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ICHTHYOPLANKTON AND STATION DATA FOR SURFACE (MANTA) AND OBLIQUE (BONGO) PLANKTON TOWS FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 2003

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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 2003. It is the 62nd report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 321 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 62 larval fish categories identified in Manta net tows and standardized counts (number under 10 square meters of sea surface) of each of the 117 larval fish taxa 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 62nd 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 2003. 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). Neuston[1] sampling with the Manta net (Figure 1) was initiated in 1977–78. Alhstrom and Stevens (1976), Gruber et al. (1982), and Doyle

[1]Useage of the term "neuston" for surface-living marine organisms is controversial because it 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).

(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 in 2003 will be published by the Scripps Institution of Oceanography (Univ. of Calif., SIO *in prep.*). All available records for all four 2003 CalCOFI surveys 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	Special cruises
2001	Ambrose et al. 2003a	1997–98	Ambrose et al. 2003b
2002	Charter et al. 2003		

SAMPLING AREA AND PATTERN

A total of 321 standard CalCOFI survey stations was occupied on four cruises in 2003, employing three research vessels:

0302, RV *David Starr Jordan*, 99 stations, January 30 – February 23;

0304, RV *Roger Revelle,* 66 stations, April 4 – 19
RV *David Starr Jordan*, 28 stations, April 15 – 25;

0307, RV *New Horizon*, 62 stations, July 17 – 29;

0310, RV *New Horizon,* 66 stations; October 20 – November 3.

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 (April)

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

cruises an additional five survey lines were sampled northward to the vicinity of Point Reyes, California (Figure 2 and 3). The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. On all cruises, except cruise 0307, lines 83.3 and 86.7 extended seaward to station 110.0, and lines 90.0 and 93.3 extended to station 120.0. (Figure 2 – 4). On Cruise 0307 lines 83.3 and 86.7 extended to station 100.0 and lines 90.0 and 93.3 extended to station 110.0 (Figure 4). On cruise 0302 lines 60.0 – 80.0 extended to station 100.0 (Figure 2), and on cruise 0304 lines 60.0 and 70.0 extended seaward to station 90.0 (Figure 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 requirements. The cod end of each net is constructed of 0.333 mm mesh.

The standard bongo tow in 2003 was a double oblique haul to 212 m depth (to 15 m from the bottom in shallow areas) designed to filter a constant amount of water per depth interval (~ 2 m^3/m of depth) over the vertical range of most ichthyoplankters. Hauls were made at a ship speed of 1.5–2.0 knots and initiated by clamping the net to the towing cable above a 34 kg weight suspended below the surface. The net was lowered to ~ 212 m depth by paying out 300 m of wire at 50 m/minute (35 m of depth/minute). After fishing at depth for 30 seconds, the net was retrieved at 20 m/minute (14 m of depth/minute). The angle of stray was recorded every 30 seconds and maintained at 45° (± 3°) by adjusting ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. At the beginning and end of each tow, readings were made from a flow meter suspended in the mouth of the starboard net. Detailed descriptions of gear and methods are given by Kramer et al. (1972) and Smith and Richardson (1977); Ohman and Smith (1995) provided summaries of historical CalCOFI zooplankton methods and calibration factors for the various gear types.

LABORATORY PROCEDURES

The ichthyoplankton was removed from the invertebrate portion of each sample and bottled separately in 3% buffered formalin. In addition to fish eggs and larvae, some samples contained juvenile, and occasionally adult, stages of fishes; these were removed and bottled separately in 3% formalin. The volume

of water filtered by each net was computed from the flowmeter readings. A "standard haul factor" is used for oblique CalCOFI net tows to calculate the total number of ichthyoplankters of a taxon per unit surface area (Kramer et al. 1972; Smith and Richardson 1977; Moser et al. 1993). A requirement for this is the entire depth distribution of the taxon must be encompassed during the tow. The Manta net samples only the upper ~15.5 cm of the water column and most, if not all, ichthyoplankton taxa that inhabit the surface zone have a vertical range > 15.5 cm. Even taxa associated with the immediate surface layer may range deeper than 15.5 cm as a result of diel migratory patterns or vertical mixing (Hempel and Weikert 1972; Doyle 1992b). Calculation of total numbers of eggs or larvae per unit surface area from Manta net samples awaits accurate information on the fine-scale vertical distribution of these organisms in the upper region of the water column. Even if there are few species whose larvae are restricted to the upper 15.5 cm of the water column, the time series of Manta samples provides a useful index of relative abundance for species whose larvae appear in these samples. In this report we express quantities of eggs or larvae in each sample as unadjusted counts or as numbers of eggs or larvae per unit volume of water filtered by the Manta net. We determined a zooplankton displacement volume for each Bongo net sample (methods described in Staff, SPFI 1953 and Kramer et al. 1972). Samples containing > 25 ml of plankton were fractioned to ~50% of their original volume (Manta net samples are not fractioned). Aliquot percentages for fractioned samples are listed in Table 5 under the "Percent Sorted" column. The sorting process included the removal of all ichthyoplankton from the samples and identification and separation of: eggs and larvae of Pacific sardine, northern anchovy, and Pacific saury and larvae of Pacific hake. Body lengths of sardine, anchovy, and hake larvae were measured to the nearest 0.5 mm. Presently, Manta net tow samples are being resorted for squid paralarvae; in the process additional fish eggs and larvae may be sorted, identified, and added to their respective databases.

