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ICHTHYOPLANKTON AND STATION DATA FOR SURFACE (MANTA) AND OBLIQUE (BONGO) TOWS TAKEN FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 2004

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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 2004. It is the 63rd report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 327 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 68 larval fish categories identified in Manta net tows and standardized counts (number under 10 square meters of sea surface) of each of the 138 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 63rd 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 2004. 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),

[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).

Gruber et al. (1982), and Doyle (1992a,b) provided initial information on 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 2004 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		

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

SAMPLING AREA AND PATTERN

A total of 327 standard CalCOFI survey stations was occupied on four cruises in 2004, employing three research vessels:

0401, RV *David Starr Jordan,* 93 stations, January 5 – 27;

0404, RV *New Horizon,* 61 stations, March 23 – April 8
RV *David Starr Jordan,* 25 stations, April 14–21;

0407, RV *David Starr Jordan,* 74 stations, July 12 – 28;

0411, RV *Roger Revelle,* 74 stations, November 2 – 19.

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 – February) and spring

[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

(March–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, Baja California, Mexico. On cruise 0401, lines 60.0 through 73.3 extended seaward to station 90, but on cruise 0404 lines 60.0 through 70.0 extended seaward only to station 80. On all cruises, lines 76.7 and 80.0 extended seaward to station 100.0, lines 83.3 and 86.7 extended seaward to station 110.0, and lines 90.0 and 93.3 extended to station 120.0 (Figures 2–4). On cruises 0407 and 0411, 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 2004 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.

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between cardinal lines (those ending in "0"). Scripps Institution of Oceanography continues to use the original designation for ordinal lines.

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 2004. 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 2004 surveys could be identified to species. A total of 68 larval fish categories (including disintegrated) was identified in Manta net tows for 2004: 61 to species (92% of the total larvae collected in the Manta net tows) and 6 to genus (7.8% of the total larvae). A total of 138 larval fish categories (including unidentified and disintegrated) was identified in the Bongo net tows: 112 to species (88% of the total larvae collected in the Bongo net tows), 20 to genus (11% of the total larvae), 3 to family, and 1 to order. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Fisheries Resources Division by D. A. Ambrose 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:

Coryphaenoides pectoralis – Morita (1999) placed *Albatrossia pectoralis* in *Coryphaenoides*; in CalCOFI ichthyoplankton data reports through the 2003 report *C. pectoralis* was reported as *A. pectoralis*.

Cyclothone spp. – small or damaged larvae, mostly *C. acclinidens* and/or *C. pseudopallida* lacking diagnostic characters.

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.

Glyptocephalus zachirus – see comment for Pleuronectidae.

Howella spp. – larvae represent a single species, either *H. brodiei* or *H. sherborni*; taxonomy of the adult is unresolved.

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 half as many fish larvae were collected in surface samples on CalCOFI cruises during 2004 compared with 2003. Of the five most abundant taxa collected in Manta net tows in 2004, Pacific sardine (*Sardinops sagax*) ranked first in abundance, as it has each year since 1997, with 24.6% of the total fish larvae, and fifth in occurrence with larvae collected in 7.7% of the total samples (Tables 2 and 3). However, the total number of Pacific sardine larvae in the 2004 Manta net tows was only 20% of the 2003 value, and they occurred only 56% as frequently. Within the 66-station standard CalCOFI pattern, the average larval density (0.1 larvae/100m^3) and proportion of positive stations (4.7%) during 2004 were

the lowest that have been recorded in standard CalCOFI Manta samples. The second most abundant species in 2004, northern anchovy (*Engraulis mordax*), accounted for 12.6% of the total larvae and tied for third in occurrence with 9.8% of the samples. The total number of northern anchovy larvae collected in 2004 was about 60% of the 2003 value, and within the 66-station standard pattern both the average larval density (1.3 larvae/100m^3) and the frequency of occurrence (12.2%) in 2004 were the lowest that have been recorded in standard CalCOFI Manta net samples. Lingcod (*Ophiodon elongatus*) was the third most abundant with 10.5% of the total larvae and ninth in total occurrence (3.4% of the samples). Eight times more larval lingcod were collected in 2004 than in 2003, but their frequencies of occurrence were similar in both years. Higher abundances and frequencies of occurrence of larval lingcod in 2003–2004 compared with most other years undoubtedly reflect the addition of the northern CalCOFI stations in winter and spring, during the lingcod spawning season. Mussel blenny (*Hypsoblennius jenkinsi*) ranked fourth in abundance with 9.8% of the total larvae, and tied for seventh in frequency of occurrence with 4.3% of the samples. Nearly three times more mussel blenny larvae were collected during 2004, but in only about 60% as many samples, compared with 2003. Cabezon (*Scorpaenichthys marmoratus*) ranked fifth in abundance (7.9% of the total larvae), and tied for third in frequency of occurrence (9.8% of the samples). About 60% as many cabezon larvae were collected during 2004 compared with 2003, but their frequency of occurrence was similar in both years. The next five most abundant taxa were unidentified larvae of the rockfish genus *Sebastes* (6.0% of the total larvae), Pacific saury (*Cololabis saira*) with 5.8% of the total, brown Irish lord (*Hemilepidotus spinosus*) with 4.7% of total, jacksmelt (*Atherinopsis californiensis*) with 2.7% of the total, and Panama lightfish (*Vinciguerria lucetia*) with 2.7% of the total larvae. These species ranked 2nd, 1st, tied for 17th, ranked 6th, and tied for 7th in frequency of occurrence, respectively. The ten most abundant taxa comprised 87.3% of all the larvae collected in Manta net tows on CalCOFI cruises in 2004. The remaining 12.7% was distributed among 58 other categories. Of the ten most abundant taxa, five are coastal demersal taxa, two are coastal pelagic 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

In contrast to the surface samples, more larvae (129%) were collected in the oblique samples during the 2004 CalCOFI survey than during the 2003 survey. Of the five most abundant taxa collected in the Bongo net tows during 2004, Pacific sardine ranked first in abundance as in most years since 1999, with 14.8% of the total larvae, and tied for 20th in occurrence, with 9.5% positive tows (Tables 6 and 7). However, only 58% as many Pacific sardine larvae were collected in the oblique tows (60% as many occurrences) during 2004 compared with 2003, and within the standard 66-station CalCOFI pattern average larval abundance (3.1 larvae under 10m^2 of sea surface) was the lowest since 1984, continuing the decline off southern California in most years since 1999. The second most abundant species, Panama lightfish, accounted for 14.5% of the total larvae and tied for 11th in occurrence (14.4% of the samples). Larval Panama lightfish were more than three times more abundant during 2004 compared with 2003 (and more abundant than they have been since 1998), but they occurred with equal frequency in both years. Northern lampfish (*Stenobrachius leucopsarus*) ranked third in abundance with 12.2% of the larvae, and was first in occurrence (44.2% of the samples). Abundance and frequency of occurrence of larval northern lampfish were nearly the same in 2003 and 2004. Unidentified rockfish larvae (*Sebastes* spp.) ranked fourth in abundance with 9.1% of the total larvae, and 4th in frequency of occurrence with 31.0% positive tows. Compared with 2003, larval abundance was somewhat higher (121%) in 2004, but frequency of larval occurrence was nearly the same. Popeye blacksmelt (*Bathylagus ochotensis*) ranked fifth in abundance (7.3% of the total larvae) and 3rd in frequency of occurrence (33.1% of the samples). Larval popeye blacksmelt were more than twice as abundant (263%) and occurred more than twice as frequently in the 2004 oblique tows compared with 2003. The next five most abundant taxa were northern anchovy (5.9% of the total larvae; larval abundance and frequency of occurrence were similar between the 2003 and 2004 oblique tows off southern California), California smoothtongue, *Leuroglossus stilbius* (5.7%), Pacific hake, *Merluccius productus (*5.7%), California flashlightfish, *Protomyctophum crockeri* (2.0%), and snubnose blacksmelt, *Bathylagus wesethi* (1.7%). These species ranked 6th, 5th, 7th, 2nd, and 15th in frequency of occurrence, respectively. The ten most abundant taxa comprised 79.1% of all the larvae collected in Bongo net tows on CalCOFI cruises in 2004. The remaining 20.9% was distributed among

128 other categories (including the unidentified and disintegrated categories). Of the ten most abundant taxa, two were coastal demersal taxa, two were coastal pelagic species, and six 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 2004 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*, NH, *New Horizon*, and RR, *Roger Revelle*. 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*, RV *New Horizon,* and the RV *Roger Revelle* during the 2004 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 the RV *David Starr Jordan*, RV *New Horizon,* and the RV *Roger Revelle* during the 2004 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,* RV *New Horizon,* and the RV *Roger Revelle* during the 2004 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 2004 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*, NH, *New Horizon,* and RR, *Roger Revelle.* 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 2004 listed in rank order.

Table 7. Pooled counts of all larval fish taxa taken in Bongo net tows on CalCOFI survey cruises in 2004 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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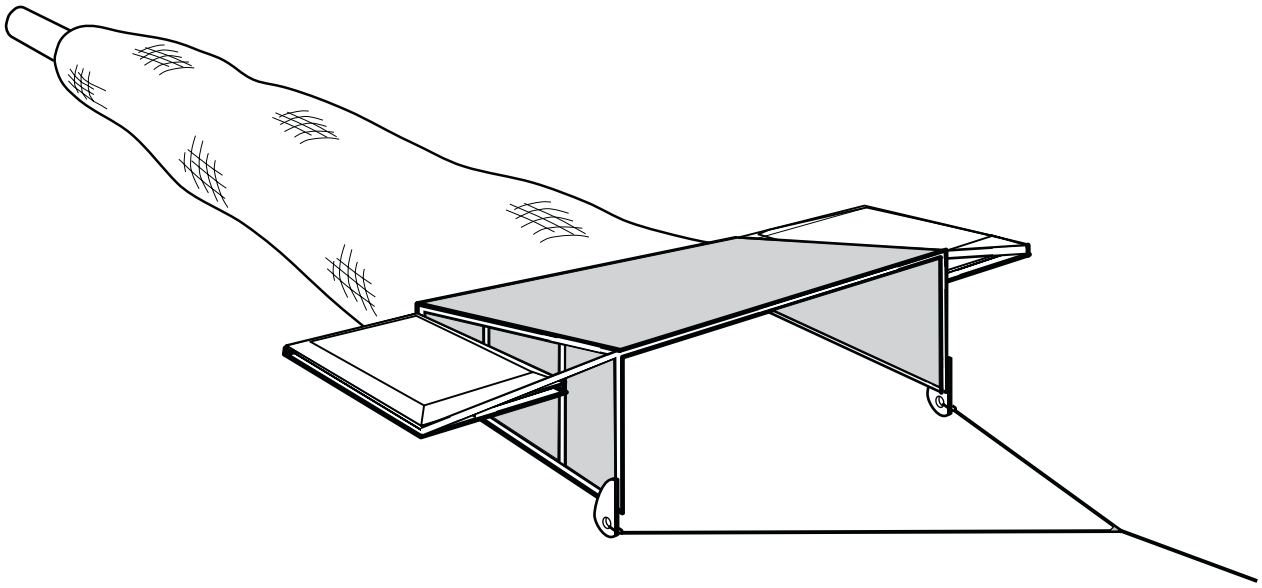

Figure 1. Diagram of the Manta net used on CalCOFI surveys.

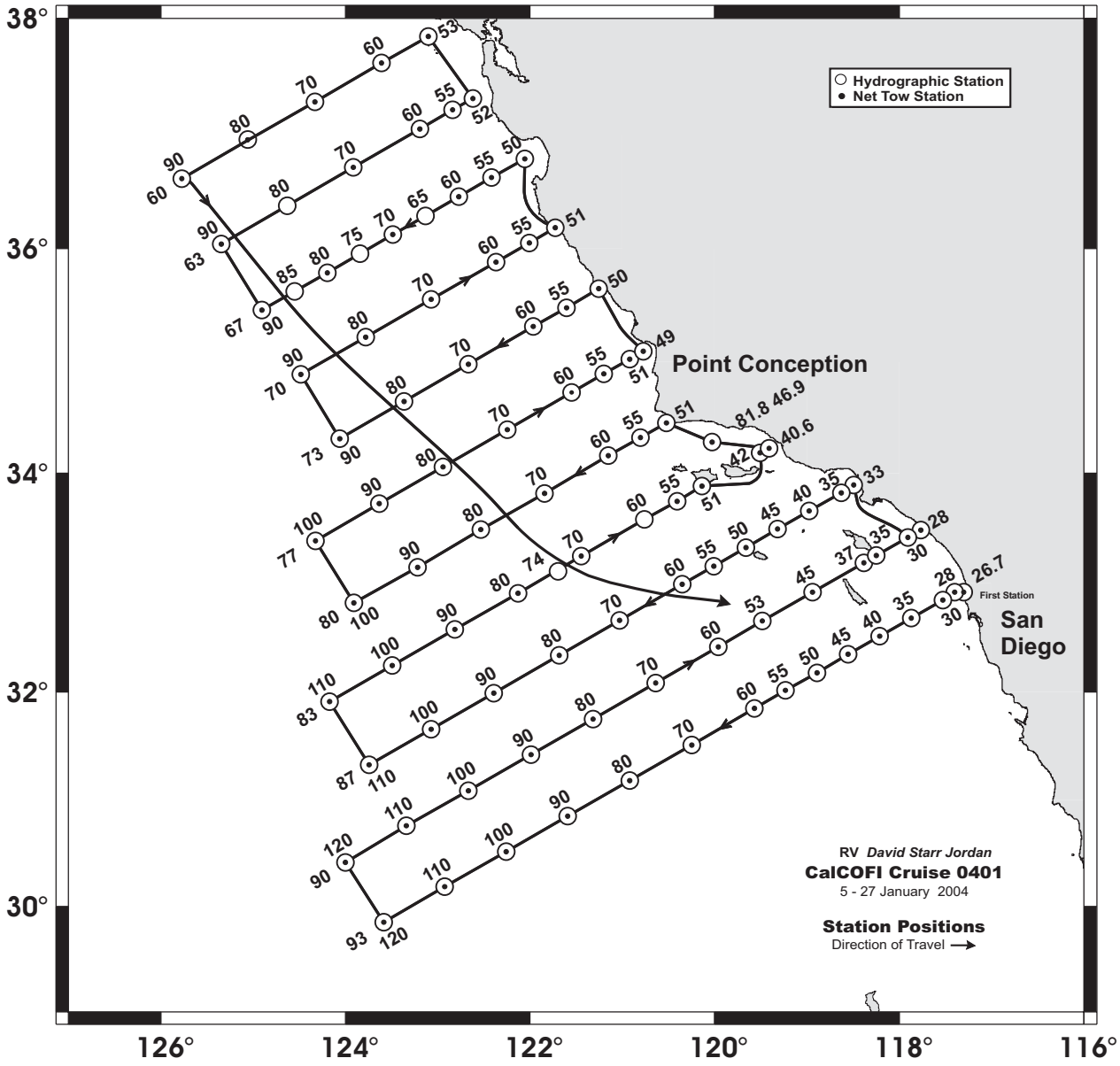

Figure 2. Stations and cruise track for CalCOFI cruise 0401JD. Circles indicate hydrographic stations; dots indicate net tow stations. On cruise 0401JD, a Bongo tow was taken unaccompanied by a Manta tow on station 60.0 70.0, and a Manta tow was taken unaccompanied by a Bongo tow on station 77.0 60.0

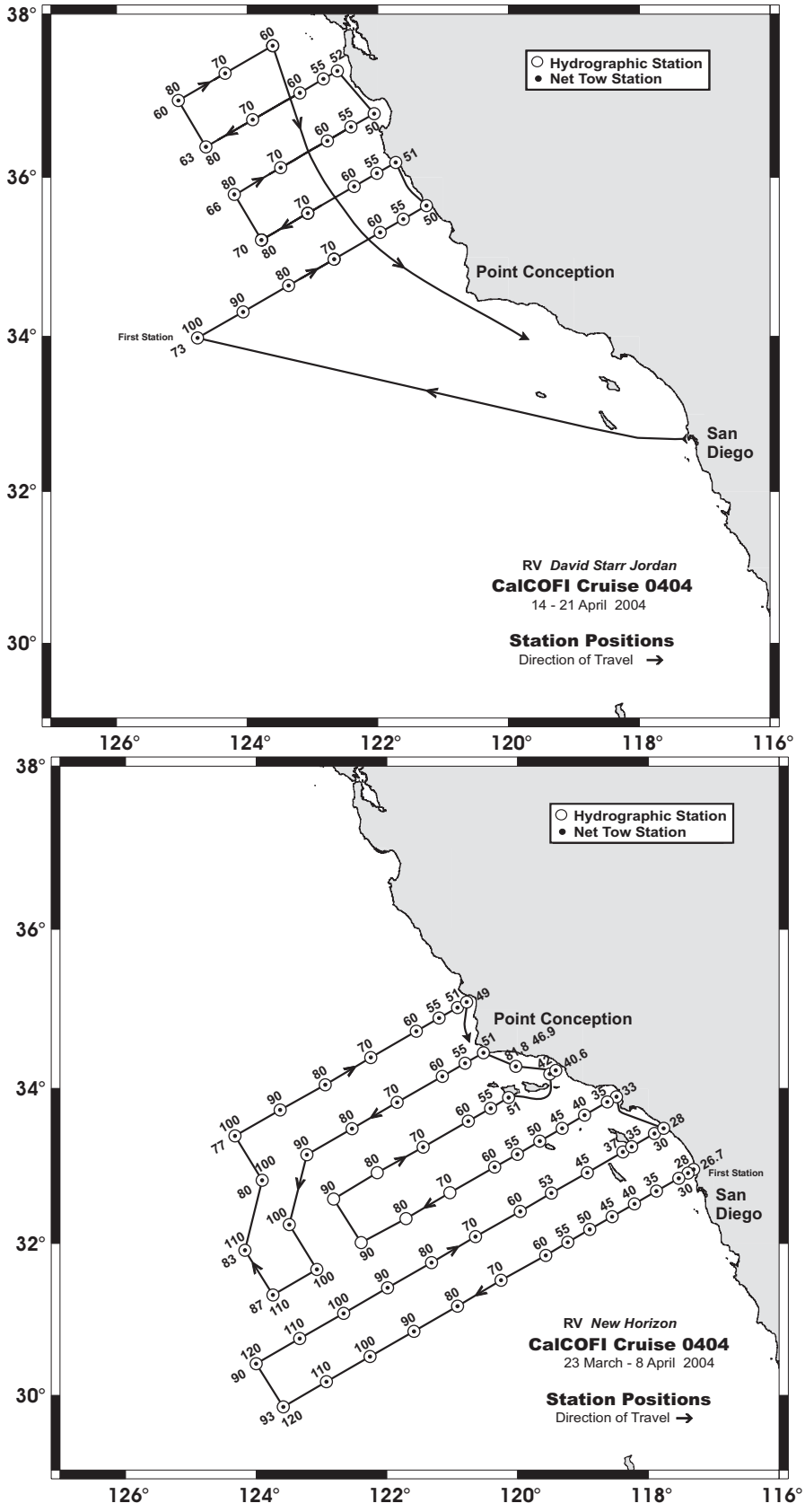

Figure 3. Stations and cruise track for CalCOFI cruise 0404JD (above) and 0404NH (below). On cruise 0404NH, a Bongo tow was taken unaccompanied by a Manta tow at station 77. 60. Symbols are as in Figure 2.

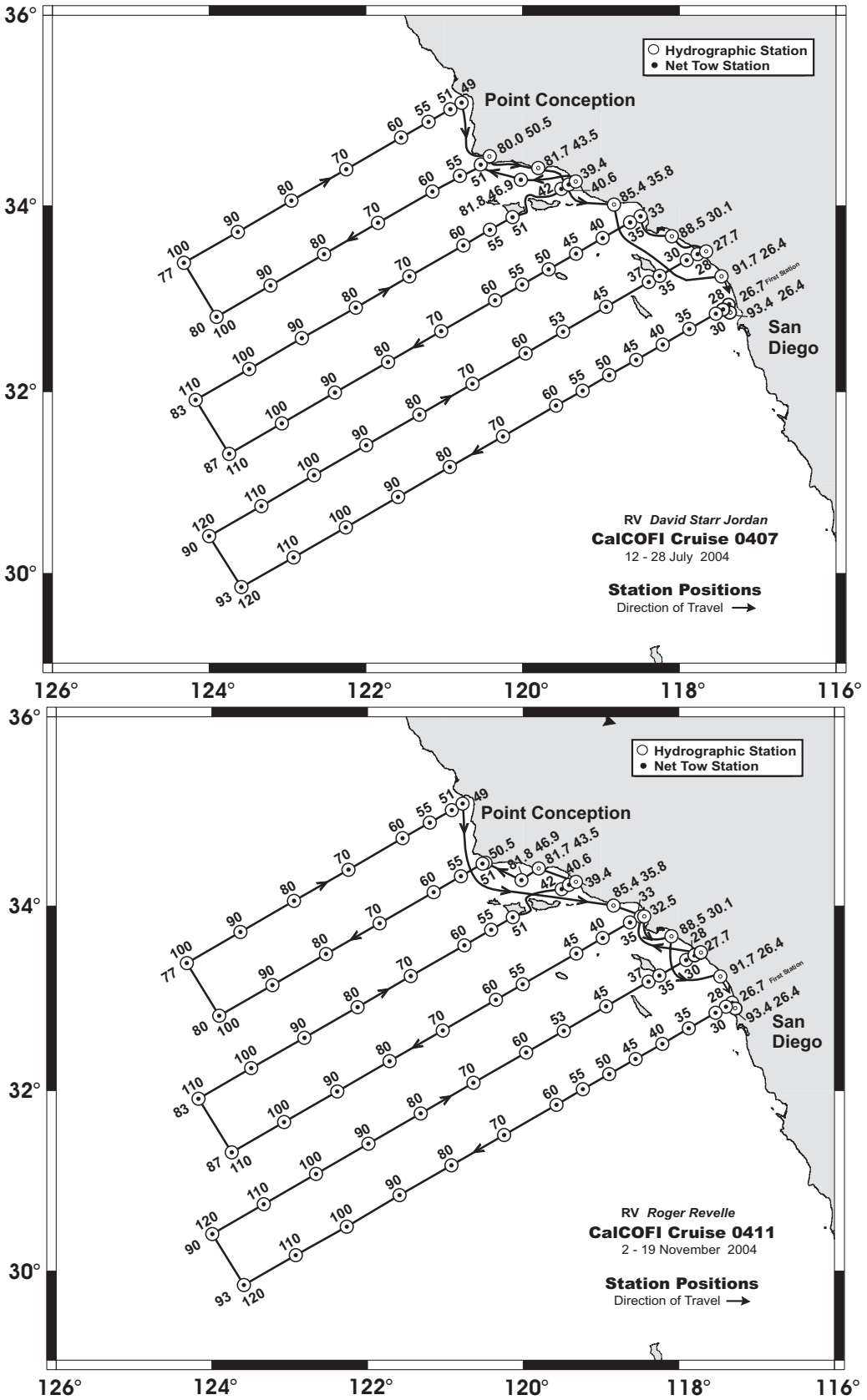

Figure 4. Stations and cruise track for CalCOFI cruise 0407JD (above) and 0411RR (below). Symbols are as in Figure 2.

