12
15	*Medialuna californiensis*	12
15	*Tetragonurus cuvieri*	12
18	*Hemilepidotus spinosus*	11
19	*Hypsoblennius gentilis*	9
20	*Hexagrammos decagrammus*	8
21	*Ophiodon elongatus*	7
21	*Triphoturus mexicanus*	7
21	*Leuresthes tenuis*	7
21	*Genyonemus lineatus*	7
25	*Cheilopogon pinnatibarbatus*	6
25	*Oxylebius pictus*	6
25	*Girella nigricans*	6
25	*Pleuronichthys coenosus*	6
25	*Oxyjulis californica*	6
30	*Aristostomias scintillans*	5
30	*Cyclothone signata*	5
30	*Hypsypops rubicundus*	5
30	*Paralabrax* spp.	5
30	*Sebastes jordani*	5
35	*Parophrys vetulus*	4
35	*Stenobrachius leucopsarus*	4
35	*Sphyraena argentea*	4
38	*Nannobrachium* spp.	3
38	*Nannobrachium ritteri*	3
40	*Hexagrammos lagocephalus*	2
40	*Hypsoblennius* spp.	2
40	*Citharichthys stigmaeus*	2
40	*Chromis punctipinnis*	2
40	*Scorpaena guttata*	2
40	*Hermosilla azurea*	2
40	*Protomyctophum crockeri*	2
40	*Sebastes goodei*	2
40	*Pleuronichthys verticalis*	2
40	*Sebastes aurora*	2
40	*Coryphaena hippurus*	2
51	*Cyclothone acclinidens*	1
51	*Microstomus pacificus*	1
51	*Diogenichthys laternatus*	1

Table 3. (cont.)

Rank	Taxon	Count
51	*Neoclinus stephensae*	1
51	*Bathylagus wesethi*	1
51	*Pleuronichthys decurrens*	1
51	*Stomias atriventer*	1
51	*Atherinops affinis*	1
51	*Paralichthys californicus*	1
51	*Neoclinus blanchardi*	1
51	*Alloclinus holderi*	1
51	*Liparis fucensis*	1
51	*Liparis mucosus*	1
51	*Sebastes paucispinis*	1
51	Unidentified fish larvae	1
51	*Sebastolobus* spp.	1
51	*Atractoscion nobilis*	1
51	*Seriola lalandi*	1
51	*Peprilus simillimus*	1
51	*Icichthys lockingtoni*	1
51	*Scopelosaurus* spp.	1
	Total	7789

Table 4. Numbers of fish larvae taken in Manta net tows on the 2005 CalCOFI survey, listed by taxon, station, and month. Numbers of larvae are expressed as larvae per 100 cubic meters of water filtered. Unoccupied stations are indicated by a dash.

Sardinops sagax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	2.7	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	0.6	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	11.1	-	-	-	-	-	-	-	-
70.0	90.0	0.0	-	-	2.8	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
76.7	55.0	0.0	-	-	2.3	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	2.3	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	146.5	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	55.0	0.0	-	-	1.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	10.8	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	157.1	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	1.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	215.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	15.6	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	56.5	-	-	0.0	-	-	-	-	-
83.3	100.0	0.0	-	-	2.3	-	-	0.0	-	-	-	-	-
86.7	35.0	0.0	-	-	2.8	-	-	2.5	-	-	-	0.0	-
86.7	40.0	0.0	-	-	525.1	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.0	-	-	15.7	-	-	0.0	-	-	-	0.0	-
86.7	55.0	-	-	-	10.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	2.9	-	-	11.7	-	-	-	-	-
86.7	70.0	-	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0	35.0	0.0	-	-	14.8	-	-	25.5	-	-	-	0.0	-
90.0	37.0	0.0	-	-	395.6	-	-	14.5	-	-	-	0.0	-

Table 4. (cont.)

Sardinops sagax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	-	62.5	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	3.1	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	15.8	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	2.4	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	-	15.7	-	-	2.3	-	-	-	0.0	-
93.3	40.0	0.0	-	-	1.6	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	1233.4	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	38.8	-	-	1.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	23.6	-	-	5.3	-	-	-	0.0	-
93.3	90.0	0.0	-	-	2.1	-	-	0.0	-	-	-	0.0	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	51.0	0.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
76.7	51.0	0.0	-	-	0.6	-	-	4.0	-	-	-	0.0	-
76.7	55.0	1.9	-	-	3.9	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	4.0	-	-	0.7	-	-	-	0.0	-
80.0	55.0	0.0	-	-	47.1	-	-	0.7	-	-	-	0.0	-
80.0	60.0	0.0	-	-	8.7	-	-	0.7	-	-	-	0.0	-
80.0	70.0	0.0	-	-	1.3	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	3.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	0.9	-	-	0.0	-	-	-	-	-
86.7	33.0	0.0	-	-	4.6	-	-	0.5	-	-	-	0.0	-
86.7	35.0	0.0	-	-	232.3	-	-	6.7	-	-	-	0.0	-
86.7	40.0	0.0	-	-	20.0	-	-	4.0	-	-	-	0.0	-
86.7	50.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
86.7	55.0	-	-	-	16.8	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	0.0	-	-	16.1	-	-	-	-	-
90.0	28.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
90.0	35.0	0.0	-	-	1.8	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.8	-	-	92.8	-	-	4.6	-	-	-	0.0	-
90.0	45.0	0.0	-	-	16.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	3.7	-	-	0.8	-	-	-	0.0	-
93.3	28.0	0.0	-	-	813.8	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	45.3	-	-	29.0	-	-	-	0.0	-
93.3	35.0	0.0	-	-	29.0	-	-	12.1	-	-	-	0.0	-
93.3	40.0	0.0	-	-	5.5	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	8.0	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	0.0	-	-	2.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	1.2	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-

Bathylagus wesethi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Cyclothone acclinidens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	-	-	-	0.7	-	-	0.0	-	-	-	-	-

Cyclothone signata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	0.0	-	-	2.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Vinciguerria lucetia

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
80.0	90.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	0.8	-	-	-	0.8	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
90.0	70.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0	100.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-

Table 4. (cont.)

Vinciguerria lucetia (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 120.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3 26.7	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3 110.0	-	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Stomias atriventer

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 45.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Aristostomias scintillans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
86.7 90.0	0.0	-	-	0.0	-	-	1.5	-	-	-	0.0	-
93.3 90.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3 100.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

***Scopelosaurus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	13.5	-
80.0 90.0	0.0	-	-	0.0	-	-	1.3	-	-	-	0.0	-
80.0 100.0	0.0	-	-	0.0	-	-	2.0	-	-	-	0.0	-
83.3 80.0	0.0	-	-	0.0	-	-	0.7	-	-	-	-	-
86.7 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-
90.0 53.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
90.0 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.3	-
90.0 120.0	0.0	-	-	12.5	-	-	0.0	-	-	-	0.0	-
93.3 70.0	0.0	-	-	1.2	-	-	0.0	-	-	-	0.0	-
93.3 100.0	0.0	-	-	1.3	-	-	0.0	-	-	-	0.0	-
93.3 110.0	-	-	-	5.5	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Lampadena urophaos

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	0.0	-	-	0.0	-	-	5.4	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.0	-
90.0	120.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

***Nannobrachium* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	80.0	0.0	-	-	0.0	-	-	1.4	-	-	-	-	-
90.0	80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Nannobrachium ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	28.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Stenobrachius leucopsarus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
73.3	50.0	0.7	-	-	-	-	-	-	-	-	-	-	-
86.7	33.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	2.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	1.4	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Diogenichthys laternatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-

Protomyctophum crockeri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	55.0	-	-	-	0.8	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	2.9	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	1.9	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	1.6	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-

Atherinops affinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-

Atherinopsis californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
83.3	42.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	-	11.8	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3	26.7	5.2	-	-	11.4	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	7.4	-	-	0.0	-	-	-	0.0	-

Leuresthes tenuis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	45.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7	50.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
93.3	26.7	0.0	-	-	0.0	-	-	2.3	-	-	-	0.9	-
93.3	30.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-

Cololabis saira

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	0.6	-	-	-	-	-	-	-	-	-	-	-
60.0	100.0	0.6	-	-	-	-	-	-	-	-	-	-	-
70.0	51.0	0.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-
73.3	90.0	7.5	-	-	1.1	-	-	-	-	-	-	-	-

Table 4. (cont.)

Cololabis saira (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	100.0	6.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	60.0	0.0	-	-	1.4	-	-	0.0	-	-	-	0.0	-
76.7	70.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	5.4	-	-	0.7	-	-	-	0.9	-
76.7	90.0	4.9	-	-	8.8	-	-	0.0	-	-	-	0.9	-
76.7	100.0	3.5	-	-	27.6	-	-	0.0	-	-	-	0.8	-
80.0	70.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	7.0	-	-	0.7	-	-	-	2.9	-
80.0	90.0	2.9	-	-	0.8	-	-	0.0	-	-	-	0.8	-
80.0	100.0	13.3	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	2.4	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	80.0	5.1	-	-	0.0	-	-	0.0	-	-	-	-	-
83.3	90.0	3.0	-	-	8.7	-	-	1.8	-	-	-	-	-
83.3	100.0	5.4	-	-	1.5	-	-	0.0	-	-	-	-	-
83.3	110.0	4.2	-	-	1.4	-	-	0.0	-	-	-	-	-
86.7	35.0	1.9	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7	50.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	0.7	-	-	0.0	-	-	-	-	-
86.7	70.0	-	-	-	1.5	-	-	0.6	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.3	-
86.7	100.0	13.2	-	-	0.9	-	-	0.0	-	-	-	0.8	-
86.7	110.0	24.4	-	-	0.7	-	-	0.0	-	-	-	2.1	-
90.0	35.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	37.0	4.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.6	-	-	0.0	-	-	0.7	-	-	-	0.0	-
90.0	60.0	0.0	-	-	0.8	-	-	0.7	-	-	-	0.7	-
90.0	70.0	0.0	-	-	2.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	1.3	-	-	6.0	-	-	0.8	-	-	-	9.3	-
90.0	90.0	0.8	-	-	0.0	-	-	0.0	-	-	-	2.3	-
90.0	100.0	3.1	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	110.0	11.3	-	-	0.7	-	-	0.0	-	-	-	5.0	-
90.0	120.0	16.2	-	-	0.0	-	-	0.0	-	-	-	2.1	-
93.3	28.0	6.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	30.0	3.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Cololabis saira (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	35.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	9.9	-	-	0.7	-	-	-	0.0	-
93.3	55.0	3.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	2.6	-	-	0.0	-	-	-	0.0	-
93.3	70.0	16.7	-	-	3.0	-	-	0.6	-	-	-	0.0	-
93.3	80.0	0.9	-	-	0.0	-	-	0.0	-	-	-	2.4	-
93.3	90.0	2.0	-	-	2.1	-	-	0.7	-	-	-	0.7	-
93.3	100.0	2.2	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3	110.0	-	-	-	0.0	-	-	0.6	-	-	-	0.0	-
93.3	120.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Cheilopogon pinnatibarbatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.8	-
93.3	40.0	0.0	-	-	0.0	-	-	1.4	-	-	-	0.0	-

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	1.3	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	0.0	-	-	2.0	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	83.3	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	4.7	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-
70.0	51.0	0.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	1.2	-	-	-	-	-	-	-	-
73.3	50.0	5.5	-	-	-	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	2.6	-	-	0.0	-	-	-	0.0	-
76.7	51.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
76.7	55.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.9	-
80.0	55.0	4.9	-	-	1.4	-	-	0.0	-	-	-	1.7	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-

Table 4. (cont.)

***Sebastes* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	10.8	-	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.6	-	-	7.7	-	-	0.0	-	-	-	0.0	-
86.7	45.0	1.6	-	-	4.0	-	-	0.0	-	-	-	0.6	-
86.7	50.0	4.7	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	60.0	-	-	-	0.0	-	-	0.5	-	-	-	-	-
86.7	90.0	1.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.9	-	-	0.9	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	5.7	-	-	0.0	-	-	-	0.0	-
90.0	53.0	3.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	1.9	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	11.8	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
93.3	55.0	3.2	-	-	5.8	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	-	-	-	0.0	-	-	0.5	-	-	-	-	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	7.9	-
83.3	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.8	-
86.7	40.0	1.9	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7	60.0	-	-	-	0.0	-	-	0.5	-	-	-	-	-
93.3	35.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
93.3	55.0	2.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Sebastes goodei

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	1.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	60.0	0.0	-	-	1.2	-	-	-	-	-	-	-	-
66.7	55.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	1.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	1.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

***Sebastolobus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	35.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-

Scorpaena guttata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	1.3	-	-	0.0	-	-	-	0.0	-

Hexagrammos decagrammus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	1.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Hexagrammos lagocephalus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	51.0	1.5	-	-	0.0	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	55.0	0.0	-	-	0.6	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	3.4	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Hemilepidotus spinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	6.2	-	-	0.0	-	-	-	-	-	-	-	-
80.0	51.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Scorpaenichthys marmoratus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.6	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	7.5	-	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	1.4	-	-	-	-	-	-	-	-	-	-	-
76.7	51.0	24.7	-	-	1.7	-	-	0.0	-	-	-	7.0	-
76.7	55.0	0.0	-	-	0.8	-	-	0.0	-	-	-	1.4	-
76.7	60.0	0.9	-	-	0.7	-	-	0.0	-	-	-	1.8	-
80.0	51.0	11.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	6.1	-
83.3	51.0	3.1	-	-	0.0	-	-	0.0	-	-	-	0.8	-
83.3	55.0	1.5	-	-	1.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.8	-	-	0.0	-	-	-	4.4	-
83.3	90.0	0.0	-	-	0.9	-	-	0.0	-	-	-	-	-
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
86.7	50.0	2.7	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	45.0	1.3	-	-	2.1	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	1.9	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Liparis fucensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-

Liparis mucosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-

***Paralabrax* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	-	0.0	-	-	3.4	-	-	-	0.0	-
93.3	30.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-

Seriola lalandi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-

Trachurus symmetricus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	3.9	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	8.1	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	55.0	-	-	-	1.5	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	63.5	-	-	0.0	-	-	-	-	-
86.7	70.0	-	-	-	2.3	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	70.0	0.0	-	-	11.5	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	2.0	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-

Table 4. (cont.)

Coryphaena hippurus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-

Atractoscion nobilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	30.0	0.0	-	-	1.0	-	-	0.0	-	-	-	0.0	-

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.6	-	-	0.0	-	-	-	-	-	-	-	-
86.7	33.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Girella nigricans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	28.0	0.0	-	-	0.0	-	-	2.5	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-

Hermosilla azurea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3	35.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-

Medialuna californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	0.0	-	-	4.2	-	-	-	0.0	-
80.0	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
90.0	80.0	0.0	-	-	0.0	-	-	1.6	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-

Chromis punctipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

Table 4. (cont.)

Hypsypops rubicundus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
86.7	35.0	0.0	-	-	2.8	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

Oxyjulis californica

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	45.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	-	0.0	-	-	1.5	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

Alloclinus holderi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-

Neoclinus blanchardi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-

Neoclinus stephensae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

***Hypsoblennius* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-

Hypsoblennius gentilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	1.8	-
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	35.0	0.0	-	-	0.0	-	-	2.6	-	-	-	0.0	-
93.3	26.7	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	0.0	-	-	1.8	-	-	-	0.0	-

Table 4. (cont.)

Hypsoblennius gilberti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.0	-	-	0.8	-	-	-	1.8	-
83.3	55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	10.6	-	-	-	0.0	-
86.7	35.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.8	-
86.7	40.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7	50.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	35.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3	30.0	0.0	-	-	0.0	-	-	1.8	-	-	-	0.0	-

Hypsoblennius jenkinsi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.7	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.6	-
81.8	46.9	0.0	-	-	0.0	-	-	1.6	-	-	-	2.7	-
83.3	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7	33.0	0.0	-	-	0.7	-	-	89.7	-	-	-	1.4	-
86.7	35.0	0.0	-	-	0.0	-	-	37.1	-	-	-	0.0	-
86.7	40.0	0.0	-	-	0.0	-	-	1.6	-	-	-	0.0	-
90.0	28.0	0.0	-	-	0.0	-	-	2.5	-	-	-	0.0	-
90.0	30.0	0.0	-	-	0.0	-	-	3.3	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.0	-	-	30.6	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	24.5	-	-	-	0.0	-
90.0	53.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
93.3	26.7	0.0	-	-	0.0	-	-	0.8	-	-	-	0.9	-
93.3	28.0	0.0	-	-	0.9	-	-	0.0	-	-	-	3.1	-
93.3	30.0	0.0	-	-	0.0	-	-	20.9	-	-	-	0.0	-
93.3	35.0	0.0	-	-	0.0	-	-	59.8	-	-	-	7.6	-

Sphyraena argentea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	28.0	0.0	-	-	0.0	-	-	2.5	-	-	-	0.0	-
93.3	26.7	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-

Table 4. (cont.)