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 2003. 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 2003 surveys could be identified to species. A total of 62 larval fish categories was identified in Manta net tows for 2003: 55 to species, 6 to genus, and 1 to family. A total of 117 larval fish categories (including disintegrated) was identified in the Bongo net tows: 100 to species, 14 to genus, and 2 to family. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Fisheries Resources Division by D. A. Ambrose, S. R.. Charter, W. Watson, and the senior author of this report.

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 special explanation:

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).

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*.

Vinciguerria lucetia – *V. lucetia*, an eastern tropical Pacific species, is common in the present CalCOFI region whereas the central water mass species *V. poweriae* 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

Of the five most abundant larvae collected in Manta net tows on CalCOFI cruises in 2003, Pacific sardine (*Sardinops sagax*) ranked first in abundance with 63.1% of the total fish larvae and third in occurrence with larvae collected in 13.8% of the total samples (Tables 2 and 3). It was over five times as abundant as the second most abundant species, northern anchovy (*Engraulis mordax*), which accounted for 10.7% of the total larvae and ranked fourth in occurrence with 13.4% of the samples. Cabezon (*Scorpaenichthys marmoratus*) was the third most abundant with 6.7% of the total larvae and fifth in total occurrence (11.3% of the samples). Pacific saury (*Cololabis saira)* ranked fourth in abundance with 6.2% of the total larvae and first in total occurrence with 28.4% of the samples. The rockfish genus (*Sebastes*) ranked fifth in abundance (4.2% of total larvae), and ranked second in frequency of occurrence (14.4% of the samples). The next five most abundant taxa were the mussel blenny *Hypsoblennius jenkinsi (*1.8% of the total larvae*)*, kelp greenling *Hexagrammos decagrammus* (0.8% of the total larvae), splitnose rockfish *Sebastes diploproa* and lingcod *Ophiodon elongatus*, each with 0.7% of total larvae, and shortbelly rockfish *Sebastes jordani* (0.5% of the total larvae). These species ranked 6th, tied for 10th, 8th, tied for 10th, and 9th in frequency of occurrence, respectively. The ten most abundant taxa comprised 95.5% of all the larvae collected in Manta net tows on CalCOFI cruises in 2003. The remaining 4.5% was distributed among 52 other categories. Of the ten most

abundant taxa, seven are coastal demersal taxa, two are coastal pelagic species, and one is an epipelagic species.

Of the five most abundant larvae collected in Bongo net tows on the 2003 CalCOFI survey, Pacific sardine (*Sardinops sagax*) ranked first in abundance, with 33.2% of the total larvae, and ninth in occurrence, with 15.9% positive tows (Tables 6 and 7). It was more than twice as abundant as the second most abundant species, Northern lampfish (*Stenobrachius leucopsarus*) which accounted for 15.8% of the total larvae and ranked first in occurrence (43.3% of the samples). The rockfish genus *Sebastes* ranked third with 9.7% of the larvae and tied for second in occurrence (31.5% of the samples). Northern anchovy (*Engraulis mordax*) ranked fourth in abundance with 7.5% of the total larvae and tenth in frequency of occurrence with 15.6% positive tows. Panama lightfish (*Vinciguerria lucetia*) ranked fifth in abundance (5.9%) and 12th in frequency of occurrence (14.3% of the samples). The next five most abundant taxa were popeye blacksmelt *Bathylagus ochotensis* (3.6% of total larvae), shortbelly rockfish *Sebastes jordani* (2.6%), California flashlightfish *Protomyctophum crockeri* (2.2%), Pacific hake *Merluccius productus* (2.0%), and broadfin lampfish *Nannobrachium ritteri* (1.3%). These species ranked tied for 2nd, 14th, 4th, tied for 12th, and 6th, in frequency of occurrence, respectively. The ten most abundant taxa comprised 83.9% of all the larvae collected in Bongo net tows on CalCOFI cruises in 2003. The remaining 16.1% was distributed among 107 other categories (including the disintegrated category). Of the ten most abundant taxa, three were coastal demersal taxa, two were coastal pelagic species, and five were midwater 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 2003 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 2003 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 2003 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 2003 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 2003 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*, or 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 2003 listed in rank order.

Table 7. Pooled counts of all larval fish taxa taken in Bongo net tows on CalCOFI survey cruises in 2003 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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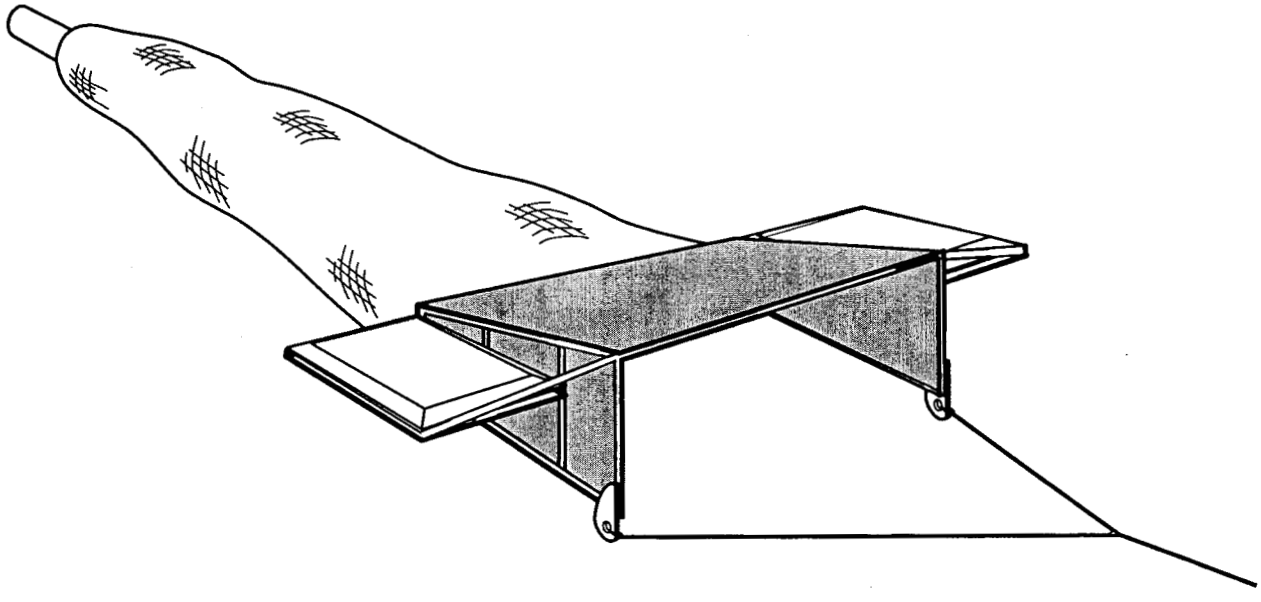