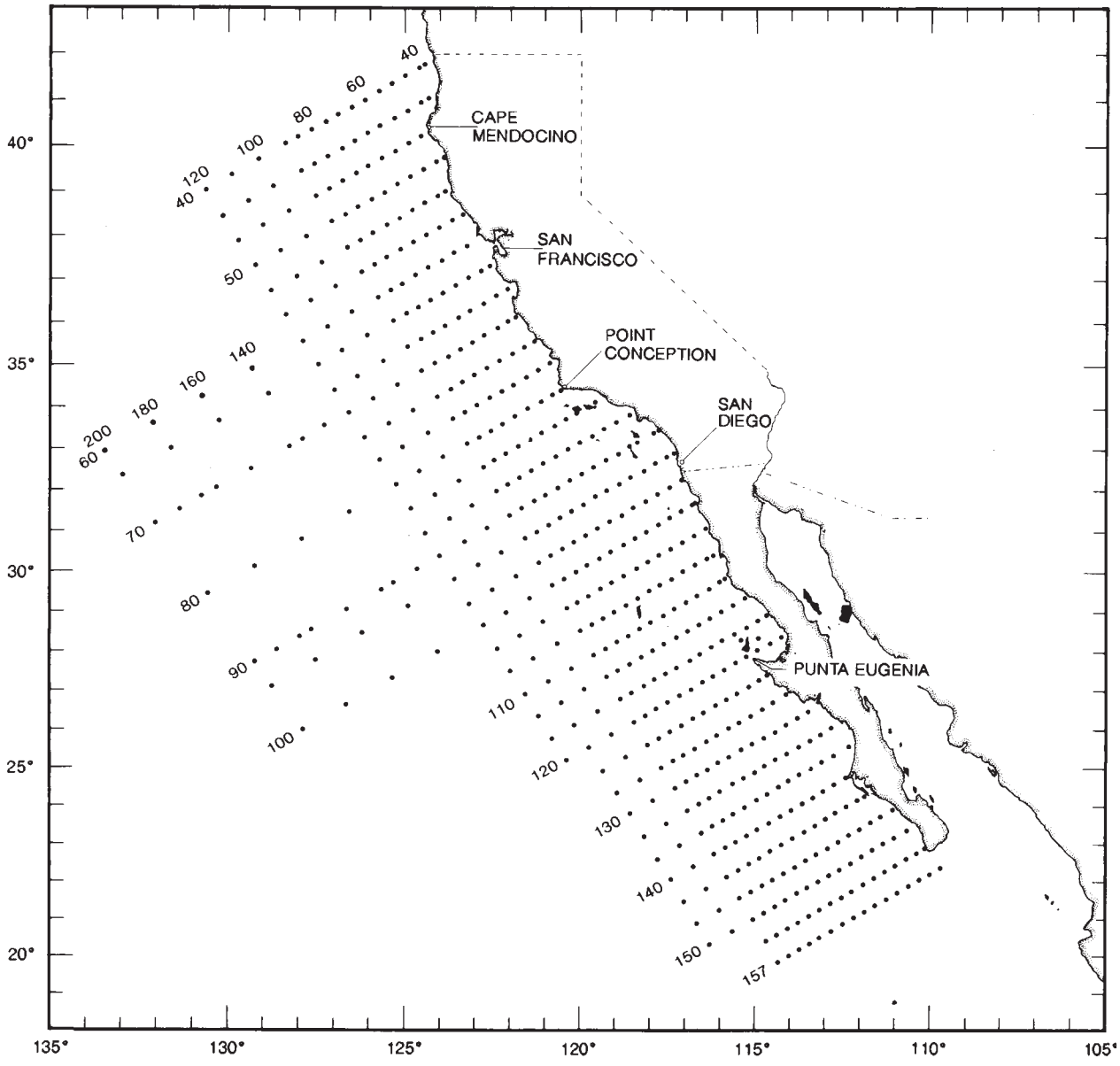

Figure 5. The basic CalCOFI station pattern occupied, in part, by cruises during 1951-1984.

TABLE 1. Station and plankton tow data for Manta tows taken on the 2004 CalCOFI survey. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 0401

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	50.7	123	06.0	JD	04	01	26	0814	70	89	38
60.0	60.0	37	36.9	123	36.4	JD	04	01	26	1231	70	6	19
60.0	80.0	36	56.9	125	03.3	JD	04	01	27	0025	71	1	3
60.0	90.0	36	36.8	125	46.2	JD	04	01	27	0639	79	1	4
63.3	52.0	37	18.5	122	37.2	JD	04	01	26	0228	70	374	154
63.3	55.0	37	12.6	122	50.2	JD	04	01	25	2346	75	12	95
63.3	60.0	37	02.6	123	11.6	JD	04	01	25	1959	71	6	22
63.3	70.0	36	42.6	123	55.0	JD	04	01	25	1338	67	0	3
63.3	90.0	36	02.4	125	20.5	JD	04	01	25	0050	68	1	1
66.7	50.0	36	47.2	122	03.4	JD	04	01	23	1106	82	0	15
66.7	55.0	36	37.2	122	24.9	JD	04	01	23	1513	72	0	2
66.7	60.0	36	27.2	122	46.4	JD	04	01	23	1912	70	0	2
66.7	70.0	36	07.3	123	29.0	JD	04	01	24	0226	76	2	2
66.7	80.0	35	47.2	124	11.7	JD	04	01	24	0947	67	0	1
66.7	90.0	35	27.2	124	54.2	JD	04	01	24	1707	73	0	2
70.0	51.0	36	10.8	121	43.7	JD	04	01	23	0135	72	7	84
70.0	55.0	36	02.9	122	00.6	JD	04	01	22	2219	79	1	0
70.0	60.0	35	52.9	122	21.9	JD	04	01	22	1759	73	0	0
70.0	70.0	35	32.9	123	04.4	JD	04	01	22	1148	69	0	3
70.0	80.0	35	12.9	123	46.7	JD	04	01	22	0545	73	0	2
70.0	90.0	34	52.9	124	28.8	JD	04	01	21	2339	74	0	2
73.3	50.0	35	38.6	121	15.3	JD	04	01	20	1646	73	1	1
73.3	55.0	35	28.6	121	36.4	JD	04	01	20	2006	70	0	17
73.3	60.0	35	18.7	121	57.7	JD	04	01	20	2340	70	1	2
73.3	70.0	34	58.5	122	39.9	JD	04	01	21	0548	68	0	4
73.3	80.0	34	38.6	123	21.9	JD	04	01	21	1135	66	0	6
73.3	90.0	34	18.6	124	03.7	JD	04	01	21	1739	68	0	3
76.7	49.0	35	05.3	120	46.5	JD	04	01	20	1052	70	0	18
76.7	51.0	35	01.3	120	55.1	JD	04	01	20	0815	73	4	1
76.7	55.0	34	53.4	121	12.0	JD	04	01	20	0415	72	2	1
76.7	60.0	34	43.2	121	33.0	JD	04	01	20	0032	77	8	10
76.7	70.0	34	23.3	122	14.7	JD	04	01	19	1728	69	4	4
76.7	80.0	34	03.2	122	56.6	JD	04	01	19	0906	69	0	0
76.7	90.0	33	43.3	123	37.9	JD	04	01	19	0336	74	0	1
76.7	100.0	33	23.2	124	19.3	JD	04	01	18	2129	80	0	0
80.0	51.0	34	27.1	120	31.5	JD	04	01	17	0535	66	37	59
80.0	55.0	34	19.0	120	48.1	JD	04	01	17	0809	74	0	2
80.0	60.0	34	09.2	121	09.0	JD	04	01	17	1340	69	0	0
80.0	70.0	33	49.0	121	50.6	JD	04	01	17	2002	87	1	1
80.0	80.0	33	29.1	122	32.1	JD	04	01	18	0145	77	3	1
80.0	90.0	33	08.6	123	13.2	JD	04	01	18	0802	77	0	22
80.0	100.0	32	49.0	123	54.6	JD	04	01	18	1525	75	0	0
81.8	46.9	34	16.5	120	01.6	JD	04	01	17	0130	70	3	467
83.3	40.6	34	13.4	119	24.6	JD	04	01	16	2037	81	0	20
83.3	42.0	34	10.9	119	30.6	JD	04	01	16	1106	83	1	48
83.3	51.0	33	52.8	120	08.1	JD	04	01	16	0434	79	0	42
83.3	55.0	33	44.6	120	24.4	JD	04	01	16	0121	82	0	3
83.3	70.0	33	14.8	121	26.7	JD	04	01	15	1417	69	0	0
83.3	80.0	32	54.5	122	07.7	JD	04	01	15	0534	72	0	1

TABLE 1. (cont.)

CalCOFI Cruise 0401

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	90.0	32	34.7	122	48.7	JD	04	01	14	2326	87	9	12
83.3	100.0	32	14.8	123	29.6	JD	04	01	14	1742	73	1	0
83.3	110.0	31	54.8	124	10.2	JD	04	01	14	1208	86	0	41
86.7	33.0	33	53.3	118	29.5	JD	04	01	12	0252	81	157	0
86.7	35.0	33	49.3	118	37.7	JD	04	01	12	0534	87	5	6
86.7	40.0	33	39.4	118	58.5	JD	04	01	12	0832	77	1	50
86.7	45.0	33	29.5	119	19.2	JD	04	01	12	1334	85	1	228
86.7	50.0	33	19.5	119	39.8	JD	04	01	12	1648	84	2	20
86.7	55.0	33	09.3	120	00.4	JD	04	01	12	2049	95	1	3
86.7	60.0	32	59.3	120	21.0	JD	04	01	13	0037	87	2	26
86.7	70.0	32	39.5	121	01.9	JD	04	01	13	0632	82	0	1
86.7	80.0	32	20.4	121	41.0	JD	04	01	13	1238	85	1	37
86.7	90.0	31	59.5	122	23.4	JD	04	01	13	1853	82	6	2
86.7	100.0	31	39.4	123	04.4	JD	04	01	14	0040	85	4	1
86.7	110.0	31	19.5	123	44.6	JD	04	01	14	0615	79	0	1
90.0	28.0	33	29.0	117	46.1	JD	04	01	11	1659	77	0	93
90.0	30.0	33	24.9	117	54.4	JD	04	01	11	2008	74	0	56
90.0	35.0	33	15.2	118	14.9	JD	04	01	11	1024	90	0	21
90.0	37.0	33	11.1	118	23.1	JD	04	01	11	0751	86	0	158
90.0	45.0	32	55.1	118	56.2	JD	04	01	11	0216	70	6	0
90.0	53.0	32	39.1	119	28.9	JD	04	01	10	2105	71	7	0
90.0	60.0	32	25.0	119	57.7	JD	04	01	10	1604	74	3	0
90.0	70.0	32	05.0	120	38.4	JD	04	01	10	0832	86	0	3
90.0	80.0	31	45.0	121	19.1	JD	04	01	10	0324	82	0	0
90.0	90.0	31	25.1	121	59.4	JD	04	01	09	2125	89	1	0
90.0	100.0	31	05.0	122	39.9	JD	04	01	09	1545	83	0	0
90.0	110.0	30	45.3	123	20.2	JD	04	01	09	0803	78	0	0
90.0	120.0	30	24.9	123	59.9	JD	04	01	09	0130	76	0	0
93.3	26.7	32	54.9	117	18.2	JD	04	01	05	1724	86	3	83
93.3	28.0	32	55.0	117	23.8	JD	04	01	05	1955	81	0	465
93.3	30.0	32	50.8	117	31.8	JD	04	01	06	0120	85	1	0
93.3	35.0	32	40.9	117	52.3	JD	04	01	06	0524	86	0	1
93.3	40.0	32	30.9	118	12.7	JD	04	01	06	0830	91	0	3
93.3	45.0	32	20.9	118	33.2	JD	04	01	06	1347	84	0	7
93.3	50.0	32	10.7	118	53.5	JD	04	01	06	1731	87	0	9
93.3	55.0	32	00.8	119	14.1	JD	04	01	06	2117	84	1	6
93.3	60.0	31	50.8	119	34.3	JD	04	01	07	0123	81	0	0
93.3	70.0	31	30.7	120	14.9	JD	04	01	07	0811	90	0	19
93.3	80.0	31	10.8	120	55.1	JD	04	01	07	1504	90	1	4
93.3	90.0	30	50.8	121	35.5	JD	04	01	07	2043	93	0	2
93.3	100.0	30	30.8	122	15.4	JD	04	01	08	0218	86	1	1
93.3	110.0	30	11.0	122	55.4	JD	04	01	08	0805	87	0	0
93.3	120.0	29	50.9	123	35.0	JD	04	01	08	1922	78	0	0

TABLE 1. (cont.)

CalCOFI Cruise 0404

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	60.0	37	36.8	123	36.6	JD	04	04	21	1943	90	34	21
60.0	70.0	37	16.9	124	20.0	JD	04	04	21	0930	53	37	131
60.0	80.0	36	56.8	125	03.2	JD	04	04	21	0040	100	0	0
63.3	52.0	37	18.6	122	37.0	JD	04	04	19	1049	83	0	38
63.3	55.0	37	12.6	122	49.9	JD	04	04	19	1359	81	2	44
63.3	60.0	37	02.5	123	11.6	JD	04	04	19	1914	82	21	521
63.3	70.0	36	42.5	123	54.8	JD	04	04	20	0443	80	97	137
63.3	80.0	36	22.5	124	37.6	JD	04	04	20	1346	81	114	32
66.7	50.0	36	47.1	122	03.4	JD	04	04	19	0418	94	24	38
66.7	55.0	36	37.2	122	24.8	JD	04	04	18	2338	94	5	1026
66.7	60.0	36	27.1	122	46.4	JD	04	04	18	1817	85	2	548
66.7	70.0	36	07.2	123	29.0	JD	04	04	18	0819	87	2	130
66.7	80.0	35	47.2	124	11.8	JD	04	04	17	2131	83	115	202
70.0	51.0	36	10.9	121	43.7	JD	04	04	16	0213	90	5	282
70.0	55.0	36	02.9	122	00.7	JD	04	04	16	0546	92	3	125
70.0	60.0	35	53.0	122	21.8	JD	04	04	16	0955	89	0	257
70.0	70.0	35	33.0	123	04.4	JD	04	04	16	1804	84	0	916
70.0	80.0	35	12.9	123	46.7	JD	04	04	17	0339	77	278	1707
73.3	50.0	35	38.6	121	15.3	JD	04	04	15	2007	84	8	22
73.3	55.0	35	28.6	121	36.5	JD	04	04	15	1640	80	0	54
73.3	60.0	35	18.6	121	57.7	JD	04	04	15	1245	83	1	180
73.3	70.0	34	58.6	122	40.2	JD	04	04	15	0641	72	14	607
73.3	80.0	34	38.6	123	21.9	JD	04	04	14	2304	77	0	0
73.3	90.0	34	18.6	124	03.7	JD	04	04	14	1728	80	0	1
73.3	100.0	33	58.6	124	45.3	JD	04	04	14	1151	79	0	1
76.7	49.0	35	05.4	120	46.8	NH	04	04	08	0840	75	0	40
76.7	51.0	35	01.3	120	55.1	NH	04	04	08	0633	93	2	12
76.7	55.0	34	53.2	121	12.1	NH	04	04	08	0255	88	4	25
76.7	70.0	34	23.3	122	14.8	NH	04	04	07	1553	78	0	1
76.7	80.0	34	02.6	122	56.5	NH	04	04	07	0755	76	2	8
76.7	90.0	33	43.2	123	38.1	NH	04	04	07	0122	80	7	0
76.7	100.0	33	23.3	124	19.5	NH	04	04	06	1809	108	0	1
80.0	51.0	34	27.0	120	31.4	NH	04	04	03	2101	98	4	34
80.0	55.0	34	19.0	120	48.1	NH	04	04	04	0044	90	9	5
80.0	60.0	34	09.1	121	09.1	NH	04	04	04	0447	96	3	256
80.0	70.0	33	49.1	121	50.7	NH	04	04	04	1120	101	2	82
80.0	80.0	33	29.0	122	31.9	NH	04	04	04	1755	95	0	5
80.0	90.0	33	09.0	123	13.3	NH	04	04	05	0023	93	2	13
80.0	100.0	32	49.0	123	54.4	NH	04	04	06	1151	84	0	0
81.8	46.9	34	16.5	120	01.5	NH	04	04	03	1621	107	2	2
83.3	40.6	34	13.5	119	24.8	NH	04	04	03	1110	117	1	517
83.3	42.0	34	10.9	119	30.5	NH	04	04	03	0922	118	1	330
83.3	51.0	33	52.7	120	08.3	NH	04	04	03	0333	90	14	723
83.3	55.0	33	44.7	120	24.6	NH	04	04	02	2353	73	15	144
83.3	60.0	33	34.7	120	45.3	NH	04	04	02	1840	89	160	84
83.3	70.0	33	14.8	121	26.8	NH	04	04	02	1111	93	0	0
83.3	100.0	32	14.7	123	29.6	NH	04	04	05	0758	99	1	0
83.3	110.0	31	54.6	124	10.2	NH	04	04	06	0351	77	2	1
86.7	33.0	33	53.4	118	29.3	NH	04	03	29	1718	111	35	81
86.7	35.0	33	49.4	118	37.7	NH	04	03	29	1944	98	9	1182

TABLE 1. (cont.)

CalCOFI Cruise 0404

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
86.7	40.0	33	39.4	118	58.5	NH	04	03	30	0012	83	2	938
86.7	45.0	33	29.3	119	19.0	NH	04	03	30	0417	84	3	258
86.7	50.0	33	19.4	119	39.6	NH	04	03	30	0733	86	56	1652
86.7	55.0	33	09.2	120	00.2	NH	04	03	30	1117	109	3	920
86.7	60.0	32	59.4	120	21.0	NH	04	03	30	1539	88	0	17
86.7	100.0	31	39.5	123	04.2	NH	04	04	05	1538	81	0	0
86.7	110.0	31	19.4	123	44.6	NH	04	04	05	2128	92	3	11
90.0	28.0	33	29.1	117	46.1	NH	04	03	29	0920	119	11	477
90.0	30.0	33	25.1	117	54.3	NH	04	03	29	0658	112	1	13355
90.0	35.0	33	15.1	118	15.3	NH	04	03	29	0243	106	3	3001
90.0	37.0	33	11.1	118	23.2	NH	04	03	28	2338	91	0	2170
90.0	45.0	32	55.1	118	56.1	NH	04	03	28	1749	100	7	6751
90.0	53.0	32	39.2	119	28.9	NH	04	03	28	1110	100	1	64
90.0	60.0	32	25.0	119	57.6	NH	04	03	28	0614	80	5	39
90.0	70.0	32	05.3	120	38.7	NH	04	03	27	2358	99	1	7
90.0	80.0	31	45.1	121	18.9	NH	04	03	27	1634	95	5	12
90.0	90.0	31	25.1	121	59.5	NH	04	03	27	1021	83	0	0
90.0	100.0	31	05.0	122	39.8	NH	04	03	27	0349	91	0	0
90.0	110.0	30	45.1	123	19.9	NH	04	03	26	2126	103	2	0
90.0	120.0	30	25.0	123	59.9	NH	04	03	26	1516	79	0	102
93.3	26.7	32	57.4	117	18.3	NH	04	03	23	1220	88	6	138
93.3	28.0	32	54.8	117	23.6	NH	04	03	23	1533	89	0	73
93.3	30.0	32	50.8	117	31.9	NH	04	03	23	1834	84	6	775
93.3	35.0	32	40.8	117	52.4	NH	04	03	23	2242	97	1	31
93.3	40.0	32	30.9	118	12.8	NH	04	03	24	0252	86	7	65
93.3	45.0	32	20.8	118	33.2	NH	04	03	24	0654	84	20	106
93.3	50.0	32	10.9	118	53.9	NH	04	03	24	1108	100	2	4
93.3	55.0	32	00.8	119	14.0	NH	04	03	24	1519	82	0	34
93.3	60.0	31	50.7	119	34.2	NH	04	03	24	1905	77	59	885
93.3	70.0	31	31.1	120	15.2	NH	04	03	25	0144	94	5	114
93.3	80.0	31	10.6	120	55.0	NH	04	03	25	0805	98	0	131
93.3	90.0	30	50.8	121	35.3	NH	04	03	25	1604	90	0	11
93.3	100.0	30	30.9	122	15.4	NH	04	03	25	2120	109	0	0
93.3	110.0	30	10.9	122	55.3	NH	04	03	26	0250	87	2	0
93.3	120.0	29	50.6	123	35.1	NH	04	03	26	0728	85	0	45

TABLE 1. (cont.)

CalCOFI Cruise 0407

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	JD	04	07	27	0413	51	3	181
76.7	51.0	35	01.3	120	55.2	JD	04	07	27	0144	66	1	1
76.7	55.0	34	53.3	121	12.0	JD	04	07	26	2219	58	8	20
76.7	60.0	34	43.3	121	33.0	JD	04	07	26	1813	59	4	439
76.7	70.0	34	23.3	122	14.9	JD	04	07	26	1159	62	10	50
76.7	80.0	34	03.3	122	56.9	JD	04	07	26	0544	61	2	62
76.7	90.0	33	43.2	123	38.1	JD	04	07	25	2340	66	15	1
76.7	100.0	33	23.4	124	19.5	JD	04	07	25	1738	55	1	1
80.0	51.0	34	27.0	120	31.5	JD	04	07	24	0329	55	6	634
80.0	55.0	34	19.1	120	48.0	JD	04	07	24	0645	60	3	19
80.0	60.0	34	09.1	121	09.0	JD	04	07	24	1052	55	0	20
80.0	70.0	33	49.1	121	50.6	JD	04	07	24	1652	52	0	130
80.0	80.0	33	29.0	122	32.0	JD	04	07	24	2306	48	3	209
80.0	90.0	33	09.0	123	13.1	JD	04	07	25	0513	55	36	52
80.0	100.0	32	48.8	123	54.2	JD	04	07	25	1129	55	0	5
81.8	46.9	34	16.5	120	01.4	JD	04	07	23	2330	60	5	9
83.3	40.6	34	13.7	119	24.6	JD	04	07	23	1708	60	1	276
83.3	42.0	34	10.7	119	30.5	JD	04	07	23	1512	61	0	217
83.3	51.0	33	52.8	120	07.8	JD	04	07	23	0819	57	5	417
83.3	55.0	33	44.8	120	24.9	JD	04	07	23	0519	54	1	3
83.3	60.0	33	34.7	120	45.4	JD	04	07	23	0100	67	3	12
83.3	70.0	33	14.7	121	26.6	JD	04	07	22	1821	56	1	22
83.3	80.0	32	54.5	122	07.6	JD	04	07	22	1200	61	3	69
83.3	90.0	32	34.8	122	49.0	JD	04	07	22	0603	54	0	17
83.3	100.0	32	14.7	123	29.4	JD	04	07	21	2352	51	1	435
83.3	110.0	31	54.8	124	10.3	JD	04	07	21	1748	62	7	189
86.7	33.0	33	53.4	118	29.5	JD	04	07	19	0155	73	81	1517
86.7	35.0	33	49.4	118	37.7	JD	04	07	19	0435	69	2	993
86.7	40.0	33	39.4	118	58.5	JD	04	07	19	0804	81	1	24
86.7	45.0	33	29.3	119	19.1	JD	04	07	19	1432	71	0	0
86.7	50.0	33	19.3	119	39.9	JD	04	07	19	1904	66	3	84
86.7	55.0	33	09.4	120	00.4	JD	04	07	19	2251	61	1	6
86.7	60.0	32	59.4	120	20.9	JD	04	07	20	0229	68	0	0
86.7	70.0	32	39.3	121	02.4	JD	04	07	20	1052	62	0	41
86.7	80.0	32	19.3	121	42.9	JD	04	07	20	1715	55	10	11
86.7	90.0	31	59.4	122	23.6	JD	04	07	20	2303	52	0	7
86.7	100.0	31	39.4	123	04.3	JD	04	07	21	0452	59	4	117
86.7	110.0	31	19.3	123	44.8	JD	04	07	21	1108	64	0	1091
90.0	28.0	33	29.1	117	46.1	JD	04	07	18	1755	72	10	81
90.0	30.0	33	25.1	117	54.2	JD	04	07	18	1457	74	23	3
90.0	35.0	33	15.2	118	14.9	JD	04	07	18	1056	73	0	590
90.0	37.0	33	11.1	118	23.4	JD	04	07	18	0809	75	4	3
90.0	45.0	32	55.1	118	56.1	JD	04	07	18	0241	71	10	36
90.0	53.0	32	39.2	119	28.9	JD	04	07	17	2044	68	7	18
90.0	60.0	32	25.1	119	57.6	JD	04	07	17	1551	68	1	53
90.0	70.0	32	05.2	120	38.3	JD	04	07	17	0806	71	5	12
90.0	80.0	31	45.0	121	19.0	JD	04	07	17	0031	74	5	0
90.0	90.0	31	25.1	121	59.5	JD	04	07	16	1838	66	4	330
90.0	100.0	31	05.2	122	39.6	JD	04	07	16	1148	72	0	149

TABLE 1. (cont.)

CalCOFI Cruise 0407

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
90.0	110.0	30	44.9	123	20.0	JD	04	07	16	0529	67	2	120
90.0	120.0	30	25.1	123	59.9	JD	04	07	15	2330	72	17	179
93.3	26.7	32	57.4	117	18.3	JD	04	07	12	2059	83	99	4330
93.3	28.0	32	54.8	117	23.7	JD	04	07	13	0011	77	79	119
93.3	30.0	32	50.8	117	31.9	JD	04	07	13	0249	75	73	1
93.3	35.0	32	40.8	117	52.4	JD	04	07	13	0659	73	2	1
93.3	40.0	32	30.7	118	12.8	JD	04	07	13	1101	73	0	3
93.3	45.0	32	20.9	118	32.9	JD	04	07	13	1709	78	0	4
93.3	50.0	32	10.9	118	53.5	JD	04	07	13	2118	74	6	0
93.3	55.0	32	00.7	119	14.0	JD	04	07	14	0125	76	4	0
93.3	60.0	31	50.9	119	34.2	JD	04	07	14	0526	67	0	13
93.3	70.0	31	30.7	120	15.0	JD	04	07	14	1147	75	0	57
93.3	80.0	31	10.7	120	55.5	JD	04	07	14	1739	77	2	35
93.3	90.0	30	50.8	121	35.3	JD	04	07	14	2321	72	36	74
93.3	100.0	30	30.8	122	15.4	JD	04	07	15	0518	69	16	286
93.3	110.0	30	10.8	122	55.4	JD	04	07	15	1125	73	1	757
93.3	120.0	29	51.0	123	35.2	JD	04	07	15	1729	72	8	371

TABLE 1. (cont.)