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
86.7 40.0	0.0	-	-	1.5	-	-	4.0	-	-	-	0.0	-
90.0 35.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-
90.0 37.0	0.0	-	-	4.3	-	-	0.0	-	-	-	0.0	-
90.0 45.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3 35.0	0.0	-	-	20.7	-	-	0.0	-	-	-	0.0	-
93.3 55.0	0.0	-	-	8.0	-	-	0.0	-	-	-	0.0	-
93.3 60.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3 70.0	0.0	-	-	1.2	-	-	0.0	-	-	-	0.0	-

Icichthys lockingtoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 30.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-

Tetragonurus cuvieri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 70.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
76.7 100.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0 90.0	0.0	-	-	0.0	-	-	1.3	-	-	-	0.0	-
83.3 80.0	0.0	-	-	0.0	-	-	0.7	-	-	-	-	-
83.3 100.0	0.0	-	-	0.0	-	-	0.7	-	-	-	-	-
86.7 70.0	-	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7 90.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
90.0 110.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.8	-
90.0 120.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
93.3 110.0	-	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Peprilus simillimus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-

Citharichthys stigmaeus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 80.0	0.6	-	-	0.0	-	-	-	-	-	-	-	-
86.7 60.0	-	-	-	0.0	-	-	0.5	-	-	-	-	-

Table 4. (cont.)

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	28.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-

Microstomus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	0.7	-	-	-	-	-	-	-	-

Parophrys vetulus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	1.3	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Pleuronichthys coenosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
86.7	40.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
93.3	35.0	0.0	-	-	0.0	-	-	1.5	-	-	-	0.0	-

Pleuronichthys decurrens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-

Pleuronichthys verticalis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	35.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-

Unidentified fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	28.0	0.0	-	-	0.0	-	-	0.9	-	-	-	0.0	-

Table 5. Station and Bongo net tow data for CalCOFI cruises in 2005. Counts for fish eggs and larvae are not adjusted for standard haul factor or percent of sample sorted. Plankton volume given as milliliters per 1000 cubic meters of water strained.

CalCOFI Cruise 0501

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
60.0	53.0	37	50.9	123	06.0	JD	05	01	30	0511	76	174	4.37	29	100.0	32	230
60.0	60.0	37	36.8	123	36.6	JD	05	01	30	0029	213	456	4.66	140	50.0	17	64
60.0	70.0	37	16.8	124	20.0	JD	05	01	29	1737	212	470	4.52	87	48.7	17	6
60.0	80.0	36	56.9	125	03.2	JD	05	01	29	1134	213	433	4.92	42	100.0	8	0
60.0	90.0	36	36.8	125	46.4	JD	05	01	29	0545	207	457	4.52	171	51.2	47	9
60.0	100.0	36	16.8	126	29.2	JD	05	01	29	0009	216	453	4.77	37	100.0	4	6
63.3	52.0	37	18.5	122	37.2	JD	05	01	26	0313	80	175	4.55	11	100.0	6	60
63.3	55.0	37	12.6	122	50.1	JD	05	01	26	2227	208	430	4.84	172	51.3	21	44
63.3	60.0	37	02.7	123	11.7	JD	05	01	27	1553	183	547	3.34	13	100.0	24	55
63.3	70.0	36	42.5	123	54.8	JD	05	01	27	2310	208	465	4.47	67	100.0	26	17
63.3	80.0	36	22.6	124	37.8	JD	05	01	28	0502	221	464	4.76	84	100.0	54	21
63.3	90.0	36	02.7	125	20.3	JD	05	01	28	1100	217	464	4.67	39	100.0	45	1
63.3	100.0	35	42.6	126	03.0	JD	05	01	28	1735	209	454	4.60	22	100.0	6	8
66.7	50.0	36	47.2	122	03.5	JD	05	01	25	1810	202	477	4.23	140	49.2	20	5
66.7	55.0	36	37.2	122	24.9	JD	05	01	25	1407	216	465	4.64	9	100.0	40	38
66.7	60.0	36	27.2	122	46.5	JD	05	01	25	0929	208	456	4.55	50	100.0	24	203
66.7	70.0	36	07.3	123	29.2	JD	05	01	25	0214	215	454	4.73	75	100.0	2	4
66.7	80.0	35	47.3	124	11.8	JD	05	01	24	1851	181	525	3.44	57	100.0	5	11
66.7	90.0	35	27.2	124	54.1	JD	05	01	24	1112	198	482	4.10	37	100.0	2	6
66.7	100.0	35	07.2	125	36.4	JD	05	01	24	0351	219	433	5.06	67	100.0	9	10
70.0	51.0	36	10.9	121	43.7	JD	05	01	22	1456	212	438	4.84	48	100.0	20	17
70.0	55.0	36	02.9	122	00.6	JD	05	01	22	1822	210	437	4.79	75	100.0	11	29
70.0	60.0	35	52.9	122	21.9	JD	05	01	22	2210	206	450	4.57	58	100.0	39	14
70.0	70.0	35	32.9	123	04.6	JD	05	01	23	0350	213	429	4.97	58	100.0	10	2
70.0	80.0	35	12.9	123	46.7	JD	05	01	23	0922	200	460	4.35	46	100.0	4	7
70.0	90.0	34	52.9	124	28.6	JD	05	01	23	1530	213	439	4.85	30	100.0	3	17
70.0	100.0	34	32.8	125	10.9	JD	05	01	23	2136	210	427	4.91	44	100.0	4	7
73.3	50.0	35	38.8	121	15.4	JD	05	01	22	0938	24	74	3.30	14	100.0	9	13
73.3	55.0	35	28.6	121	36.8	JD	05	01	22	0614	212	448	4.73	65	100.0	48	130
73.3	60.0	35	18.7	121	57.7	JD	05	01	22	0223	213	431	4.94	195	48.8	6	3

Table 5. (cont.)

CalCOFI Cruise 0501 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
73.3	70.0	34	58.6	122	39.9	JD	05	01	21	2057	204	447	4.56	83	51.3	3	0
73.3	80.0	34	38.6	123	21.9	JD	05	01	21	1346	206	462	4.44	130	100.0	9	3
73.3	90.0	34	18.7	124	03.6	JD	05	01	21	0852	207	454	4.54	365	100.0	1	5
73.3	100.0	33	58.6	124	45.4	JD	05	01	21	0304	216	444	4.86	176	100.0	4	2
76.7	49.0	35	05.3	120	46.8	NH	05	01	18	2139	50	142	3.54	7	100.0	15	60
76.7	51.0	35	01.2	120	55.1	NH	05	01	18	1926	217	410	5.30	183	100.0	42	38
76.7	55.0	34	53.3	121	11.9	NH	05	01	18	1620	207	452	4.57	53	100.0	97	44
76.7	60.0	34	43.4	121	33.0	NH	05	01	18	1143	210	434	4.84	48	100.0	57	108
76.7	70.0	34	23.2	122	14.7	NH	05	01	18	0529	207	444	4.66	27	100.0	5	4
76.7	80.0	34	03.3	122	56.5	NH	05	01	17	2311	210	442	4.76	84	100.0	19	4
76.7	90.0	33	43.2	123	38.1	NH	05	01	17	1703	197	525	3.75	29	100.0	8	2
76.7	100.0	33	22.5	124	19.0	NH	05	01	17	0922	208	447	4.65	36	100.0	2	9
80.0	50.5	34	27.7	120	29.2	NH	05	01	15	2048	12	48	2.42	83	100.0	1	15
80.0	51.0	34	27.0	120	31.4	NH	05	01	15	2138	56	127	4.44	24	100.0	29	18
80.0	60.0	34	09.1	121	09.1	NH	05	01	16	0503	207	413	5.00	48	100.0	15	8
80.0	70.0	33	49.0	121	50.5	NH	05	01	16	1105	206	430	4.79	23	100.0	3	3
80.0	80.0	33	28.9	122	32.1	NH	05	01	16	1703	216	460	4.70	98	100.0	4	6
80.0	90.0	33	09.0	123	13.4	NH	05	01	16	2247	208	462	4.50	755	100.0	3	1
80.0	100.0	32	48.9	123	54.5	NH	05	01	17	0430	215	431	4.98	411	100.0	0	0
81.7	43.5	34	24.2	119	47.8	NH	05	01	15	1352	11	41	2.71	48	100.0	0	5
81.8	46.9	34	16.6	120	01.5	NH	05	01	15	1704	205	444	4.61	29	100.0	41	1584
83.3	39.4	34	15.3	119	19.5	NH	05	01	15	0707	14	41	3.45	73	100.0	41	234
83.3	40.6	34	13.4	119	24.6	NH	05	01	15	0843	20	55	3.70	128	100.0	2	35
83.3	42.0	34	10.7	119	30.6	NH	05	01	15	1056	103	245	4.20	33	100.0	50	229
83.3	51.0	33	52.7	120	08.2	NH	05	01	15	0110	65	169	3.85	53	100.0	80	36
83.3	55.0	33	44.6	120	24.7	NH	05	01	14	2155	207	431	4.81	121	100.0	57	189
83.3	60.0	33	34.7	120	45.2	NH	05	01	14	1739	209	430	4.86	47	100.0	7	30
83.3	70.0	33	14.7	121	26.6	NH	05	01	14	1140	207	480	4.31	37	100.0	18	7
83.3	80.0	32	54.7	122	07.7	NH	05	01	14	0445	210	448	4.68	208	100.0	2	5
83.3	90.0	32	34.6	122	48.7	NH	05	01	13	2243	209	441	4.73	315	100.0	2	1
83.3	100.0	32	14.7	123	29.4	NH	05	01	13	1701	208	440	4.71	441	100.0	3	4
83.3	110.0	31	54.6	124	10.2	NH	05	01	13	1056	202	505	4.00	420	100.0	1	2
85.4	35.8	34	00.7	118	50.0	NH	05	01	19	1257	13	45	2.89	22	100.0	3	32

Table 5. (cont.)

CalCOFI Cruise 0501 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	33.0	33	53.0	118	29.8	NH	05	01	10	2038	41	108	3.82	74	100.0	57	516
86.7	35.0	33	48.9	118	37.4	NH	05	01	10	2246	211	431	4.88	37	100.0	23	58
86.7	40.0	33	39.3	118	58.2	NH	05	01	11	0455	221	456	4.86	57	100.0	11	186
86.7	45.0	33	29.3	119	18.6	NH	05	01	11	0858	181	551	3.27	22	100.0	8	215
86.7	50.0	33	19.4	119	39.8	NH	05	01	11	1231	57	190	2.99	42	100.0	79	15
86.7	90.0	31	59.5	122	23.8	NH	05	01	12	1632	208	489	4.26	63	100.0	4	3
86.7	100.0	31	39.5	123	04.1	NH	05	01	12	2225	221	496	4.45	77	100.0	4	7
86.7	110.0	31	19.4	123	44.5	NH	05	01	13	0429	210	446	4.71	101	100.0	6	7
86.8	32.5	33	53.5	118	26.4	NH	05	01	10	1939	14	41	3.45	98	100.0	23	333
88.5	30.1	33	40.5	118	05.7	NH	05	01	10	1611	14	42	3.38	24	100.0	5	347
90.0	27.7	33	29.7	117	44.8	NH	05	01	10	1210	15	42	3.44	47	100.0	32	142
90.0	28.0	33	29.1	117	46.1	NH	05	01	10	1302	39	112	3.48	107	100.0	18	345
90.0	30.0	33	25.1	117	54.6	NH	05	01	10	0830	209	431	4.85	23	100.0	4	13
90.0	35.0	33	15.1	118	15.5	NH	05	01	10	0536	174	358	4.86	36	100.0	34	15
90.0	37.0	33	11.3	118	23.3	NH	05	01	10	0256	197	436	4.51	46	100.0	3	103
90.0	45.0	32	55.0	118	56.0	NH	05	01	09	2137	214	416	5.16	106	100.0	56	113
90.0	53.0	32	39.2	119	28.7	NH	05	01	09	1547	208	472	4.40	25	100.0	12	237
90.0	60.0	32	25.8	119	57.7	NH	05	01	09	0923	207	497	4.16	12	100.0	3	5
90.0	70.0	32	05.4	120	38.4	NH	05	01	09	0422	218	450	4.84	64	100.0	8	1
90.0	80.0	31	45.1	121	19.0	NH	05	01	08	2218	210	424	4.96	57	100.0	7	3
90.0	90.0	31	25.2	121	59.3	NH	05	01	08	1610	207	435	4.77	32	100.0	2	9
90.0	100.0	31	04.9	122	39.4	NH	05	01	08	0835	190	449	4.23	20	100.0	3	4
90.0	110.0	30	45.3	123	19.7	NH	05	01	08	0157	197	455	4.32	15	100.0	34	7
90.0	120.0	30	25.0	123	59.8	NH	05	01	07	1943	198	478	4.14	29	100.0	20	5
91.7	26.4	33	14.7	117	28.1	NH	05	01	20	0326	11	46	2.38	108	100.0	4	74
93.3	26.7	32	57.4	117	18.4	NH	05	01	04	1244	70	167	4.20	36	100.0	2	3
93.3	28.0	32	54.3	117	23.4	NH	05	01	04	1715	211	403	5.22	55	100.0	7	8
93.3	30.0	32	50.8	117	31.9	NH	05	01	04	2023	193	426	4.52	23	100.0	1	24
93.3	40.0	32	30.6	118	12.6	NH	05	01	05	0524	202	413	4.89	27	100.0	8	110
93.3	45.0	32	21.1	118	32.4	NH	05	01	05	0831	201	426	4.71	33	100.0	9	49
93.3	50.0	32	10.7	118	53.1	NH	05	01	05	1403	199	452	4.40	51	100.0	10	111
93.3	55.0	32	00.9	119	13.9	NH	05	01	05	1808	199	441	4.52	77	100.0	11	18
93.3	60.0	31	51.0	119	34.1	NH	05	01	05	2200	202	425	4.75	42	100.0	22	22

Table 5. (cont.)

CalCOFI Cruise 0501 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
93.3	70.0	31	30.6	120	14.5	NH	05	01	06	0401	202	418	4.83	67	100.0	5	1
93.3	80.0	31	11.1	120	54.7	NH	05	01	06	0900	203	419	4.83	38	100.0	15	6
93.3	90.0	30	51.0	121	35.2	NH	05	01	06	1635	209	401	5.21	30	100.0	19	15
93.3	100.0	30	31.1	122	15.6	NH	05	01	06	2245	217	430	5.03	28	100.0	11	20
93.3	110.0	30	11.2	122	55.2	NH	05	01	07	0529	197	445	4.42	25	100.0	10	6
93.3	120.0	29	50.8	123	34.8	NH	05	01	07	1242	202	434	4.66	25	100.0	4	4
93.4	26.4	32	57.0	117	16.6	NH	05	01	04	1359	14	49	2.79	102	100.0	1	39

CalCOFI Cruise 0504

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
60.0	53.0	37	50.8	123	06.0	JD	05	04	23	0950	73	173	4.24	58	100.0	17	26
60.0	60.0	37	36.8	123	36.6	JD	05	04	23	0525	213	424	5.01	83	51.4	3	12
60.0	70.0	37	16.8	124	19.9	JD	05	04	22	2153	217	420	5.16	131	52.7	7	11
60.0	80.0	36	56.8	125	03.2	JD	05	04	22	1603	212	419	5.07	220	52.1	3	9
63.3	52.0	37	18.6	122	37.2	JD	05	04	21	1615	84	165	5.09	152	100.0	7	16
63.3	55.0	37	12.6	122	50.1	JD	05	04	21	1845	209	442	4.72	66	48.2	34	55
63.3	60.0	37	02.5	123	11.8	JD	05	04	21	2211	216	406	5.31	185	52.0	35	40
63.3	70.0	36	42.6	123	54.8	JD	05	04	22	0403	216	406	5.31	52	100.0	8	9
63.3	80.0	36	22.7	124	37.7	JD	05	04	22	0953	211	406	5.21	101	51.2	7	18
66.7	50.0	36	47.2	122	03.4	JD	05	04	20	1045	220	410	5.36	134	52.7	1	42
66.7	55.0	36	37.3	122	24.8	JD	05	04	20	1513	213	399	5.33	108	53.4	5	92
66.7	60.0	36	27.3	122	46.2	JD	05	04	20	1950	209	447	4.68	790	51.2	1	3
66.7	80.0	35	47.2	124	11.7	JD	05	04	17	1026	192	478	4.02	50	100.0	9	4
66.7	90.0	35	27.2	124	54.2	JD	05	04	17	0211	203	452	4.49	49	100.0	6	12
66.7	100.0	35	07.1	125	36.4	JD	05	04	16	1835	213	431	4.93	144	100.0	28	7
70.0	51.0	36	09.0	121	47.9	JD	05	04	15	0202	189	524	3.60	137	51.3	6	8
70.0	55.0	36	02.8	122	00.6	JD	05	04	15	0625	219	458	4.78	33	100.0	11	46
70.0	60.0	35	52.8	122	22.1	JD	05	04	15	1041	189	493	3.83	45	100.0	19	75
70.0	70.0	35	32.9	123	04.4	JD	05	04	15	1716	213	465	4.56	34	100.0	4	35