Figure 1. Diagram of the Manta net used on CalCOFI surveys.

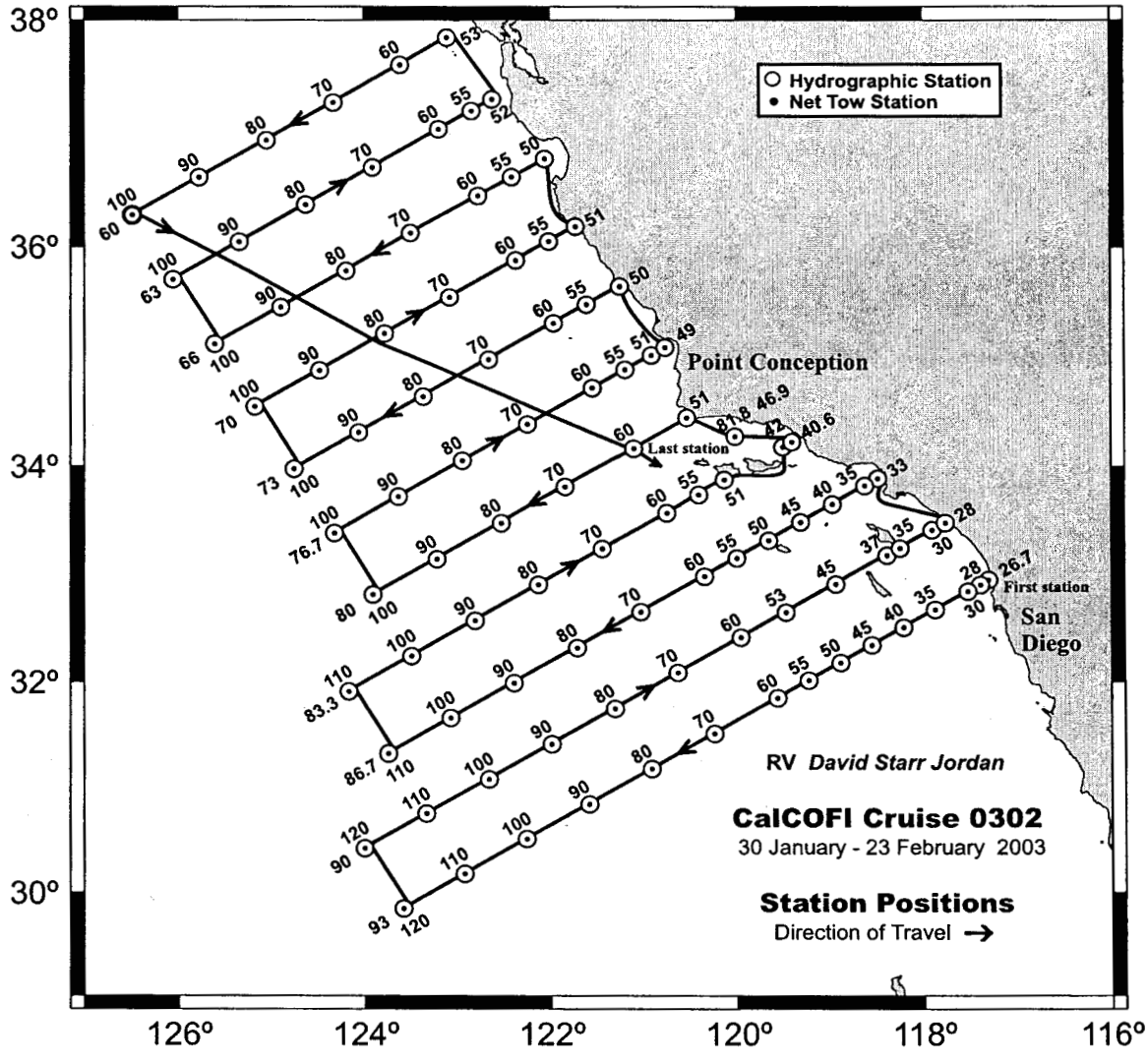

Figure 2. Stations and cruise track for CalCOFI cruise 0302. Circles indicate hydrographic stations; dots indicate net tow stations. On cruise 0302, a Bongo tow was taken unaccompanied by a Manta tow at station 80.0 60.0.