CalCOFI Cruise 0411

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	46.6	RR	04	11	18	1135	79	0	115
76.7	51.0	35	01.3	120	55.1	RR	04	11	18	0825	59	0	2
76.7	55.0	34	53.3	121	12.0	RR	04	11	18	0444	99	4	0
76.7	60.0	34	43.3	121	32.9	RR	04	11	17	2323	75	0	0
76.7	70.0	34	23.2	122	14.8	RR	04	11	17	1636	83	0	6
76.7	80.0	34	03.3	122	56.5	RR	04	11	17	1035	93	0	3
76.7	90.0	33	43.3	123	38.0	RR	04	11	17	0249	109	3	20
76.7	100.0	33	23.3	124	19.4	RR	04	11	16	2058	103	4	0
80.0	51.0	34	27.0	120	31.4	RR	04	11	15	0420	123	14	321
80.0	55.0	34	19.0	120	48.1	RR	04	11	15	0802	96	2	1
80.0	60.0	34	09.0	121	09.0	RR	04	11	15	1232	110	0	2
80.0	70.0	33	49.0	121	50.6	RR	04	11	15	1819	98	1	2
80.0	80.0	33	29.0	122	32.0	RR	04	11	16	0015	119	1	5
80.0	90.0	33	09.0	123	13.3	RR	04	11	16	0549	105	0	0
80.0	100.0	32	49.0	123	54.5	RR	04	11	16	1525	126	3	3
81.8	46.9	34	16.5	120	01.5	RR	04	11	14	2200	90	3	3
83.3	40.6	34	13.5	119	24.7	RR	04	11	14	1105	95	1	37
83.3	42.0	34	10.7	119	30.5	RR	04	11	14	0821	85	1	530
83.3	51.0	33	52.7	120	08.1	RR	04	11	14	0255	129	4	130
83.3	55.0	33	44.7	120	24.6	RR	04	11	13	2311	80	0	1
83.3	60.0	33	34.7	120	45.3	RR	04	11	13	1759	71	2	0
83.3	70.0	33	14.7	121	26.6	RR	04	11	13	1135	86	0	1
83.3	80.0	32	54.7	122	07.7	RR	04	11	13	0436	93	0	5
83.3	90.0	32	34.7	122	48.7	RR	04	11	12	2235	98	1	2
83.3	100.0	32	14.7	123	29.6	RR	04	11	12	1605	74	2	0
83.3	110.0	31	54.7	124	10.2	RR	04	11	12	0733	89	9	0
86.7	33.0	33	53.4	118	29.4	RR	04	11	09	1924	92	6	25
86.7	35.0	33	49.4	118	37.7	RR	04	11	09	2301	88	207	0
86.7	40.0	33	39.5	118	58.5	RR	04	11	10	0317	129	1	33
86.7	45.0	33	29.4	119	19.1	RR	04	11	10	0649	88	0	0
86.7	55.0	33	09.5	120	00.4	RR	04	11	10	1500	114	0	4
86.7	60.0	32	59.4	120	21.0	RR	04	11	10	1941	96	0	0
86.7	70.0	32	39.4	121	02.0	RR	04	11	11	0128	80	1	1
86.7	80.0	32	19.4	121	42.9	RR	04	11	11	0642	85	0	1
86.7	90.0	31	59.4	122	23.4	RR	04	11	11	1535	107	1	43
86.7	100.0	31	39.4	123	04.2	RR	04	11	11	2120	101	2	11
86.7	110.0	31	19.4	123	44.6	RR	04	11	12	0259	100	21	5
90.0	28.0	33	29.1	117	46.1	RR	04	11	09	1033	119	9	23
90.0	30.0	33	25.1	117	54.3	RR	04	11	09	0733	91	1	0
90.0	35.0	33	15.2	118	15.0	RR	04	11	09	0348	93	0	1
90.0	37.0	33	11.1	118	23.2	RR	04	11	09	0031	113	2	0
90.0	45.0	32	55.1	118	56.1	RR	04	11	08	1848	95	2	1
90.0	53.0	32	39.1	119	28.8	RR	04	11	08	1227	106	0	1
90.0	60.0	32	25.1	119	57.6	RR	04	11	08	0623	91	0	1
90.0	70.0	32	05.1	120	38.3	RR	04	11	08	0031	106	10	3
90.0	80.0	31	45.0	121	19.0	RR	04	11	07	1757	95	1	0
90.0	90.0	31	25.1	121	59.4	RR	04	11	07	1136	101	2	0
90.0	100.0	31	05.1	122	39.7	RR	04	11	06	2303	98	13	1
90.0	110.0	30	45.0	123	19.9	RR	04	11	06	1556	66	0	14
90.0	120.0	30	25.1	123	59.8	RR	04	11	06	0638	112	11	7

TABLE 1. (cont.)

CalCOFI Cruise 0411

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	26.7	32	57.4	117	18.3	RR	04	11	02	1258	103	0	28
93.3	28.0	32	54.8	117	23.6	RR	04	11	02	1828	99	7	0
93.3	30.0	32	50.9	117	31.7	RR	04	11	02	2212	89	1	0
93.3	35.0	32	40.8	117	52.4	RR	04	11	03	0217	117	1	0
93.3	40.0	32	30.8	118	12.8	RR	04	11	03	0604	96	5	0
93.3	45.0	32	20.7	118	33.3	RR	04	11	03	1129	103	0	2
93.3	50.0	32	10.9	118	53.6	RR	04	11	03	1622	76	0	0
93.3	55.0	32	00.8	119	13.9	RR	04	11	03	2242	81	2	1
93.3	60.0	31	50.8	119	34.3	RR	04	11	04	0322	88	0	0
93.3	70.0	31	30.8	120	14.8	RR	04	11	04	0753	80	2	1
93.3	80.0	31	10.8	120	55.2	RR	04	11	04	2206	112	2	5
93.3	90.0	30	50.8	121	35.4	RR	04	11	05	0400	117	4	1
93.3	100.0	30	29.8	122	16.1	RR	04	11	05	0817	122	2	1
93.3	110.0	30	10.9	122	55.4	RR	04	11	05	1619	100	8	25
93.3	120.0	29	50.8	123	35.2	RR	04	11	06	0206	90	3	14

TABLE 2. Pooled occurrences of fish larvae taken in Manta net tows on the 2004 CalCOFI survey.

Rank	Taxon	Occurrences
1	*Cololabis saira*	54
2	*Sebastes* spp.	34
3	*Scorpaenichthys marmoratus*	32
3	*Engraulis mordax*	32
5	*Sardinops sagax*	25
6	*Atherinopsis californiensis*	15
7	*Hypsoblennius jenkinsi*	14
7	*Vinciguerria lucetia*	14
9	*Ophiodon elongatus*	11
10	*Sebastes diploproa*	10
10	*Ceratoscopelus townsendi*	10
12	*Hexagrammos decagrammus*	9
12	*Trachurus symmetricus*	9
14	*Chromis punctipinnis*	8
15	*Triphoturus mexicanus*	6
15	*Medialuna californiensis*	6
17	*Tetragonurus cuvieri*	5
17	*Merluccius productus*	5
17	*Hemilepidotus spinosus*	5
17	*Scomber japonicus*	5
17	*Sphyraena argentea*	5
22	*Paralichthys californicus*	4
22	*Citharichthys sordidus*	4
22	*Oxyjulis californica*	4
25	*Cyclothone signata*	3
25	*Sebastes jordani*	3
25	*Diaphus* spp.	3
25	*Paralabrax* spp.	3
25	*Hypsoblennius gentilis*	3
25	*Neoclinus* spp.	3
25	*Stenobrachius leucopsarus*	3
25	*Lampadena urophaos*	3
25	*Hypsoblennius gilberti*	3
34	*Bathylagus ochotensis*	2
34	*Cheilopogon pinnatibarbatus*	2
34	*Gigantactis* spp.	2
34	*Macroramphosus gracilis*	2
34	*Hypsoblennius* spp.	2
34	*Sebastes paucispinis*	2
34	*Anisotremus davidsoni*	2
34	*Aristostomias scintillans*	2
34	*Citharichthys stigmaeus*	2
34	*Hypsypops rubicundus*	2
34	*Bathophilus flemingi*	2
45	*Protomyctophum crockeri*	1
45	*Leuroglossus stilbius*	1
45	*Atherinops affinis*	1
45	*Stomias atriventer*	1
45	*Chilara taylori*	1
45	*Mugil cephalus*	1
45	*Pleuronichthys decurrens*	1
45	*Pleuronichthys coenosus*	1

TABLE 2. (cont.)

Rank	Taxon	Occurrences
45	*Microstomus pacificus*	1
45	*Lepidopsetta bilineata*	1
45	*Peprilus simillimus*	1
45	*Rhinogobiops nicholsii*	1
45	*Icosteus aenigmaticus*	1
45	*Leptocottus armatus*	1
45	*Semicossyphus pulcher*	1
45	*Cheilopogon heterurus*	1
45	*Hermosilla azurea*	1
45	*Genyonemus lineatus*	1
45	*Atractoscion nobilis*	1
45	Disintegrated fish larvae	1
45	*Ruscarius creaseri*	1
45	*Anoplopoma fimbria*	1
45	*Melamphaes lugubris*	1
45	*Ammodytes hexapturus*	1
	Total	399

TABLE 3. Pooled raw counts of fish larvae taken in Manta net tows on the 2004 CalCOFI survey.

Rank	Taxon	Count
1	*Sardinops sagax*	748
2	*Engraulis mordax*	384
3	*Ophiodon elongatus*	320
4	*Hypsoblennius jenkinsi*	298
5	*Scorpaenichthys marmoratus*	240
6	*Sebastes* spp.	183
7	*Cololabis saira*	176
8	*Hemilepidotus spinosus*	144
9	*Atherinopsis californiensis*	83
10	*Vinciguerria lucetia*	82
11	*Hypsoblennius* spp.	40
12	*Chromis punctipinnis*	39
13	*Hexagrammos decagrammus*	38
14	*Trachurus symmetricus*	29
15	*Ammodytes hexapturus*	20
16	*Ceratoscopelus townsendi*	19
17	*Hypsoblennius gilberti*	18
18	*Paralichthys californicus*	17
19	*Medialuna californiensis*	13
20	*Merluccius productus*	12
21	*Sebastes diploproa*	10
22	*Sphyraena argentea*	9
22	*Lampadena urophaos*	9
22	*Citharichthys sordidus*	9
25	*Anisotremus davidsoni*	7
25	*Triphoturus mexicanus*	7
27	*Scomber japonicus*	6
27	*Oxyjulis californica*	6
27	*Macroramphosus gracilis*	6
30	*Paralabrax* spp.	5
30	*Tetragonurus cuvieri*	5
32	*Hypsoblennius gentilis*	4
33	*Stenobrachius leucopsarus*	3
33	*Cyclothone signata*	3
33	*Diaphus* spp.	3
33	*Microstomus pacificus*	3
33	*Sebastes jordani*	3
33	*Neoclinus* spp.	3
33	*Hypsypops rubicundus*	3
40	*Cheilopogon pinnatibarbatus*	2
40	*Gigantactis* spp.	2
40	*Semicossyphus pulcher*	2
40	*Bathylagus ochotensis*	2
40	*Citharichthys stigmaeus*	2
40	*Aristostomias scintillans*	2
40	*Sebastes paucispinis*	2
40	*Bathophilus flemingi*	2
48	*Chilara taylori*	1
48	*Atherinops affinis*	1
48	*Lepidopsetta bilineata*	1
48	*Pleuronichthys decurrens*	1
48	*Pleuronichthys coenosus*	1

TABLE 3. (cont.)

Rank	Taxon	Count
48	*Leuroglossus stilbius*	1
48	*Stomias atriventer*	1
48	*Cheilopogon heterurus*	1
48	*Mugil cephalus*	1
48	*Ruscarius creaseri*	1
48	Disintegrated fish larvae	1
48	*Protomyctophum crockeri*	1
48	*Leptocottus armatus*	1
48	*Anoplopoma fimbria*	1
48	*Melamphaes lugubris*	1
48	*Hermosilla azurea*	1
48	*Peprilus simillimus*	1
48	*Icosteus aenigmaticus*	1
48	*Atractoscion nobilis*	1
48	*Genyonemus lineatus*	1
48	*Rhinogobiops nicholsii*	1
	Total	3044

TABLE 4. Numbers of fish larvae taken in Manta net tows on the 2004 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.
60.0	60.0	0.0	-	-	20.8	-	-	-	-	-	-	-	-
60.0	70.0	-	-	-	19.5	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	16.3	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	77.2	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	92.0	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	2.8	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	1.7	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	95.2	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	212.5	-	-	-	-	-	-	-	-
73.3	60.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	10.1	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	4.8	-	-	9.8	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	1.4	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	0.0	-	-	-	0.9	-
86.7	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-
90.0	60.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	1.7	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	0.0	-	-	-	2.2	-	-	-	0.0	-
93.3	60.0	0.0	-	3.8	-	-	-	0.0	-	-	-	0.0	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.7	-	-	-	-	-	-	-	-	-	-	-
76.7	55.0	0.0	-	-	0.0	-	-	3.5	-	-	-	0.0	-
76.7	60.0	0.0	-	-	-	-	-	0.6	-	-	-	0.0	-
80.0	51.0	0.0	-	-	1.0	-	-	2.2	-	-	-	1.2	-

TABLE 4. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	60.0	-	-	-	134.2	-	-	0.7	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	1.5	-	-	-	1.8	-
86.7	35.0	0.0	-	3.9	-	-	-	0.0	-	-	-	108.9	-
86.7	40.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.0	-	0.9	-	-	-	0.7	-	-	-	-	-
86.7	55.0	0.0	-	2.2	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	0.0	-	-	-	-	-	0.0	-	-	-	0.8	-
90.0	28.0	0.0	-	0.0	-	-	-	3.6	-	-	-	0.0	-
90.0	35.0	0.0	-	1.1	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
93.3	26.7	0.0	-	0.9	-	-	-	26.5	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	1.5	-	-	-	0.0	-
93.3	30.0	0.0	-	2.5	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	3.5	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	15.1	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	0.0	-	-	-	2.2	-	-	-	0.0	-
93.3	55.0	0.0	-	0.0	-	-	-	3.0	-	-	-	0.0	-
93.3	60.0	0.0	-	2.3	-	-	-	0.0	-	-	-	0.0	-

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	90.0	0.7	-	-	-	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-

Leuroglossus stilbius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	51.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-

Cyclothone signata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.2	-
93.3	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	0.8	-
93.3	80.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.1	-

TABLE 4. (cont.)

Vinciguerria lucetia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	0.0	-	-	-	-	-	0.6	-	-	-	0.0	-
83.3 110.0	0.0	-	-	0.0	-	-	2.5	-	-	-	0.0	-
86.7 80.0	0.0	-	-	-	-	-	3.8	-	-	-	0.0	-
86.7 100.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0 90.0	0.0	-	0.0	-	-	-	2.0	-	-	-	0.0	-
90.0 110.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0 120.0	0.0	-	0.0	-	-	-	9.3	-	-	-	2.2	-
93.3 80.0	0.9	-	0.0	-	-	-	1.5	-	-	-	0.0	-
93.3 90.0	0.0	-	0.0	-	-	-	25.1	-	-	-	0.0	-
93.3 100.0	0.0	-	0.0	-	-	-	6.9	-	-	-	0.0	-
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-
93.3 120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	0.9	-

Stomias atriventer

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

Bathophilus flemingi

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

Aristostomias scintillans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	0.0	-	-	1.0	-	-	0.0	-	-	-	0.0	-
86.7 80.0	0.0	-	-	-	-	-	0.5	-	-	-	0.0	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
83.3 110.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
86.7 100.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0 120.0	0.0	-	0.0	-	-	-	1.4	-	-	-	5.6	-
93.3 70.0	0.0	-	0.9	-	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Ceratoscopelus townsendi (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	100.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
93.3	120.0	0.0	-	0.0	-	-	-	2.9	-	-	-	0.0	-

***Diaphus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.1	-

Lampadena urophaos

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	100.0	0.0	-	0.0	-	-	-	3.4	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-
93.3	120.0	0.0	-	0.0	-	-	-	2.2	-	-	-	0.0	-

Stenobrachius leucopsarus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.9	-	-	-	0.0	-	-	-	0.0	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	0.0	-	-	-	-	-	0.6	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	0.7	-	-	-	1.2	-
90.0	120.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-

Protomyctophum crockeri

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	-

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	3.5	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Merluccius productus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	0.8	-	-	-	-	-	0.0	-	-	-	0.0	-
83.3 60.0	-	-	-	2.7	-	-	0.0	-	-	-	0.0	-
86.7 45.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
90.0 60.0	0.0	-	2.4	-	-	-	0.0	-	-	-	0.0	-

Chilara taylori

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-

***Gigantactis* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	0.8	-
93.3 120.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-

Atherinops affinis

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

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.2	-
81.8 46.9	0.0	-	-	1.1	-	-	0.0	-	-	-	0.0	-
83.3 40.6	0.0	-	-	1.2	-	-	0.0	-	-	-	0.0	-
83.3 42.0	0.0	-	-	1.2	-	-	0.0	-	-	-	0.0	-
83.3 51.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7 33.0	11.3	-	38.9	-	-	-	0.0	-	-	-	0.0	-
86.7 35.0	0.9	-	2.0	-	-	-	0.0	-	-	-	0.0	-
90.0 28.0	0.0	-	13.1	-	-	-	0.0	-	-	-	7.1	-
93.3 26.7	0.9	-	4.4	-	-	-	0.0	-	-	-	0.0	-
93.3 30.0	0.0	-	1.7	-	-	-	0.0	-	-	-	0.0	-

Cololabis saira

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 90.0	0.8	-	-	-	-	-	-	-	-	-	-	-
63.3 70.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

Cololabis saira (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	70.0	1.5	-	-	0.0	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.3	-
76.7	100.0	0.0	-	-	0.0	-	-	0.5	-	-	-	3.1	-
80.0	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-
80.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.2	-
80.0	90.0	0.0	-	-	0.9	-	-	13.8	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
83.3	80.0	0.0	-	-	-	-	-	1.2	-	-	-	0.0	-
83.3	90.0	7.8	-	-	-	-	-	0.0	-	-	-	1.0	-
83.3	100.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
83.3	110.0	0.0	-	-	1.5	-	-	0.0	-	-	-	8.0	-
86.7	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	0.9	-
86.7	40.0	0.0	-	0.8	-	-	-	0.0	-	-	-	1.3	-
86.7	55.0	1.0	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	60.0	1.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.8	-	-	-	-	-	1.1	-	-	-	0.0	-
86.7	90.0	4.9	-	-	-	-	-	0.0	-	-	-	1.1	-
86.7	100.0	3.4	-	-	0.0	-	-	0.0	-	-	-	2.0	-
86.7	110.0	0.0	-	-	2.8	-	-	0.0	-	-	-	21.0	-
90.0	45.0	0.7	-	1.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0	70.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.6	-
90.0	80.0	0.0	-	2.8	-	-	-	2.9	-	-	-	1.0	-
90.0	90.0	0.9	-	0.0	-	-	-	0.0	-	-	-	2.0	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	11.8	-
90.0	110.0	0.0	-	2.1	-	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	3.4	-
93.3	28.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
93.3	30.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.9	-
93.3	55.0	0.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.6	-
93.3	80.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.1	-
93.3	90.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.7	-
93.3	100.0	0.9	-	0.0	-	-	-	0.0	-	-	-	2.4	-

TABLE 4. (cont.)

Cololabis saira (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 110.0	0.0	-	1.7	-	-	-	0.0	-	-	-	5.0	-
93.3 120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.8	-

Cheilopogon heterurus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.1	-

Cheilopogon pinnatibarbatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 40.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
90.0 37.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-

Melamphaes lugubris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-

Macroramphosus gracilis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.1	-
93.3 40.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.8	-

***Sebastes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	2.1	-	-	-	-	-	-	-	-	-	-	-
60.0 60.0	0.0	-	-	4.5	-	-	-	-	-	-	-	-
63.3 55.0	8.3	-	-	1.6	-	-	-	-	-	-	-	-
63.3 60.0	3.6	-	-	0.8	-	-	-	-	-	-	-	-
66.7 50.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
66.7 70.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
70.0 51.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0 55.0	0.0	-	-	1.8	-	-	-	-	-	-	-	-
73.3 50.0	0.0	-	-	4.2	-	-	-	-	-	-	-	-
76.7 51.0	2.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	4.6	-	-	-	-	-	0.0	-	-	-	0.0	-
76.7 70.0	1.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	0.0	-	-	1.0	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	1.1	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	2.7	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.8	-	47.5	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	1.1	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.2	-
90.0	45.0	2.8	-	2.0	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	5.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	38.3	-	-	-	0.0	-	-	-	0.0	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
76.7	55.0	0.7	-	-	0.0	-	-	0.0	-	-	-	1.0	-
76.7	80.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	60.0	-	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.2	-
90.0	35.0	0.0	-	1.1	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	0.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	60.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	0.8	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-

Anoplopoma fimbria

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

Hexagrammos decagrammus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	2.1	-	-	-	-	-	-	-	-	-	-	-
60.0	60.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	5.6	-	-	0.0	-	-	-	-	-	-	-	-
73.3	60.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	12.6	-	-	1.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	1.9	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	1.8	-	-	0.0	-	-	-	0.0	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	0.7	-	-	-	-	-	-	-	-	-	-	-
60.0	60.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	212.6	-	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
70.0	51.0	0.0	-	-	3.6	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-
80.0	55.0	0.0	-	-	2.7	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	0.9	-	-	-	0.0	-	-	-	0.0	-

Hemilepidotus spinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	56.3	-	-	-	-	-	-	-	-	-	-	-
60.0	60.0	1.4	-	-	0.0	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

Hemilepidotus spinosus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	41.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-

Leptocottus armatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-

Ruscarius creaseri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-

Scorpaenichthys marmoratus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.7	-	-	0.9	-	-	-	-	-	-	-	-
63.3	52.0	0.7	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	1.9	-	-	-	-	-	-	-	-
70.0	51.0	4.3	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	0.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-
76.7	70.0	1.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	11.9	-	-	1.0	-	-	0.0	-	-	-	2.5	-
80.0	55.0	0.0	-	-	5.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	1.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.9	-	-	2.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	1.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	2.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	10.8	-	-	0.0	-	-	-	2.6	-
83.3	55.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	33.0	115.7	-	0.0	-	-	-	0.0	-	-	-	0.9	-
86.7	35.0	3.5	-	2.0	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	1.7	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	0.8	-	0.0	-	-	-	0.0	-	-	-	-	-
90.0	30.0	0.0	-	1.1	-	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Scorpaenichthys marmoratus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	0.0	-	1.1	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-
90.0	60.0	2.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-

***Paralabrax* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0	45.0	0.0	-	0.0	-	-	-	2.1	-	-	-	0.0	-
93.3	28.0	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	70.0	0.0	-	-	0.0	-	-	5.6	-	-	-	0.0	-
76.7	80.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
83.3	40.6	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	60.0	-	-	-	0.0	-	-	1.3	-	-	-	0.0	-
90.0	80.0	0.0	-	0.9	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
93.3	60.0	0.0	-	0.8	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	3.8	-	-	-	0.0	-	-	-	0.0	-

Anisotremus davidsoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	0.0	-	-	-	4.4	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-

Atractoscion nobilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	0.0	-	-	-	0.7	-	-	-	-	-

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.2	-

TABLE 4. (cont.)

Hermosilla azurea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-

Medialuna californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3 42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7 100.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
90.0 28.0	0.0	-	0.0	-	-	-	1.4	-	-	-	0.0	-
90.0 37.0	0.0	-	0.0	-	-	-	1.5	-	-	-	0.0	-
90.0 70.0	0.0	-	0.0	-	-	-	3.6	-	-	-	0.0	-

Mugil cephalus

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

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0 30.0	0.0	-	0.0	-	-	-	17.0	-	-	-	0.0	-
90.0 37.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
90.0 53.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3 26.7	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
93.3 28.0	0.0	-	0.0	-	-	-	0.8	-	-	-	1.0	-
93.3 30.0	0.0	-	0.0	-	-	-	3.0	-	-	-	0.0	-

Hypsypops rubicundus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
93.3 30.0	0.0	-	0.0	-	-	-	1.5	-	-	-	0.0	-

Oxyjulis californica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	0.0	-	-	-	-	-	1.2	-	-	-	0.0	-
86.7 50.0	0.0	-	0.0	-	-	-	0.7	-	-	-	-	-
90.0 45.0	0.0	-	1.0	-	-	-	1.4	-	-	-	0.0	-

TABLE 4. (cont.)