Table 5. (cont.) CalCOFI Cruise 0504 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
70.0	80.0	35	12.8	123	46.7	JD	05	04	15	2330	216	439	4.92	118	100.0	8	11
70.0	90.0	34	53.0	124	28.9	JD	05	04	16	0550	212	445	4.76	38	100.0	7	9
70.0	100.0	34	32.8	125	10.8	JD	05	04	16	1153	215	423	5.07	47	100.0	35	25
73.3	70.0	34	57.7	122	39.7	JD	05	04	08	1515	204	484	4.21	37	100.0	10	14
73.3	80.0	34	38.7	123	21.9	JD	05	04	08	0852	191	523	3.66	44	100.0	7	8
73.3	90.0	34	18.5	124	03.7	JD	05	04	08	0237	216	448	4.82	25	100.0	11	8
73.3	100.0	33	58.6	124	45.3	JD	05	04	07	2031	210	455	4.62	51	100.0	2	21
76.7	49.0	35	05.3	120	46.6	NH	05	04	30	0630	51	111	4.55	90	100.0	8	372
76.7	51.0	35	01.4	120	54.9	NH	05	04	30	0443	200	402	4.99	187	53.3	33	1023
76.7	55.0	34	53.4	121	11.5	NH	05	04	30	0134	202	423	4.76	156	50.0	113	2540
76.7	60.0	34	43.2	121	33.1	NH	05	04	29	2127	207	385	5.38	169	52.3	17	913
76.7	70.0	34	23.5	122	14.5	NH	05	04	29	1545	203	450	4.51	56	100.0	321	2370
76.7	80.0	34	03.3	122	56.5	NH	05	04	29	0835	209	403	5.18	65	46.1	119	15
76.7	90.0	33	43.4	123	37.8	NH	05	04	29	0356	210	434	4.84	74	53.1	46	26
76.7	100.0	33	23.3	124	19.6	NH	05	04	28	2150	207	419	4.93	84	100.0	23	26
80.0	50.5	34	27.5	120	29.6	NH	05	04	27	0225	27	66	4.12	211	100.0	16	379
80.0	51.0	34	27.0	120	31.4	NH	05	04	27	0340	56	124	4.48	210	50.0	21	156
80.0	55.0	34	19.0	120	48.0	NH	05	04	27	0711	209	419	4.98	86	52.7	61	761
80.0	60.0	34	09.0	121	09.0	NH	05	04	27	1147	212	410	5.17	51	100.0	130	716
80.0	70.0	33	48.7	121	50.3	NH	05	04	27	1840	207	440	4.70	59	46.1	36	104
80.0	80.0	33	29.0	122	32.2	NH	05	04	28	0111	213	460	4.62	83	52.6	109	264
80.0	90.0	33	09.0	123	13.4	NH	05	04	28	0722	208	473	4.39	21	100.0	16	26
80.0	100.0	32	49.2	123	54.0	NH	05	04	28	1512	216	444	4.87	65	100.0	18	88
81.7	43.5	34	23.8	119	46.9	NH	05	04	26	1929	19	69	2.81	88	100.0	8	777
81.8	46.9	34	16.4	120	01.6	NH	05	04	26	2256	206	364	5.65	146	52.8	53	1217
83.3	39.4	34	15.3	119	19.6	NH	05	04	26	1632	15	42	3.61	24	100.0	0	0
83.3	40.6	34	13.7	119	24.4	NH	05	04	26	1527	20	59	3.35	51	100.0	7	2669
83.3	42.0	34	11.0	119	30.6	NH	05	04	26	1239	140	299	4.68	261	51.2	271	433
83.3	51.0	33	52.6	120	08.3	NH	05	04	22	1904	64	154	4.12	39	100.0	14	105
83.3	55.0	33	44.9	120	24.3	NH	05	04	22	2219	211	381	5.55	66	52.0	24	815
83.3	60.0	33	34.7	120	45.2	NH	05	04	23	0240	198	458	4.32	144	51.5	335	588
83.3	70.0	33	14.7	121	26.6	NH	05	04	23	0806	210	388	5.43	83	56.2	39	183
83.3	80.0	32	54.5	122	07.3	NH	05	04	23	1555	196	437	4.48	110	52.0	98	443
83.3	90.0	32	34.7	122	48.9	NH	05	04	23	2114	207	409	5.06	54	100.0	8	70

Table 5. (cont.)

CalCOFI Cruise 0504 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
83.3	100.0	32	14.7	123	29.5	NH	05	04	24	0247	206	473	4.35	25	100.0	6	10
83.3	110.0	31	54.2	124	08.7	NH	05	04	24	0756	208	419	4.95	50	100.0	12	33
85.4	35.8	34	00.7	118	50.2	NH	05	04	30	1924	28	78	3.61	1003	100.0	8	43
86.7	33.0	33	53.0	118	29.6	NH	05	04	21	2343	46	67	6.90	747	52.0	17	466
86.7	35.0	33	49.5	118	37.5	NH	05	04	22	0237	213	375	5.69	312	50.4	328	539
86.7	40.0	33	39.4	118	58.4	NH	05	04	22	0723	206	400	5.15	248	50.5	566	36
86.7	45.0	33	29.3	119	19.3	NH	05	04	22	1141	195	446	4.38	76	47.0	19	5370
86.7	50.0	33	19.4	119	39.8	NH	05	04	26	0528	56	131	4.24	46	100.0	275	7564
86.7	55.0	33	09.5	120	00.1	NH	05	04	26	0155	189	447	4.22	60	48.1	111	2591
86.7	60.0	32	59.3	120	21.3	NH	05	04	25	2130	201	409	4.90	34	100.0	82	47
86.7	70.0	32	39.2	121	01.7	NH	05	04	25	1513	202	447	4.52	54	100.0	219	338
86.7	80.0	32	19.1	121	41.4	NH	05	04	25	0753	211	385	5.47	39	100.0	37	51
86.7	90.0	31	59.2	122	22.8	NH	05	04	25	0251	212	430	4.92	30	100.0	76	58
86.7	100.0	31	39.5	123	04.5	NH	05	04	24	2053	206	395	5.22	96	100.0	6	62
86.7	110.0	31	19.3	123	44.3	NH	05	04	24	1502	209	429	4.87	30	100.0	7	50
86.8	32.5	33	53.2	118	26.5	NH	05	04	21	2208	19	52	3.66	134	100.0	61	3661
88.5	30.1	33	40.3	118	05.7	NH	05	04	21	1845	14	51	2.73	39	100.0	23	422
90.0	27.7	33	29.6	117	45.0	NH	05	04	21	1614	19	71	2.62	113	100.0	44	141
90.0	28.0	33	29.2	117	46.3	NH	05	04	21	1447	212	417	5.07	185	51.9	557	52
90.0	30.0	33	25.2	117	54.3	NH	05	04	21	1154	203	421	4.82	145	52.4	351	15
90.0	35.0	33	15.2	118	15.1	NH	05	04	21	0800	196	385	5.08	166	51.5	713	61
90.0	37.0	33	11.2	118	23.1	NH	05	04	21	0450	207	400	5.18	177	53.5	266	50
90.0	45.0	32	55.1	118	56.2	NH	05	04	20	2257	207	359	5.77	109	53.8	434	489
90.0	53.0	32	39.1	119	28.8	NH	05	04	20	1718	203	417	4.86	36	100.0	100	152
90.0	60.0	32	25.1	119	57.7	NH	05	04	20	1123	200	418	4.78	19	100.0	31	79
90.0	70.0	32	05.0	120	38.2	NH	05	04	20	0454	200	441	4.54	27	100.0	76	142
90.0	80.0	31	45.2	121	19.1	NH	05	04	19	2231	210	438	4.78	30	100.0	32	28
90.0	90.0	31	25.0	121	59.2	NH	05	04	19	1558	202	503	4.02	20	100.0	20	30
90.0	100.0	31	05.1	122	39.7	NH	05	04	19	0711	211	512	4.12	20	100.0	47	256
90.0	110.0	30	45.1	123	19.9	NH	05	04	19	0148	212	545	3.87	97	100.0	10	203
90.0	120.0	30	25.1	123	59.8	NH	05	04	18	1839	195	520	3.74	6	100.0	1	67
91.7	26.4	33	14.7	117	27.8	NH	05	04	15	1526	8	64	1.24	63	100.0	16	918
93.3	26.7	32	57.5	117	18.1	NH	05	04	15	1114	206	427	4.81	154	46.9	230	772

Table 5. (cont.)

CalCOFI Cruise 0504 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
93.3	28.0	32	54.6	117	23.7	NH	05	04	15	2004	200	399	5.01	198	49.3	494	118
93.3	30.0	32	50.8	117	32.0	NH	05	04	15	2242	202	384	5.25	294	50.4	598	27
93.3	35.0	32	40.8	117	52.1	NH	05	04	16	0234	206	424	4.85	99	50.0	229	17
93.3	40.0	32	30.8	118	12.7	NH	05	04	16	0645	197	452	4.36	55	100.0	489	41
93.3	45.0	32	20.8	118	33.3	NH	05	04	16	1055	211	433	4.88	224	49.4	437	79
93.3	50.0	32	10.9	118	53.4	NH	05	04	16	1507	197	459	4.28	61	46.4	779	69
93.3	55.0	32	00.8	119	14.0	NH	05	04	16	1919	210	449	4.67	58	50.0	1198	77
93.3	60.0	31	50.8	119	34.3	NH	05	04	16	2318	209	413	5.05	61	100.0	725	234
93.3	70.0	31	31.0	120	14.7	NH	05	04	17	0534	209	447	4.67	45	100.0	107	84
93.3	80.0	31	10.8	120	55.2	NH	05	04	17	1241	214	453	4.73	38	100.0	393	71
93.3	90.0	30	50.7	121	35.6	NH	05	04	17	1839	205	459	4.46	26	100.0	29	79
93.3	100.0	30	30.8	122	15.5	NH	05	04	18	0035	215	478	4.49	17	100.0	16	123
93.3	110.0	30	10.8	122	55.3	NH	05	04	18	0640	208	509	4.08	6	100.0	10	719
93.3	120.0	29	50.9	123	35.3	NH	05	04	18	1243	213	515	4.14	6	100.0	1	44
93.4	26.4	32	57.1	117	16.8	NH	05	04	15	1243	10	63	1.58	63	100.0	3	231

CalCOFI Cruise 0507

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.9	NH	05	07	16	0151	40	105	3.82	105	100.0	1	113
76.7	51.0	35	01.3	120	55.2	NH	05	07	15	2314	209	419	4.98	207	51.7	3	12
76.7	55.0	34	53.3	121	11.8	NH	05	07	15	1944	203	457	4.43	282	51.1	1	0
76.7	60.0	34	43.2	121	33.1	NH	05	07	15	1528	209	417	5.00	341	51.4	9	0
76.7	70.0	34	23.2	122	15.3	NH	05	07	15	0827	214	441	4.84	48	100.0	33	30
76.7	80.0	34	03.1	122	56.0	NH	05	07	15	0113	214	452	4.72	31	100.0	2	6
76.7	90.0	33	43.2	123	38.0	NH	05	07	14	1859	213	453	4.70	40	100.0	10	14
76.7	100.0	33	22.5	124	19.3	NH	05	07	14	1241	214	476	4.50	23	100.0	8	42
80.0	50.5	34	27.7	120	29.1	NH	05	07	12	2022	13	59	2.22	102	100.0	1	218
80.0	51.0	34	27.1	120	31.3	NH	05	07	12	2151	44	157	2.77	286	53.3	1	30
80.0	55.0	34	19.0	120	48.0	NH	05	07	13	0118	210	426	4.91	181	50.6	1	0

Table 5. (cont.)

CalCOFI Cruise 0507 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
80.0	60.0	34	09.0	121	09.0	NH	05	07	13	0543	211	453	4.65	157	49.2	8	0
80.0	70.0	33	49.2	121	50.7	NH	05	07	13	1151	211	459	4.59	115	52.8	7	5
80.0	80.0	33	28.9	122	31.9	NH	05	07	13	1811	213	463	4.60	26	100.0	14	8
80.0	90.0	33	08.6	123	12.8	NH	05	07	14	0016	212	454	4.67	31	100.0	69	496
80.0	100.0	32	49.1	123	54.4	NH	05	07	14	0641	214	479	4.46	21	100.0	35	560
81.7	43.5	34	24.3	119	48.0	NH	05	07	12	1319	14	46	2.94	44	100.0	1	44
81.8	46.9	34	16.6	120	01.4	NH	05	07	12	1659	201	450	4.46	162	50.6	3	0
83.3	39.4	34	15.5	119	19.5	NH	05	07	12	0814	14	51	2.72	39	100.0	0	31
83.3	40.6	34	13.5	119	24.6	NH	05	07	12	0717	21	60	3.43	150	100.0	6	53
83.3	42.0	34	10.6	119	30.6	NH	05	07	12	0959	78	205	3.80	112	100.0	7	127
83.3	51.0	33	52.7	120	08.2	NH	05	07	12	0031	77	161	4.76	230	54.0	2	34
83.3	55.0	33	44.6	120	24.6	NH	05	07	11	2057	204	451	4.50	233	48.5	5	0
83.3	60.0	33	34.7	120	45.4	NH	05	07	11	1642	209	444	4.71	79	51.4	9	3
83.3	70.0	33	13.8	121	27.7	NH	05	07	11	0905	208	484	4.30	29	100.0	10	0
83.3	80.0	32	54.3	122	07.9	NH	05	07	11	0344	218	427	5.10	47	100.0	24	110
83.3	90.0	32	34.7	122	48.8	NH	05	07	10	2127	213	488	4.36	39	100.0	13	209
83.3	100.0	32	14.6	123	29.7	NH	05	07	10	1517	213	435	4.90	30	100.0	29	346
83.3	110.0	31	54.7	124	10.7	NH	05	07	10	0804	212	452	4.69	33	100.0	30	211
85.4	35.8	34	00.7	118	49.8	NH	05	07	16	1752	13	44	2.94	113	100.0	1	152
86.7	33.0	33	53.4	118	29.4	NH	05	07	07	2020	39	104	3.78	106	100.0	12	112
86.7	35.0	33	49.4	118	37.7	NH	05	07	07	2306	214	415	5.16	123	50.9	9	6
86.7	40.0	33	39.4	118	58.5	NH	05	07	08	0329	201	432	4.65	125	51.8	0	0
86.7	45.0	33	29.4	119	19.2	NH	05	07	08	0751	207	392	5.28	452	51.9	1	0
86.7	50.0	33	19.4	119	39.8	NH	05	07	08	1128	50	118	4.25	490	53.4	2	0
86.7	55.0	33	09.4	120	00.2	NH	05	07	08	1538	214	413	5.17	90	51.3	5	2
86.7	60.0	32	59.4	120	20.9	NH	05	07	08	2012	214	458	4.68	120	47.2	47	2
86.7	70.0	32	39.3	121	02.2	NH	05	07	09	0229	215	425	5.04	106	51.1	23	3
86.7	80.0	32	18.5	121	42.2	NH	05	07	09	0754	218	419	5.20	43	100.0	80	151
86.7	90.0	31	59.4	122	23.4	NH	05	07	09	1508	210	446	4.72	29	100.0	22	1
86.7	100.0	31	39.4	123	04.2	NH	05	07	09	2049	214	447	4.80	54	100.0	123	169
86.7	110.0	31	19.5	123	44.6	NH	05	07	10	0227	209	437	4.79	53	100.0	73	201
86.8	32.5	33	53.4	118	26.4	NH	05	07	07	1840	14	39	3.51	128	100.0	1	151
88.5	30.1	33	40.3	118	05.0	NH	05	07	07	1446	12	41	2.85	73	100.0	8	75

Table 5. (cont.)