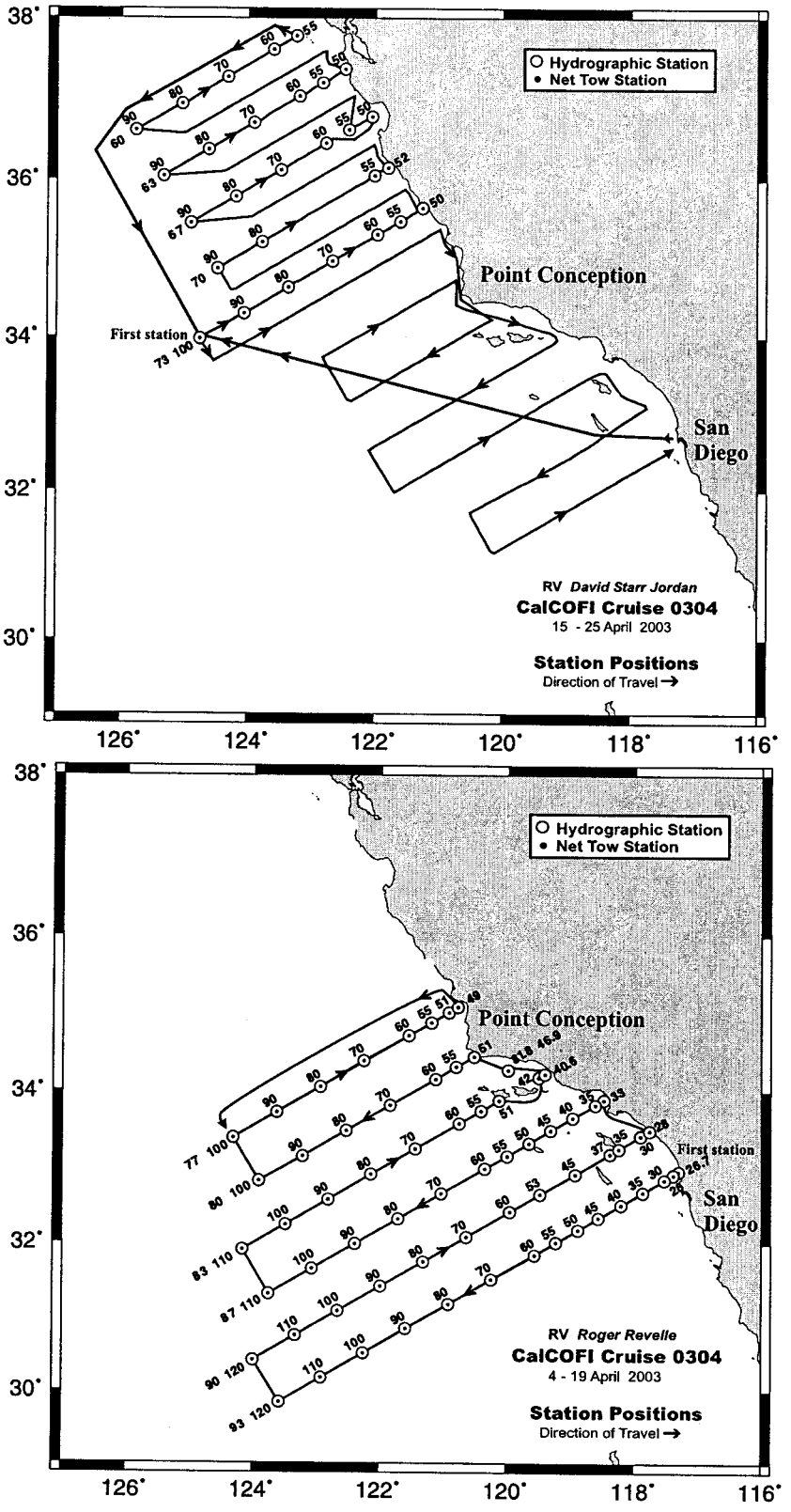

Figure 3. Stations and cruise tracks for CalCOFI cruises 0304 JD (above) and 0304 RR (below). Symbols are as in Figure 2.