Semicossyphus pulcher

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	0.0	-	-	-	1.4	-	-	-	0.0	-

Ammodytes hexapturus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	0.0	-	-	18.9	-	-	-	-	-	-	-	-

***Neoclinus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7	35.0	0.0	-	1.0	-	-	-	0.0	-	-	-	0.0	-

***Hypsoblennius* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.0	-	-	1.8	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	30.7	-	-	-	0.0	-

Hypsoblennius gentilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.2	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.6	-
86.7	33.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-

Hypsoblennius gilberti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	10.9	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	1.5	-	-	-	0.0	-

Hypsoblennius jenkinsi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	1.0	-	-	-	0.0	-
76.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.5	-
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	1.8	-
83.3	40.6	0.0	-	-	0.0	-	-	0.0	-	-	-	1.0	-

TABLE 4. (cont.)

Hypsoblennius jenkinsi (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	0.0	-	-	-	38.5	-	-	-	1.8	-
86.7	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	67.6	-
86.7	55.0	0.0	-	0.0	-	-	-	0.6	-	-	-	0.0	-
93.3	26.7	1.7	-	0.0	-	-	-	10.8	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	53.4	-	-	-	5.9	-
93.3	30.0	0.0	-	0.0	-	-	-	49.3	-	-	-	0.0	-

Icosteus aenigmaticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-

Rhinogobiops nicholsii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.2	-

Sphyraena argentea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	0.0	-	-	1.1	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	1.5	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0	45.0	0.0	-	0.0	-	-	-	2.1	-	-	-	0.0	-

Scomber japonicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7	35.0	0.0	-	0.0	-	-	-	0.7	-	-	-	0.0	-
90.0	45.0	0.0	-	2.0	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-
93.3	35.0	0.0	-	0.0	-	-	-	0.7	-	-	-	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	-	-	0.0	-	-	0.0	-	-	-	1.0	-

TABLE 4. (cont.)

Tetragonurus cuvieri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
83.3	110.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-

Peprilus simillimus

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

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	6.1	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.9	-
83.3	51.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-
83.3	60.0	-	-	-	0.0	-	-	0.0	-	-	-	0.7	-

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	11.6	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	0.8	-	-	-	0.0	-

Lepidopsetta bilineata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	0.8	-	-	-	-	-	-	-	-

Microstomus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	2.7	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

Pleuronichthys coenosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	1.0	-

Pleuronichthys decurrens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	0.9	-	-	-	-	-	-	-	-

Disintegrated fish larvae

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

TABLE 5. Station and Bongo net tow data for CalCOFI cruises in 2004. 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 0401

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	50.7	123	06.0	JD	04	01	26	0831	77	162	4.76	37	100.0	4	96
60.0	60.0	37	36.9	123	36.4	JD	04	01	26	1252	214	438	4.88	85	45.9	52	181
60.0	70.0	37	16.7	124	19.9	JD	04	01	26	1824	209	430	4.86	147	47.6	46	12
60.0	80.0	36	56.9	125	03.3	JD	04	01	27	0046	215	435	4.95	110	50.0	8	7
60.0	90.0	36	36.8	125	46.2	JD	04	01	27	0659	214	457	4.69	92	47.6	12	4
63.3	52.0	37	18.5	122	37.2	JD	04	01	26	0249	76	175	4.34	34	100.0	12	118
63.3	55.0	37	12.6	122	50.2	JD	04	01	26	0005	209	466	4.49	146	51.4	68	29
63.3	60.0	37	02.6	123	11.6	JD	04	01	25	2017	212	454	4.67	123	51.7	21	118
63.3	70.0	36	42.6	123	55.0	JD	04	01	25	1357	213	465	4.59	99	52.1	14	8
63.3	90.0	36	02.4	125	20.5	JD	04	01	25	0111	215	440	4.89	132	48.2	18	7
66.7	50.0	36	47.2	122	03.4	JD	04	01	23	1128	208	425	4.89	94	50.0	19	63
66.7	55.0	36	37.2	122	24.9	JD	04	01	23	1532	211	435	4.84	53	100.0	64	316
66.7	60.0	36	27.2	122	46.4	JD	04	01	23	1931	211	430	4.90	137	50.8	85	46
66.7	70.0	36	07.3	123	29.0	JD	04	01	24	0246	209	443	4.72	160	52.1	60	11
66.7	80.0	35	47.2	124	11.7	JD	04	01	24	1006	214	417	5.13	38	100.0	18	6
66.7	90.0	35	27.2	124	54.2	JD	04	01	24	1725	210	442	4.75	57	100.0	8	5
70.0	51.0	36	10.8	121	43.7	JD	04	01	23	0154	211	423	4.98	116	53.0	18	19
70.0	55.0	36	02.9	122	00.6	JD	04	01	22	2238	210	443	4.75	108	52.0	13	28
70.0	60.0	35	52.9	122	21.9	JD	04	01	22	1819	209	444	4.71	108	52.0	21	35
70.0	70.0	35	32.9	123	04.4	JD	04	01	22	1212	214	424	5.06	57	100.0	16	24
70.0	80.0	35	12.9	123	46.7	JD	04	01	22	0606	210	394	5.33	145	49.1	25	4
70.0	90.0	34	52.9	124	28.8	JD	04	01	21	2356	213	423	5.04	66	53.5	13	4
73.3	50.0	35	38.6	121	15.3	JD	04	01	20	1706	35	82	4.30	49	100.0	3	2
73.3	55.0	35	28.6	121	36.4	JD	04	01	20	2024	210	420	5.00	150	50.7	34	66
73.3	60.0	35	18.7	121	57.7	JD	04	01	20	2357	213	415	5.13	157	47.6	38	27
73.3	70.0	34	58.5	122	39.9	JD	04	01	21	0609	214	415	5.16	123	52.9	28	16
73.3	80.0	34	38.6	123	21.9	JD	04	01	21	1154	211	413	5.11	78	53.1	3	2
73.3	90.0	34	18.6	124	03.7	JD	04	01	21	1758	213	412	5.17	129	52.8	80	6
76.7	49.0	35	05.3	120	46.5	JD	04	01	20	1113	56	141	3.95	14	100.0	0	39
76.7	51.0	35	01.3	120	55.1	JD	04	01	20	0835	208	443	4.69	50	100.0	31	369
76.7	55.0	34	53.4	121	12.0	JD	04	01	20	0511	211	472	4.48	123	51.7	52	32

TABLE 5. (cont.) CalCOFI Cruise 0401

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	70.0	34	23.3	122	14.7	JD	04	01	19	1752	208	492	4.24	77	52.6	15	54
76.7	80.0	34	03.2	122	56.6	JD	04	01	19	0926	213	496	4.29	38	100.0	9	6
76.7	90.0	33	43.3	123	37.9	JD	04	01	19	0357	216	461	4.68	83	47.3	6	4
76.7	100.0	33	23.2	124	19.3	JD	04	01	18	2148	211	465	4.55	37	100.0	7	5
80.0	51.0	34	27.1	120	31.5	JD	04	01	17	0555	55	146	3.77	55	100.0	37	273
80.0	55.0	34	19.0	120	48.1	JD	04	01	17	0829	220	442	4.97	57	100.0	26	184
80.0	60.0	34	09.2	121	09.0	JD	04	01	17	1359	211	482	4.36	33	100.0	14	16
80.0	70.0	33	49.0	121	50.6	JD	04	01	17	2021	213	475	4.49	213	52.4	11	7
80.0	80.0	33	29.1	122	32.1	JD	04	01	18	0206	209	479	4.36	121	46.5	25	6
80.0	90.0	33	08.6	123	13.2	JD	04	01	18	0823	217	430	5.05	74	46.8	26	2
80.0	100.0	32	49.0	123	54.6	JD	04	01	18	1543	213	477	4.47	38	100.0	10	10
81.8	46.9	34	16.5	120	01.6	JD	04	01	17	0152	210	474	4.42	80	50.0	68	676
83.3	40.6	34	13.4	119	24.6	JD	04	01	16	2056	20	57	3.55	17	100.0	0	5
83.3	42.0	34	10.9	119	30.6	JD	04	01	16	1129	90	209	4.32	72	100.0	11	303
83.3	51.0	33	52.8	120	08.1	JD	04	01	16	0454	70	170	4.15	124	100.0	45	55
83.3	55.0	33	44.6	120	24.4	JD	04	01	16	0143	214	444	4.83	47	100.0	12	121
83.3	70.0	33	14.8	121	26.7	JD	04	01	15	1437	205	511	4.00	33	100.0	2	3
83.3	80.0	32	54.5	122	07.7	JD	04	01	15	0559	211	473	4.47	262	52.4	3	4
83.3	90.0	32	34.7	122	48.7	JD	04	01	14	2345	212	442	4.78	90	100.0	9	2
83.3	100.0	32	14.8	123	29.6	JD	04	01	14	1801	211	475	4.45	103	100.0	18	3
83.3	110.0	31	54.8	124	10.2	JD	04	01	14	1228	209	459	4.56	59	100.0	14	14
86.7	33.0	33	53.3	118	29.5	JD	04	01	12	0317	50	119	4.17	25	100.0	6	96
86.7	35.0	33	49.3	118	37.7	JD	04	01	12	0554	212	445	4.77	52	100.0	47	39
86.7	40.0	33	39.4	118	58.5	JD	04	01	12	0852	214	442	4.83	38	100.0	110	410
86.7	45.0	33	29.5	119	19.2	JD	04	01	12	1352	212	448	4.72	83	51.3	24	156
86.7	50.0	33	19.5	119	39.8	JD	04	01	12	1717	62	145	4.29	234	47.0	221	1
86.7	55.0	33	09.3	120	00.4	JD	04	01	12	2109	210	465	4.51	65	53.3	6	2
86.7	60.0	32	59.3	120	21.0	JD	04	01	13	0059	212	490	4.33	69	47.0	2	0
86.7	70.0	32	39.5	121	01.9	JD	04	01	13	0652	207	496	4.18	44	100.0	28	7
86.7	80.0	32	20.4	121	41.0	JD	04	01	13	1257	212	446	4.75	27	100.0	8	2
86.7	90.0	31	59.5	122	23.4	JD	04	01	13	1911	215	471	4.57	34	100.0	16	5
86.7	100.0	31	39.4	123	04.4	JD	04	01	14	0101	211	481	4.38	33	100.0	4	12
86.7	110.0	31	19.5	123	44.6	JD	04	01	14	0635	215	449	4.77	29	100.0	3	9

TABLE 5. (cont.) CalCOFI Cruise 0401

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	28.0	33	29.0	117	46.1	JD	04	01	11	1718	41	100	4.06	40	100.0	1	25
90.0	30.0	33	24.9	117	54.4	JD	04	01	11	2029	212	450	4.72	65	48.2	3	18
90.0	35.0	33	15.2	118	14.9	JD	04	01	11	1044	209	455	4.60	40	100.0	17	358
90.0	37.0	33	11.1	118	23.1	JD	04	01	11	0811	212	447	4.76	38	100.0	6	115
90.0	45.0	32	55.1	118	56.2	JD	04	01	11	0254	214	448	4.77	96	53.4	13	40
90.0	53.0	32	39.1	119	28.9	JD	04	01	10	2123	215	455	4.72	46	100.0	5	16
90.0	60.0	32	25.0	119	57.7	JD	04	01	10	1623	213	451	4.72	102	50.0	36	7
90.0	70.0	32	05.0	120	38.4	JD	04	01	10	0852	221	478	4.62	25	100.0	5	8
90.0	80.0	31	45.0	121	19.1	JD	04	01	10	0345	214	468	4.58	39	100.0	31	3
90.0	90.0	31	25.1	121	59.4	JD	04	01	09	2145	215	459	4.68	83	100.0	3	10
90.0	100.0	31	05.0	122	39.9	JD	04	01	09	1605	214	468	4.57	47	100.0	3	4
90.0	110.0	30	45.3	123	20.2	JD	04	01	09	0836	214	453	4.73	26	100.0	5	14
90.0	120.0	30	24.9	123	59.9	JD	04	01	09	0150	206	480	4.29	62	100.0	2	98
93.3	26.7	32	54.9	117	18.2	JD	04	01	05	1746	130	265	4.91	45	100.0	15	39
93.3	28.0	32	55.0	117	23.8	JD	04	01	05	2016	209	435	4.80	53	100.0	13	70
93.3	30.0	32	50.8	117	31.8	JD	04	01	06	0139	209	446	4.69	67	46.6	3	9
93.3	35.0	32	40.9	117	52.3	JD	04	01	06	0543	213	449	4.75	82	51.3	3	8
93.3	40.0	32	30.9	118	12.7	JD	04	01	06	0851	211	450	4.69	85	52.6	0	1
93.3	45.0	32	20.9	118	33.2	JD	04	01	06	1407	207	428	4.83	131	53.5	3	17
93.3	50.0	32	10.7	118	53.5	JD	04	01	06	1750	216	451	4.78	84	47.3	0	3
93.3	55.0	32	00.8	119	14.1	JD	04	01	06	2138	214	449	4.77	54	100.0	6	0
93.3	60.0	31	50.8	119	34.3	JD	04	01	07	0143	213	449	4.73	118	49.0	1	2
93.3	70.0	31	30.7	120	14.9	JD	04	01	07	0830	210	426	4.93	56	100.0	4	7
93.3	80.0	31	10.8	120	55.1	JD	04	01	07	1521	212	454	4.67	88	100.0	2	1
93.3	90.0	30	50.8	121	35.5	JD	04	01	07	2104	215	446	4.82	132	100.0	1	8
93.3	100.0	30	30.8	122	15.4	JD	04	01	08	0237	211	455	4.64	121	100.0	11	2
93.3	110.0	30	11.0	122	55.4	JD	04	01	08	0826	212	437	4.86	37	100.0	0	7
93.3	120.0	29	50.9	123	35.0	JD	04	01	08	1948	205	494	4.14	55	100.0	1	32

TABLE 5. (cont.) CalCOFI Cruise 0404

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	60.0	37	36.8	123	36.6	JD	04	04	21	2004	199	498	4.00	117	48.2	154	12
60.0	70.0	37	16.9	124	20.0	JD	04	04	21	0949	208	457	4.56	81	54.0	63	92
60.0	80.0	36	56.8	125	03.2	JD	04	04	21	0059	212	483	4.39	116	51.7	129	59
63.3	52.0	37	18.6	122	37.0	JD	04	04	19	1110	65	176	3.69	285	52.0	80	19
63.3	55.0	37	12.6	122	49.9	JD	04	04	19	1421	213	410	5.20	234	48.9	83	45
63.3	60.0	37	02.5	123	11.6	JD	04	04	19	1933	205	433	4.72	270	49.5	46	75
63.3	70.0	36	42.5	123	54.8	JD	04	04	20	0502	207	438	4.72	57	100.0	406	95
63.3	80.0	36	22.5	124	37.6	JD	04	04	20	1407	214	452	4.73	27	100.0	13	5
66.7	50.0	36	47.1	122	03.4	JD	04	04	19	0436	211	391	5.39	724	49.1	28	21
66.7	55.0	36	37.2	122	24.8	JD	04	04	18	2357	212	405	5.25	173	51.4	91	93
66.7	60.0	36	27.1	122	46.4	JD	04	04	18	1837	208	442	4.71	138	52.4	192	159
66.7	70.0	36	07.2	123	29.0	JD	04	04	18	0838	214	430	4.97	368	51.8	66	78
66.7	80.0	35	47.2	124	11.8	JD	04	04	17	2151	208	472	4.42	140	48.4	176	111
70.0	51.0	36	10.9	121	43.7	JD	04	04	16	0234	211	432	4.90	102	45.4	17	6
70.0	55.0	36	02.9	122	00.7	JD	04	04	16	0604	205	432	4.74	167	51.3	24	69
70.0	60.0	35	53.0	122	21.8	JD	04	04	16	1014	202	476	4.24	69	51.5	101	66
70.0	70.0	35	33.0	123	04.4	JD	04	04	16	1823	212	435	4.86	126	52.7	81	299
70.0	80.0	35	12.9	123	46.7	JD	04	04	17	0400	212	438	4.85	185	50.6	127	127
73.3	50.0	35	38.6	121	15.3	JD	04	04	15	2028	28	71	3.97	113	100.0	33	9
73.3	55.0	35	28.6	121	36.5	JD	04	04	15	1701	199	434	4.59	148	51.5	17	116
73.3	60.0	35	18.6	121	57.7	JD	04	04	15	1305	214	418	5.13	69	51.7	44	17
73.3	70.0	34	58.6	122	40.2	JD	04	04	15	0703	211	428	4.92	140	48.3	73	157
73.3	80.0	34	38.6	123	21.9	JD	04	04	14	2324	213	453	4.71	86	48.7	11	2
73.3	90.0	34	18.6	124	03.7	JD	04	04	14	1748	211	452	4.66	71	53.1	6	3
73.3	100.0	33	58.6	124	45.3	JD	04	04	14	1212	211	466	4.54	75	100.0	38	13
76.7	49.0	35	05.4	120	46.8	NH	04	04	08	0856	63	140	4.47	236	51.5	19	30
76.7	51.0	35	01.3	120	55.1	NH	04	04	08	0653	206	422	4.87	90	52.6	28	72
76.7	55.0	34	53.2	121	12.1	NH	04	04	08	0317	191	457	4.17	111	49.0	38	56
76.7	60.0	34	43.3	121	33.0	NH	04	04	07	2247	213	454	4.68	77	51.4	33	161
76.7	70.0	34	23.3	122	14.8	NH	04	04	07	1613	211	431	4.89	46	100.0	21	22
76.7	80.0	34	02.6	122	56.5	NH	04	04	07	0814	209	482	4.35	62	46.6	20	9
76.7	90.0	33	43.2	123	38.1	NH	04	04	07	0143	195	447	4.36	98	52.2	15	6
76.7	100.0	33	23.3	124	19.5	NH	04	04	06	1825	207	441	4.68	66	100.0	29	42
80.0	51.0	34	27.0	120	31.4	NH	04	04	03	2119	78	171	4.59	94	100.0	15	23

TABLE 5. (cont.) CalCOFI Cruise 0404

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	55.0	34	19.0	120	48.1	NH	04	04	04	0105	202	435	4.63	78	47.0	17	64
80.0	60.0	34	09.1	121	09.1	NH	04	04	04	0506	208	414	5.01	123	49.0	70	187
80.0	70.0	33	49.1	121	50.7	NH	04	04	04	1140	196	446	4.38	119	50.9	56	103
80.0	80.0	33	29.0	122	31.9	NH	04	04	04	1815	204	424	4.81	116	53.0	15	14
80.0	90.0	33	09.0	123	13.3	NH	04	04	05	0055	209	430	4.86	70	50.0	17	23
80.0	100.0	32	49.0	123	54.4	NH	04	04	06	1210	197	474	4.16	23	100.0	13	20
81.8	46.9	34	16.5	120	01.5	NH	04	04	03	1637	207	411	5.04	58	100.0	18	117
83.3	40.6	34	13.5	119	24.8	NH	04	04	03	1130	21	59	3.52	119	100.0	4	79
83.3	42.0	34	10.9	119	30.5	NH	04	04	03	0942	90	196	4.57	66	100.0	4	312
83.3	51.0	33	52.7	120	08.3	NH	04	04	03	0352	76	169	4.50	47	100.0	29	89
83.3	55.0	33	44.7	120	24.6	NH	04	04	03	0016	208	442	4.71	113	48.0	32	113
83.3	60.0	33	34.7	120	45.3	NH	04	04	02	1856	207	428	4.82	128	47.2	29	69
83.3	70.0	33	14.8	121	26.8	NH	04	04	02	1132	189	609	3.10	30	100.0	17	23
83.3	100.0	32	14.7	123	29.6	NH	04	04	05	0817	212	430	4.92	21	100.0	41	11
83.3	110.0	31	54.6	124	10.2	NH	04	04	06	0410	206	433	4.75	21	100.0	50	39
86.7	33.0	33	53.4	118	29.3	NH	04	03	29	1735	49	118	4.13	26	100.0	4	38
86.7	35.0	33	49.4	118	37.7	NH	04	03	29	2001	215	396	5.42	38	100.0	53	213
86.7	40.0	33	39.4	118	58.5	NH	04	03	30	0031	200	439	4.57	43	100.0	44	547
86.7	45.0	33	29.3	119	19.0	NH	04	03	30	0437	206	426	4.84	70	53.3	25	138
86.7	50.0	33	19.4	119	39.6	NH	04	03	30	0752	70	158	4.45	51	100.0	89	484
86.7	55.0	33	09.2	120	00.2	NH	04	03	30	1137	197	460	4.27	80	48.6	24	343
86.7	60.0	32	59.4	120	21.0	NH	04	03	30	1558	195	429	4.55	166	49.2	17	120
86.7	100.0	31	39.5	123	04.2	NH	04	04	05	1559	206	434	4.74	14	100.0	48	24
86.7	110.0	31	19.4	123	44.6	NH	04	04	05	2147	209	427	4.90	42	100.0	23	101
90.0	28.0	33	29.1	117	46.1	NH	04	03	29	0938	92	187	4.92	32	100.0	10	72
90.0	30.0	33	25.1	117	54.3	NH	04	03	29	0719	210	405	5.18	52	100.0	55	100
90.0	35.0	33	15.1	118	15.3	NH	04	03	29	0304	200	432	4.62	49	100.0	71	944
90.0	37.0	33	11.1	118	23.2	NH	04	03	28	2355	216	417	5.17	60	100.0	31	558
90.0	45.0	32	55.1	118	56.1	NH	04	03	28	1804	208	421	4.95	83	51.4	235	2887
90.0	53.0	32	39.2	119	28.9	NH	04	03	28	1129	211	454	4.64	92	52.3	80	22
90.0	60.0	32	25.0	119	57.6	NH	04	03	28	0633	212	416	5.09	192	50.0	75	39
90.0	70.0	32	05.3	120	38.7	NH	04	03	28	0018	195	589	3.32	44	53.8	24	25
90.0	80.0	31	45.1	121	18.9	NH	04	03	27	1650	202	565	3.57	50	100.0	23	27
90.0	90.0	31	25.1	121	59.5	NH	04	03	27	1040	210	470	4.48	26	100.0	16	95

TABLE 5. (cont.) CalCOFI Cruise 0404

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	100.0	31	05.0	122	39.8	NH	04	03	27	0408	215	443	4.86	27	100.0	13	9
90.0	110.0	30	45.1	123	19.9	NH	04	03	26	2148	218	434	5.02	16	100.0	8	21
90.0	120.0	30	25.0	123	59.9	NH	04	03	26	1536	191	546	3.50	20	100.0	0	814
93.3	26.7	32	57.4	117	18.3	NH	04	03	23	1251	34	101	3.34	20	100.0	2	70
93.3	28.0	32	54.8	117	23.6	NH	04	03	23	1558	206	437	4.72	46	100.0	24	89
93.3	30.0	32	50.8	117	31.9	NH	04	03	23	1855	212	428	4.97	35	100.0	38	83
93.3	35.0	32	40.8	117	52.4	NH	04	03	23	2301	206	419	4.93	41	100.0	45	113
93.3	40.0	32	30.9	118	12.8	NH	04	03	24	0313	213	430	4.96	65	50.0	73	120
93.3	45.0	32	20.8	118	33.2	NH	04	03	24	0713	206	432	4.77	90	46.1	100	205
93.3	50.0	32	10.9	118	53.9	NH	04	03	24	1129	209	438	4.78	37	100.0	27	115
93.3	55.0	32	00.8	119	14.0	NH	04	03	24	1539	196	548	3.58	71	53.8	30	36
93.3	60.0	31	50.7	119	34.2	NH	04	03	24	1927	213	430	4.96	135	51.7	57	459
93.3	70.0	31	31.1	120	15.2	NH	04	03	25	0204	202	491	4.11	55	48.1	15	98
93.3	80.0	31	10.6	120	55.0	NH	04	03	25	0824	213	446	4.77	40	100.0	9	118
93.3	90.0	30	50.8	121	35.3	NH	04	03	25	1619	194	472	4.11	32	100.0	10	45
93.3	100.0	30	30.9	122	15.4	NH	04	03	25	2137	209	453	4.62	40	100.0	38	34
93.3	110.0	30	10.9	122	55.3	NH	04	03	26	0310	207	490	4.22	27	100.0	24	75
93.3	120.0	29	50.6	123	35.1	NH	04	03	26	0748	214	429	4.98	19	100.0	4	94