CalCOFI Cruise 0507 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
90.0	27.7	33	29.4	117	45.2	NH	05	07	07	1216	14	42	3.21	143	100.0	7	402
90.0	28.0	33	29.2	117	46.2	NH	05	07	07	1109	59	142	4.20	177	100.0	5	211
90.0	30.0	33	25.1	117	54.3	NH	05	07	07	0833	224	314	7.13	325	50.9	0	5
90.0	35.0	33	15.1	118	15.0	NH	05	07	07	0348	205	401	5.11	165	51.5	14	3
90.0	37.0	33	11.1	118	23.2	NH	05	07	07	0035	203	356	5.70	432	51.2	5	0
90.0	45.0	32	55.0	118	56.3	NH	05	07	06	1855	215	408	5.26	61	100.0	1	0
90.0	53.0	32	39.0	119	29.0	NH	05	07	06	1315	211	407	5.18	93	52.6	5	4
90.0	60.0	32	24.8	119	57.3	NH	05	07	06	0752	213	480	4.44	29	100.0	6	2
90.0	70.0	32	05.1	120	38.4	NH	05	07	06	0129	193	489	3.93	49	100.0	31	55
90.0	80.0	31	45.1	121	19.0	NH	05	07	05	1850	225	342	6.57	53	100.0	20	6
90.0	90.0	31	25.0	121	59.5	NH	05	07	05	1227	214	424	5.04	28	100.0	17	486
90.0	100.0	31	05.4	122	39.7	NH	05	07	05	0609	217	488	4.44	12	100.0	13	780
90.0	110.0	30	45.0	123	20.0	NH	05	07	04	2315	212	476	4.45	25	100.0	106	362
90.0	120.0	30	24.9	123	59.7	NH	05	07	04	1609	209	440	4.76	14	100.0	111	271
91.7	26.4	33	14.7	117	27.7	NH	05	07	01	1513	13	38	3.41	182	100.0	11	33
93.3	26.7	32	57.3	117	17.8	NH	05	07	01	1120	34	88	3.81	204	100.0	5	43
93.3	28.0	32	54.6	117	23.6	NH	05	07	01	1920	212	403	5.26	164	48.4	5	4
93.3	30.0	32	50.8	117	31.9	NH	05	07	01	2208	205	383	5.34	159	52.4	7	1
93.3	35.0	32	40.9	117	52.6	NH	05	07	02	0209	207	408	5.07	203	53.0	1	0
93.3	40.0	32	30.9	118	12.6	NH	05	07	02	0616	213	383	5.55	272	53.8	1	0
93.3	45.0	32	20.8	118	33.3	NH	05	07	02	0912	210	428	4.90	154	48.4	5	6
93.3	50.0	32	10.8	118	53.2	NH	05	07	02	1450	216	402	5.36	129	46.1	6	0
93.3	55.0	32	00.8	119	13.9	NH	05	07	02	1848	217	381	5.69	179	48.5	21	2
93.3	60.0	31	50.8	119	34.2	NH	05	07	02	2249	218	425	5.12	78	51.5	9	1
93.3	70.0	31	30.9	120	14.4	NH	05	07	03	0435	215	456	4.70	48	100.0	6	6
93.3	80.0	31	10.8	120	55.2	NH	05	07	03	1054	215	403	5.33	35	100.0	15	426
93.3	90.0	30	50.9	121	35.4	NH	05	07	03	1643	217	477	4.55	38	100.0	2	2096
93.3	100.0	30	30.8	122	15.4	NH	05	07	03	2230	213	469	4.54	23	100.0	70	232
93.3	110.0	30	10.8	122	55.5	NH	05	07	04	0414	211	437	4.83	27	100.0	13	386
93.3	120.0	29	49.5	123	34.3	NH	05	07	04	0834	216	430	5.01	23	100.0	118	58
93.4	26.4	32	56.8	117	16.9	NH	05	07	01	1158	13	45	2.86	66	100.0	18	73

Table 5. (cont.) CalCOFI Cruise 0511

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	NH	05	11	20	0401	48	125	3.80	48	100.0	1	25
76.7	51.0	35	01.3	120	55.3	NH	05	11	20	0138	201	442	4.53	179	50.6	2	29
76.7	55.0	34	53.4	121	11.7	NH	05	11	19	2213	206	424	4.86	304	52.7	2	2
76.7	60.0	34	43.5	121	32.8	NH	05	11	19	1831	202	404	4.99	240	51.5	21	6
76.7	70.0	34	23.0	122	14.7	NH	05	11	19	1207	194	478	4.04	33	100.0	4	8
76.7	80.0	34	03.4	122	56.5	NH	05	11	19	0549	208	443	4.70	63	46.4	1	2
76.7	90.0	33	43.4	123	37.9	NH	05	11	18	2355	199	496	4.00	42	100.0	12	1
76.7	100.0	33	23.1	124	19.4	NH	05	11	18	1756	202	481	4.19	17	100.0	21	5
80.0	50.5	34	27.7	120	29.3	NH	05	11	17	0025	19	46	4.14	87	100.0	2	54
80.0	51.0	34	27.0	120	31.0	NH	05	11	17	0207	62	165	3.76	12	100.0	0	47
80.0	55.0	34	19.0	120	47.9	NH	05	11	17	0613	205	480	4.26	123	52.5	8	0
80.0	60.0	34	08.7	121	09.4	NH	05	11	17	0928	201	447	4.51	67	53.3	10	24
80.0	70.0	33	48.9	121	50.7	NH	05	11	17	1704	203	448	4.53	118	49.0	0	1
80.0	80.0	33	29.1	122	32.0	NH	05	11	17	2311	200	458	4.35	101	52.1	5	0
80.0	90.0	33	09.1	123	13.3	NH	05	11	18	0534	193	500	3.85	40	100.0	2	0
80.0	100.0	32	49.2	123	54.5	NH	05	11	18	1159	205	490	4.17	18	100.0	9	5
81.7	43.5	34	24.1	119	48.1	NH	05	11	16	1706	19	67	2.84	45	100.0	1	24
81.8	46.9	34	16.5	120	01.4	NH	05	11	16	2040	210	424	4.95	38	100.0	3	28
83.3	39.4	34	14.9	119	20.8	NH	05	11	16	1346	15	55	2.66	18	100.0	0	19
83.3	40.6	34	13.7	119	23.6	NH	05	11	16	1207	20	60	3.35	33	100.0	0	21
83.3	42.0	34	10.9	119	31.0	NH	05	11	16	0917	122	242	5.01	29	100.0	5	73
83.3	51.0	33	52.6	120	08.3	NH	05	11	16	0313	77	195	3.97	26	100.0	13	64
83.3	55.0	33	44.8	120	24.7	NH	05	11	15	2317	207	443	4.67	86	47.3	0	1
83.3	60.0	33	34.7	120	45.5	NH	05	11	15	1702	194	484	4.01	93	53.3	1	0
83.3	70.0	33	15.3	121	26.6	NH	05	11	15	0916	210	431	4.86	84	52.7	1	0
86.7	33.0	33	53.4	118	29.4	NH	05	11	11	0233	39	113	3.48	53	100.0	10	42
86.7	35.0	33	49.4	118	37.8	NH	05	11	11	0618	193	453	4.25	51	100.0	3	3
86.7	40.0	33	39.4	118	58.5	NH	05	11	11	1111	205	446	4.60	45	100.0	9	23
86.7	45.0	33	29.5	119	19.2	NH	05	11	11	1522	206	449	4.59	65	55.1	4	11
86.7	55.0	33	09.2	120	00.6	NH	05	11	12	0034	190	489	3.89	94	52.1	2	0
86.7	60.0	32	59.5	120	21.2	NH	05	11	12	0437	212	481	4.40	135	47.6	6	1
86.7	70.0	32	39.3	121	02.0	NH	05	11	12	1223	189	527	3.59	44	100.0	15	21
86.7	80.0	32	19.6	121	42.9	NH	05	11	12	1846	198	584	3.39	58	52.9	5	19
86.7	90.0	31	59.2	122	23.9	NH	05	11	13	0139	200	541	3.70	50	100.0	25	8

Table 5. (cont.) CalCOFI Cruise 0511 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	100.0	31	39.6	123	04.3	NH	05	11	13	0823	208	453	4.59	62	100.0	1	7
86.7	110.0	31	19.5	123	44.8	NH	05	11	13	1650	204	615	3.32	18	100.0	11	40
86.8	32.5	33	53.3	118	26.6	NH	05	11	11	0121	20	57	3.55	70	100.0	2	47
88.5	30.1	33	40.3	118	05.1	NH	05	11	10	2140	17	44	3.83	69	100.0	0	177
90.0	27.7	33	29.6	117	45.0	NH	05	11	10	1730	13	46	2.76	129	100.0	3	11
90.0	28.0	33	29.1	117	46.0	NH	05	11	10	1859	112	246	4.55	49	100.0	3	41
90.0	30.0	33	25.1	117	54.2	NH	05	11	10	1533	207	420	4.93	50	100.0	8	2
90.0	35.0	33	15.1	118	15.0	NH	05	11	10	1110	197	431	4.57	39	100.0	13	199
90.0	37.0	33	11.1	118	23.2	NH	05	11	10	0816	202	444	4.54	70	51.6	6	2
90.0	45.0	32	55.2	118	56.2	NH	05	11	10	0255	198	478	4.13	65	48.3	7	0
90.0	53.0	32	39.1	119	28.6	NH	05	11	09	2141	205	454	4.52	82	48.6	9	5
90.0	60.0	32	25.4	119	57.8	NH	05	11	09	1647	199	486	4.08	72	45.7	4	0
90.0	70.0	32	05.4	120	38.0	NH	05	11	09	0920	196	466	4.20	49	100.0	0	2
90.0	80.0	31	45.1	121	18.9	NH	05	11	09	0355	186	486	3.83	60	100.0	36	6
90.0	90.0	31	25.1	121	59.6	NH	05	11	08	2041	211	483	4.37	89	100.0	9	5
90.0	100.0	31	05.0	122	39.6	NH	05	11	08	1316	198	482	4.11	23	100.0	12	0
90.0	110.0	30	45.1	123	19.9	NH	05	11	08	0621	219	197	11.1	25	100.0	16	7
90.0	120.0	30	24.8	123	59.9	NH	05	11	07	2354	193	497	3.88	22	100.0	136	16
91.7	26.4	33	14.5	117	27.9	NH	05	11	04	1715	16	45	3.52	22	100.0	0	311
93.3	26.7	32	57.4	117	18.3	NH	05	11	04	1248	214	401	5.33	22	100.0	1	15
93.3	28.0	32	54.6	117	23.9	NH	05	11	04	2144	208	439	4.73	57	100.0	2	3
93.3	30.0	32	50.7	117	32.0	NH	05	11	05	0027	195	465	4.19	52	100.0	8	2
93.3	35.0	32	40.9	117	52.5	NH	05	11	05	0424	185	443	4.17	151	52.2	4	0
93.3	40.0	32	30.9	118	12.8	NH	05	11	05	0827	204	466	4.38	32	100.0	0	7
93.3	45.0	32	20.8	118	33.2	NH	05	11	05	1243	190	503	3.77	14	100.0	3	2
93.3	50.0	32	10.6	118	53.8	NH	05	11	05	1705	199	491	4.04	39	100.0	1	1
93.3	55.0	32	00.9	119	14.8	NH	05	11	05	2147	206	459	4.49	46	100.0	5	0
93.3	60.0	31	50.7	119	34.5	NH	05	11	06	0119	190	567	3.35	95	48.1	1	1
93.3	70.0	31	30.8	120	14.7	NH	05	11	06	0836	208	455	4.57	207	52.1	3	3
93.3	80.0	31	10.8	120	55.2	NH	05	11	06	1623	203	432	4.69	28	100.0	8	10
93.3	90.0	30	51.1	121	35.4	NH	05	11	06	2231	213	447	4.76	36	100.0	55	11
93.3	100.0	30	31.0	122	15.6	NH	05	11	07	0440	192	455	4.22	37	100.0	39	13
93.3	110.0	30	10.9	122	55.3	NH	05	11	07	1102	207	467	4.43	15	100.0	90	14
93.3	120.0	29	51.0	123	35.3	NH	05	11	07	1716	195	450	4.33	11	100.0	56	6
93.4	26.4	32	57.2	117	16.9	NH	05	11	04	1426	14	46	3.10	22	100.0	3	28

Table 6. Pooled occurrences of fish larvae taken in Bongo net tows on CalCOFI cruises in 2005.

Rank	Taxon	Occurrences
1	*Sebastes* spp.	112
2	*Stenobrachius leucopsarus*	108
3	*Protomyctophum crockeri*	99
4	*Bathylagus ochotensis*	94
5	*Engraulis mordax*	89
6	*Leuroglossus stilbius*	81
7	*Merluccius productus*	57
7	*Symbolophorus californiensis*	57
9	*Vinciguerria lucetia*	55
10	*Citharichthys stigmaeus*	54
11	*Sardinops sagax*	53
12	*Triphoturus mexicanus*	50
13	*Bathylagus wesethi*	48
14	*Cyclothone signata*	47
15	*Nannobrachium ritteri*	41
16	*Diogenichthys atlanticus*	39
17	*Nannobrachium* spp.	38
18	*Lestidiops ringens*	34
18	*Argyropelecus sladeni*	34
20	*Trachurus symmetricus*	32
21	*Citharichthys sordidus*	29
22	*Ceratoscopelus townsendi*	28
23	*Diaphus* spp.	27
24	*Chauliodus macouni*	26
25	*Danaphos oculatus*	24
26	*Hypsoblennius jenkinsi*	23
27	*Sebastes jordani*	22
28	*Idiacanthus antrostomus*	21
29	*Melamphaes lugubris*	19
29	*Sebastes paucispinis*	19
31	*Nansenia candida*	16
31	*Microstoma* spp.	16
31	*Genyonemus lineatus*	16
34	*Lyopsetta exilis*	15
34	*Argentina sialis*	15
36	*Tetragonurus cuvieri*	14
37	*Paralichthys californicus*	13
37	*Rhinogobiops nicholsii*	13
39	*Bathylagus pacificus*	12
40	*Stomias atriventer*	10
41	*Scomber japonicus*	9
41	Disintegrated fish larvae	9
41	*Tarletonbeania crenularis*	9
44	*Melamphaes parvus*	8
44	*Argyropelecus affinis*	8
46	Myctophidae	7
46	*Bathophilus flemingi*	7
46	*Myctophum nitidulum*	7
49	*Chiasmodon niger*	6
49	*Sebastes aurora*	6
49	*Oxyjulis californica*	6
49	Clupeiformes	6

Table 6. (cont.)

Rank	Taxon	Occurrences
49	*Poromitra crassiceps*	6
49	*Trachipterus altivelis*	6
55	*Ruscarius creaseri*	5
55	*Cataetyx rubrirostris*	5
55	*Atherinopsis californiensis*	5
55	*Scopelarchus analis*	5
55	*Nannobrachium regale*	5
55	*Parophrys vetulus*	5
55	*Pleuronichthys verticalis*	5
55	*Scopelosaurus* spp.	5
63	*Brosmophycis marginata*	4
63	*Icelinus quadriseriatus*	4
63	*Sebastes diploproa*	4
63	*Electrona risso*	4
63	*Argyropelecus lychnus*	4
63	*Aristostomias scintillans*	4
69	*Argyropelecus hemigymnus*	3
69	*Arctozenus risso*	3
69	*Tactostoma macropus*	3
69	*Hygophum reinhardtii*	3
69	*Notoscopelus resplendens*	3
69	*Melamphaes* spp.	3
69	*Sebastes goodei*	3
69	*Cololabis saira*	3
69	*Lepidogobius lepidus*	3
78	*Scorpaenichthys marmoratus*	2
78	*Ichthyococcus irregularis*	2
78	*Odontopyxis trispinosa*	2
78	*Liparis* spp.	2
78	*Typhlogobius californiensis*	2
78	*Hypsypops rubicundus*	2
78	*Desmodema lorum*	2
78	*Cyclothone acclinidens*	2
78	*Sternoptyx* spp.	2
78	*Rathbunella* spp.	2
78	Stichaeidae	2
78	*Vinciguerria poweriae*	2
78	*Cryptotrema corallinum*	2
78	*Benthalbella dentata*	2
78	*Lepidopsetta bilineata*	2
78	*Citharichthys* spp.	2
78	*Hippoglossina stomata*	2
78	*Bathylagus milleri*	2
78	*Microstomus pacificus*	2
78	*Scopelogadus bispinosus*	2
78	*Hypsopsetta guttulata*	2
78	*Hygophum* spp.	2
78	*Oxylebius pictus*	2
101	*Pleuronichthys ritteri*	1
101	*Pleuronichthys coenosus*	1
101	*Neoclinus* spp.	1
101	*Icichthys lockingtoni*	1
101	*Ilypnus gilberti*	1

Table 6. (cont.)