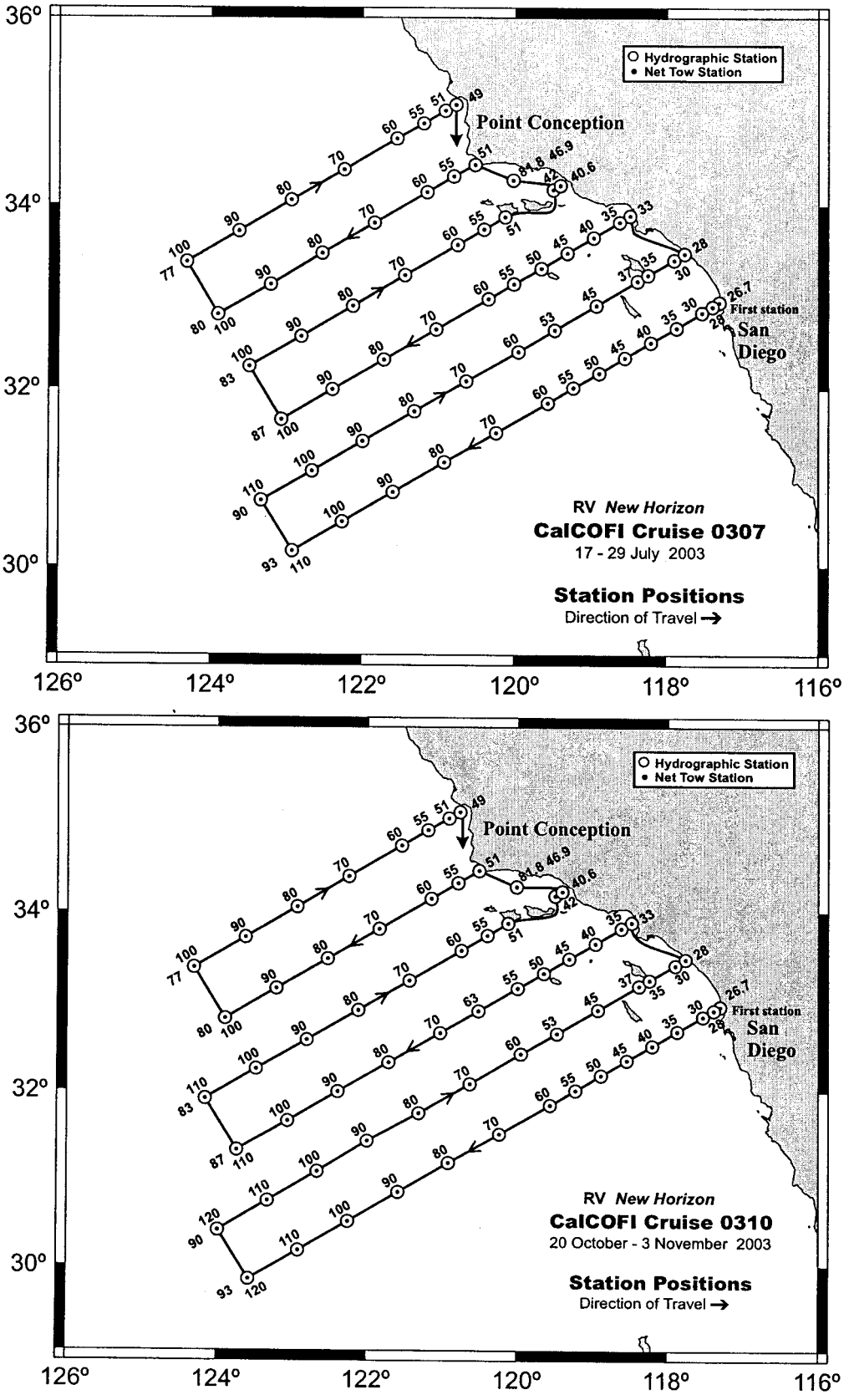

Figure 4. Stations and cruise tracks for CalCOFI cruises 0307 (above) and 0310 (below). Symbols are as in Figure 2.