TABLE 5. (cont.) CalCOFI Cruise 0407

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	JD	04	07	27	0435	50	117	4.26	332	46.1	2	30
76.7	51.0	35	01.3	120	55.2	JD	04	07	27	0206	212	423	5.01	104	52.2	6	0
76.7	55.0	34	53.3	121	12.0	JD	04	07	26	2238	209	427	4.89	164	50.0	18	0
76.7	60.0	34	43.3	121	33.0	JD	04	07	26	1833	208	422	4.93	119	50.0	2	4
76.7	70.0	34	23.3	122	14.9	JD	04	07	26	1220	213	415	5.12	140	48.2	1	17
76.7	80.0	34	03.3	122	56.9	JD	04	07	26	0604	215	409	5.26	100	53.6	2	5
76.7	90.0	33	43.2	123	38.1	JD	04	07	26	0001	212	436	4.86	87	52.6	1	0
76.7	100.0	33	23.4	124	19.5	JD	04	07	25	1759	202	455	4.42	46	100.0	4	2
80.0	50.5	34	27.7	120	29.1	JD	04	07	27	0946	17	80	2.12	50	100.0	5	104
80.0	51.0	34	27.0	120	31.5	JD	04	07	24	0351	63	138	4.56	72	100.0	7	367
80.0	55.0	34	19.1	120	48.0	JD	04	07	24	0708	203	410	4.94	136	51.7	3	8
80.0	60.0	34	09.1	121	09.0	JD	04	07	24	1114	211	396	5.32	197	48.7	5	3
80.0	70.0	33	49.1	121	50.6	JD	04	07	24	1712	214	409	5.22	139	50.8	5	31
80.0	80.0	33	29.0	122	32.0	JD	04	07	24	2326	214	401	5.33	234	51.0	2	4
80.0	90.0	33	09.0	123	13.1	JD	04	07	25	0535	208	400	5.19	165	51.5	1	5
80.0	100.0	32	48.8	123	54.2	JD	04	07	25	1149	212	411	5.16	58	100.0	2	4
81.7	43.5	34	24.2	119	48.1	JD	04	07	27	1421	20	54	3.64	18	100.0	0	47
81.8	46.9	34	16.5	120	01.4	JD	04	07	23	2350	210	393	5.34	199	53.8	4	2
83.3	39.4	34	15.5	119	19.5	JD	04	07	23	1829	11	37	3.09	27	100.0	2	64
83.3	40.6	34	13.7	119	24.6	JD	04	07	23	1730	21	53	3.86	75	100.0	12	89
83.3	42.0	34	10.7	119	30.5	JD	04	07	23	1532	147	293	5.02	85	100.0	9	207
83.3	51.0	33	52.8	120	07.8	JD	04	07	23	0844	112	168	6.70	95	100.0	9	31
83.3	55.0	33	44.8	120	24.9	JD	04	07	23	0541	195	438	4.45	151	48.4	1	0
83.3	60.0	33	34.7	120	45.4	JD	04	07	23	0122	211	419	5.03	265	52.2	6	6
83.3	70.0	33	14.7	121	26.6	JD	04	07	22	1840	207	421	4.91	140	52.5	7	17
83.3	80.0	32	54.5	122	07.6	JD	04	07	22	1220	212	393	5.40	97	52.6	25	60
83.3	90.0	32	34.8	122	49.0	JD	04	07	22	0624	211	431	4.90	30	100.0	15	102
83.3	100.0	32	14.7	123	29.4	JD	04	07	22	0016	214	415	5.15	51	100.0	22	471
83.3	110.0	31	54.8	124	10.3	JD	04	07	21	1812	207	404	5.11	22	100.0	226	264
85.4	35.8	34	00.8	118	49.9	JD	04	07	27	2011	15	42	3.58	144	100.0	1	47
86.7	33.0	33	53.4	118	29.5	JD	04	07	19	0219	34	76	4.50	277	100.0	17	400
86.7	35.0	33	49.4	118	37.7	JD	04	07	19	0459	209	433	4.82	60	50.0	6	2
86.7	40.0	33	39.4	118	58.5	JD	04	07	19	0839	211	430	4.92	68	51.7	0	2
86.7	45.0	33	29.3	119	19.1	JD	04	07	19	1451	209	422	4.95	154	50.7	5	2

TABLE 5. (cont.)

CalCOFI Cruise 0407

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	50.0	33	19.3	119	39.9	JD	04	07	19	1925	42	121	3.48	240	51.7	1	8
86.7	55.0	33	09.4	120	00.4	JD	04	07	19	2312	212	426	4.96	195	49.3	1	0
86.7	60.0	32	59.4	120	20.9	JD	04	07	20	0254	216	347	6.22	804	50.5	0	0
86.7	70.0	32	39.3	121	02.4	JD	04	07	20	1128	211	474	4.45	76	52.7	12	1
86.7	80.0	32	19.3	121	42.9	JD	04	07	20	1736	204	412	4.96	51	100.0	90	36
86.7	90.0	31	59.4	122	23.6	JD	04	07	20	2324	212	434	4.88	74	100.0	82	122
86.7	100.0	31	39.4	123	04.3	JD	04	07	21	0514	203	430	4.71	42	100.0	24	481
86.7	110.0	31	19.3	123	44.8	JD	04	07	21	1129	210	429	4.89	19	100.0	75	529
88.5	30.1	33	40.4	118	05.6	JD	04	07	18	2155	17	48	3.59	189	100.0	13	469
90.0	27.7	33	29.6	117	44.9	JD	04	07	18	1918	14	54	2.60	204	100.0	6	593
90.0	28.0	33	29.1	117	46.1	JD	04	07	18	1816	65	156	4.14	282	50.0	1	63
90.0	30.0	33	25.1	117	54.2	JD	04	07	18	1519	207	431	4.81	93	52.5	11	1
90.0	35.0	33	15.2	118	14.9	JD	04	07	18	1116	212	414	5.11	82	50.0	4	2
90.0	37.0	33	11.1	118	23.4	JD	04	07	18	0832	211	424	4.97	66	53.5	6	0
90.0	45.0	32	55.1	118	56.1	JD	04	07	18	0300	214	425	5.04	108	47.8	4	0
90.0	53.0	32	39.2	119	28.9	JD	04	07	17	2104	211	432	4.87	241	50.0	4	0
90.0	60.0	32	25.1	119	57.6	JD	04	07	17	1611	207	398	5.19	201	52.5	15	2
90.0	70.0	32	05.2	120	38.3	JD	04	07	17	0827	213	425	5.01	87	51.3	17	8
90.0	80.0	31	45.0	121	19.0	JD	04	07	17	0054	213	418	5.11	77	100.0	115	23
90.0	90.0	31	25.1	121	59.5	JD	04	07	16	1900	205	428	4.77	44	100.0	99	1171
90.0	100.0	31	05.2	122	39.6	JD	04	07	16	1207	212	446	4.74	22	100.0	362	393
90.0	110.0	30	44.9	123	20.0	JD	04	07	16	0550	216	433	4.98	16	100.0	195	186
90.0	120.0	30	25.1	123	59.9	JD	04	07	15	2350	213	457	4.66	28	100.0	460	382
91.7	26.4	33	14.8	117	27.8	JD	04	07	28	0529	6	45	1.40	111	100.0	1	374
93.3	26.7	32	57.4	117	18.3	JD	04	07	12	2123	55	133	4.15	188	100.0	53	157
93.3	28.0	32	54.8	117	23.7	JD	04	07	13	0033	210	435	4.83	110	50.0	19	8
93.3	30.0	32	50.8	117	31.9	JD	04	07	13	0310	214	423	5.05	95	52.5	5	8
93.3	35.0	32	40.8	117	52.4	JD	04	07	13	0719	220	415	5.30	65	48.1	10	0
93.3	40.0	32	30.7	118	12.8	JD	04	07	13	1120	212	430	4.93	442	48.4	2	6
93.3	45.0	32	20.9	118	32.9	JD	04	07	13	1729	192	481	3.98	27	100.0	5	0
93.3	50.0	32	10.9	118	53.5	JD	04	07	13	2146	209	455	4.59	99	48.8	6	0
93.3	55.0	32	00.7	119	14.0	JD	04	07	14	0145	213	426	4.99	202	50.0	3	0
93.3	60.0	31	50.9	119	34.2	JD	04	07	14	0546	208	437	4.75	158	52.1	3	2

TABLE 5. (cont.)

CalCOFI Cruise 0407

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	30.7	120	15.0	JD	04	07	14	1208	212	428	4.95	161	50.7	18	33
93.3	80.0	31	10.7	120	55.5	JD	04	07	14	1802	206	434	4.73	168	53.4	34	4
93.3	90.0	30	50.8	121	35.3	JD	04	07	14	2345	212	434	4.87	35	100.0	226	69
93.3	100.0	30	30.8	122	15.4	JD	04	07	15	0536	214	432	4.94	19	100.0	112	376
93.3	110.0	30	10.8	122	55.4	JD	04	07	15	1145	216	456	4.73	13	100.0	246	745
93.3	120.0	29	51.0	123	35.2	JD	04	07	15	1755	213	440	4.84	16	100.0	92	273
93.4	26.4	32	57.2	117	16.8	JD	04	07	12	2221	11	41	2.75	122	100.0	8	99

CalCOFI Cruise 0411

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	46.6	RR	04	11	18	1157	41	128	3.18	8	100.0	1	32
76.7	51.0	35	01.3	120	55.1	RR	04	11	18	0845	215	446	4.82	29	100.0	8	62
76.7	55.0	34	53.3	121	12.0	RR	04	11	18	0504	211	441	4.79	64	53.5	2	8
76.7	60.0	34	43.3	121	32.9	RR	04	11	17	2344	199	467	4.27	51	100.0	1	3
76.7	70.0	34	23.2	122	14.8	RR	04	11	17	1657	193	468	4.12	47	100.0	4	5
76.7	80.0	34	03.3	122	56.5	RR	04	11	17	1053	223	409	5.44	56	100.0	19	7
76.7	90.0	33	43.3	123	38.0	RR	04	11	17	0308	194	472	4.11	104	48.9	2	7
76.7	100.0	33	23.3	124	19.4	RR	04	11	16	2120	214	425	5.04	38	100.0	22	8
80.0	50.5	34	27.7	120	29.1	RR	04	11	15	0257	14	42	3.20	95	100.0	0	25
80.0	51.0	34	27.0	120	31.4	RR	04	11	15	0441	62	147	4.24	48	100.0	10	42
80.0	55.0	34	19.0	120	48.1	RR	04	11	15	0821	216	433	4.98	67	48.2	17	49
80.0	60.0	34	09.0	121	09.0	RR	04	11	15	1254	185	457	4.05	48	100.0	4	1
80.0	70.0	33	49.0	121	50.6	RR	04	11	15	1842	209	453	4.62	62	46.4	3	2
80.0	80.0	33	29.0	122	32.0	RR	04	11	16	0035	192	449	4.28	96	53.4	0	2
80.0	90.0	33	09.0	123	13.3	RR	04	11	16	0608	225	401	5.60	40	100.0	10	1
80.0	100.0	32	49.0	123	54.5	RR	04	11	16	1547	217	415	5.22	22	100.0	10	5
81.7	43.5	34	24.2	119	48.1	RR	04	11	14	1736	13	51	2.53	39	100.0	0	18
81.8	46.9	34	16.5	120	01.5	RR	04	11	14	2223	201	467	4.30	43	100.0	26	461
83.3	39.4	34	15.5	119	19.4	RR	04	11	14	1333	14	51	2.69	39	100.0	0	10
83.3	40.6	34	13.5	119	24.7	RR	04	11	14	1124	30	71	4.18	14	100.0	0	5

TABLE 5. (cont.) CalCOFI Cruise 0411

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	42.0	34	10.7	119	30.5	RR	04	11	14	0840	100	262	3.80	57	100.0	29	56
83.3	51.0	33	52.7	120	08.1	RR	04	11	14	0315	47	168	2.80	54	100.0	13	109
83.3	55.0	33	44.7	120	24.6	RR	04	11	13	2340	205	430	4.77	56	100.0	5	37
83.3	60.0	33	34.7	120	45.3	RR	04	11	13	1841	221	433	5.11	270	52.9	3	4
83.3	70.0	33	14.7	121	26.6	RR	04	11	13	1156	213	456	4.67	37	100.0	0	5
83.3	80.0	32	54.7	122	07.7	RR	04	11	13	0456	197	458	4.31	37	100.0	5	3
83.3	90.0	32	34.7	122	48.7	RR	04	11	12	2252	206	468	4.40	56	100.0	5	3
83.3	100.0	32	14.7	123	29.6	RR	04	11	12	1626	212	478	4.42	8	100.0	4	4
83.3	110.0	31	54.7	124	10.2	RR	04	11	12	0751	210	447	4.69	31	100.0	7	5
85.4	35.8	34	00.4	118	50.2	RR	04	11	18	2349	20	75	2.62	40	100.0	18	44
86.7	33.0	33	53.4	118	29.4	RR	04	11	09	2006	42	102	4.18	118	100.0	32	29
86.7	35.0	33	49.4	118	37.7	RR	04	11	09	2325	211	409	5.16	76	48.3	8	1
86.7	40.0	33	39.5	118	58.5	RR	04	11	10	0337	216	402	5.37	90	50.0	2	20
86.7	45.0	33	29.4	119	19.1	RR	04	11	10	0708	190	478	3.97	44	100.0	0	95
86.7	55.0	33	09.5	120	00.4	RR	04	11	10	1523	193	445	4.34	90	52.5	3	8
86.7	60.0	32	59.4	120	21.0	RR	04	11	10	2002	204	449	4.55	116	46.1	2	7
86.7	70.0	32	39.4	121	02.0	RR	04	11	11	0147	214	438	4.87	75	48.4	1	1
86.7	80.0	32	19.4	121	42.9	RR	04	11	11	0700	197	444	4.42	95	52.3	1	1
86.7	90.0	31	59.4	122	23.4	RR	04	11	11	1558	211	449	4.71	40	100.0	3	4
86.7	100.0	31	39.4	123	04.2	RR	04	11	11	2140	210	444	4.72	27	100.0	24	17
86.7	110.0	31	19.4	123	44.6	RR	04	11	12	0337	221	409	5.39	34	100.0	33	8
86.8	32.5	33	53.4	118	26.5	RR	04	11	19	0224	12	47	2.51	170	100.0	29	14
88.5	30.1	33	40.4	118	05.6	RR	04	11	09	1530	14	41	3.38	97	100.0	13	95
90.0	27.7	33	29.7	117	44.9	RR	04	11	09	1306	12	54	2.24	112	100.0	27	33
90.0	28.0	33	29.1	117	46.1	RR	04	11	09	1053	64	160	4.00	88	100.0	18	5
90.0	30.0	33	25.1	117	54.3	RR	04	11	09	0752	202	415	4.87	48	100.0	4	37
90.0	35.0	33	15.2	118	15.0	RR	04	11	09	0408	211	413	5.11	82	52.9	3	6
90.0	37.0	33	11.1	118	23.2	RR	04	11	09	0053	204	427	4.78	66	53.5	3	4
90.0	45.0	32	55.1	118	56.1	RR	04	11	08	1912	219	396	5.53	195	50.6	8	11
90.0	53.0	32	39.1	119	28.8	RR	04	11	08	1252	211	430	4.91	21	100.0	1	1
90.0	60.0	32	25.1	119	57.6	RR	04	11	08	0644	210	421	4.98	36	100.0	3	10
90.0	70.0	32	05.1	120	38.3	RR	04	11	08	0054	199	449	4.43	49	100.0	5	0
90.0	80.0	31	45.0	121	19.0	RR	04	11	07	1823	211	433	4.86	60	100.0	7	2
90.0	90.0	31	25.1	121	59.4	RR	04	11	07	1156	200	453	4.42	31	100.0	5	1

TABLE 5.(cont.)

CalCOFI Cruise 0411

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	100.0	31	05.1	122	39.7	RR	04	11	06	2328	209	450	4.64	29	100.0	24	8
90.0	110.0	30	45.0	123	19.9	RR	04	11	06	1621	215	472	4.55	13	100.0	13	15
90.0	120.0	30	25.1	123	59.8	RR	04	11	06	0658	208	487	4.26	14	100.0	14	19
91.7	26.4	33	14.6	117	27.9	RR	04	11	19	0832	12	43	2.74	141	100.0	12	191
93.3	26.7	32	57.4	117	18.3	RR	04	11	02	1330	161	409	3.95	32	100.0	4	15
93.3	28.0	32	54.8	117	23.6	RR	04	11	02	1909	215	420	5.10	50	100.0	5	0
93.3	30.0	32	50.9	117	31.7	RR	04	11	02	2247	192	482	3.97	46	100.0	12	0
93.3	35.0	32	40.8	117	52.4	RR	04	11	03	0244	191	428	4.46	164	52.8	6	1
93.3	40.0	32	30.8	118	12.8	RR	04	11	03	0626	219	392	5.59	59	100.0	1	1
93.3	45.0	32	20.7	118	33.3	RR	04	11	03	1148	199	463	4.29	30	100.0	4	2
93.3	50.0	32	10.9	118	53.6	RR	04	11	03	1650	210	490	4.27	27	100.0	2	1
93.3	55.0	32	00.8	119	13.9	RR	04	11	03	2319	192	540	3.56	41	100.0	10	1
93.3	60.0	31	50.8	119	34.3	RR	04	11	04	0343	214	465	4.60	26	100.0	4	5
93.3	70.0	31	30.8	120	14.8	RR	04	11	04	0813	204	480	4.26	42	100.0	2	1
93.3	80.0	31	10.8	120	55.2	RR	04	11	04	2232	217	454	4.78	42	100.0	3	10
93.3	90.0	30	50.8	121	35.4	RR	04	11	05	0421	198	485	4.07	43	100.0	9	3
93.3	100.0	30	29.8	122	16.1	RR	04	11	05	0836	210	476	4.41	17	100.0	27	17
93.3	110.0	30	10.9	122	55.4	RR	04	11	05	1646	215	493	4.37	12	100.0	12	10
93.3	120.0	29	50.8	123	35.2	RR	04	11	06	0228	217	474	4.58	25	100.0	33	15
93.4	26.4	32	57.2	117	16.8	RR	04	11	02	1534	14	44	3.29	137	100.0	4	27

TABLE 6. Pooled occurrences of fish larvae taken in Bongo net tows on CalCOFI cruises in 2004.

Rank	Taxon	Occurrences
1	*Stenobrachius leucopsarus*	144
2	*Protomyctophum crockeri*	120
3	*Bathylagus ochotensis*	108
4	*Sebastes* spp.	101
5	*Leuroglossus stilbius*	84
6	*Engraulis mordax*	69
7	*Merluccius productus*	64
8	*Diogenichthys atlanticus*	58
8	*Nannobrachium ritteri*	58
10	*Citharichthys sordidus*	56
11	*Vinciguerria lucetia*	47
11	*Citharichthys stigmaeus*	47
13	*Cyclothone signata*	45
14	*Triphoturus mexicanus*	40
15	*Bathylagus wesethi*	38
16	*Symbolophorus californiensis*	37
17	*Chauliodus macouni*	34
18	*Lestidiops ringens*	33
19	*Ceratoscopelus townsendi*	32
20	*Danaphos oculatus*	31
20	*Sardinops sagax*	31
22	*Diaphus* spp.	29
22	*Argyropelecus sladeni*	29
24	*Nannobrachium* spp.	26
24	*Sebastes jordani*	26
24	*Melamphaes lugubris*	26
27	*Idiacanthus antrostomus*	24
28	*Trachurus symmetricus*	23
29	*Tarletonbeania crenularis*	22
29	*Rhinogobiops nicholsii*	22
31	*Lyopsetta exilis*	18
32	*Microstoma* spp.	16
32	*Sebastes paucispinis*	16
34	*Nansenia candida*	13
34	*Sebastes diploproa*	13
36	Disintegrated fish larvae	12
36	*Bathylagus pacificus*	12
38	*Paralichthys californicus*	11
38	*Argyropelecus affinis*	11
38	*Sternoptyx* spp.	11
41	*Sebastolobus* spp.	10
41	*Argentina sialis*	10
41	*Genyonemus lineatus*	10
44	Myctophidae	9
44	*Melamphaes parvus*	9
46	*Scopelogadus bispinosus*	8
46	*Hygophum reinhardtii*	8
46	*Benthalbella dentata*	8
46	*Arctozenus risso*	8
46	*Tetragonurus cuvieri*	8
51	*Hypsoblennius jenkinsi*	7
51	*Trachipterus altivelis*	7

TABLE 6.

Rank	Taxon	Occurrences
51	*Stomias atriventer*	7
51	*Paralabrax* spp.	7
51	*Bathophilus flemingi*	7
51	*Liparis mucosus*	7
57	*Odontopyxis trispinosa*	6
57	*Bathylagus milleri*	6
59	*Nannobrachium regale*	5
59	*Scopelosaurus* spp.	5
59	*Aristostomias scintillans*	5
62	*Oxyjulis californica*	4
62	*Chiasmodon niger*	4
62	*Sebastes aurora*	4
62	*Seriphus politus*	4
62	*Parophrys vetulus*	4
67	*Ichthyococcus irregularis*	3
67	*Argyropelecus hemigymnus*	3
67	*Chromis punctipinnis*	3
67	*Ruscarius creaseri*	3
67	*Rosenblattichthys volucris*	3
67	*Electrona risso*	3
67	*Typhlogobius californiensis*	3
67	*Microstomus pacificus*	3
67	*Melamphaes* spp.	3
67	*Hypsopsetta guttulata*	3
67	*Oxylebius pictus*	3
67	*Rathbunella* spp.	3
67	*Pleuronichthys verticalis*	3
67	*Hippoglossina stomata*	3
81	*Scomber japonicus*	2
81	*Peprilus simillimus*	2
81	*Sphyraena argentea*	2
81	*Tactostoma macropus*	2
81	*Lepidogobius lepidus*	2
81	*Icichthys lockingtoni*	2
81	*Xenistius californiensis*	2
81	*Symphurus atricaudus*	2
81	*Chilara taylori*	2
81	*Brosmophycis marginata*	2
81	*Artedius lateralis*	2
81	*Artedius harringtoni*	2
81	Cottidae	2
81	*Argyropelecus lychnus*	2
81	*Ophiodon elongatus*	2
81	*Ophidion scrippsae*	2
81	*Lepidopsetta bilineata*	2
98	*Pleuronichthys ritteri*	1
98	*Pleuronichthys decurrens*	1
98	*Cyclothone* spp.	1
98	*Cyclothone acclinidens*	1
98	*Xystreurys liolepis*	1
98	Sternoptychidae	1
98	*Argyropelecus* spp.	1
98	*Neoclinus stephensae*	1
98	*Citharichthys* spp.	1

TABLE 6.

Rank	Taxon	Occurrences
98	*Glyptocephalus zachirus*	1
98	*Cataetyx rubrirostris*	1
98	*Liparis* spp.	1
98	*Ruscarius meanyi*	1
98	*Icelinus quadriseriatus*	1
98	*Clinocottus analis*	1
98	*Zaniolepis frenata*	1
98	*Brama japonica*	1
98	*Anisotremus davidsoni*	1
98	*Sebastes goodei*	1
98	Unidentified fish larvae	1
98	*Cheilotrema saturnum*	1
98	Anguilliformes	1
98	*Medialuna californiensis*	1
98	*Cololabis saira*	1
98	*Hypsoblennius* spp.	1
98	*Howella* spp.	1
98	*Scopelarchus analis*	1
98	*Ilypnus gilberti*	1
98	*Clevelandia ios*	1
98	*Icosteus aenigmaticus*	1
98	*Hypsoblennius gilberti*	1
98	*Gigantactis* spp.	1
98	*Notoscopelus resplendens*	1
98	*Oneirodes* spp.	1
98	*Neoclinus* spp.	1
98	*Paraclinus integripinnis*	1
98	*Myctophum nitidulum*	1
98	*Semicossyphus pulcher*	1
98	*Coryphaenoides pectoralis*	1
98	*Scopelarchus* spp.	1
98	*Nannobrachium hawaiiensis*	1
	Total	1931

TABLE 7. Pooled counts of fish larvae taken in Bongo net tows on CalCOFI cruises in 2004. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Sardinops sagax*	9662
2	*Vinciguerria lucetia*	9475
3	*Stenobrachius leucopsarus*	7966
4	*Sebastes* spp.	5947
5	*Bathylagus ochotensis*	4778
6	*Engraulis mordax*	3859
7	*Leuroglossus stilbius*	3729
8	*Merluccius productus*	3709
9	*Protomyctophum crockeri*	1333
10	*Bathylagus wesethi*	1102
11	*Sebastes jordani*	842
12	*Citharichthys sordidus*	760
13	*Citharichthys stigmaeus*	710
14	*Ceratoscopelus townsendi*	707
15	*Triphoturus mexicanus*	697
16	*Diaphus* spp.	679
17	*Diogenichthys atlanticus*	669
18	*Nannobrachium ritteri*	616
19	*Cyclothone signata*	608
20	*Symbolophorus californiensis*	570
21	*Sebastes paucispinis*	547
22	*Trachurus symmetricus*	372
23	*Lestidiops ringens*	295
24	*Chauliodus macouni*	277
25	*Idiacanthus antrostomus*	268
26	*Sebastes diploproa*	267
27	*Argyropelecus sladeni*	261
28	*Danaphos oculatus*	260
29	*Nannobrachium* spp.	257
30	*Lyopsetta exilis*	214
31	*Tarletonbeania crenularis*	212
32	*Hypsoblennius jenkinsi*	203
33	*Melamphaes lugubris*	186
34	*Bathylagus pacificus*	178
35	*Rhinogobiops nicholsii*	170
36	*Genyonemus lineatus*	146
37	*Nansenia candida*	133
38	*Sebastolobus* spp.	132
39	*Paralichthys californicus*	110
40	*Microstoma* spp.	103
41	Disintegrated fish larvae	91
42	*Argentina sialis*	84
43	*Sternoptyx* spp.	77
44	*Melamphaes parvus*	75
45	*Argyropelecus affinis*	65
46	*Liparis mucosus*	64
47	Myctophidae	62
48	*Paralabrax* spp.	60
48	*Bathophilus flemingi*	60
50	*Microstomus pacificus*	59
51	*Benthalbella dentata*	55

TABLE 7.