Rank	Taxon	Occurrences
101	*Peprilus simillimus*	1
101	*Xystreurys liolepis*	1
101	*Nansenia crassa*	1
101	Sternoptychidae	1
101	*Sphyraena argentea*	1
101	*Hypsoblennius gentilis*	1
101	*Clinocottus analis*	1
101	*Leptocephalus holti*	1
101	Unidentified fish larvae	1
101	*Scopeloberyx robustus*	1
101	*Zaniolepis frenata*	1
101	*Zaniolepis latipinnis*	1
101	*Ophiodon elongatus*	1
101	*Notolychnus valdiviae*	1
101	Cottidae	1
101	*Artedius harringtoni*	1
101	*Chromis punctipinnis*	1
101	*Lampadena urophaos*	1
101	*Vinciguerria* spp.	1
101	*Hemilepidotus spinosus*	1
101	*Xeneretmus latifrons*	1
101	Paralepididae	1
101	*Scopelarchus guentheri*	1
101	*Paralabrax* spp.	1
101	*Rosenblattichthys volucris*	1
101	*Seriphus politus*	1
101	*Girella nigricans*	1
101	*Leuresthes tenuis*	1
101	*Artedius lateralis*	1
	Total	1871

Table 7. Pooled counts of fish larvae taken in Bongo net tows on CalCOFI cruises in 2005. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Engraulis mordax*	69313
2	*Sardinops sagax*	16507
3	*Sebastes* spp.	5415
4	*Vinciguerria lucetia*	4863
5	*Merluccius productus*	3811
6	*Stenobrachius leucopsarus*	3387
7	*Leuroglossus stilbius*	2276
8	*Trachurus symmetricus*	2121
9	*Bathylagus ochotensis*	1969
10	*Bathylagus wesethi*	1075
11	*Triphoturus mexicanus*	1043
12	*Protomyctophum crockeri*	918
13	*Sebastes jordani*	779
14	*Cyclothone signata*	719
15	*Symbolophorus californiensis*	631
16	*Citharichthys stigmaeus*	594
17	*Genyonemus lineatus*	484
18	*Diogenichthys atlanticus*	459
19	*Nannobrachium ritteri*	431
20	Clupeiformes	429
21	*Ceratoscopelus townsendi*	389
22	*Nannobrachium* spp.	339
23	*Diaphus* spp.	286
24	*Sebastes paucispinis*	272
25	*Lestidiops ringens*	249
26	*Citharichthys sordidus*	242
27	*Argyropelecus sladeni*	240
28	*Hypsoblennius jenkinsi*	234
29	*Scomber japonicus*	229
30	*Chauliodus macouni*	192
31	*Danaphos oculatus*	167
32	*Argentina sialis*	164
33	*Melamphaes lugubris*	163
34	*Oxyjulis californica*	161
35	*Lyopsetta exilis*	150
36	*Bathylagus pacificus*	124
37	*Nansenia candida*	115
38	*Idiacanthus antrostomus*	113
39	*Rhinogobiops nicholsii*	104
40	*Tetragonurus cuvieri*	96
41	*Parophrys vetulus*	94
42	*Stomias atriventer*	93
43	*Microstoma* spp.	91
44	*Paralichthys californicus*	87
45	Myctophidae	77
46	*Argyropelecus affinis*	56
47	*Tarletonbeania crenularis*	55
48	*Cataetyx rubrirostris*	54
49	*Nannobrachium regale*	45
50	*Pleuronichthys verticalis*	44
51	Disintegrated fish larvae	41

Table 7. (cont.)

Rank	Taxon	Count
52	*Bathophilus flemingi*	38
53	*Melamphaes parvus*	37
53	*Sebastes aurora*	37
55	*Brosmophycis marginata*	35
56	*Sternoptyx* spp.	34
56	*Ruscarius creaseri*	34
58	*Myctophum nitidulum*	33
59	*Sebastes diploproa*	32
60	*Cryptotrema corallinum*	31
61	*Chiasmodon niger*	29
61	*Trachipterus altivelis*	29
63	*Poromitra crassiceps*	28
64	*Aristostomias scintillans*	25
65	*Electrona risso*	24
65	*Scopelosaurus* spp.	24
65	*Icelinus quadriseriatus*	24
68	*Pleuronichthys coenosus*	23
68	*Scopelarchus analis*	23
70	*Lepidopsetta bilineata*	20
70	*Sebastes goodei*	20
70	*Vinciguerria* spp.	20
73	*Argyropelecus lychnus*	18
73	*Atherinopsis californiensis*	18
73	*Hygophum reinhardtii*	18
73	*Oxylebius pictus*	18
73	*Scorpaenichthys marmoratus*	18
78	*Lepidogobius lepidus*	17
78	*Arctozenus risso*	17
80	*Tactostoma macropus*	15
80	*Notoscopelus resplendens*	15
82	*Cololabis saira*	14
82	*Typhlogobius californiensis*	14
82	*Hypsypops rubicundus*	14
82	*Rathbunella* spp.	14
82	*Bathylagus milleri*	14
82	*Hippoglossina stomata*	14
82	*Hypsopsetta guttulata*	14
82	*Argyropelecus hemigymnus*	14
90	*Melamphaes* spp.	13
90	*Citharichthys* spp.	13
90	*Odontopyxis trispinosa*	13
90	*Ichthyococcus irregularis*	13
94	*Seriphus politus*	11
95	*Girella nigricans*	10
95	*Pleuronichthys ritteri*	10
95	*Microstomus pacificus*	10
95	*Benthalbella dentata*	10
95	Stichaeidae	10
95	*Vinciguerria poweriae*	10
101	*Chromis punctipinnis*	9
101	*Ophiodon elongatus*	9
101	Sternoptychidae	9
101	*Clinocottus analis*	9

Table 7. (cont.)

Rank	Taxon	Count
101	*Desmodema lorum*	9
101	*Peprilus simillimus*	9
107	*Hypsoblennius gentilis*	8
107	*Liparis* spp.	8
107	*Cyclothone acclinidens*	8
107	*Paralabrax* spp.	8
107	*Hygophum* spp.	8
107	*Scopelogadus bispinosus*	8
113	*Xystreurys liolepis*	5
113	*Lampadena urophaos*	5
113	*Leptocephalus holti*	5
113	*Nansenia crassa*	5
113	*Artedius harringtoni*	5
113	Unidentified fish larvae	5
119	*Scopelarchus guentheri*	4
119	*Artedius lateralis*	4
119	*Rosenblattichthys volucris*	4
119	*Zaniolepis frenata*	4
119	*Neoclinus* spp.	4
119	*Hemilepidotus spinosus*	4
119	Paralepididae	4
119	*Xeneretmus latifrons*	4
119	*Zaniolepis latipinnis*	4
119	*Icichthys lockingtoni*	4
119	Cottidae	4
119	*Notolychnus valdiviae*	4
119	*Scopeloberyx robustus*	4
132	*Sphyraena argentea*	3
132	*Ilypnus gilberti*	3
134	*Leuresthes tenuis*	2
	Total	123171

Table 8. Number of fish larvae taken in Bongo net tows at stations occupied on CalCOFI cruises in 2005. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Leptocephalus holti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-

Clupeiformes

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	27.4	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	39.2	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	128.4	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	119.9	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	101.0	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	14.2	-	-	0.0	-	-	-	0.0	-

Sardinops sagax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	100.0	0.0	-	-	9.9	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	19.7	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	5.1	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
76.7	60.0	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
76.7	70.0	0.0	-	-	1335.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	595.5	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	255.2	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
80.0	50.5	0.0	-	-	12.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	149.9	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	254.9	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	667.5	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	4.4	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	43.8	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	118.8	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Sardinops sagax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	60.0	0.0	-	-	2315.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	270.5	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	758.2	-	-	0.0	-	-	-	-	-
86.7	40.0	0.0	-	-	2009.0	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	28.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.0	-	-	250.2	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	166.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	497.2	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	5.5	-	-	0.0	-	-	-	0.0	-
86.8	32.5	0.0	-	-	11.0	-	-	0.0	-	-	-	0.0	-
90.0	27.7	0.0	-	-	2.6	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	9.8	-	-	4.2	-	-	-	0.0	-
90.0	35.0	0.0	-	-	157.8	-	-	9.9	-	-	-	0.0	-
90.0	37.0	0.0	-	-	174.3	-	-	33.4	-	-	-	0.0	-
90.0	45.0	0.0	-	-	1329.9	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	345.1	-	-	9.8	-	-	-	0.0	-
91.7	26.4	0.0	-	-	2.5	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	41.0	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	50.8	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	62.5	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	455.9	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	82.8	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	938.5	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	516.6	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	1092.8	-	-	11.7	-	-	-	0.0	-
93.3	60.0	0.0	-	-	868.6	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	463.5	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	17.8	-	-	0.0	-	-	-	0.0	-
93.4	26.4	0.0	-	-	1.6	-	-	0.0	-	-	-	0.0	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	30.6	-	-	0.0	-	-	-	-	-	-	-	-

Table 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
						Engraulis mordax (cont.)							
76.7	49.0	0.0	-	-	27.3	-	-	0.0	-	-	-	0.0	-
76.7	51.0	0.0	-	-	112.3	-	-	19.3	-	-	-	0.0	-
76.7	55.0	4.6	-	-	904.4	-	-	0.0	-	-	-	0.0	-
76.7	60.0	0.0	-	-	10.3	-	-	87.5	-	-	-	0.0	-
76.7	70.0	0.0	-	-	45.1	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	415.7	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
80.0	50.5	0.0	-	-	8.2	-	-	0.0	-	-	-	0.0	-
80.0	51.0	4.4	-	-	134.4	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	463.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	299.9	-	-	28.4	-	-	-	0.0	-
80.0	70.0	0.0	-	-	61.2	-	-	26.1	-	-	-	0.0	-
81.7	43.5	0.0	-	-	22.5	-	-	0.0	-	-	-	0.0	-
81.8	46.9	9.2	-	-	214.0	-	-	0.0	-	-	-	0.0	-
83.3	40.6	3.7	-	-	13.4	-	-	0.0	-	-	-	0.0	-
83.3	42.0	50.4	-	-	2120.6	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	16.5	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	106.7	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	327.1	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	21.5	-	-	-	0.0	-
85.4	35.8	8.7	-	-	25.3	-	-	0.0	-	-	-	0.0	-
86.7	33.0	26.7	-	-	225.6	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.9	-	-	3262.7	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.0	-	-	3436.7	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	65.2	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.0	-	-	775.9	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	745.7	-	-	20.2	-	-	-	0.0	-
86.7	60.0	-	-	-	0.0	-	-	426.4	-	-	-	0.0	-
86.7	70.0	-	-	-	22.6	-	-	19.7	-	-	-	0.0	-
86.8	32.5	17.3	-	-	194.0	-	-	0.0	-	-	-	0.0	-
88.5	30.1	6.8	-	-	57.3	-	-	0.0	-	-	-	0.0	-
90.0	27.7	13.8	-	-	112.7	-	-	0.0	-	-	-	5.5	-
90.0	28.0	17.4	-	-	5382.6	-	-	0.0	-	-	-	9.1	-
90.0	30.0	0.0	-	-	2823.9	-	-	0.0	-	-	-	4.9	-
90.0	35.0	0.0	-	-	6096.0	-	-	69.5	-	-	-	0.0	-

Table 8. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.0	-	-	2062.3	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	-	2112.8	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	72.9	-	-	9.8	-	-	-	0.0	-
90.0	60.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	0.0	-	-	47.2	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	13.1	-	-	-	0.0	-
91.7	26.4	0.0	-	-	14.9	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	2123.0	-	-	7.6	-	-	-	0.0	-
93.3	28.0	0.0	-	-	4400.3	-	-	10.9	-	-	-	0.0	-
93.3	30.0	0.0	-	-	5562.5	-	-	51.0	-	-	-	4.2	-
93.3	35.0	-	-	-	1154.3	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	1696.0	-	-	10.3	-	-	-	0.0	-
93.3	45.0	0.0	-	-	2420.2	-	-	10.1	-	-	-	0.0	-
93.3	50.0	0.0	-	-	5663.6	-	-	46.5	-	-	-	0.0	-
93.3	55.0	0.0	-	-	9536.1	-	-	58.7	-	-	-	0.0	-
93.3	60.0	0.0	-	-	1570.6	-	-	19.9	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	1130.5	-	-	10.7	-	-	-	0.0	-
93.3	90.0	0.0	-	-	4.5	-	-	4.6	-	-	-	0.0	-

Argentina sialis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
63.3	60.0	3.3	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.0	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	4.9	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	5.1	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	5.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	9.2	-	-	32.1	-	-	0.0	-	-	-	5.0	-
83.3	42.0	0.0	-	-	27.4	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	21.3	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Microstoma* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	4.3	-	-	0.0	-	-	0.0	-	-	-	9.2	-
83.3	100.0	0.0	-	-	8.7	-	-	0.0	-	-	-	-	-
83.3	110.0	0.0	-	-	5.0	-	-	0.0	-	-	-	-	-
86.7	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.7	-
86.7	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	53.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.3	-
90.0	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
90.0	110.0	0.0	-	-	3.9	-	-	0.0	-	-	-	0.0	-
93.3	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.5	-
93.3	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-

Nansenia candida

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	90.0	0.0	-	-	4.5	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	9.9	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	10.1	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	8.4	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	8.6	-	-	0.0	-	-	-	-	-
83.3	90.0	0.0	-	-	5.1	-	-	0.0	-	-	-	-	-
83.3	110.0	0.0	-	-	5.0	-	-	0.0	-	-	-	-	-
86.7	70.0	-	-	-	9.0	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	8.0	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	8.9	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Nansenia crassa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Bathylagus milleri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	60.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
76.7	90.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.0	-	-	8.5	-	-	-	-	-	-	-	-
60.0	60.0	46.6	-	-	9.7	-	-	-	-	-	-	-	-
60.0	70.0	18.6	-	-	0.0	-	-	-	-	-	-	-	-
60.0	80.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
60.0	90.0	53.0	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	28.3	-	-	19.6	-	-	-	-	-	-	-	-
63.3	60.0	13.4	-	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	58.1	-	-	21.2	-	-	-	-	-	-	-	-
63.3	80.0	52.4	-	-	10.2	-	-	-	-	-	-	-	-
63.3	90.0	9.3	-	-	-	-	-	-	-	-	-	-	-
66.7	50.0	34.4	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	74.2	-	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	86.5	-	-	0.0	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	64.1	-	-	-	-	-	-	-	-
70.0	51.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	50.3	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	9.9	-	-	4.6	-	-	-	-	-	-	-	-
70.0	100.0	4.9	-	-	71.0	-	-	-	-	-	-	-	-
73.3	55.0	28.4	-	-	-	-	-	-	-	-	-	-	-
73.3	60.0	30.4	-	-	-	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	14.6	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
76.7	55.0	22.9	-	-	19.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	14.5	-	-	41.1	-	-	0.0	-	-	-	19.4	-
76.7	70.0	4.7	-	-	4.5	-	-	0.0	-	-	-	0.0	-
76.7	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	27.3	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.9	-	-	4.5	-	-	-	0.0	-
80.0	60.0	5.0	-	-	5.2	-	-	0.0	-	-	-	8.5	-
80.0	70.0	9.6	-	-	20.4	-	-	8.7	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
83.3	55.0	43.3	-	-	0.0	-	-	9.3	-	-	-	0.0	-
83.3	60.0	29.2	-	-	25.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	17.2	-	-	9.7	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	8.6	-	-	0.0	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	4.7	-	-	-	-	-
86.7	40.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	31.6	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	32.8	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
90.0	30.0	4.9	-	-	82.8	-	-	0.0	-	-	-	0.0	-
90.0	35.0	9.7	-	-	0.0	-	-	9.9	-	-	-	0.0	-
90.0	37.0	0.0	-	-	19.4	-	-	0.0	-	-	-	0.0	-
90.0	45.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	19.1	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	0.0	-	-	7.9	-	-	-	0.0	-
90.0	80.0	0.0	-	-	19.1	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	8.0	-	-	5.0	-	-	-	0.0	-
90.0	110.0	0.0	-	-	0.0	-	-	13.4	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	9.5	-	-	-	0.0	-
93.3	28.0	5.2	-	-	20.3	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	114.6	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	67.9	-	-	0.0	-	-	-	0.0	-
93.3	40.0	4.9	-	-	21.8	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	55.3	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	11.7	-	-	-	0.0	-
93.3	60.0	28.5	-	-	5.1	-	-	9.9	-	-	-	0.0	-
93.3	70.0	4.8	-	-	32.7	-	-	9.4	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.0	-	-	10.7	-	-	-	0.0	-
93.3	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-

Bathylagus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	9.3	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	27.8	-	-	19.6	-	-	-	-	-	-	-	-
60.0	90.0	8.8	-	-	-	-	-	-	-	-	-	-	-
63.3	60.0	13.4	-	-	10.2	-	-	-	-	-	-	-	-
66.7	55.0	13.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-
83.3	42.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
93.3	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Bathylagus wesethi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	23.1	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	4.9	-	-	4.5	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	37.4	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	26.8	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	30.6	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-
83.3	100.0	0.0	-	-	0.0	-	-	9.8	-	-	-	-	-

Table 8. (cont.)