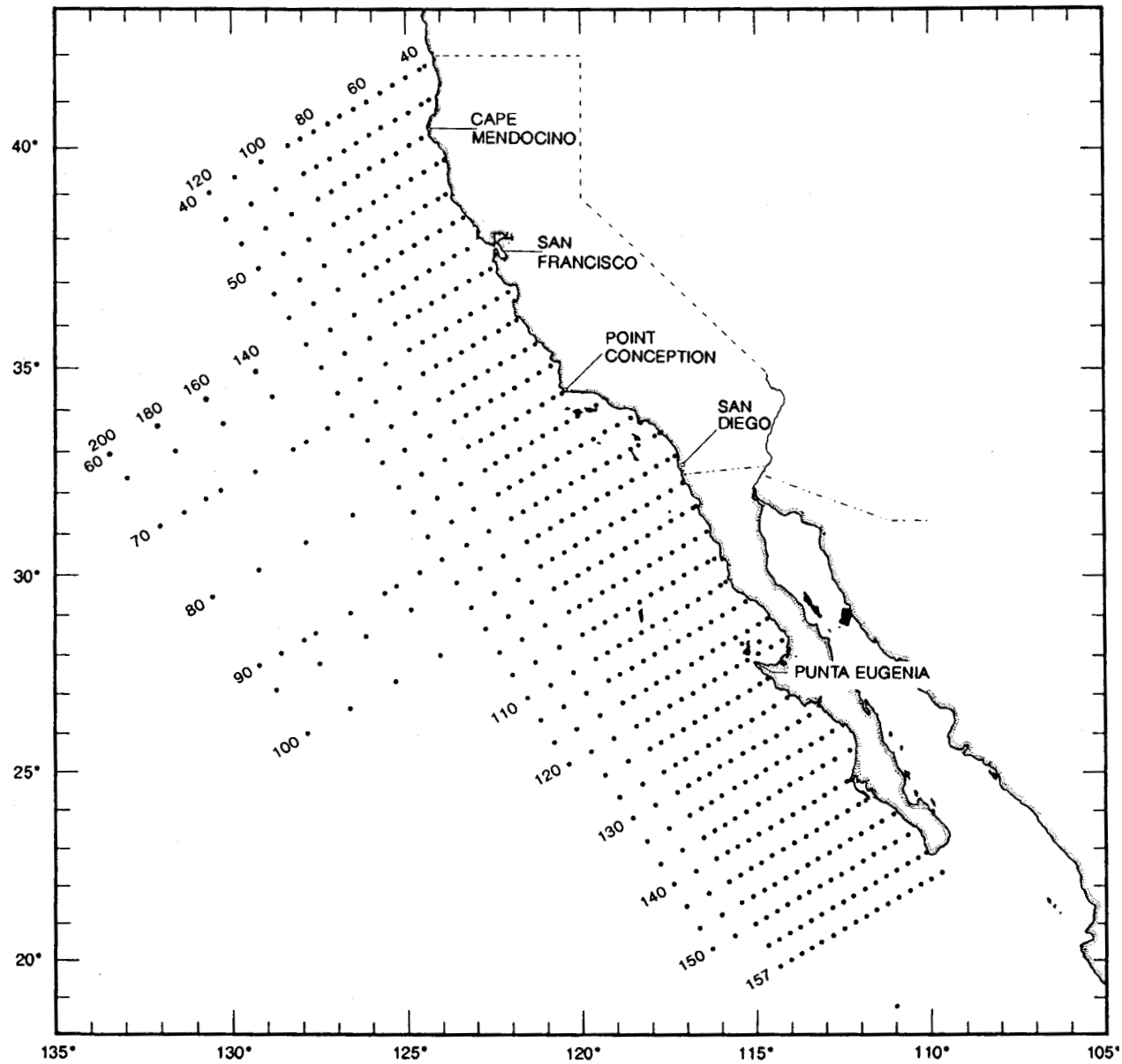

Figure 5. The basic CalCOFI station pattern occupied, in part, by cruises during 1951-1984.

TABLE 1. Station and plankton tow data for Manta net tows taken on the 2003 CalCOFI survey. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 0302

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
60.0	53.0	37	50.8	123	06.0	JD	03	02	22	0807	74	7	83
60.0	60.0	37	36.7	123	36.6	JD	03	02	22	1221	84	6	3
60.0	70.0	37	16.9	124	19.9	JD	03	02	22	1746	79	67	4
60.0	80.0	36	56.9	125	03.1	JD	03	02	22	2309	80	0	2
60.0	90.0	36	36.9	125	46.3	JD	03	02	23	0433	75	1	3
60.0	100.0	36	16.9	126	29.1	JD	03	02	23	1008	74	0	0
63.3	52.0	37	18.6	122	37.2	JD	03	02	22	0202	75	37	3158
63.3	55.0	37	12.5	122	50.2	JD	03	02	21	2324	83	15	128
63.3	60.0	37	02.6	123	11.7	JD	03	02	21	2010	87	1	6
63.3	70.0	36	42.3	123	54.6	JD	03	02	21	1402	82	0	0
63.3	80.0	36	22.6	124	37.7	JD	03	02	21	0754	81	0	0
63.3	90.0	36	02.6	125	20.6	JD	03	02	20	0420	79	0	2
63.3	100.0	35	42.4	126	03.0	JD	03	02	19	2204	74	0	0
66.7	50.0	36	47.2	122	03.3	JD	03	02	18	0604	80	279	12
66.7	55.0	36	37.2	122	24.7	JD	03	02	18	1228	82	0	6
66.7	60.0	36	27.3	122	46.3	JD	03	02	18	1555	78	5	3
66.7	70.0	36	07.3	123	30.0	JD	03	02	18	2141	78	0	3
66.7	80.0	35	47.2	124	11.6	JD	03	02	19	0330	85	1	10
66.7	90.0	35	27.2	124	54.0	JD	03	02	19	0859	78	0	1
66.7	100.0	35	07.3	125	36.3	JD	03	02	19	1449	81	0	0
70.0	51.0	36	10.9	121	43.7	JD	03	02	17	2339	77	75	4
70.0	55.0	36	02.9	122	00.8	JD	03	02	17	2026	73	12	9
70.0	60.0	35	52.9	122	21.9	JD	03	02	17	1710	77	2	15
70.0	70.0	35	32.8	123	04.5	JD	03	02	17	1113	76	6	36
70.0	80.0	35	12.8	123	46.7	JD	03	02	17	0524	76	1	12
70.0	90.0	34	52.8	124	28.9	JD	03	02	16	2333	79	1	2
70.0	100.0	34	32.9	125	10.7	JD	03	02	16	1800	85	15	4
73.3	50.0	35	38.6	121	15.3	JD	03	02	15	0744	85	36	61
73.3	55.0	35	28.7	121	36.5	JD	03	02	15	1021	84	1	781
73.3	60.0	35	18.6	121	57.7	JD	03	02	15	1356	81	1	14
73.3	70.0	34	58.7	122	39.8	JD	03	02	15	1930	74	2	4
73.3	80.0	34	38.6	123	21.8	JD	03	02	16	0145	75	3	7
73.3	90.0	34	18.7	124	03.7	JD	03	02	16	0717	79	0	7
73.3	100.0	33	58.6	124	45.6	JD	03	02	16	1227	80	3	66
76.7	49.0	35	05.3	120	46.5	JD	03	02	15	0210	88	29	31
76.7	51.0	35	01.2	120	55.2	JD	03	02	14	2341	77	8	49
76.7	55.0	34	53.4	121	12.0	JD	03	02	14	1958	78	16	156
76.7	60.0	34	43.2	121	33.0	JD	03	02	14	1538	80	2	5
76.7	70.0	34	23.3	122	14.9	JD	03	02	14	0805	76	2	1
76.7	80.0	34	03.3	122	56.5	JD	03	02	14	0048	71	1	4
76.7	90.0	33	43.3	123	38.1	JD	03	02	13	1810	80	0	4
76.7	100.0	33	23.3	124	19.4	JD	03	02	13	1150	79	0	0
80.0	51.0	34	27.1	120	32.4	JD	03	02	11	0415	86	32	22
80.0	70.0	33	49.0	121	50.5	JD	03	02	12	0814	74	2	2
80.0	80.0	33	28.8	122	31.6	JD	03	02	12	1633	75	1	0
80.0	90.0	33	08.9	123	13.2	JD	03	02	12	2252	78	2	4
80.0	100.0	32	49.0	123	54.6	JD	03	02	13	0523	80	1	6