Rank	Taxon	Count
51	*Tetragonurus cuvieri*	55
53	*Trachipterus altivelis*	54
54	*Scopelogadus bispinosus*	48
55	*Arctozenus risso*	47
56	*Hygophum reinhardtii*	44
56	*Bathylagus milleri*	44
58	*Stomias atriventer*	38
59	*Oxyjulis californica*	35
59	*Sebastes aurora*	35
61	*Chiasmodon niger*	34
61	*Nannobrachium regale*	34
63	*Aristostomias scintillans*	33
64	*Hypsopsetta guttulata*	30
64	*Lepidogobius lepidus*	30
66	*Odontopyxis trispinosa*	29
66	*Scopelosaurus* spp.	29
68	*Electrona risso*	24
68	*Scomber japonicus*	24
68	*Tactostoma macropus*	24
68	*Melamphaes* spp.	24
72	*Parophrys vetulus*	22
72	*Typhlogobius californiensis*	22
74	*Sebastes goodei*	21
75	Cottidae	20
75	*Brosmophycis marginata*	20
75	*Ophiodon elongatus*	20
78	*Seriphus politus*	19
78	*Oxylebius pictus*	19
78	*Ruscarius creaseri*	19
78	*Argyropelecus hemigymnus*	19
82	*Chromis punctipinnis*	18
83	*Rathbunella* spp.	17
83	*Pleuronichthys verticalis*	17
85	*Ophidion scrippsae*	16
86	*Icichthys lockingtoni*	15
86	*Peprilus simillimus*	15
86	*Rosenblattichthys volucris*	15
89	*Ichthyococcus irregularis*	14
90	*Pleuronichthys ritteri*	13
90	*Lepidopsetta bilineata*	13
90	*Chilara taylori*	13
90	*Artedius lateralis*	13
90	*Artedius harringtoni*	13
95	*Icelinus quadriseriatus*	12
96	*Ruscarius meanyi*	11
96	*Semicossyphus pulcher*	11
98	*Medialuna californiensis*	10
98	*Neoclinus stephensae*	10
98	*Liparis* spp.	10
98	Unidentified fish larvae	10
98	*Nannobrachium hawaiiensis*	10
98	*Hypsoblennius gilberti*	10
98	*Argyropelecus lychnus*	10
98	*Pleuronichthys decurrens*	10

TABLE 7.

Rank	Taxon	Count
98	*Howella* spp.	10
98	*Icosteus aenigmaticus*	10
98	*Hippoglossina stomata*	10
109	*Cyclothone* spp.	9
109	*Brama japonica*	9
111	*Zaniolepis frenata*	8
111	*Xystreurys liolepis*	8
113	*Glyptocephalus zachirus*	7
113	*Symphurus atricaudus*	7
113	*Coryphaenoides pectoralis*	7
113	*Ilypnus gilberti*	7
113	*Xenistius californiensis*	7
118	*Hypsoblennius* spp.	6
119	*Argyropelecus* spp.	5
119	Sternoptychidae	5
119	*Scopelarchus* spp.	5
119	*Gigantactis* spp.	5
119	*Scopelarchus analis*	5
119	*Cataetyx rubrirostris*	5
119	*Cyclothone acclinidens*	5
119	*Sphyraena argentea*	5
119	*Citharichthys* spp.	5
119	*Notoscopelus resplendens*	5
129	*Cololabis saira*	4
129	Anguilliformes	4
129	*Myctophum nitidulum*	4
129	*Oneirodes* spp.	4
129	*Clevelandia ios*	4
129	*Anisotremus davidsoni*	4
129	*Neoclinus* spp.	4
136	*Paraclinus integripinnis*	3
136	*Cheilotrema saturnum*	3
138	*Clinocottus analis*	2
	Total	65174

TABLE 8. Number of fish larvae taken in Bongo net tows at stations occupied on CalCOFI cruises in 2004. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Anguilliformes

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-

Sardinops sagax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	58.1	-	-	-	-	-	-	-	-
60.0	70.0	0.0	-	-	430.7	-	-	-	-	-	-	-	-
60.0	80.0	0.0	-	-	560.4	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	124.0	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	1855.0	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	14.2	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	22.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	275.8	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	1375.2	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	-	67.2	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	1406.4	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	551.6	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	534.9	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	690.1	-	-	-	-	-	-	-	-
73.3	55.0	0.0	-	-	8.9	-	-	-	-	-	-	-	-
73.3	60.0	0.0	-	-	277.8	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	468.6	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	8.8	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	131.7	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	24.5	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	25.1	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	86.1	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	45.4	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	30.6	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	142.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	356.3	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Sardinops sagax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
91.7	26.4	-	-	-	-	-	-	0.0	-	-	-	5.5	-
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-
93.3	40.0	0.0	-	9.9	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	62.1	-	-	-	0.0	-	-	-	0.0	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	4.3	-	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	8.7	-	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	11.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	51.1	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	71.9	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	16.5	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	47.9	-	-	-	-	-	-	-	-
73.3	55.0	0.0	-	-	17.8	-	-	-	-	-	-	-	-
73.3	60.0	0.0	-	-	19.8	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	20.4	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	8.7	-	-	9.2	-	-	-	0.0	-
76.7	51.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	0.0	-	-	0.0	-	-	29.3	-	-	-	0.0	-
76.7	70.0	0.0	-	-	0.0	-	-	10.6	-	-	-	0.0	-
80.0	51.0	0.0	-	-	9.2	-	-	9.1	-	-	-	0.0	-
80.0	55.0	0.0	-	-	9.9	-	-	9.6	-	-	-	10.3	-
80.0	70.0	0.0	-	-	17.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
83.3	40.6	0.0	-	-	10.6	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.3	-	-	0.0	-	-	0.0	-	-	-	11.4	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.8	-
83.3	55.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	10.5	-
86.7	33.0	0.0	-	0.0	-	-	-	18.0	-	-	-	20.9	-
86.7	35.0	0.0	-	81.3	-	-	-	0.0	-	-	-	42.7	-

TABLE 8. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	40.0	4.8	-	64.0	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	9.1	-	-	-	9.8	-	-	-	0.0	-
86.7	50.0	0.0	-	8.9	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	61.5	-	-	-	0.0	-	-	-	0.0	-
86.8	32.5	-	-	-	-	-	-	-	-	-	-	5.0	-
88.5	30.1	-	-	-	-	-	-	10.8	-	-	-	3.4	-
90.0	27.7	-	-	-	-	-	-	0.0	-	-	-	15.7	-
90.0	28.0	0.0	-	9.8	-	-	-	0.0	-	-	-	52.0	-
90.0	30.0	0.0	-	155.4	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	27.7	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	72.4	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	8.9	-	1762.4	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	35.5	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	81.4	-	-	-	0.0	-	-	-	0.0	-
91.7	26.4	-	-	-	-	-	-	0.0	-	-	-	5.5	-
93.3	26.7	0.0	-	3.3	-	-	-	8.3	-	-	-	0.0	-
93.3	28.0	9.6	-	0.0	-	-	-	29.0	-	-	-	0.0	-
93.3	30.0	0.0	-	39.8	-	-	-	19.2	-	-	-	0.0	-
93.3	35.0	0.0	-	0.0	-	-	-	44.1	-	-	-	0.0	-
93.3	40.0	0.0	-	148.8	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	393.2	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	0.0	-	-	-	18.8	-	-	-	0.0	-
93.3	55.0	0.0	-	20.0	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	57.6	-	-	-	9.1	-	-	-	0.0	-
93.3	80.0	0.0	-	0.0	-	-	-	8.9	-	-	-	0.0	-

Argentina sialis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
81.8	46.9	8.8	-	-	5.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	7.6	-
86.7	35.0	4.8	-	21.7	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	9.8	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

***Microstoma* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	8.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	0.0	-	-	10.5	-	-	-	0.0	-
83.3	60.0	-	-	-	10.2	-	-	0.0	-	-	-	0.0	-
86.7	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.3	-
86.7	70.0	0.0	-	-	-	-	-	8.4	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
86.7	110.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	5.1	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-
93.3	55.0	0.0	-	6.7	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	4.6	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	8.4	-	-	-	0.0	-	-	-	0.0	-

Nansenia candida

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	30.6	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	18.4	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	10.2	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
90.0	80.0	0.0	-	3.6	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-

Bathylagus milleri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	0.0	-	-	8.5	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Bathylagus milleri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	8.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.1	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	95.7	-	-	166.0	-	-	-	-	-	-	-	-
60.0	70.0	51.1	-	-	16.9	-	-	-	-	-	-	-	-
60.0	80.0	9.9	-	-	220.8	-	-	-	-	-	-	-	-
60.0	90.0	9.9	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	96.1	-	-	10.6	-	-	-	-	-	-	-	-
63.3	60.0	81.3	-	-	19.1	-	-	-	-	-	-	-	-
63.3	70.0	52.9	-	-	9.4	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	14.2	-	-	-	-	-	-	-	-
63.3	90.0	101.5	-	-	-	-	-	-	-	-	-	-	-
66.7	50.0	19.6	-	-	11.0	-	-	-	-	-	-	-	-
66.7	55.0	62.9	-	-	326.8	-	-	-	-	-	-	-	-
66.7	60.0	96.5	-	-	71.9	-	-	-	-	-	-	-	-
66.7	70.0	72.5	-	-	115.1	-	-	-	-	-	-	-	-
66.7	80.0	20.5	-	-	27.4	-	-	-	-	-	-	-	-
66.7	90.0	4.8	-	-	-	-	-	-	-	-	-	-	-
70.0	51.0	28.2	-	-	43.2	-	-	-	-	-	-	-	-
70.0	55.0	54.8	-	-	73.9	-	-	-	-	-	-	-	-
70.0	60.0	54.3	-	-	164.7	-	-	-	-	-	-	-	-
70.0	70.0	20.2	-	-	138.3	-	-	-	-	-	-	-	-
70.0	80.0	86.8	-	-	143.8	-	-	-	-	-	-	-	-
70.0	90.0	9.4	-	-	-	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	11.9	-	-	-	-	-	-	-	-
73.3	55.0	128.2	-	-	53.5	-	-	-	-	-	-	-	-
73.3	60.0	150.9	-	-	59.5	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	142.6	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
73.3	90.0	78.3	-	-	8.8	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	100.0	-	-	-	13.6	-	-	-	-	-	-	-	-
76.7	51.0	23.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	121.3	-	-	25.5	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	-	-	36.4	-	-	0.0	-	-	-	0.0	-
76.7	70.0	32.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	17.2	-	-	46.7	-	-	0.0	-	-	-	5.4	-
76.7	90.0	29.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	55.0	9.9	-	-	9.9	-	-	0.0	-	-	-	0.0	-
80.0	60.0	21.8	-	-	51.1	-	-	0.0	-	-	-	0.0	-
80.0	70.0	17.1	-	-	34.4	-	-	0.0	-	-	-	0.0	-
80.0	80.0	75.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
80.0	90.0	43.2	-	-	9.7	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	5.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	4.5	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	58.9	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	10.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
83.3	90.0	19.1	-	-	-	-	-	0.0	-	-	-	0.0	-
83.3	100.0	26.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	37.9	-	-	-	0.0	-	-	-	0.0	-
86.7	40.0	19.3	-	13.7	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	18.3	-	0.0	-	-	-	0.0	-	-	-	-	-
86.7	55.0	8.5	-	0.0	-	-	-	10.1	-	-	-	0.0	-
86.7	60.0	0.0	-	9.2	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	33.4	-	-	-	-	-	8.4	-	-	-	0.0	-
86.7	80.0	14.3	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	4.6	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	9.8	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	20.7	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	60.1	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	10.3	-	-	-	9.3	-	-	-	0.0	-
90.0	45.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	26.6	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	60.0	0.0	-	20.4	-	-	-	19.8	-	-	-	0.0	-
93.3	28.0	0.0	-	14.2	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	10.1	-	44.7	-	-	-	9.6	-	-	-	0.0	-
93.3	35.0	0.0	-	29.6	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	89.3	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	20.7	-	-	-	4.0	-	-	-	0.0	-
93.3	50.0	0.0	-	33.5	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	4.8	-	46.6	-	-	-	10.0	-	-	-	0.0	-
93.3	60.0	0.0	-	67.2	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-

Bathylagus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	53.2	-	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	4.7	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	22.0	-	-	-	-	-	-	-	-
70.0	60.0	18.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	19.2	-	-	-	-	-	-	-	-
70.0	90.0	9.4	-	-	-	-	-	-	-	-	-	-	-
73.3	55.0	9.9	-	-	8.9	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	4.5	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	8.4	-	-	0.0	-	-	-	0.0	-

Bathylagus wesethi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	18.7	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	51.3	-	-	-	0.0	-
83.3	100.0	13.4	-	-	9.8	-	-	25.8	-	-	-	0.0	-
83.3	110.0	4.6	-	-	14.3	-	-	132.9	-	-	-	4.7	-
86.7	80.0	0.0	-	-	-	-	-	69.4	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	34.2	-	-	-	0.0	-
86.7	100.0	0.0	-	-	19.0	-	-	14.1	-	-	-	0.0	-
86.7	110.0	0.0	-	-	9.8	-	-	19.6	-	-	-	0.0	-

TABLE 8. (cont.)

Bathylagus wesethi (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	60.0	0.0	-	0.0	-	-	-	9.9	-	-	-	0.0	-
90.0	70.0	0.0	-	12.3	-	-	-	29.3	-	-	-	4.4	-
90.0	80.0	0.0	-	0.0	-	-	-	86.9	-	-	-	0.0	-
90.0	90.0	0.0	-	9.0	-	-	-	38.2	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	42.7	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	44.8	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3	35.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	0.0	-	-	-	10.2	-	-	-	0.0	-
93.3	60.0	0.0	-	0.0	-	-	-	9.1	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	78.1	-	-	-	0.0	-
93.3	80.0	0.0	-	9.5	-	-	-	132.9	-	-	-	0.0	-
93.3	100.0	0.0	-	4.6	-	-	-	29.6	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	71.0	-	-	-	4.4	-
93.3	120.0	0.0	-	0.0	-	-	-	9.7	-	-	-	0.0	-

Leuroglossus stilbius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	10.6	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	9.5	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	4.7	-	-	-	-	-	-	-	-
66.7	50.0	39.1	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	58.1	-	-	20.4	-	-	-	-	-	-	-	-
66.7	60.0	28.9	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	27.2	-	-	9.6	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
70.0	51.0	0.0	-	-	32.4	-	-	-	-	-	-	-	-
70.0	55.0	36.5	-	-	9.2	-	-	-	-	-	-	-	-
70.0	60.0	45.3	-	-	24.7	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
73.3	55.0	19.7	-	-	17.8	-	-	-	-	-	-	-	-
73.3	70.0	29.3	-	-	10.2	-	-	-	-	-	-	-	-
76.7	51.0	14.1	-	-	0.0	-	-	0.0	-	-	-	19.3	-

TABLE 8. (cont.)

Leuroglossus stilbius (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	17.3	-	-	127.7	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	-	-	72.8	-	-	0.0	-	-	-	0.0	-
76.7	70.0	16.1	-	-	9.8	-	-	0.0	-	-	-	0.0	-
76.7	80.0	4.3	-	-	18.7	-	-	0.0	-	-	-	16.3	-
80.0	51.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	99.4	-	-	29.6	-	-	0.0	-	-	-	51.7	-
80.0	60.0	0.0	-	-	347.6	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	51.6	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	19.4	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	238.7	-	-	40.3	-	-	0.0	-	-	-	86.0	-
83.3	42.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
83.3	55.0	4.8	-	-	88.3	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	0.0	-	-	0.0	-	-	-	9.7	-
83.3	70.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
83.3	80.0	8.5	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.8	-	103.0	-	-	-	0.0	-	-	-	0.0	-
86.7	40.0	420.2	-	77.7	-	-	-	0.0	-	-	-	10.7	-
86.7	45.0	9.2	-	36.3	-	-	-	9.8	-	-	-	0.0	-
86.7	55.0	8.5	-	8.8	-	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	55.5	-	-	-	0.0	-	-	-	9.9	-
86.7	80.0	4.8	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	9.8	-	25.9	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	4.6	-	120.1	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	4.8	-	67.2	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	221.5	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.7	-	17.7	-	-	-	9.7	-	-	-	0.0	-
90.0	80.0	0.0	-	3.6	-	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	4.5	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	28.3	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	44.7	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	83.8	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	148.8	-	-	-	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	45.0	0.0	-	175.9	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	28.7	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	4.8	-	39.9	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	28.8	-	-	-	0.0	-	-	-	0.0	-

***Cyclothone* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	110.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.1	-

Cyclothone acclinidens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	4.6	-	-	-	-	-	0.0	-	-	-	0.0	-

Cyclothone signata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.6	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	10.3	-	-	-	4.3	-
83.3	90.0	0.0	-	-	-	-	-	0.0	-	-	-	4.4	-
83.3	100.0	4.5	-	-	14.8	-	-	5.2	-	-	-	0.0	-
83.3	110.0	4.6	-	-	47.5	-	-	35.8	-	-	-	4.7	-
86.7	50.0	9.1	-	0.0	-	-	-	0.0	-	-	-	-	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	80.0	4.8	-	-	-	-	-	29.8	-	-	-	0.0	-
86.7	90.0	4.6	-	-	-	-	-	9.8	-	-	-	0.0	-
86.7	100.0	4.4	-	-	19.0	-	-	0.0	-	-	-	14.2	-
86.7	110.0	4.8	-	-	0.0	-	-	9.8	-	-	-	27.0	-
90.0	60.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	18.3	-	0.0	-	-	-	5.1	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	23.9	-	-	-	0.0	-
90.0	100.0	0.0	-	14.6	-	-	-	4.7	-	-	-	13.9	-
90.0	110.0	0.0	-	5.0	-	-	-	14.9	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	60.6	-	-	-	17.0	-
93.3	70.0	0.0	-	8.5	-	-	-	9.8	-	-	-	0.0	-
93.3	100.0	4.6	-	27.7	-	-	-	0.0	-	-	-	26.5	-
93.3	110.0	0.0	-	16.9	-	-	-	4.7	-	-	-	4.4	-
93.3	120.0	0.0	-	0.0	-	-	-	19.4	-	-	-	9.2	-

TABLE 8. (cont.)

Sternoptychidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-

***Argyropelecus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-

Argyropelecus affinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	70.0	0.0	-	-	8.4	-	-	-	-	-	-	-	-
76.7	100.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.2	-
86.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	4.7	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.3	-
93.3	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
93.3	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.2	-

Argyropelecus hemigymnus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
90.0	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.9	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-

Argyropelecus lychnus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	100.0	4.6	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-

Argyropelecus sladeni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	70.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	0.0	-	-	17.8	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.1	-
80.0	60.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.8	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.4	-

TABLE 8. (cont.)

Argyropelecus sladeni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
83.3	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	80.0	0.0	-	-	-	-	-	14.9	-	-	-	0.0	-
86.7	100.0	0.0	-	-	19.0	-	-	0.0	-	-	-	9.4	-
86.7	110.0	0.0	-	-	0.0	-	-	4.9	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	27.5	-	-	-	0.0	-
90.0	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.7	-
90.0	60.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	10.2	-	-	-	4.9	-
90.0	90.0	0.0	-	4.5	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	4.6	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	7.1	-
93.3	60.0	9.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	0.0	-	-	-	8.9	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3	100.0	4.6	-	0.0	-	-	-	4.9	-	-	-	4.4	-

Danaphos oculatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	0.0	-	-	10.6	-	-	-	-	-	-	-	-
63.3	60.0	9.0	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
76.7	90.0	0.0	-	-	8.4	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	20.2	-
80.0	60.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
80.0	80.0	9.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.2	-
83.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
83.3	100.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-

TABLE 8. (cont.)

Danaphos oculatus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	0.0	-	-	-	19.3	-	-	-	0.0	-
86.7	55.0	8.5	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	4.2	-	-	-	-	-	8.4	-	-	-	0.0	-
86.7	90.0	4.6	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	4.7	-	-	-	9.4	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.2	-
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.9	-
90.0	60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	9.2	-	0.0	-	-	-	10.2	-	-	-	0.0	-
90.0	90.0	0.0	-	9.0	-	-	-	0.0	-	-	-	0.0	-
90.0	110.0	9.5	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.3	-
93.3	45.0	0.0	-	0.0	-	-	-	4.0	-	-	-	0.0	-
93.3	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.8	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-

***Sternoptyx* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	9.4	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	10.0	-	-	-	0.0	-
93.3	30.0	0.0	-	0.0	-	-	-	9.6	-	-	-	0.0	-
93.3	50.0	0.0	-	0.0	-	-	-	9.4	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-

Ichthyococcus irregularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
90.0	80.0	0.0	-	3.6	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Vinciguerria lucetia

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	112.9	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	29.4	-	-	-	0.0	-
83.3	100.0	4.5	-	-	4.9	-	-	15.5	-	-	-	0.0	-
83.3	110.0	4.6	-	-	14.3	-	-	725.6	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	183.5	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	205.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	14.2	-	-	18.8	-	-	-	33.0	-
86.7	110.0	0.0	-	-	24.5	-	-	224.9	-	-	-	80.9	-
90.0	37.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.9	-
90.0	60.0	0.0	-	0.0	-	-	-	9.9	-	-	-	0.0	-
90.0	70.0	0.0	-	0.0	-	-	-	19.5	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	224.8	-	-	-	4.9	-
90.0	90.0	0.0	-	0.0	-	-	-	233.7	-	-	-	8.8	-
90.0	100.0	0.0	-	0.0	-	-	-	1445.7	-	-	-	46.4	-
90.0	110.0	0.0	-	0.0	-	-	-	771.9	-	-	-	22.8	-
90.0	120.0	4.3	-	0.0	-	-	-	1975.8	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.2	-
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	11.9	-
93.3	50.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.5	-
93.3	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	3.6	-
93.3	60.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
93.3	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
93.3	80.0	0.0	-	0.0	-	-	-	44.3	-	-	-	4.8	-
93.3	90.0	0.0	-	0.0	-	-	-	939.9	-	-	-	0.0	-
93.3	100.0	4.6	-	0.0	-	-	-	474.2	-	-	-	39.7	-
93.3	110.0	0.0	-	0.0	-	-	-	936.5	-	-	-	21.9	-
93.3	120.0	0.0	-	5.0	-	-	-	358.2	-	-	-	109.9	-

Chauliodus macouni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	70.0	20.4	-	-	0.0	-	-	-	-	-	-	-	-
60.0	80.0	9.9	-	-	8.5	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	4.7	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	4.7	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Chauliodus macouni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	80.0	5.1	-	-	9.1	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	8.2	-	-	-	-	-	-	-	-
70.0	70.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	10.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	8.8	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	4.5	-	-	-	-	-	-	-	-
76.7	55.0	0.0	-	-	8.5	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
76.7	90.0	9.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	15.1	-
80.0	70.0	0.0	-	-	17.2	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.6	-
83.3	60.0	-	-	-	10.2	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	9.2	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	0.0	-	-	-	4.7	-
86.7	100.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	4.6	-	3.6	-	-	-	0.0	-	-	-	4.9	-
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	60.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
93.3	100.0	0.0	-	13.9	-	-	-	0.0	-	-	-	0.0	-

Stomias atriventer

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	9.2	-	-	-	0.0	-
90.0	110.0	4.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-
93.3	110.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3	120.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Bathophilus flemingi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	0.0	-	-	25.6	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	10.2	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3	110.0	0.0	-	4.2	-	-	-	0.0	-	-	-	0.0	-

Tactostoma macropus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	15.3	-	-	-	0.0	-

Aristostomias scintillans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	4.7	-
93.3	100.0	0.0	-	4.6	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	4.2	-	-	-	0.0	-	-	-	0.0	-

Idiacanthus antrostomus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	15.1	-
80.0	60.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.4	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
83.3	110.0	0.0	-	-	0.0	-	-	35.8	-	-	-	4.7	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	4.6	-	-	-	-	-	0.0	-	-	-	4.7	-
86.7	110.0	0.0	-	-	0.0	-	-	9.8	-	-	-	10.8	-
90.0	80.0	4.6	-	0.0	-	-	-	5.1	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	9.5	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	23.7	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	34.9	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	9.3	-	-	-	8.5	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	4.1	-

TABLE 8. (cont.)