Bathylagus wesethi (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	14.9	-	-	42.2	-	-	-	-	-
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	108.5	-	-	-	3.6	-
86.7	80.0	-	-	-	54.7	-	-	41.6	-	-	-	0.0	-
86.7	90.0	0.0	-	-	78.7	-	-	23.6	-	-	-	7.4	-
86.7	100.0	0.0	-	-	5.2	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	6.6	-
90.0	35.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	9.6	-	-	13.3	-	-	-	0.0	-
90.0	70.0	0.0	-	-	27.2	-	-	11.8	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	26.3	-	-	-	0.0	-
90.0	90.0	0.0	-	-	20.1	-	-	10.1	-	-	-	4.4	-
90.0	100.0	0.0	-	-	41.2	-	-	0.0	-	-	-	0.0	-
90.0	110.0	8.6	-	-	19.4	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	8.7	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	93.4	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	111.1	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
93.3	80.0	0.0	-	-	23.7	-	-	0.0	-	-	-	4.7	-
93.3	90.0	0.0	-	-	26.8	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	-	0.0	-	-	19.3	-	-	-	0.0	-

Leuroglossus stilbius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	37.3	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	18.6	-	-	0.0	-	-	-	-	-	-	-	-
60.0	90.0	26.5	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	37.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	60.0	3.3	-	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	4.5	-	-	0.0	-	-	-	-	-	-	-	-
63.3	80.0	42.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	100.0	4.6	-	-	-	-	-	-	-	-	-	-	-
66.7	60.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-

Table 8. (cont.)

Leuroglossus stilbius (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	51.0	4.8	-	-	14.0	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	13.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	5.0	-	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	127.7	-	-	-	-	-	-	-	-	-	-	-
76.7	49.0	10.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	196.1	-	-	56.2	-	-	0.0	-	-	-	0.0	-
76.7	55.0	36.6	-	-	28.6	-	-	0.0	-	-	-	0.0	-
76.7	60.0	14.5	-	-	10.3	-	-	0.0	-	-	-	19.4	-
76.7	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
76.7	80.0	9.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	3.8	-	-	27.3	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
80.0	55.0	-	-	-	37.8	-	-	0.0	-	-	-	0.0	-
80.0	60.0	15.0	-	-	25.9	-	-	0.0	-	-	-	16.9	-
80.0	70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	23.1	-	-	107.0	-	-	17.6	-	-	-	0.0	-
83.3	42.0	33.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	52.9	-	-	21.3	-	-	9.3	-	-	-	0.0	-
83.3	60.0	4.9	-	-	16.8	-	-	0.0	-	-	-	0.0	-
86.7	35.0	24.4	-	-	45.2	-	-	0.0	-	-	-	0.0	-
86.7	40.0	9.7	-	-	30.6	-	-	0.0	-	-	-	9.2	-
86.7	45.0	3.3	-	-	28.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	6.0	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	26.3	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	19.5	-	-	0.0	-	-	-	0.0	-
90.0	30.0	4.9	-	-	82.8	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	29.6	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	116.2	-	-	0.0	-	-	-	0.0	-
90.0	45.0	20.6	-	-	107.2	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	4.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	30.8	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	50.8	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Leuroglossus stilbius (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	30.0	0.0	-	-	72.9	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	106.7	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	48.0	-	-	0.0	-	-	-	0.0	-
93.3	45.0	23.6	-	-	29.6	-	-	10.1	-	-	-	0.0	-
93.3	50.0	8.8	-	-	46.1	-	-	0.0	-	-	-	0.0	-
93.3	55.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	60.0	19.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	70.0	9.7	-	-	14.0	-	-	0.0	-	-	-	0.0	-
93.3	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	90.0	15.6	-	-	8.9	-	-	0.0	-	-	-	0.0	-
93.3	100.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	110.0	13.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Cyclothone acclinidens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.9	-

Cyclothone signata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	8.0	-
76.7	100.0	0.0	-	-	9.9	-	-	0.0	-	-	-	8.4	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	9.3	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	53.5	-	-	-	8.3	-
83.3	70.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
86.7	60.0	-	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	90.0	0.0	-	-	103.3	-	-	0.0	-	-	-	7.4	-
86.7	100.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	9.6	-	-	-	0.0	-
90.0	45.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Cyclothone signata (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	63.6	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	9.6	-	-	0.0	-	-	-	19.2	-
90.0	100.0	0.0	-	-	33.0	-	-	0.0	-	-	-	0.0	-
90.0	110.0	8.6	-	-	0.0	-	-	0.0	-	-	-	11.1	-
90.0	120.0	8.3	-	-	0.0	-	-	4.8	-	-	-	73.7	-
93.3	28.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	4.4	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
93.3	60.0	4.8	-	-	20.2	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	80.0	14.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	90.0	15.6	-	-	0.0	-	-	0.0	-	-	-	14.3	-
93.3	100.0	5.0	-	-	4.5	-	-	0.0	-	-	-	8.4	-
93.3	110.0	13.3	-	-	4.1	-	-	0.0	-	-	-	35.4	-
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	30.3	-

Sternoptychidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	9.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Argyropelecus affinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	100.0	10.1	-	-	0.0	-	-	-	-	-	-	-	-
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
83.3	55.0	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	110.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-

Table 8. (cont.)

Argyropelecus hemigymnus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	90.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Argyropelecus lychnus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.3	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
93.3	120.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Argyropelecus sladeni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	80.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	100.0	4.6	-	-	-	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	9.4	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	4.2	-
80.0	90.0	0.0	-	-	8.8	-	-	4.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
83.3	80.0	0.0	-	-	8.6	-	-	5.1	-	-	-	-	-
83.3	90.0	0.0	-	-	5.1	-	-	0.0	-	-	-	-	-
86.7	35.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
86.7	80.0	-	-	-	16.4	-	-	5.2	-	-	-	0.0	-
86.7	90.0	0.0	-	-	14.8	-	-	4.7	-	-	-	3.7	-
86.7	110.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.9	-
90.0	37.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	7.8	-
93.3	28.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	0.0	-	-	0.0	-	-	-	16.0	-
93.3	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
93.3	50.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Argyropelecus sladeni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	55.0	0.0	-	-	0.0	-	-	11.7	-	-	-	0.0	-
93.3	60.0	9.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.5	-
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Danaphos oculatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	4.4	-	-	0.0	-	-	-	-	-	-	-	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	70.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
83.3	55.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-
83.3	100.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.0	-
90.0	30.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
93.3	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	9.9	-	-	-	0.0	-
93.3	70.0	0.0	-	-	14.0	-	-	0.0	-	-	-	0.0	-
93.3	80.0	9.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	14.3	-
93.3	100.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Sternoptyx* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	-	0.0	-	-	9.3	-	-	-	0.0	-
90.0	120.0	24.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Ichthyococcus irregularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-

***Vinciguerria* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	70.0	-	-	-	0.0	-	-	19.7	-	-	-	0.0	-

Vinciguerria lucetia

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	3.4	-	-	0.0	-	-	-	-	-	-	-	-
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	12.6	-
80.0	90.0	0.0	-	-	0.0	-	-	186.8	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
83.3	100.0	0.0	-	-	0.0	-	-	63.7	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	42.2	-	-	-	-	-
86.7	80.0	-	-	-	16.4	-	-	239.2	-	-	-	25.6	-
86.7	90.0	0.0	-	-	24.6	-	-	4.7	-	-	-	37.0	-
86.7	100.0	0.0	-	-	10.4	-	-	542.4	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	186.8	-	-	-	3.3	-
90.0	37.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	60.0	12.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	4.5	-	-	11.8	-	-	-	0.0	-
90.0	80.0	5.0	-	-	4.8	-	-	19.7	-	-	-	95.8	-
90.0	90.0	0.0	-	-	0.0	-	-	45.4	-	-	-	4.4	-
90.0	100.0	0.0	-	-	12.4	-	-	53.3	-	-	-	16.4	-
90.0	110.0	43.2	-	-	0.0	-	-	445.0	-	-	-	155.4	-
90.0	120.0	24.8	-	-	0.0	-	-	457.0	-	-	-	345.3	-

Table 8. (cont.)

Vinciguerria lucetia (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	60.0	0.0	-	-	45.5	-	-	0.0	-	-	-	7.0	-
93.3	70.0	0.0	-	-	37.4	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.0	-	-	10.7	-	-	-	9.4	-
93.3	90.0	0.0	-	-	4.5	-	-	0.0	-	-	-	176.1	-
93.3	100.0	0.0	-	-	31.4	-	-	295.1	-	-	-	97.1	-
93.3	110.0	0.0	-	-	12.2	-	-	19.3	-	-	-	310.1	-
93.3	120.0	0.0	-	-	4.1	-	-	501.0	-	-	-	121.2	-

Vinciguerria poweriae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-

Chauliodus macouni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
63.3	80.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	4.9	-	-	-	-	-	-	-	-
70.0	51.0	0.0	-	-	7.0	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	5.0	-	-	0.0	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	5.1	-	-	-	-	-	-	-	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	70.0	4.7	-	-	0.0	-	-	0.0	-	-	-	4.0	-
76.7	80.0	9.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	4.0	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
80.0	60.0	10.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	18.3	-	-	-	0.0	-
83.3	110.0	0.0	-	-	5.0	-	-	0.0	-	-	-	-	-
86.7	35.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
86.7	60.0	-	-	-	0.0	-	-	0.0	-	-	-	9.2	-
86.7	80.0	-	-	-	10.9	-	-	15.6	-	-	-	0.0	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.9	-

Table 8. (cont.)

Chauliodus macouni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	80.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	10.1	-	-	-	0.0	-
93.3	60.0	9.5	-	-	5.1	-	-	0.0	-	-	-	0.0	-

Stomias atriventer

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	18.2	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	28.0	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.0	-	-	5.3	-	-	-	0.0	-
93.3	100.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-

Bathophilus flemingi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	11.2	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	4.9	-	-	0.0	-	-	-	3.7	-
90.0	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-

Tactostoma macropus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
80.0	60.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-

Table 8. (cont.)

Aristostomias scintillans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
83.3	110.0	0.0	-	-	5.0	-	-	0.0	-	-	-	-	-
86.7	90.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	0.0	-	-	-	0.0	-

Idiacanthus antrostomus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	4.9	-	-	0.0	-	-	-	-	-	-	-	-
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	90.0	4.5	-	-	0.0	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
80.0	80.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-
83.3	100.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.7	-
86.7	100.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.3	-
90.0	60.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
90.0	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
90.0	100.0	4.2	-	-	0.0	-	-	0.0	-	-	-	4.1	-
90.0	120.0	0.0	-	-	0.0	-	-	9.5	-	-	-	3.9	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
93.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.9	-

Benthalbella dentata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	5.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	100.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-

Rosenblattichthys volucris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

Table 8. (cont.)

Scopelarchus analis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.7	-
86.7	110.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	110.0	0.0	-	-	3.9	-	-	0.0	-	-	-	0.0	-

Scopelarchus guentheri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

***Scopelosaurus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Paralepididae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-

Arctozenus risso

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.0	-

Lestidiops ringens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	8.8	-	-	-	-	-	-	-	-	-	-	-
66.7	100.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	100.0	4.9	-	-	0.0	-	-	-	-	-	-	-	-

Table 8. (cont.)

Lestidiops ringens (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	55.0	4.7	-	-	-	-	-	-	-	-	-	-	-
73.3	70.0	8.9	-	-	0.0	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.4	-
80.0	60.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	90.0	4.5	-	-	0.0	-	-	32.7	-	-	-	0.0	-
83.3	100.0	0.0	-	-	4.4	-	-	4.9	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	9.4	-	-	-	-	-
86.7	60.0	-	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	5.5	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	14.8	-	-	4.7	-	-	-	3.7	-
86.7	100.0	0.0	-	-	5.2	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
90.0	60.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
90.0	70.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	3.8	-
93.3	40.0	0.0	-	-	4.4	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
93.3	60.0	4.8	-	-	15.2	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
93.3	90.0	0.0	-	-	8.9	-	-	0.0	-	-	-	4.8	-

Myctophidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	35.3	-	-	-	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.0	-
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-
86.7	60.0	-	-	-	14.7	-	-	0.0	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	10.0	-	-	-	0.0	-

Table 8. (cont.)

Ceratoscopelus townsendi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	90.0	0.0	-	-	13.5	-	-	-	-	-	-	-	-
73.3	100.0	4.9	-	-	4.6	-	-	-	-	-	-	-	-
80.0	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	31.2	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	8.7	-	-	-	-	-
83.3	100.0	0.0	-	-	0.0	-	-	29.4	-	-	-	-	-
86.7	90.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	33.5	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	24.7	-	-	0.0	-	-	-	0.0	-
90.0	110.0	8.6	-	-	0.0	-	-	4.5	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	19.0	-	-	-	38.8	-
93.3	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-
93.3	100.0	10.1	-	-	22.5	-	-	9.1	-	-	-	8.4	-
93.3	110.0	0.0	-	-	8.2	-	-	0.0	-	-	-	8.9	-
93.3	120.0	4.7	-	-	0.0	-	-	35.1	-	-	-	21.7	-

***Diaphus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	4.5	-	-	33.9	-	-	-	4.0	-
76.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	14.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	17.8	-	-	-	0.0	-
83.3	80.0	0.0	-	-	8.6	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	0.0	-	-	10.1	-	-	-	0.0	-
86.7	60.0	-	-	-	0.0	-	-	9.9	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	39.5	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	14.2	-	-	-	0.0	-

Table 8. (cont.)

***Diaphus* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	60.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
90.0	70.0	0.0	-	-	0.0	-	-	7.9	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	26.3	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.9	-
93.3	26.7	0.0	-	-	0.0	-	-	0.0	-	-	-	5.3	-
93.3	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
93.3	45.0	0.0	-	-	0.0	-	-	10.1	-	-	-	0.0	-
93.3	50.0	0.0	-	-	0.0	-	-	11.6	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	11.7	-	-	-	0.0	-
93.3	60.0	0.0	-	-	0.0	-	-	9.9	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.0	-	-	5.3	-	-	-	0.0	-
93.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Lampadena urophaos

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

***Nannobrachium* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	100.0	9.2	-	-	-	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	8.0	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	9.9	-	-	-	-	-	-	-	-
70.0	51.0	0.0	-	-	7.0	-	-	-	-	-	-	-	-
70.0	100.0	4.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	8.9	-	-	7.3	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	0.0	-	-	14.5	-	-	-	0.0	-
76.7	90.0	7.5	-	-	0.0	-	-	9.4	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
80.0	70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	4.7	-	-	17.6	-	-	4.6	-	-	-	0.0	-
83.3	55.0	14.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Nannobrachium* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	70.0	8.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
83.3	100.0	0.0	-	-	4.4	-	-	0.0	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	4.7	-	-	-	-	-
86.7	35.0	19.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	90.0	8.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	14.4	-	-	-	0.0	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
90.0	80.0	14.9	-	-	4.8	-	-	13.1	-	-	-	0.0	-
90.0	100.0	0.0	-	-	8.2	-	-	0.0	-	-	-	0.0	-
90.0	110.0	4.3	-	-	7.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	0.0	-	-	19.9	-	-	-	0.0	-
93.3	80.0	0.0	-	-	9.5	-	-	10.7	-	-	-	0.0	-
93.3	90.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Nannobrachium regale

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	19.7	-	-	-	0.0	-
93.3	55.0	0.0	-	-	0.0	-	-	11.7	-	-	-	0.0	-

Nannobrachium ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
66.7	90.0	0.0	-	-	4.5	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	25.4	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	4.5	-	-	4.8	-	-	-	0.0	-
76.7	80.0	0.0	-	-	11.2	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Nannobrachium ritteri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	100.0	0.0	-	-	39.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	5.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	90.0	0.0	-	-	8.8	-	-	0.0	-	-	-	0.0	-
83.3	70.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	25.5	-	-	-	-	-
83.3	110.0	0.0	-	-	9.9	-	-	0.0	-	-	-	-	-
86.7	33.0	7.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	14.7	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	16.4	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	34.4	-	-	4.7	-	-	-	0.0	-
90.0	45.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	13.6	-	-	11.8	-	-	-	0.0	-
90.0	80.0	5.0	-	-	9.6	-	-	0.0	-	-	-	7.7	-
90.0	90.0	0.0	-	-	0.0	-	-	5.0	-	-	-	4.4	-
90.0	100.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	110.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	28.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	27.7	-	-	0.0	-	-	-	0.0	-
93.3	55.0	9.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	25.3	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Notolychnus valdiviae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.9	-