TABLE 1. (cont.) CalCOFI Cruise 0302

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
81.8	46.9	34	16.5	120	01.4	JD	03	02	10	2319	77	21	145
83.3	40.6	34	13.5	119	24.7	JD	03	02	10	0909	77	32	1033
83.3	42.0	34	10.7	119	30.5	JD	03	02	10	0741	87	5	7
83.3	51.0	33	52.7	120	08.1	JD	03	02	10	0137	96	12	155
83.3	55.0	33	44.6	120	24.7	JD	03	02	09	2206	74	2	5
83.3	60.0	33	34.6	120	45.4	JD	03	02	09	1746	84	0	17
83.3	70.0	33	14.7	121	26.6	JD	03	02	09	1127	88	3	8
83.3	80.0	32	54.8	122	07.7	JD	03	02	09	0540	83	6	8
83.3	90.0	32	34.7	122	48.6	JD	03	02	08	2357	79	0	15
83.3	100.0	32	14.7	123	29.6	JD	03	02	08	1803	74	13	3
83.3	110.0	31	54.6	124	10.1	JD	03	02	08	1201	79	2	3
86.7	33.0	33	53.3	118	29.4	JD	03	02	06	0046	77	27	56
86.7	35.0	33	49.4	118	37.8	JD	03	02	06	0323	71	50	744
86.7	40.0	33	39.4	118	58.5	JD	03	02	06	0746	84	1	0
86.7	45.0	33	29.4	119	19.1	JD	03	02	06	1150	77	0	1204
86.7	50.0	33	19.5	119	39.7	JD	03	02	06	1535	77	13	10
86.7	55.0	33	09.4	120	00.3	JD	03	02	06	1942	81	0	15
86.7	60.0	32	59.4	120	21.0	JD	03	02	07	0005	89	4	1
86.7	70.0	32	39.4	121	02.0	JD	03	02	07	0554	74	3	2
86.7	80.0	32	19.4	121	42.8	JD	03	02	07	1146	74	0	1
86.7	90.0	31	59.5	122	23.6	JD	03	02	07	1754	75	1	0
86.7	100.0	31	39.5	123	04.1	JD	03	02	07	2350	73	9	1
86.7	110.0	31	19.4	123	44.6	JD	03	02	08	0545	76	15	1
90.0	28.0	33	29.1	117	46.1	JD	03	02	05	1736	82	3	392
90.0	30.0	33	25.1	117	54.3	JD	03	02	05	1507	76	0	0
90.0	35.0	33	15.1	118	15.0	JD	03	02	05	1114	75	0	25
90.0	37.0	33	11.2	118	23.2	JD	03	02	05	0831	82	1	764
90.0	45.0	32	55.1	118	56.2	JD	03	02	05	0308	80	0	25
90.0	53.0	32	39.1	119	28.8	JD	03	02	04	2140	74	6	5
90.0	60.0	32	25.1	119	57.6	JD	03	02	04	1654	75	0	850
90.0	70.0	32	05.3	120	38.3	JD	03	02	04	1055	78	0	8
90.0	80.0	31	45.0	121	18.8	JD	03	02	04	0423	83	0	0
90.0	90.0	31	25.0	121	59.3	JD	03	02	03	2213	78	7	5
90.0	100.0	31	05.1	122	39.7	JD	03	02	03	1603	76	12	0
90.0	110.0	30	45.3	123	19.9	JD	03	02	03	0804	76	3	0
90.0	120.0	30	25.3	123	59.8	JD	03	02	03	0024	71	2	1
93.3	26.7	32	57.6	117	18.3	JD	03	01	30	1456	85	5	3
93.3	28.0	32	54.8	117	23.7	JD	03	01	30	1808	83	4	0
93.3	30.0	32	50.9	117	31.8	JD	03	01	30	2135	89	2	2
93.3	35.0	32	40.8	117	52.4	JD	03	01	31	0145	82	3	1
93.3	40.0	32	30.8	118	12.8	JD	03	01	31	0537	76	0	0
93.3	45.0	32	20.8	118	33.1	JD	03	01	31	0835	80	0	3
93.3	50.0	32	10.9	118	53.5	JD	03	01	31	1402	75	0	64
93.3	55.0	32	00.8	119	14.0	JD	03	01	31	1809	82	4	24
93.3	60.0	31	51.0	119	34.3	JD	03	01	31	2217	73	2	1
93.3	70.0	31	30.9	120	14.7	JD	03	02	01	0442	76	5	24
93.3	80.0	31	10.9	120	55.2	JD	03	02	01	1114	72	0	3
93.3	90.0	30	50.9	121	35.3	JD	03	02	01	1743	77	0	3
93.3	100.0	30	30.8	122	15.4	JD	03	02	02	0003	71	3	1
93.3	110.0	30	10.8	122	55.4	JD	03	02	02	0804	73	2	2
93.3	120.0	29	50.8	123	35.1	JD	03	02	02	1645	79	0	4