Idiacanthus antrostomus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3 110.0	0.0	-	0.0	-	-	-	37.8	-	-	-	0.0	-
93.3 120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-

Benthalbella dentata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 80.0	9.6	-	-	0.0	-	-	-	-	-	-	-	-
76.7 90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.4	-
80.0 80.0	9.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.7	-
86.7 110.0	0.0	-	-	0.0	-	-	4.9	-	-	-	0.0	-
90.0 60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-

Rosenblattichthys volucris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3 90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3 120.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-

***Scopelarchus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-

Scopelarchus analis

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

***Scopelosaurus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
83.3 100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3 110.0	4.6	-	-	0.0	-	-	5.1	-	-	-	0.0	-
86.7 100.0	0.0	-	-	4.7	-	-	0.0	-	-	-	0.0	-

Arctozenus risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 70.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
83.3 55.0	9.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Arctozenus risso (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-
90.0	90.0	0.0	-	4.5	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-
93.3	90.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-

Lestidiops ringens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	9.9	-	-	-	-	-	-	-	-	-	-	-
63.3	70.0	8.8	-	-	0.0	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	4.7	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	-	4.9	-	-	0.0	-	-	-	4.1	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.0	-
80.0	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.0	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.6	-
83.3	100.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	15.3	-	-	-	0.0	-
86.7	70.0	0.0	-	-	-	-	-	16.9	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	5.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	19.5	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.7	-	-	9.4	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.9	-	-	-	0.0	-
90.0	80.0	0.0	-	3.6	-	-	-	5.1	-	-	-	4.9	-
90.0	90.0	0.0	-	0.0	-	-	-	19.1	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	9.5	-	-	-	0.0	-
93.3	55.0	0.0	-	13.3	-	-	-	0.0	-	-	-	7.1	-
93.3	60.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	29.3	-	-	-	4.3	-
93.3	80.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.8	-
93.3	90.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.1	-
93.3	110.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3	120.0	4.1	-	0.0	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Myctophidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	8.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
83.3	100.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	5.1	-	-	-	0.0	-
90.0	90.0	0.0	-	4.5	-	-	-	4.8	-	-	-	0.0	-
90.0	110.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	0.0	-	-	-	0.0	-
93.3	120.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-

Ceratoscopelus townsendi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	8.3	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
83.3	110.0	0.0	-	-	28.5	-	-	71.5	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	54.6	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	9.8	-	-	-	0.0	-
86.7	100.0	0.0	-	-	14.2	-	-	4.7	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	44.0	-	-	-	0.0	-
90.0	37.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.9	-
90.0	70.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-
90.0	80.0	4.6	-	0.0	-	-	-	61.3	-	-	-	0.0	-
90.0	90.0	0.0	-	9.0	-	-	-	9.5	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	80.6	-	-	-	18.6	-
90.0	110.0	0.0	-	5.0	-	-	-	5.0	-	-	-	18.2	-
90.0	120.0	0.0	-	0.0	-	-	-	51.3	-	-	-	21.3	-
93.3	90.0	0.0	-	0.0	-	-	-	19.5	-	-	-	0.0	-
93.3	100.0	0.0	-	13.9	-	-	-	19.8	-	-	-	8.8	-
93.3	110.0	0.0	-	4.2	-	-	-	23.7	-	-	-	0.0	-
93.3	120.0	0.0	-	0.0	-	-	-	53.2	-	-	-	0.0	-

***Diaphus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	24.9	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	4.7	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	80.0	-	-	-	4.7	-	-	-	-	-	-	-	-
76.7	100.0	0.0	-	-	4.7	-	-	4.4	-	-	-	0.0	-
80.0	70.0	0.0	-	-	0.0	-	-	10.3	-	-	-	10.0	-
80.0	90.0	0.0	-	-	0.0	-	-	10.1	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	3.1	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	41.1	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	15.5	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	71.5	-	-	-	0.0	-
86.7	70.0	0.0	-	-	-	-	-	50.7	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	9.9	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	43.9	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	14.1	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	19.6	-	-	-	0.0	-
90.0	53.0	0.0	-	0.0	-	-	-	9.7	-	-	-	0.0	-
90.0	60.0	0.0	-	0.0	-	-	-	89.0	-	-	-	0.0	-
90.0	70.0	0.0	-	0.0	-	-	-	39.1	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	46.0	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	42.9	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	23.7	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	34.9	-	-	-	0.0	-
93.3	60.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
93.3	80.0	0.0	-	0.0	-	-	-	17.7	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	9.7	-	-	-	12.2	-

***Nannobrachium* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
73.3	60.0	0.0	-	-	9.9	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
76.7	100.0	9.1	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	10.4	-
83.3	70.0	0.0	-	-	3.1	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-

TABLE 8. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	4.7	-	-	-	0.0	-
86.7	110.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	9.8	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	5.1	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	19.1	-	-	-	0.0	-
90.0	100.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-
93.3	35.0	0.0	-	9.9	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	31.0	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	4.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	25.6	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	16.9	-	-	-	4.7	-	-	-	0.0	-

Nannobrachium hawaiiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-

Nannobrachium regale

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	0.0	-	-	0.0	-	-	10.5	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	5.1	-	-	-	0.0	-
93.3	80.0	0.0	-	0.0	-	-	-	8.9	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-

Nannobrachium ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-
60.0	80.0	19.8	-	-	17.0	-	-	-	-	-	-	-	-
63.3	70.0	8.8	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	60.0	9.6	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	10.9	-	-	9.6	-	-	-	-	-	-	-	-
70.0	90.0	9.4	-	-	-	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Nannobrachium ritteri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	60.0	10.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	18.7	-	-	0.0	-	-	-	0.0	-
76.7	100.0	4.6	-	-	28.1	-	-	8.8	-	-	-	0.0	-
80.0	60.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	17.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	9.4	-	-	18.2	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.6	-
80.0	100.0	4.5	-	-	20.8	-	-	0.0	-	-	-	0.0	-
83.3	55.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
83.3	100.0	4.5	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	13.7	-	-	4.8	-	-	5.1	-	-	-	0.0	-
86.7	80.0	4.8	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	9.1	-	-	-	-	-	4.9	-	-	-	0.0	-
86.7	100.0	0.0	-	-	42.7	-	-	0.0	-	-	-	9.4	-
86.7	110.0	4.8	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	0.0	-	-	-	0.0	-	-	-	5.0	-
90.0	70.0	0.0	-	12.3	-	-	-	9.8	-	-	-	0.0	-
90.0	80.0	36.6	-	0.0	-	-	-	15.3	-	-	-	4.9	-
90.0	90.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	9.7	-	-	-	4.7	-	-	-	0.0	-
90.0	110.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	4.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	4.8	-	6.7	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	4.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3	100.0	9.3	-	41.6	-	-	-	4.9	-	-	-	0.0	-
93.3	110.0	0.0	-	12.7	-	-	-	0.0	-	-	-	0.0	-

Notoscopelus resplendens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-

TABLE 8. (cont.)

Station		***Stenobrachius leucopsarus***											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	4.8	-	-	-	-	-	-	-	-	-	-	-
60.0	60.0	340.2	-	-	572.6	-	-	-	-	-	-	-	-
60.0	70.0	296.1	-	-	8.4	-	-	-	-	-	-	-	-
60.0	80.0	19.8	-	-	127.4	-	-	-	-	-	-	-	-
60.0	90.0	49.3	-	-	-	-	-	-	-	-	-	-	-
63.3	52.0	0.0	-	-	42.6	-	-	-	-	-	-	-	-
63.3	55.0	26.2	-	-	106.3	-	-	-	-	-	-	-	-
63.3	60.0	18.1	-	-	143.0	-	-	-	-	-	-	-	-
63.3	70.0	17.6	-	-	9.4	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	4.7	-	-	-	-	-	-	-	-
63.3	90.0	30.4	-	-	-	-	-	-	-	-	-	-	-
66.7	50.0	78.2	-	-	22.0	-	-	-	-	-	-	-	-
66.7	55.0	150.0	-	-	61.3	-	-	-	-	-	-	-	-
66.7	60.0	655.9	-	-	116.9	-	-	-	-	-	-	-	-
66.7	70.0	344.3	-	-	48.0	-	-	-	-	-	-	-	-
66.7	80.0	41.0	-	-	36.5	-	-	-	-	-	-	-	-
66.7	90.0	4.8	-	-	-	-	-	-	-	-	-	-	-
70.0	51.0	47.0	-	-	10.8	-	-	-	-	-	-	-	-
70.0	55.0	27.4	-	-	27.7	-	-	-	-	-	-	-	-
70.0	60.0	54.3	-	-	24.7	-	-	-	-	-	-	-	-
70.0	70.0	25.3	-	-	9.2	-	-	-	-	-	-	-	-
70.0	80.0	108.6	-	-	134.2	-	-	-	-	-	-	-	-
70.0	90.0	75.4	-	-	-	-	-	-	-	-	-	-	-
73.3	55.0	147.9	-	-	8.9	-	-	-	-	-	-	-	-
73.3	60.0	183.2	-	-	49.6	-	-	-	-	-	-	-	-
73.3	70.0	195.1	-	-	40.7	-	-	-	-	-	-	-	-
73.3	80.0	19.2	-	-	29.0	-	-	-	-	-	-	-	-
73.3	90.0	616.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	4.5	-	-	-	-	-	-	-	-
76.7	51.0	18.8	-	-	37.0	-	-	0.0	-	-	-	4.8	-
76.7	55.0	251.3	-	-	8.5	-	-	0.0	-	-	-	9.0	-
76.7	60.0	-	-	-	45.5	-	-	0.0	-	-	-	4.3	-
76.7	70.0	32.2	-	-	29.3	-	-	0.0	-	-	-	4.1	-
76.7	80.0	12.9	-	-	46.7	-	-	0.0	-	-	-	59.8	-

TABLE 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	58.5	-	-	0.0	-	-	-	8.4	-
76.7	100.0	0.0	-	-	56.2	-	-	0.0	-	-	-	5.0	-
80.0	51.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0	55.0	5.0	-	-	19.7	-	-	0.0	-	-	-	20.7	-
80.0	60.0	17.4	-	-	143.1	-	-	10.9	-	-	-	4.1	-
80.0	70.0	42.8	-	-	60.2	-	-	10.3	-	-	-	0.0	-
80.0	80.0	84.4	-	-	18.2	-	-	0.0	-	-	-	0.0	-
80.0	90.0	226.6	-	-	68.0	-	-	0.0	-	-	-	11.2	-
80.0	100.0	4.5	-	-	8.3	-	-	0.0	-	-	-	0.0	-
81.8	46.9	97.2	-	-	5.0	-	-	0.0	-	-	-	8.6	-
83.3	42.0	4.3	-	-	0.0	-	-	0.0	-	-	-	7.6	-
83.3	51.0	16.6	-	-	22.5	-	-	0.0	-	-	-	0.0	-
83.3	55.0	24.2	-	-	68.7	-	-	9.2	-	-	-	0.0	-
83.3	60.0	-	-	-	51.1	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	15.5	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	10.3	-	-	-	0.0	-
83.3	90.0	4.8	-	-	-	-	-	0.0	-	-	-	8.8	-
86.7	33.0	0.0	-	4.1	-	-	-	0.0	-	-	-	4.2	-
86.7	35.0	28.6	-	10.8	-	-	-	0.0	-	-	-	0.0	-
86.7	40.0	24.2	-	9.1	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	9.2	-	18.2	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	109.5	-	4.5	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	26.4	-	-	-	0.0	-	-	-	8.3	-
86.7	60.0	0.0	-	9.2	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	25.1	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	13.7	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	4.1	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	19.6	-	41.4	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	9.2	-	9.2	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.7	-	8.9	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	18.9	-	71.3	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	30.9	-	-	-	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	80.0	0.0	-	7.1	-	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	17.9	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	14.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	43.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	10.1	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	9.3	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	178.6	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	9.0	-	51.7	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	13.3	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	19.2	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	4.8	-	-	-	8.9	-	-	-	0.0	-
93.3	90.0	4.8	-	4.1	-	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	4.6	-	-	-	0.0	-	-	-	0.0	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	3.1	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	25.8	-	-	-	0.0	-
83.3	110.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	22.5	-	-	-	0.0	-
86.7	55.0	0.0	-	8.8	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	19.5	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	14.1	-	-	-	0.0	-
86.7	110.0	0.0	-	-	14.7	-	-	0.0	-	-	-	0.0	-
90.0	27.7	-	-	-	-	-	-	2.6	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	36.6	-	-	-	0.0	-
90.0	35.0	0.0	-	0.0	-	-	-	10.2	-	-	-	0.0	-
90.0	37.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	0.0	-	-	-	9.9	-	-	-	0.0	-
90.0	80.0	0.0	-	3.6	-	-	-	56.2	-	-	-	0.0	-
90.0	90.0	0.0	-	4.5	-	-	-	33.4	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	14.2	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-

TABLE 8. (cont.)

Triphoturus mexicanus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	26.7	0.0	-	0.0	-	-	-	16.6	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	125.6	-	-	-	0.0	-
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	35.0	0.0	-	4.9	-	-	-	33.1	-	-	-	0.0	-
93.3	45.0	0.0	-	10.3	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	3.6	-
93.3	60.0	0.0	-	19.2	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	0.0	-	-	-	4.3	-
93.3	80.0	0.0	-	0.0	-	-	-	53.1	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	43.8	-	-	-	4.1	-
93.3	100.0	0.0	-	4.6	-	-	-	0.0	-	-	-	4.4	-
93.3	110.0	0.0	-	4.2	-	-	-	33.1	-	-	-	0.0	-
93.3	120.0	0.0	-	0.0	-	-	-	4.8	-	-	-	0.0	-
93.4	26.4	-	-	-	-	-	-	0.0	-	-	-	3.3	-

Diogenichthys atlanticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	10.6	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	10.2	-	-	0.0	-	-	-	-	-	-	-	-
60.0	80.0	9.9	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
66.7	80.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
76.7	100.0	4.6	-	-	0.0	-	-	0.0	-	-	-	15.1	-
80.0	70.0	8.6	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	100.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	9.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-
83.3	90.0	4.8	-	-	-	-	-	9.8	-	-	-	0.0	-
83.3	100.0	4.5	-	-	44.3	-	-	0.0	-	-	-	4.4	-
83.3	110.0	22.8	-	-	33.3	-	-	10.2	-	-	-	9.4	-
86.7	55.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.3	-
86.7	60.0	9.2	-	0.0	-	-	-	0.0	-	-	-	9.9	-
86.7	70.0	16.7	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	90.0	4.6	-	-	-	-	-	4.9	-	-	-	0.0	-

TABLE 8. (cont.)

Diogenichthys atlanticus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	4.4	-	-	23.7	-	-	0.0	-	-	-	9.4	-
86.7	110.0	0.0	-	-	4.9	-	-	0.0	-	-	-	10.8	-
90.0	70.0	4.6	-	6.2	-	-	-	19.5	-	-	-	0.0	-
90.0	80.0	18.3	-	17.9	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	4.9	-	-	-	33.2	-	-	-	0.0	-
90.0	110.0	0.0	-	15.1	-	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	4.3	-
93.3	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	8.4	-
93.3	45.0	9.0	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	6.7	-	-	-	0.0	-	-	-	3.6	-
93.3	60.0	0.0	-	48.0	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	4.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-
93.3	100.0	9.3	-	37.0	-	-	-	4.9	-	-	-	4.4	-
93.3	110.0	0.0	-	8.4	-	-	-	4.7	-	-	-	13.1	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.2	-

Electrona risso

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	80.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.9	-
90.0	120.0	0.0	-	0.0	-	-	-	14.0	-	-	-	0.0	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-

Hygophum reinhardtii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	0.0	-	-	5.1	-	-	-	4.7	-
86.7	100.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-
90.0	80.0	4.6	-	0.0	-	-	-	5.1	-	-	-	0.0	-
90.0	110.0	0.0	-	0.0	-	-	-	5.0	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-

Myctophum nitidulum

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

TABLE 8. (cont.)

Protomyctophum crockeri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	21.3	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	10.2	-	-	0.0	-	-	-	-	-	-	-	-
60.0	80.0	0.0	-	-	25.5	-	-	-	-	-	-	-	-
60.0	90.0	29.6	-	-	-	-	-	-	-	-	-	-	-
63.3	60.0	18.1	-	-	19.1	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	9.4	-	-	-	-	-	-	-	-
63.3	80.0	-	-	-	9.5	-	-	-	-	-	-	-	-
66.7	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	18.0	-	-	-	-	-	-	-	-
66.7	70.0	9.1	-	-	9.6	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
66.7	90.0	23.8	-	-	-	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	8.2	-	-	-	-	-	-	-	-
70.0	70.0	5.1	-	-	18.4	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
70.0	90.0	18.8	-	-	-	-	-	-	-	-	-	-	-
73.3	60.0	32.3	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	9.7	-	-	-	-	-	-	-	-
73.3	90.0	0.0	-	-	17.6	-	-	-	-	-	-	-	-
76.7	55.0	0.0	-	-	0.0	-	-	9.8	-	-	-	0.0	-
76.7	60.0	-	-	-	0.0	-	-	9.9	-	-	-	0.0	-
76.7	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.1	-
76.7	80.0	4.3	-	-	0.0	-	-	0.0	-	-	-	5.4	-
76.7	90.0	9.9	-	-	16.7	-	-	0.0	-	-	-	0.0	-
76.7	100.0	4.6	-	-	9.4	-	-	0.0	-	-	-	20.2	-
80.0	60.0	0.0	-	-	20.4	-	-	0.0	-	-	-	0.0	-
80.0	70.0	25.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	10.8	-	-	29.2	-	-	0.0	-	-	-	0.0	-
80.0	100.0	4.5	-	-	0.0	-	-	0.0	-	-	-	5.2	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
83.3	51.0	0.0	-	-	0.0	-	-	6.7	-	-	-	0.0	-
83.3	60.0	-	-	-	0.0	-	-	9.6	-	-	-	19.3	-
83.3	70.0	0.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-

TABLE 8. (cont.)

Protomyctophum crockeri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	80.0	0.0	-	-	-	-	-	10.3	-	-	-	4.3	-
83.3	90.0	9.6	-	-	-	-	-	0.0	-	-	-	4.4	-
83.3	100.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	4.1	-	-	-	0.0	-	-	-	0.0	-
86.7	35.0	9.5	-	0.0	-	-	-	9.6	-	-	-	10.7	-
86.7	40.0	0.0	-	4.6	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	9.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	55.0	25.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	60.0	9.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	8.4	-	-	-	-	-	0.0	-	-	-	10.1	-
86.7	80.0	9.5	-	-	-	-	-	24.8	-	-	-	0.0	-
86.7	90.0	9.1	-	-	-	-	-	0.0	-	-	-	4.7	-
86.7	100.0	4.4	-	-	9.5	-	-	4.7	-	-	-	4.7	-
86.7	110.0	0.0	-	-	9.8	-	-	4.9	-	-	-	10.8	-
90.0	30.0	0.0	-	0.0	-	-	-	9.2	-	-	-	0.0	-
90.0	35.0	4.6	-	9.2	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	0.0	-	-	-	9.3	-	-	-	8.9	-
90.0	45.0	8.9	-	9.6	-	-	-	21.1	-	-	-	0.0	-
90.0	53.0	0.0	-	26.6	-	-	-	0.0	-	-	-	4.9	-
90.0	60.0	9.4	-	0.0	-	-	-	9.9	-	-	-	10.0	-
90.0	70.0	0.0	-	6.2	-	-	-	9.8	-	-	-	4.4	-
90.0	80.0	4.6	-	14.3	-	-	-	5.1	-	-	-	0.0	-
90.0	90.0	4.7	-	4.5	-	-	-	0.0	-	-	-	8.8	-
90.0	100.0	9.1	-	0.0	-	-	-	0.0	-	-	-	4.6	-
90.0	110.0	4.7	-	0.0	-	-	-	0.0	-	-	-	4.6	-
93.3	26.7	4.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	9.7	-	-	-	0.0	-
93.3	30.0	0.0	-	0.0	-	-	-	9.6	-	-	-	0.0	-
93.3	35.0	18.5	-	4.9	-	-	-	0.0	-	-	-	16.9	-
93.3	45.0	0.0	-	0.0	-	-	-	11.9	-	-	-	0.0	-
93.3	50.0	0.0	-	9.6	-	-	-	9.4	-	-	-	0.0	-
93.3	55.0	9.5	-	20.0	-	-	-	0.0	-	-	-	10.7	-
93.3	60.0	0.0	-	48.0	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Protomyctophum crockeri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	70.0	9.9	-	0.0	-	-	-	19.5	-	-	-	0.0	-
93.3	80.0	4.7	-	4.8	-	-	-	0.0	-	-	-	4.8	-
93.3	90.0	0.0	-	8.2	-	-	-	0.0	-	-	-	4.1	-
93.3	100.0	13.9	-	13.9	-	-	-	0.0	-	-	-	8.8	-

Symbolophorus californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	100.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-
83.3	100.0	0.0	-	-	88.6	-	-	0.0	-	-	-	0.0	-
83.3	110.0	4.6	-	-	23.8	-	-	10.2	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	34.7	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	34.2	-	-	-	0.0	-
86.7	100.0	4.4	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.9	-	-	9.8	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	9.2	-	-	-	0.0	-
90.0	60.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	13.9	-	30.9	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	36.6	-	10.7	-	-	-	10.2	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	23.9	-	-	-	0.0	-
90.0	100.0	0.0	-	19.4	-	-	-	4.7	-	-	-	0.0	-
90.0	110.0	4.7	-	0.0	-	-	-	14.9	-	-	-	0.0	-
90.0	120.0	4.3	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	45.0	0.0	-	10.3	-	-	-	0.0	-	-	-	0.0	-
93.3	55.0	0.0	-	0.0	-	-	-	10.0	-	-	-	0.0	-
93.3	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
93.3	80.0	0.0	-	0.0	-	-	-	17.7	-	-	-	0.0	-
93.3	90.0	0.0	-	8.2	-	-	-	34.1	-	-	-	0.0	-
93.3	100.0	0.0	-	0.0	-	-	-	4.9	-	-	-	4.4	-
93.3	110.0	0.0	-	16.9	-	-	-	14.2	-	-	-	0.0	-

Tarletonbeania crenularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Tarletonbeania crenularis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	9.9	-	-	8.5	-	-	-	-	-	-	-	-
63.3	60.0	9.0	-	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	8.8	-	-	9.4	-	-	-	-	-	-	-	-
63.3	90.0	30.4	-	-	-	-	-	-	-	-	-	-	-
66.7	70.0	18.1	-	-	0.0	-	-	-	-	-	-	-	-
66.7	80.0	15.4	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	100.0	4.6	-	-	0.0	-	-	4.4	-	-	-	0.0	-
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.6	-
83.3	80.0	8.5	-	-	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	9.1	-	0.0	-	-	-	0.0	-	-	-	-	-
90.0	90.0	0.0	-	0.0	-	-	-	4.8	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	14.6	-	-	-	0.0	-
93.3	100.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-

Trachipterus altivelis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	60.0	10.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	55.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	4.4	-	-	0.0	-	-	10.9	-	-	-	0.0	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.9	-

Coryphaenoides pectoralis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	55.0	0.0	-	6.7	-	-	-	0.0	-	-	-	0.0	-

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	340.2	-	-	-	-	-	-	-	-
60.0	70.0	0.0	-	-	67.6	-	-	-	-	-	-	-	-
60.0	80.0	0.0	-	-	67.9	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Merluccius productus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	21.3	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	42.5	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	76.3	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	11.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	102.1	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	62.9	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	-	182.3	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	45.7	-	-	-	-	-	-	-	-
70.0	51.0	28.2	-	-	75.6	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
70.0	60.0	0.0	-	-	32.9	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	86.3	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	39.7	-	-	-	-	-	-	-	-
73.3	60.0	0.0	-	-	19.8	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	20.4	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	112.8	-	-	0.0	-	-	-	0.0	-
76.7	51.0	61.0	-	-	203.7	-	-	0.0	-	-	-	0.0	-
76.7	55.0	8.7	-	-	136.2	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	-	-	145.7	-	-	0.0	-	-	-	0.0	-
76.7	70.0	0.0	-	-	29.3	-	-	0.0	-	-	-	0.0	-
80.0	51.0	109.3	-	-	9.2	-	-	4.6	-	-	-	0.0	-
80.0	55.0	0.0	-	-	59.1	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	132.9	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
81.8	46.9	212.2	-	-	20.2	-	-	0.0	-	-	-	0.0	-
83.3	42.0	17.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	16.6	-	-	13.5	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	49.1	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	153.2	-	-	0.0	-	-	-	0.0	-
86.7	35.0	23.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	40.0	53.1	-	9.1	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	9.2	-	9.1	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Merluccius productus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	8.9	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	61.5	-	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	74.0	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	9.2	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	17.9	-	9.6	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	159.7	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	56.6	-	122.2	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	4.8	-	4.7	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	14.8	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	9.9	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	103.5	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	76.8	-	-	-	0.0	-	-	-	0.0	-

Chilara taylori

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	0.0	-	-	9.8	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.8	-

Ophidion scrippsae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	2.6	-
86.7	33.0	0.0	-	0.0	-	-	-	0.0	-	-	-	12.5	-

Brosmophycis marginata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.0	-	-	9.9	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	10.3	-	-	-	0.0	-

Cataetyx rubrirostris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	30.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-

***Oneirodes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.3	-

TABLE 8. (cont.)