Notoscopelus resplendens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Notoscopelus resplendens (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Stenobrachius leucopsarus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.0	-	-	25.4	-	-	-	-	-	-	-	-
60.0	60.0	18.6	-	-	9.7	-	-	-	-	-	-	-	-
60.0	70.0	55.7	-	-	39.2	-	-	-	-	-	-	-	-
60.0	80.0	19.7	-	-	9.7	-	-	-	-	-	-	-	-
60.0	90.0	273.7	-	-	-	-	-	-	-	-	-	-	-
60.0	100.0	9.5	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	84.9	-	-	19.6	-	-	-	-	-	-	-	-
63.3	60.0	40.1	-	-	30.6	-	-	-	-	-	-	-	-
63.3	70.0	31.3	-	-	5.3	-	-	-	-	-	-	-	-
63.3	80.0	147.6	-	-	50.9	-	-	-	-	-	-	-	-
63.3	90.0	186.8	-	-	-	-	-	-	-	-	-	-	-
63.3	100.0	9.2	-	-	-	-	-	-	-	-	-	-	-
66.7	50.0	34.4	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	41.8	-	-	10.0	-	-	-	-	-	-	-	-
66.7	60.0	18.2	-	-	9.1	-	-	-	-	-	-	-	-
66.7	80.0	6.9	-	-	4.0	-	-	-	-	-	-	-	-
66.7	90.0	4.1	-	-	0.0	-	-	-	-	-	-	-	-
66.7	100.0	0.0	-	-	19.7	-	-	-	-	-	-	-	-
70.0	51.0	9.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	14.4	-	-	4.8	-	-	-	-	-	-	-	-
70.0	60.0	86.8	-	-	3.8	-	-	-	-	-	-	-	-
70.0	70.0	14.9	-	-	4.6	-	-	-	-	-	-	-	-
70.0	80.0	13.1	-	-	4.9	-	-	-	-	-	-	-	-
70.0	90.0	9.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0	100.0	4.9	-	-	35.5	-	-	-	-	-	-	-	-
73.3	50.0	6.6	-	-	-	-	-	-	-	-	-	-	-
73.3	55.0	47.3	-	-	-	-	-	-	-	-	-	-	-
73.3	60.0	20.2	-	-	-	-	-	-	-	-	-	-	-

Table 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	70.0	17.8	-	-	25.3	-	-	-	-	-	-	-	-
73.3	80.0	8.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
76.7	49.0	24.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	10.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	251.4	-	-	9.5	-	-	0.0	-	-	-	9.2	-
76.7	60.0	19.4	-	-	0.0	-	-	0.0	-	-	-	135.7	-
76.7	70.0	0.0	-	-	9.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	61.9	-	-	11.2	-	-	0.0	-	-	-	0.0	-
76.7	90.0	3.8	-	-	9.1	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
80.0	51.0	35.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	15.5	-	-	0.0	-	-	-	25.4	-
80.0	80.0	4.7	-	-	26.3	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	13.2	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
81.8	46.9	18.4	-	-	0.0	-	-	8.8	-	-	-	0.0	-
83.3	40.6	0.0	-	-	3.4	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.2	-	-	9.1	-	-	0.0	-	-	-	0.0	-
83.3	51.0	3.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	14.4	-	-	10.7	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	25.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	17.2	-	-	38.6	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	8.6	-	-	0.0	-	-	-	-	-
86.7	33.0	7.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.9	-	-	90.3	-	-	10.1	-	-	-	4.3	-
86.7	40.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
86.7	45.0	3.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	6.0	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	0.0	-	-	0.0	-	-	-	7.5	-
86.7	60.0	-	-	-	4.9	-	-	0.0	-	-	-	9.2	-
86.7	70.0	-	-	-	13.6	-	-	0.0	-	-	-	7.2	-
90.0	28.0	0.0	-	-	19.5	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	-	138.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	69.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
90.0	45.0	5.2	-	-	53.6	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	22.7	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	182.9	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	166.7	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	19.4	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	39.2	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	0.0	-	-	10.1	-	-	-	0.0	-
93.3	50.0	0.0	-	-	18.4	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	18.7	-	-	0.0	-	-	-	0.0	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	90.0	0.0	-	-	4.5	-	-	-	-	-	-	-	-
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
80.0	100.0	0.0	-	-	0.0	-	-	8.9	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	19.6	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	9.4	-	-	-	-	-
86.7	35.0	0.0	-	-	0.0	-	-	60.8	-	-	-	0.0	-
86.7	55.0	-	-	-	0.0	-	-	10.1	-	-	-	0.0	-
86.7	60.0	-	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	19.7	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	41.6	-	-	-	0.0	-
86.7	90.0	0.0	-	-	14.8	-	-	4.7	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	19.2	-	-	-	4.6	-
86.7	110.0	0.0	-	-	0.0	-	-	86.2	-	-	-	0.0	-
90.0	28.0	0.0	-	-	0.0	-	-	8.4	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.0	-	-	39.7	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-

Table 8. (cont.)

Triphoturus mexicanus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	14.3	-	-	0.0	-	-	-	8.9	-
90.0	70.0	0.0	-	-	22.7	-	-	7.9	-	-	-	0.0	-
90.0	80.0	0.0	-	-	9.6	-	-	0.0	-	-	-	3.8	-
90.0	90.0	0.0	-	-	28.1	-	-	0.0	-	-	-	13.1	-
90.0	100.0	0.0	-	-	8.2	-	-	4.4	-	-	-	0.0	-
90.0	110.0	0.0	-	-	3.9	-	-	8.9	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	14.3	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	21.7	-	-	-	0.0	-
93.3	35.0	-	-	-	0.0	-	-	9.6	-	-	-	0.0	-
93.3	50.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	237.4	-	-	9.9	-	-	-	0.0	-
93.3	70.0	0.0	-	-	116.8	-	-	0.0	-	-	-	8.8	-
93.3	80.0	0.0	-	-	18.9	-	-	5.3	-	-	-	0.0	-
93.3	90.0	10.4	-	-	13.4	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
93.3	110.0	0.0	-	-	8.2	-	-	9.7	-	-	-	0.0	-

Diogenichthys atlanticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
70.0	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
76.7	90.0	3.8	-	-	0.0	-	-	0.0	-	-	-	4.0	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	16.8	-
80.0	90.0	4.5	-	-	0.0	-	-	14.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	4.7	-	-	-	-	-
86.7	60.0	-	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	90.0	0.0	-	-	24.6	-	-	4.7	-	-	-	11.1	-
86.7	100.0	4.5	-	-	0.0	-	-	9.6	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	14.4	-	-	-	6.6	-
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	13.6	-	-	3.9	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-

Table 8. (cont.)

Diogenichthys atlanticus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.4	-
90.0	110.0	47.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	120.0	12.4	-	-	0.0	-	-	4.8	-	-	-	38.8	-
93.3	60.0	0.0	-	-	10.1	-	-	0.0	-	-	-	0.0	-
93.3	80.0	19.3	-	-	9.5	-	-	0.0	-	-	-	9.4	-
93.3	90.0	15.6	-	-	0.0	-	-	0.0	-	-	-	19.0	-
93.3	100.0	15.1	-	-	0.0	-	-	0.0	-	-	-	8.4	-
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	22.2	-
93.3	120.0	4.7	-	-	0.0	-	-	0.0	-	-	-	21.7	-

Electrona risso

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
76.7	100.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-

***Hygophum* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-

Hygophum reinhardtii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.9	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	4.3	-

Myctophum nitidulum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	110.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
93.3	110.0	4.4	-	-	0.0	-	-	0.0	-	-	-	4.4	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Table 8. (cont.)

Station		*Protomyctophum crockeri*											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	70.0	9.3	-	-	9.8	-	-	-	-	-	-	-	-
60.0	80.0	4.9	-	-	9.7	-	-	-	-	-	-	-	-
60.0	90.0	8.8	-	-	-	-	-	-	-	-	-	-	-
60.0	100.0	4.8	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	9.4	-	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	17.9	-	-	0.0	-	-	-	-	-	-	-	-
63.3	80.0	9.5	-	-	0.0	-	-	-	-	-	-	-	-
63.3	90.0	9.3	-	-	-	-	-	-	-	-	-	-	-
66.7	100.0	5.1	-	-	4.9	-	-	-	-	-	-	-	-
70.0	60.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	9.9	-	-	9.1	-	-	-	-	-	-	-	-
70.0	80.0	4.4	-	-	4.9	-	-	-	-	-	-	-	-
70.0	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	3.7	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	100.0	9.7	-	-	9.2	-	-	-	-	-	-	-	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	70.0	4.7	-	-	0.0	-	-	0.0	-	-	-	8.1	-
76.7	90.0	3.8	-	-	9.1	-	-	14.1	-	-	-	16.0	-
76.7	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	16.8	-
80.0	60.0	10.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.7	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	7.7	-
80.0	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	16.7	-
83.3	55.0	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
83.3	70.0	21.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	4.7	-	-	8.6	-	-	5.1	-	-	-	-	-
83.3	90.0	0.0	-	-	15.2	-	-	0.0	-	-	-	-	-
83.3	100.0	0.0	-	-	4.4	-	-	0.0	-	-	-	-	-
83.3	110.0	4.0	-	-	5.0	-	-	0.0	-	-	-	-	-
86.7	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	60.0	-	-	-	34.3	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	4.5	-	-	9.9	-	-	-	3.6	-

Table 8. (cont.)

Protomyctophum crockeri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	80.0	-	-	-	0.0	-	-	5.2	-	-	-	6.4	-
86.7	90.0	4.3	-	-	0.0	-	-	14.2	-	-	-	3.7	-
86.7	100.0	8.9	-	-	5.2	-	-	0.0	-	-	-	0.0	-
86.7	110.0	4.7	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	35.0	14.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	37.0	4.5	-	-	0.0	-	-	11.1	-	-	-	0.0	-
90.0	45.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	53.0	13.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	17.9	-
90.0	70.0	14.5	-	-	9.1	-	-	0.0	-	-	-	0.0	-
90.0	90.0	4.8	-	-	0.0	-	-	0.0	-	-	-	4.4	-
90.0	100.0	4.2	-	-	0.0	-	-	0.0	-	-	-	4.1	-
90.0	110.0	13.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.9	-
93.3	26.7	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	28.0	15.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	20.8	-	-	0.0	-	-	-	12.6	-
93.3	40.0	4.9	-	-	13.1	-	-	0.0	-	-	-	0.0	-
93.3	45.0	9.4	-	-	9.9	-	-	10.1	-	-	-	0.0	-
93.3	50.0	8.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	55.0	18.1	-	-	9.3	-	-	0.0	-	-	-	0.0	-
93.3	60.0	19.0	-	-	25.3	-	-	9.9	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	4.7	-	-	-	0.0	-
93.3	80.0	14.5	-	-	0.0	-	-	5.3	-	-	-	4.7	-
93.3	90.0	10.4	-	-	0.0	-	-	0.0	-	-	-	4.8	-
93.3	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	12.7	-
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	21.7	-

Symbolophorus californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	0.0	-	-	5.3	-	-	-	-	-	-	-	-
70.0	90.0	0.0	-	-	19.0	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	0.0	-	-	9.7	-	-	-	0.0	-

Table 8. (cont.)

Symbolophorus californiensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
76.7	100.0	4.7	-	-	19.7	-	-	0.0	-	-	-	4.2	-
80.0	80.0	0.0	-	-	0.0	-	-	13.8	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	9.3	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	8.9	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	15.3	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	13.1	-	-	-	-	-
83.3	110.0	0.0	-	-	9.9	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	0.0	-	-	10.1	-	-	-	0.0	-
86.7	60.0	-	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	9.9	-	-	-	7.2	-
86.7	80.0	-	-	-	32.8	-	-	41.6	-	-	-	0.0	-
86.7	90.0	0.0	-	-	14.8	-	-	4.7	-	-	-	0.0	-
86.7	110.0	4.7	-	-	4.9	-	-	4.8	-	-	-	0.0	-
90.0	53.0	0.0	-	-	19.4	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
90.0	70.0	4.8	-	-	31.8	-	-	11.8	-	-	-	0.0	-
90.0	80.0	0.0	-	-	9.6	-	-	6.6	-	-	-	0.0	-
90.0	90.0	4.8	-	-	8.0	-	-	5.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	24.7	-	-	0.0	-	-	-	8.2	-
90.0	110.0	4.3	-	-	0.0	-	-	0.0	-	-	-	11.1	-
90.0	120.0	8.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	28.0	5.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
93.3	40.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	45.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	18.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	15.2	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	9.3	-	-	4.7	-	-	-	0.0	-
93.3	80.0	9.7	-	-	4.7	-	-	16.0	-	-	-	0.0	-
93.3	90.0	26.1	-	-	0.0	-	-	0.0	-	-	-	4.8	-
93.3	100.0	15.1	-	-	0.0	-	-	0.0	-	-	-	4.2	-
93.3	110.0	8.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	120.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Tarletonbeania crenularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	60.0	3.3	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	0.0	-	-	9.7	-	-	-	0.0	-
80.0	70.0	0.0	-	-	0.0	-	-	8.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	4.5	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
86.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
93.3	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Desmodema lorum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
93.3	90.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-

Trachipterus altivelis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
76.7	90.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	4.7	-	-	0.0	-	-	0.0	-	-	-	-	-
90.0	70.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	9.4	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
73.3	55.0	4.7	-	-	-	-	-	-	-	-	-	-	-
76.7	51.0	5.3	-	-	103.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	50.3	-	-	95.2	-	-	0.0	-	-	-	0.0	-
76.7	60.0	24.2	-	-	61.7	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	33.7	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Station		***Merluccius productus*** (cont.)											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	2.4	-	-	33.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	40.0	-	-	35.8	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	28.3	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	155.1	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	64.5	-	-	171.2	-	-	0.0	-	-	-	0.0	-
83.3	39.4	134.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.2	-	-	82.3	-	-	0.0	-	-	-	0.0	-
83.3	51.0	7.7	-	-	8.2	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	32.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	41.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	38.6	-	-	0.0	-	-	-	0.0	-
86.7	33.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	9.8	-	-	90.3	-	-	0.0	-	-	-	0.0	-
86.7	40.0	4.9	-	-	183.6	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
86.7	50.0	9.0	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	17.5	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	27.7	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	-	73.6	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	552.4	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	-	135.6	-	-	0.0	-	-	-	8.8	-
90.0	45.0	0.0	-	-	536.2	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	101.6	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	104.2	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	29.1	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	17.4	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	424.8	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	110.7	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	9.3	-	-	11.7	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Merluccius productus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	28.4	-	-	0.0	-	-	-	0.0	-

Brosmophycis marginata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
86.7	35.0	0.0	-	-	0.0	-	-	10.1	-	-	-	0.0	-
86.7	50.0	0.0	-	-	17.0	-	-	0.0	-	-	-	-	-

Cataetyx rubrirostris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	55.0	0.0	-	-	4.8	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	9.4	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	20.3	-	-	0.0	-	-	-	0.0	-

Atherinopsis californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5	30.1	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	27.7	6.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
91.7	26.4	2.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.4	26.4	2.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Leuresthes tenuis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4	26.4	0.0	-	-	1.6	-	-	0.0	-	-	-	0.0	-

Cololabis saira

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	4.4	-	-	0.0	-	-	-	-	-
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-
90.0	30.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Melamphaes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	90.0	4.7	-	-	-	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-

Melamphaes lugubris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	0.0	-	-	5.3	-	-	-	-	-	-	-	-
66.7	90.0	4.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	4.9	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	5.1	-	-	-	-	-	-	-	-
73.3	100.0	0.0	-	-	4.6	-	-	-	-	-	-	-	-
76.7	60.0	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	33.7	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	8.8	-	-	9.2	-	-	-	0.0	-
83.3	55.0	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	10.2	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	8.7	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	4.7	-	-	-	-	-
86.7	100.0	0.0	-	-	5.2	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	0.0	-	-	6.6	-	-	-	0.0	-
93.3	30.0	0.0	-	-	10.4	-	-	0.0	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Melamphaes parvus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	100.0	4.8	-	-	-	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	5.3	-	-	-	-	-	-	-	-
73.3	100.0	4.9	-	-	0.0	-	-	-	-	-	-	-	-
80.0	90.0	0.0	-	-	4.4	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
93.3	90.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

Table 8. (cont.)

Poromitra crassiceps

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
83.3	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	-	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	0.0	-	-	-	0.0	-

Scopeloberyx robustus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.9	-

Scopelogadus bispinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	110.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	8.7	-	-	25.4	-	-	-	-	-	-	-	-
60.0	60.0	28.0	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	27.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	22.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	28.3	-	-	97.9	-	-	-	-	-	-	-	-
63.3	60.0	3.3	-	-	194.0	-	-	-	-	-	-	-	-
66.7	50.0	94.6	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	32.5	-	-	10.0	-	-	-	-	-	-	-	-
70.0	51.0	77.4	-	-	14.0	-	-	-	-	-	-	-	-
70.0	55.0	4.8	-	-	28.7	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	68.9	-	-	-	-	-	-	-	-
73.3	50.0	23.1	-	-	-	-	-	-	-	-	-	-	-
73.3	55.0	9.5	-	-	-	-	-	-	-	-	-	-	-
73.3	60.0	10.1	-	-	-	-	-	-	-	-	-	-	-
76.7	49.0	10.6	-	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7	51.0	0.0	-	-	9.4	-	-	9.6	-	-	-	17.9	-

Table 8. (cont.)

***Sebastes* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	22.9	-	-	9.5	-	-	8.7	-	-	-	0.0	-
76.7	60.0	116.2	-	-	20.6	-	-	0.0	-	-	-	0.0	-
76.7	70.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
80.0	50.5	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
80.0	51.0	22.2	-	-	0.0	-	-	5.2	-	-	-	0.0	-
80.0	55.0	-	-	-	18.9	-	-	9.7	-	-	-	24.3	-
80.0	60.0	15.0	-	-	5.2	-	-	18.9	-	-	-	16.9	-
80.0	70.0	0.0	-	-	0.0	-	-	8.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
81.8	46.9	23.1	-	-	21.4	-	-	0.0	-	-	-	9.9	-
83.3	40.6	3.7	-	-	3.4	-	-	0.0	-	-	-	0.0	-
83.3	42.0	37.8	-	-	73.1	-	-	3.8	-	-	-	15.0	-
83.3	51.0	242.6	-	-	12.4	-	-	8.8	-	-	-	31.8	-
83.3	55.0	81.8	-	-	21.3	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	7.5	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
86.7	33.0	34.4	-	-	0.0	-	-	0.0	-	-	-	27.8	-
86.7	35.0	29.3	-	-	124.2	-	-	0.0	-	-	-	0.0	-
86.7	40.0	19.4	-	-	71.4	-	-	0.0	-	-	-	13.8	-
86.7	45.0	9.8	-	-	55.9	-	-	0.0	-	-	-	8.3	-
86.7	50.0	125.6	-	-	114.5	-	-	8.0	-	-	-	-	-
86.7	60.0	-	-	-	0.0	-	-	29.7	-	-	-	0.0	-
86.7	90.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.8	32.5	0.0	-	-	3.7	-	-	0.0	-	-	-	3.6	-
90.0	27.7	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	3.5	-	-	0.0	-	-	0.0	-	-	-	4.6	-
90.0	35.0	92.3	-	-	78.9	-	-	9.9	-	-	-	27.4	-
90.0	37.0	0.0	-	-	29.0	-	-	11.1	-	-	-	0.0	-
90.0	45.0	175.4	-	-	471.9	-	-	0.0	-	-	-	0.0	-
90.0	53.0	26.4	-	-	9.7	-	-	19.7	-	-	-	55.8	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
93.3	26.7	4.2	-	-	30.8	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	20.3	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	41.7	-	-	0.0	-	-	-	4.2	-
93.3	35.0	-	-	-	223.1	-	-	0.0	-	-	-	16.0	-

Table 8. (cont.)

***Sebastes* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	40.0	0.0	-	-	78.5	-	-	0.0	-	-	-	0.0	-
93.3	45.0	4.7	-	-	247.0	-	-	0.0	-	-	-	0.0	-
93.3	50.0	4.4	-	-	498.1	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	280.2	-	-	46.9	-	-	-	0.0	-
93.3	60.0	0.0	-	-	186.9	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	74.7	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	127.7	-	-	0.0	-	-	-	0.0	-
93.4	26.4	0.0	-	-	0.0	-	-	2.9	-	-	-	0.0	-

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.0	-	-	4.2	-	-	0.0	-	-	-	-	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.7	-
86.7	70.0	-	-	-	0.0	-	-	0.0	-	-	-	3.6	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
90.0	53.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.3	-

Sebastes goodei

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	5.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	45.0	10.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.0	-	-	8.5	-	-	-	-	-	-	-	-

Table 8. (cont.)

Sebastes jordani (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	9.3	-	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	186.1	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	112.3	-	-	-	-	-	-	-	-
66.7	55.0	23.2	-	-	0.0	-	-	-	-	-	-	-	-
76.7	49.0	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	19.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	17.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	32.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	63.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	46.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	33.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	33.0	26.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	33.9	-	-	0.0	-	-	-	0.0	-
90.0	35.0	43.7	-	-	9.9	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	-	21.4	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	20.3	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	31.3	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	13.1	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	19.8	-	-	0.0	-	-	-	0.0	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	8.6	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	13.7	-	-	0.0	-	-	0.0	-	-	-	9.2	-
76.7	60.0	38.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	7.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	19.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	33.0	7.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
86.7	50.0	53.8	-	-	0.0	-	-	0.0	-	-	-	-	-
90.0	35.0	0.0	-	-	9.9	-	-	0.0	-	-	-	9.1	-

Table 8. (cont.)

Sebastes paucispinis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
90.0	45.0	31.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	-	-	-	9.4	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	8.6	-	-	0.0	-	-	-	-	-

Zaniolepis frenata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.0	-

Zaniolepis latipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	9.3	-	-	0.0	-	-	-	-	-	-	-	-

Cottidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	0.0	-	-	0.0	-	-	0.0	-	-	-	4.1	-

Artedius harringtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	5.1	-	-	-	-	-	-	-	-

Artedius lateralis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Clinocottus analis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	9.0	-	-	0.0	-	-	-	0.0	-

Hemilepidotus spinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Icelinus quadriseriatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	11.9	-
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.5	-
90.0	28.0	0.0	-	-	0.0	-	-	4.2	-	-	-	0.0	-

Ruscarius creaseri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	9.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	8.8	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
86.7	50.0	3.0	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	8.8	-	-	0.0	-	-	-	0.0	-

Scorpaenichthys marmoratus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	60.0	0.0	-	-	8.4	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-

Odontopyxis trispinosa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-

Xeneretmus latifrons

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Liparis* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
80.0	50.5	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

***Paralabrax* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	-	0.0	-	-	8.0	-	-	-	-	-

Trachurus symmetricus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	100.0	0.0	-	-	9.9	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	4.9	-	-	-	-	-	-	-	-
70.0	100.0	0.0	-	-	15.2	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	36.1	-	-	58.1	-	-	-	0.0	-
76.7	80.0	0.0	-	-	213.5	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	63.8	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	237.1	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	30.7	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	14.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	41.9	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	25.8	-	-	0.0	-	-	-	-	-
83.3	90.0	0.0	-	-	15.2	-	-	0.0	-	-	-	-	-
86.7	50.0	0.0	-	-	4.2	-	-	0.0	-	-	-	-	-
86.7	60.0	-	-	-	259.7	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	384.2	-	-	0.0	-	-	-	0.0	-
86.7	80.0	-	-	-	10.9	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	14.6	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	43.0	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	86.3	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	4.0	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	-	8.2	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	18.4	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	18.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	328.3	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Trachurus symmetricus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	70.0	0.0	-	-	121.4	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	17.8	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	65.6	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	13.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	50.5	0.0	-	-	0.0	-	-	0.0	-	-	-	4.1	-
81.7	43.5	0.0	-	-	0.0	-	-	0.0	-	-	-	2.8	-
83.3	42.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
85.4	35.8	0.0	-	-	3.6	-	-	0.0	-	-	-	0.0	-
86.7	33.0	87.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
86.8	32.5	58.7	-	-	14.6	-	-	0.0	-	-	-	0.0	-
90.0	27.7	31.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	17.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
91.7	26.4	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	71.8	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	71.1	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	20.8	-	-	0.0	-	-	-	0.0	-

Seriphus politus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	28.0	0.0	-	-	0.0	-	-	10.9	-	-	-	0.0	-

Girella nigricans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	28.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-

Chromis punctipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.1	-

Table 8. (cont.)

Hypsypops rubicundus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	27.7	0.0	-	-	0.0	-	-	3.2	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	10.9	-	-	-	0.0	-

Oxyjulis californica

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	38.8	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	37.4	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	60.6	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	8.9	-	-	0.0	-	-	-	0.0	-

***Rathbunella* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-
83.3	42.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-

Stichaeidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	3.0	-	-	0.0	-	-	0.0	-	-	-	-	-
90.0	27.7	6.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Chiasmodon niger

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	0.0	-	-	4.9	-	-	4.7	-	-	-	0.0	-
90.0	120.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-
93.3	120.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

Cryptotrema corallinum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	23.9	-	-	0.0	-	-	0.0	-	-	-	-	-
90.0	27.7	6.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

***Neoclinus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Hypsoblennius gentilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	7.6	-	-	-	0.0	-

Hypsoblennius jenkinsi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	0.0	-	-	0.0	-	-	2.2	-	-	-	0.0	-
81.7	43.5	0.0	-	-	0.0	-	-	2.9	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	5.0	-
86.7	33.0	0.0	-	-	0.0	-	-	26.5	-	-	-	3.5	-
86.7	35.0	0.0	-	-	11.3	-	-	10.1	-	-	-	0.0	-
86.8	32.5	0.0	-	-	0.0	-	-	3.5	-	-	-	3.6	-
88.5	30.1	0.0	-	-	5.5	-	-	22.8	-	-	-	0.0	-
90.0	27.7	0.0	-	-	0.0	-	-	12.8	-	-	-	2.8	-
90.0	28.0	0.0	-	-	0.0	-	-	4.2	-	-	-	0.0	-
91.7	26.4	0.0	-	-	2.5	-	-	37.5	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	7.6	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-
93.4	26.4	0.0	-	-	1.6	-	-	45.8	-	-	-	3.1	-

Ilypnus gilberti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	27.7	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Lepidogobius lepidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	39.4	6.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	27.7	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	7.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Rhinogobiops nicholsii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
76.7	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	0.0	-	-	8.7	-	-	-	0.0	-
81.8	46.9	9.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	9.8	-	-	11.3	-	-	0.0	-	-	-	0.0	-
86.7	50.0	3.0	-	-	0.0	-	-	0.0	-	-	-	-	-
90.0	27.7	3.4	-	-	0.0	-	-	3.2	-	-	-	0.0	-
90.0	60.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	8.7	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	18.4	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-

Typhlogobius californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-

Sphyraena argentea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	27.7	0.0	-	-	0.0	-	-	3.2	-	-	-	0.0	-

Scomber japonicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	11.2	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	87.3	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	30.5	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	27.7	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	-	46.7	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	-	5.1	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Icichthys lockingtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	70.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-

Tetragonurus cuvieri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	0.0	-	-	9.7	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	5.1	-	-	-	-	-
83.3	100.0	0.0	-	-	0.0	-	-	14.7	-	-	-	-	-
83.3	110.0	0.0	-	-	0.0	-	-	18.8	-	-	-	-	-
86.7	90.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.8	-	-	-	3.3	-
90.0	80.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	-	3.7	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
93.3	120.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-

Peprilus simillimus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	0.0	-	-	0.0	-	-	9.5	-	-	-	0.0	-

***Citharichthys* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5	30.1	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	70.0	9.5	-	-	-	-	-	-	-	-	-	-	-
70.0	60.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-
70.0	90.0	4.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	4.4	-	-	0.0	-	-	-	-	-	-	-	-
76.7	60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Citharichthys sordidus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	0.0	-	-	0.0	-	-	-	24.3	-
80.0	60.0	0.0	-	-	0.0	-	-	9.5	-	-	-	8.5	-
83.3	42.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.0	-
86.7	40.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
86.7	45.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
86.7	60.0	-	-	-	0.0	-	-	0.0	-	-	-	9.2	-
86.7	70.0	-	-	-	0.0	-	-	0.0	-	-	-	3.6	-
90.0	30.0	0.0	-	-	18.4	-	-	0.0	-	-	-	9.9	-
90.0	35.0	0.0	-	-	9.9	-	-	0.0	-	-	-	13.7	-
90.0	37.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-
93.3	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
93.3	40.0	4.9	-	-	13.1	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.0	-
93.3	55.0	0.0	-	-	0.0	-	-	23.5	-	-	-	9.0	-
93.3	80.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	4.5	-	-	0.0	-	-	-	-	-	-	-	-
66.7	80.0	6.9	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	9.6	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	5.0	-	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	4.7	-	-	-	-	-	-	-	-	-	-	-
73.3	80.0	13.3	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	9.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	19.4	-
76.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.1	-
80.0	55.0	-	-	-	0.0	-	-	0.0	-	-	-	16.2	-
80.0	60.0	5.0	-	-	0.0	-	-	9.5	-	-	-	8.5	-

Table 8. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.3	-
83.3	40.6	0.0	-	-	0.0	-	-	3.4	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
83.3	55.0	4.8	-	-	0.0	-	-	18.6	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
83.3	70.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	33.0	7.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	40.0	9.7	-	-	0.0	-	-	0.0	-	-	-	13.8	-
86.7	45.0	6.5	-	-	0.0	-	-	10.2	-	-	-	0.0	-
86.7	55.0	-	-	-	0.0	-	-	0.0	-	-	-	7.5	-
86.7	60.0	-	-	-	0.0	-	-	0.0	-	-	-	27.7	-
86.7	70.0	-	-	-	0.0	-	-	0.0	-	-	-	25.1	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.7	-
90.0	28.0	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	-	9.2	-	-	0.0	-	-	-	9.9	-
90.0	37.0	4.5	-	-	0.0	-	-	0.0	-	-	-	17.6	-
90.0	45.0	25.8	-	-	0.0	-	-	5.3	-	-	-	25.7	-
90.0	53.0	0.0	-	-	0.0	-	-	9.8	-	-	-	9.3	-
90.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.9	-
93.3	30.0	4.5	-	-	0.0	-	-	10.2	-	-	-	4.2	-
93.3	40.0	4.9	-	-	13.1	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	-	19.8	-	-	0.0	-	-	-	0.0	-
93.3	50.0	17.6	-	-	27.7	-	-	11.6	-	-	-	0.0	-
93.3	55.0	18.1	-	-	0.0	-	-	23.5	-	-	-	9.0	-
93.3	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-

Hippoglossina stomata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
93.3	28.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	8.7	-	-	0.0	-	-	-	-	-	-	-	-
80.0	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Paralichthys californicus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	7.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.8	32.5	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
88.5	30.1	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	27.7	20.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	3.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.9	-
91.7	26.4	2.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
93.3	35.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
93.4	26.4	0.0	-	-	0.0	-	-	2.9	-	-	-	6.2	-

Xystreurys liolepis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	0.0	-	-	5.2	-	-	0.0	-	-	-	0.0	-

Hypsopsetta guttulata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	27.7	6.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	28.0	7.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Lepidopsetta bilineata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	55.0	0.0	-	-	10.0	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-

Lyopsetta exilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	30.5	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	9.8	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.0	-	-	-	-	-	-	-	-
76.7	60.0	0.0	-	-	10.3	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
83.3	51.0	0.0	-	-	4.1	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Lyopsetta exilis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	-	10.7	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	10.3	-	-	3.8	-	-	-	0.0	-
93.3	30.0	0.0	-	-	10.4	-	-	10.2	-	-	-	0.0	-

Microstomus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	70.0	-	-	-	4.5	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Parophrys vetulus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	21.9	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	40.6	0.0	-	-	3.4	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	33.9	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	-	30.5	-	-	0.0	-	-	-	0.0	-

Pleuronichthys coenosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	55.0	0.0	-	-	0.0	-	-	23.5	-	-	-	0.0	-

Pleuronichthys ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	45.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-

Pleuronichthys verticalis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	17.2	-	-	-	0.0	-
85.4	35.8	0.0	-	-	0.0	-	-	2.9	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	3.8	-	-	-	0.0	-
93.3	28.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	-	10.4	-	-	0.0	-	-	-	0.0	-

Table 8. (cont.)

Disintegrated fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	4.4	-	-	0.0	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
86.7	45.0	3.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	3.0	-	-	0.0	-	-	0.0	-	-	-	-	-
86.7	55.0	-	-	-	8.8	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	80.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	120.0	4.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	110.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Unidentified fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	60.0	4.6	-	-	0.0	-	-	-	-	-	-	-	-

PHYLOGENETIC INDEX TO TABLES 4 AND 8

ALPHABETICAL INDEX TO TABLES 4 AND 8

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