***Gigantactis* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	0.0	-	-	4.9	-	-	-	0.0	-

Cololabis saira

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.4	-

***Melamphaes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	9.9	-	-	-	-	-	-	-	-	-	-	-
66.7	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
70.0	51.0	9.4	-	-	0.0	-	-	-	-	-	-	-	-

Melamphaes lugubris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	10.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	0.0	-	-	8.9	-	-	-	-	-	-	-	-
73.3	80.0	0.0	-	-	19.3	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	8.8	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	9.1	-	-	-	-	-	-	-	-
76.7	55.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-
76.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.0	-
80.0	60.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
83.3	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	4.6	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	-	-	-	4.9	-	-	-	0.0	-
90.0	53.0	0.0	-	8.9	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	4.7	-	-	-	9.3	-
90.0	110.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
93.3	100.0	0.0	-	4.6	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	4.2	-	-	-	0.0	-	-	-	4.4	-

TABLE 8. (cont.)

Melamphaes parvus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	80.0	0.0	-	-	8.5	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
80.0	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.0	-
80.0	80.0	18.8	-	-	9.1	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.2	-
86.7	70.0	4.2	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	100.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-

Scopelogadus bispinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	70.0	0.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-
83.3	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	5.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.9	-	-	-	0.0	-
90.0	70.0	4.6	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3	70.0	0.0	-	8.5	-	-	-	0.0	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	4.9	-	-	-	0.0	-

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	9.5	-	-	-	-	-	-	-	-	-	-	-
60.0	60.0	21.3	-	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	61.3	-	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	34.7	-	-	248.4	-	-	-	-	-	-	-	-
63.3	55.0	393.1	-	-	521.1	-	-	-	-	-	-	-	-
63.3	60.0	54.2	-	-	9.5	-	-	-	-	-	-	-	-
63.3	70.0	0.0	-	-	4.7	-	-	-	-	-	-	-	-
66.7	50.0	9.8	-	-	131.7	-	-	-	-	-	-	-	-
66.7	55.0	14.5	-	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	9.6	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	9.1	-	-	9.6	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	27.4	-	-	-	-	-	-	-	-
70.0	51.0	47.0	-	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	64.7	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	60.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	8.6	-	-	4.0	-	-	-	-	-	-	-	-
73.3	55.0	9.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	90.0	19.6	-	-	0.0	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	34.7	-	-	0.0	-	-	-	0.0	-
76.7	51.0	0.0	-	-	9.3	-	-	28.8	-	-	-	0.0	-
76.7	55.0	8.7	-	-	17.0	-	-	9.8	-	-	-	0.0	-
76.7	70.0	24.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	15.1	-	-	18.4	-	-	0.0	-	-	-	0.0	-
80.0	55.0	9.9	-	-	29.6	-	-	9.6	-	-	-	62.0	-
80.0	60.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
81.8	46.9	17.7	-	-	5.0	-	-	9.9	-	-	-	0.0	-
83.3	40.6	0.0	-	-	0.0	-	-	3.9	-	-	-	0.0	-
83.3	42.0	8.6	-	-	0.0	-	-	10.0	-	-	-	26.6	-
83.3	51.0	124.5	-	-	85.5	-	-	0.0	-	-	-	25.2	-
83.3	55.0	4.8	-	-	19.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	10.2	-	-	9.6	-	-	-	0.0	-
86.7	33.0	25.0	-	4.1	-	-	-	0.0	-	-	-	29.3	-
86.7	35.0	109.7	-	27.1	-	-	-	19.3	-	-	-	21.4	-
86.7	40.0	9.7	-	22.9	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	156.4	-	127.1	-	-	-	9.8	-	-	-	0.0	-
86.7	50.0	1350.9	-	369.4	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	26.4	-	-	-	0.0	-	-	-	0.0	-
86.7	70.0	0.0	-	-	-	-	-	8.4	-	-	-	0.0	-
90.0	28.0	0.0	-	4.9	-	-	-	0.0	-	-	-	4.0	-
90.0	30.0	0.0	-	10.4	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	36.8	-	87.8	-	-	-	10.2	-	-	-	0.0	-
90.0	37.0	4.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	8.9	-	192.6	-	-	-	10.5	-	-	-	0.0	-
90.0	53.0	0.0	-	266.2	-	-	-	9.7	-	-	-	0.0	-
90.0	60.0	122.7	-	30.5	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	26.7	4.9	-	3.3	-	-	-	0.0	-	-	-	4.0	-
93.3	28.0	0.0	-	47.2	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	24.9	-	-	-	0.0	-	-	-	0.0	-
93.3	35.0	0.0	-	59.2	-	-	-	0.0	-	-	-	8.4	-
93.3	40.0	0.0	-	29.8	-	-	-	10.2	-	-	-	0.0	-
93.3	45.0	0.0	-	144.9	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	9.4	-	-	-	0.0	-
93.3	55.0	0.0	-	20.0	-	-	-	10.0	-	-	-	0.0	-
93.3	60.0	0.0	-	38.4	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	4.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
86.7	45.0	0.0	-	9.1	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-
63.3	52.0	0.0	-	-	14.2	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	10.6	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	-	38.4	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
80.0	80.0	28.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	82.1	-	0.0	-	-	-	0.0	-	-	-	-	-
90.0	45.0	8.9	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	37.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-

Sebastes goodei

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	0.0	-	-	21.3	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	4.3	-	-	220.0	-	-	-	-	-	-	-	-
63.3	55.0	43.7	-	-	117.0	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	9.5	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	22.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	-	143.9	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	26.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	11.4	-
83.3	51.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	35.0	19.1	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	73.0	-	0.0	-	-	-	0.0	-	-	-	-	-
90.0	30.0	0.0	-	10.4	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	13.8	-	4.6	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	19.0	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	45.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	24.6	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	4.7	-	-	-	0.0	-	-	-	0.0	-
93.3	30.0	0.0	-	9.9	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	39.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
73.3	60.0	10.8	-	-	0.0	-	-	-	-	-	-	-	-
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	2.6	-
86.7	35.0	9.5	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	45.0	18.4	-	9.1	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	337.7	-	4.5	-	-	-	0.0	-	-	-	-	-
86.7	55.0	0.0	-	8.8	-	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-

TABLE 8. (cont.)

Sebastes paucispinis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	44.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	4.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	28.3	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	9.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	0.0	-	4.7	-	-	-	0.0	-	-	-	0.0	-

***Sebastolobus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	16.6	-	-	-	-	-	-	-	-
60.0	80.0	0.0	-	-	34.0	-	-	-	-	-	-	-	-
66.7	80.0	0.0	-	-	9.1	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	18.7	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	4.8	-	-	-	-	-	-	-	-	-	-	-
73.3	55.0	0.0	-	-	8.9	-	-	-	-	-	-	-	-
83.3	42.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-

Zaniolepis frenata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	7.9	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	0.0	-	-	11.0	-	-	-	-	-	-	-	-
90.0	60.0	9.4	-	0.0	-	-	-	0.0	-	-	-	0.0	-

Cottidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	0.0	-	-	11.0	-	-	-	-	-	-	-	-
70.0	55.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Artedius harringtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	55.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-

Artedius lateralis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	8.7	-	-	0.0	-	-	-	0.0	-

Clinocottus analis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	-	-	-	-	-	-	2.1	-	-	-	0.0	-

Icelinus quadriseriatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	12.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Ruscarius creaseri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	7.9	-	-	-	-	-	-	-	-
83.3	42.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	6.7	-	-	-	0.0	-

Ruscarius meanyi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	51.0	0.0	-	-	10.8	-	-	-	-	-	-	-	-

Odontopyxis trispinosa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.8	-
80.0	50.5	-	-	-	-	-	-	2.1	-	-	-	0.0	-
80.0	51.0	0.0	-	-	4.6	-	-	9.1	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.2	-
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-

***Liparis* spp.**

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

Liparis mucosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	55.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Liparis mucosus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	31.8	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.2	-
80.0	51.0	0.0	-	-	0.0	-	-	4.6	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	2.6	-
86.7	50.0	0.0	-	0.0	-	-	-	6.7	-	-	-	-	-

***Howella* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	80.0	0.0	-	-	-	-	-	9.9	-	-	-	0.0	-

***Paralabrax* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	3.9	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	20.1	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	4.5	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	8.3	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	9.2	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-
93.3	28.0	0.0	-	0.0	-	-	-	9.7	-	-	-	0.0	-

Trachurus symmetricus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	8.7	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	-	9.2	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	-	9.6	-	-	-	-	-	-	-	-
73.3	100.0	-	-	-	4.5	-	-	-	-	-	-	-	-
76.7	80.0	0.0	-	-	9.3	-	-	9.8	-	-	-	0.0	-
80.0	70.0	0.0	-	-	129.1	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	18.2	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	-	-	-	5.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.7	-

TABLE 8. (cont.)

Trachurus symmetricus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	19.3	-	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	8.9	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	10.7	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-
93.3	70.0	0.0	-	34.2	-	-	-	0.0	-	-	-	0.0	-
93.3	80.0	0.0	-	14.3	-	-	-	0.0	-	-	-	0.0	-
93.4	26.4	-	-	-	-	-	-	0.0	-	-	-	3.3	-

Brama japonica

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-

Anisotremus davidsoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-

Xenistius californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	27.7	-	-	-	-	-	-	2.6	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-

Cheilotrema saturnum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4	26.4	-	-	-	-	-	-	2.8	-	-	-	0.0	-

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	4.3	-	-	0.0	-	-	-	-	-	-	-	-
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	15.7	-
86.7	33.0	0.0	-	4.1	-	-	-	0.0	-	-	-	29.3	-
86.8	32.5	-	-	-	-	-	-	-	-	-	-	52.7	-
88.5	30.1	-	-	-	-	-	-	0.0	-	-	-	3.4	-
90.0	27.7	-	-	-	-	-	-	0.0	-	-	-	20.2	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	26.7	9.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.4	26.4	-	-	-	-	-	-	2.8	-	-	-	0.0	-

TABLE 8. (cont.)

Seriphus politus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5	30.1	-	-	-	-	-	-	3.6	-	-	-	0.0	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.3	26.7	0.0	-	0.0	-	-	-	8.3	-	-	-	0.0	-
93.4	26.4	-	-	-	-	-	-	2.8	-	-	-	0.0	-

Medialuna californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-

Chromis punctipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.8	-
90.0	53.0	0.0	-	0.0	-	-	-	9.7	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-

Oxyjulis californica

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
93.3	35.0	0.0	-	0.0	-	-	-	11.0	-	-	-	0.0	-
93.3	50.0	0.0	-	0.0	-	-	-	9.4	-	-	-	0.0	-

Semicossyphus pulcher

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	0.0	-	-	-	10.5	-	-	-	0.0	-

***Rathbunella* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.8	-
86.7	50.0	9.1	-	0.0	-	-	-	0.0	-	-	-	-	-

Chiasmodon niger

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	0.0	-	0.0	-	-	-	14.2	-	-	-	4.6	-
90.0	110.0	0.0	-	0.0	-	-	-	10.0	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-

Paraclinus integripinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4	26.4	-	-	-	-	-	-	2.8	-	-	-	0.0	-

TABLE 8. (cont.)

***Neoclinus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	50.5	-	-	-	-	-	-	4.2	-	-	-	0.0	-

Neoclinus stephensae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-

***Hypsoblennius* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	39.4	-	-	-	-	-	-	6.2	-	-	-	0.0	-

Hypsoblennius gilberti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	9.8	-	-	-	0.0	-

Hypsoblennius jenkinsi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	15.4	-	-	-	0.0	-
86.7	33.0	0.0	-	0.0	-	-	-	22.5	-	-	-	0.0	-
88.5	30.1	-	-	-	-	-	-	28.7	-	-	-	6.8	-
90.0	27.7	-	-	-	-	-	-	10.4	-	-	-	0.0	-
91.7	26.4	-	-	-	-	-	-	0.0	-	-	-	2.7	-
93.3	26.7	0.0	-	0.0	-	-	-	116.2	-	-	-	0.0	-

Icosteus aenigmaticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	45.0	0.0	-	10.3	-	-	-	0.0	-	-	-	0.0	-

Clevelandia ios

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-

Ilypnus gilberti

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5	30.1	-	-	-	-	-	-	0.0	-	-	-	6.8	-

Lepidogobius lepidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
86.7	33.0	0.0	-	0.0	-	-	-	0.0	-	-	-	20.9	-

Rhinogobiops nicholsii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	90.0	10.1	-	-	-	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	4.0	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Rhinogobiops nicholsii (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	4.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	50.5	-	-	-	-	-	-	2.1	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	20.7	-
80.0	70.0	0.0	-	-	8.6	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	9.9	-	-	-	0.0	-
83.3	42.0	0.0	-	-	4.6	-	-	0.0	-	-	-	3.8	-
83.3	51.0	8.3	-	-	0.0	-	-	0.0	-	-	-	2.8	-
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	-	10.7	-
86.7	40.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.7	-
86.7	45.0	9.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
86.7	50.0	9.1	-	0.0	-	-	-	0.0	-	-	-	-	-
90.0	37.0	0.0	-	0.0	-	-	-	9.3	-	-	-	0.0	-
90.0	60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	6.2	-	-	-	0.0	-	-	-	0.0	-
93.3	28.0	4.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	9.9	-	-	-	0.0	-	-	-	0.0	-

Typhlogobius californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	45.0	0.0	-	9.1	-	-	-	0.0	-	-	-	0.0	-
90.0	27.7	-	-	-	-	-	-	0.0	-	-	-	2.2	-
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.9	-

Sphyraena argentea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5	30.1	-	-	-	-	-	-	3.6	-	-	-	0.0	-
91.7	26.4	-	-	-	-	-	-	1.4	-	-	-	0.0	-

Scomber japonicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	30.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-
	90.0	45.0	0.0	-	19.3	-	-	-	0.0	-	-	-	0.0
-													

Icichthys lockingtoni

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

TABLE 8. (cont.)

Icichthys lockingtoni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-

Tetragonurus cuvieri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	80.0	0.0	-	-	-	-	-	0.0	-	-	-	8.5	-
86.7	90.0	0.0	-	-	-	-	-	9.8	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.4	-
90.0	70.0	0.0	-	0.0	-	-	-	9.8	-	-	-	4.4	-
90.0	90.0	0.0	-	0.0	-	-	-	4.8	-	-	-	0.0	-

Peprilus simillimus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	26.7	0.0	-	0.0	-	-	-	4.2	-	-	-	0.0	-
93.3	35.0	0.0	-	0.0	-	-	-	11.0	-	-	-	0.0	-

***Citharichthys* spp.**

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

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	10.6	-	-	8.3	-	-	-	-	-	-	-	-
60.0	70.0	10.2	-	-	0.0	-	-	-	-	-	-	-	-
60.0	90.0	9.9	-	-	-	-	-	-	-	-	-	-	-
63.3	55.0	8.7	-	-	0.0	-	-	-	-	-	-	-	-
63.3	60.0	0.0	-	-	28.6	-	-	-	-	-	-	-	-
63.3	70.0	17.6	-	-	4.7	-	-	-	-	-	-	-	-
63.3	90.0	10.1	-	-	-	-	-	-	-	-	-	-	-
66.7	55.0	4.8	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	27.2	-	-	0.0	-	-	-	-	-	-	-	-
66.7	90.0	4.8	-	-	-	-	-	-	-	-	-	-	-
70.0	51.0	9.4	-	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	5.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	43.4	-	-	0.0	-	-	-	-	-	-	-	-
73.3	60.0	10.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	19.5	-	-	10.2	-	-	-	-	-	-	-	-
76.7	49.0	0.0	-	-	0.0	-	-	9.2	-	-	-	0.0	-

TABLE 8. (cont.)

Citharichthys sordidus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.6	-
76.7	55.0	17.3	-	-	0.0	-	-	78.2	-	-	-	0.0	-
76.7	60.0	-	-	-	0.0	-	-	9.9	-	-	-	0.0	-
76.7	70.0	8.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	9.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	11.3	-	-	0.0	-	-	0.0	-	-	-	25.4	-
80.0	55.0	5.0	-	-	0.0	-	-	0.0	-	-	-	10.3	-
80.0	60.0	0.0	-	-	0.0	-	-	32.8	-	-	-	0.0	-
83.3	40.6	0.0	-	-	3.5	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.3	-	-	0.0	-	-	10.0	-	-	-	3.8	-
83.3	55.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	-	-	0.0	-	-	19.3	-	-	-	0.0	-
83.3	70.0	4.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	8.5	-	-	-	-	-	0.0	-	-	-	4.3	-
86.7	33.0	0.0	-	0.0	-	-	-	9.0	-	-	-	0.0	-
86.7	45.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
86.7	50.0	9.1	-	0.0	-	-	-	0.0	-	-	-	-	-
86.7	90.0	13.7	-	-	-	-	-	0.0	-	-	-	0.0	-
90.0	35.0	9.2	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	37.0	0.0	-	0.0	-	-	-	9.3	-	-	-	0.0	-
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	-	10.9	-
90.0	53.0	4.7	-	0.0	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	18.9	-	10.2	-	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.9	-
90.0	100.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
93.3	45.0	0.0	-	20.7	-	-	-	0.0	-	-	-	0.0	-
93.3	50.0	0.0	-	4.8	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	67.2	-	-	-	9.1	-	-	-	0.0	-
93.3	90.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.1	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	8.3	-	-	-	-	-	-	-	-
60.0	70.0	10.2	-	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	0.0	-	-	10.2	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	60.0	19.3	-	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	9.1	-	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	10.9	-	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	4.3	-	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	19.7	-	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
73.3	90.0	9.8	-	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
76.7	55.0	0.0	-	-	0.0	-	-	39.1	-	-	-	0.0	-
76.7	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.1	-
76.7	100.0	0.0	-	-	9.4	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.5	-
80.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.1	-
80.0	90.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	9.9	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	30.4	-
83.3	51.0	0.0	-	-	4.5	-	-	26.8	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	14.3	-
83.3	60.0	-	-	-	0.0	-	-	19.3	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	0.0	-	-	-	8.6	-
83.3	90.0	4.8	-	-	-	-	-	0.0	-	-	-	4.4	-
86.7	35.0	4.8	-	0.0	-	-	-	9.6	-	-	-	0.0	-
86.7	45.0	0.0	-	0.0	-	-	-	9.8	-	-	-	0.0	-
90.0	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.7	-
90.0	35.0	0.0	-	0.0	-	-	-	20.4	-	-	-	0.0	-
90.0	37.0	0.0	-	0.0	-	-	-	18.6	-	-	-	0.0	-
90.0	45.0	17.9	-	0.0	-	-	-	0.0	-	-	-	54.6	-
90.0	53.0	0.0	-	8.9	-	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	10.2	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	0.0	-	-	-	7.9	-
93.3	28.0	0.0	-	0.0	-	-	-	0.0	-	-	-	15.3	-
93.3	30.0	10.1	-	0.0	-	-	-	0.0	-	-	-	15.9	-
93.3	35.0	0.0	-	0.0	-	-	-	11.0	-	-	-	16.9	-
93.3	40.0	0.0	-	79.4	-	-	-	0.0	-	-	-	5.6	-

TABLE 8. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	45.0	9.0	-	0.0	-	-	-	0.0	-	-	-	12.9	-
93.3	60.0	0.0	-	38.4	-	-	-	0.0	-	-	-	0.0	-

Hippoglossina stomata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.2	-
86.8	32.5	-	-	-	-	-	-	-	-	-	-	2.5	-
91.7	26.4	-	-	-	-	-	-	0.0	-	-	-	2.7	-

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	15.4	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	5.0	-	-	-	0.0	-
85.4	35.8	-	-	-	-	-	-	3.6	-	-	-	0.0	-86.8
32.5	-	-	-	-	-	-	-	-	-	-	12.6	-	
88.5	30.1	-	-	-	-	-	-	0.0	-	-	-	10.1	-
90.0	27.7	-	-	-	-	-	-	0.0	-	-	-	11.2	-
91.7	26.4	-	-	-	-	-	-	0.0	-	-	-	16.4	-
93.3	26.7	0.0	-	0.0	-	-	-	16.6	-	-	-	0.0	-
93.3	28.0	0.0	-	4.7	-	-	-	0.0	-	-	-	0.0	-
93.4	26.4	-	-	-	-	-	-	11.0	-	-	-	3.3	-

Xystreurys liolepis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	7.9	-

Glyptocephalus zachirus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	7.1	-	-	-	-	-	-	-	-

Hypsopsetta guttulata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
85.4	35.8	-	-	-	-	-	-	0.0	-	-	-	5.2	-
88.5	30.1	-	-	-	-	-	-	0.0	-	-	-	13.5	-
90.0	27.7	-	-	-	-	-	-	0.0	-	-	-	11.2	-

Lepidopsetta bilineata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	0.0	-	-	7.9	-	-	-	-	-	-	-	-
93.3	30.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Lyopsetta exilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	0.0	-	-	14.2	-	-	-	-	-	-	-	-
63.3	55.0	0.0	-	-	31.9	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	-	32.9	-	-	-	-	-	-	-	-
66.7	60.0	0.0	-	-	9.0	-	-	-	-	-	-	-	-
70.0	51.0	0.0	-	-	10.8	-	-	-	-	-	-	-	-
73.3	50.0	0.0	-	-	7.9	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	-	9.3	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	10.1	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	5.4	-	-	-	0.0	-	-	-	0.0	-86.7
55.0	0.0	-	8.8	-	-	-	0.0	-	-	-	0.0	-	
90.0	28.0	0.0	-	4.9	-	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	5.2	-	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	0.0	-	-	-	24.9	-	-	-	0.0	-
93.3	28.0	0.0	-	4.7	-	-	-	9.7	-	-	-	0.0	-
93.3	30.0	0.0	-	5.0	-	-	-	0.0	-	-	-	0.0	-
93.3	60.0	0.0	-	9.6	-	-	-	0.0	-	-	-	0.0	-

Microstomus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	0.0	-	-	41.5	-	-	-	-	-	-	-	-
60.0	80.0	0.0	-	-	8.5	-	-	-	-	-	-	-	-
83.3	60.0	-	-	-	10.2	-	-	0.0	-	-	-	0.0	-

Parophrys vetulus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	4.3	-	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	8.7	-	-	0.0	-	-	-	-	-	-	-	-
80.0	51.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
83.3	42.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Pleuronichthys decurrens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	0.0	-	0.0	-	-	-	0.0	-	-	-	9.7	-

TABLE 8. (cont.)

Pleuronichthys ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	0.0	-	-	-	0.0	-	-	-	12.5	-

Pleuronichthys verticalis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	7.7	-	-	-	0.0	-
83.3	51.0	4.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	-	0.0	-

Symphurus atricaudus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	30.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.0	-
93.4	26.4	-	-	-	-	-	-	0.0	-	-	-	3.3	-

Disintegrated fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	70.0	4.0	-	-	0.0	-	-	9.4	-	-	-	0.0	-
83.3	80.0	0.0	-	-	-	-	-	10.3	-	-	-	0.0	-
83.3	90.0	0.0	-	-	-	-	-	9.8	-	-	-	0.0	-
83.3	100.0	4.5	-	-	4.9	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	0.0	-	-	-	4.8	-	-	-	0.0	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
90.0	110.0	0.0	-	0.0	-	-	-	0.0	-	-	-	4.6	-
90.0	120.0	0.0	-	0.0	-	-	-	4.7	-	-	-	0.0	-
93.3	40.0	0.0	-	19.8	-	-	-	0.0	-	-	-	0.0	-
93.3	110.0	0.0	-	0.0	-	-	-	9.5	-	-	-	0.0	-

Unidentified fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-

PHYLOGENETIC INDEX TO TABLES 4 AND 8

ALPHABETICAL INDEX TO TABLES 4 AND 8

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