TABLE 1. (cont.) CalCOFI Cruise 0304

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	55.0	37	46.8	123	14.7	JD	03	04	25	2120	82	0	90
60.0	60.0	37	36.8	123	36.4	JD	03	04	25	1723	79	2	67
60.0	70.0	37	16.9	124	19.9	JD	03	04	25	1003	80	2	52
60.0	80.0	36	56.7	125	03.2	JD	03	04	25	0412	76	0	17
60.0	90.0	36	36.9	125	46.4	JD	03	04	24	2214	85	0	2
63.3	50.0	37	22.6	122	28.6	JD	03	04	23	2220	79	0	0
63.3	55.0	37	12.5	122	50.1	JD	03	04	23	1828	81	1	74
63.3	60.0	37	02.5	123	11.8	JD	03	04	23	1447	86	0	9
63.3	70.0	36	42.5	123	54.9	JD	03	04	23	0825	77	0	104
63.3	80.0	36	22.6	124	37.7	JD	03	04	23	0208	75	1	27
63.3	90.0	36	02.6	125	20.3	JD	03	04	22	1953	82	0	9
66.7	50.0	36	47.1	122	03.3	JD	03	04	21	1520	76	2	23
66.7	55.0	36	37.2	122	24.9	JD	03	04	21	1931	73	7	0
66.7	60.0	36	27.2	122	46.5	JD	03	04	21	0539	79	7	68
66.7	70.0	36	07.2	123	29.2	JD	03	04	20	2139	73	3	1218
66.7	80.0	35	47.2	124	11.7	JD	03	04	20	1450	81	0	67
66.7	90.0	35	27.3	124	54.2	JD	03	04	20	0840	79	0	7
70.0	52.0	36	08.9	121	48.0	JD	03	04	19	0759	81	0	0
70.0	55.0	36	02.9	122	00.7	JD	03	04	19	0427	70	0	0
70.0	80.0	35	12.9	123	46.7	JD	03	04	18	1109	90	17	170
70.0	90.0	34	52.8	124	28.8	JD	03	04	18	0335	77	0	33
73.3	50.0	35	38.6	121	15.3	JD	03	04	17	0040	90	0	130
73.3	55.0	35	28.6	121	36.4	JD	03	04	16	2054	76	0	1659
73.3	60.0	35	18.6	121	57.7	JD	03	04	16	1540	85	2	1485
73.3	70.0	34	58.5	122	40.0	JD	03	04	16	0717	85	9	559
73.3	80.0	34	38.5	123	21.9	JD	03	04	15	2316	93	520	1067
73.3	90.0	34	18.6	124	03.7	JD	03	04	15	1710	76	1	3
73.3	100.0	33	58.8	124	45.4	JD	03	04	15	1030	82	0	0
76.7	49.0	35	05.3	120	46.6	RR	03	04	19	0447	62	11	1
76.7	51.0	35	01.3	120	55.1	RR	03	04	19	0212	74	1	7
76.7	55.0	34	53.3	121	11.8	RR	03	04	18	2134	72	4	5
76.7	60.0	34	43.3	121	32.9	RR	03	04	18	1638	77	1	51
76.7	70.0	34	23.7	122	15.6	RR	03	04	18	0833	47	127	7
76.7	80.0	34	03.3	122	56.5	RR	03	04	18	0327	77	18	25
76.7	90.0	33	43.3	123	38.0	RR	03	04	17	2144	63	2	37
76.7	100.0	33	23.3	124	19.4	RR	03	04	17	1604	92	0	0
80.0	51.0	34	27.0	120	31.4	RR	03	04	16	0038	84	0	2
80.0	55.0	34	19.0	120	48.1	RR	03	04	16	0352	74	11	335
80.0	60.0	34	09.3	121	07.8	RR	03	04	16	0803	89	2	8770
80.0	70.0	33	49.0	121	50.6	RR	03	04	16	1555	97	0	53
80.0	80.0	33	29.0	122	32.0	RR	03	04	16	2111	91	508	265
80.0	90.0	33	09.0	123	13.3	RR	03	04	17	0322	71	222	476
80.0	100.0	32	49.4	123	54.8	RR	03	04	17	0733	79	3	12
81.8	46.9	34	16.5	119	59.3	RR	03	04	15	2023	55	6	5
83.3	40.6	34	13.5	119	24.7	RR	03	04	15	1449	74	1	3203
83.3	42.0	34	10.7	119	30.5	RR	03	04	15	1221	83	11	137
83.3	51.0	33	52.7	120	08.0	RR	03	04	15	0507	71	53	5
83.3	55.0	33	44.7	120	24.6	RR	03	04	15	0151	83	11	50
83.3	60.0	33	34.8	120	45.1	RR	03	04	14	2141	57	8	1060

TABLE 1. (cont.) CalCOFI Cruise 0304

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	70.0	33	14.7	121	26.6	RR	03	04	14	1517	82	0	8
83.3	80.0	32	54.6	122	08.6	RR	03	04	14	0747	80	0	17
83.3	90.0	32	34.7	122	48.7	RR	03	04	14	0334	65	46	6
83.3	100.0	32	14.7	123	29.6	RR	03	04	13	2125	57	26	7
83.3	110.0	31	54.7	124	10.2	RR	03	04	13	1603	86	4	5
86.7	33.0	33	53.5	118	29.4	RR	03	04	10	1734	94	2	27
86.7	35.0	33	49.4	118	37.4	RR	03	04	10	2020	83	14	0
86.7	40.0	33	39.4	118	58.4	RR	03	04	11	0029	89	12	3
86.7	45.0	33	29.4	119	19.1	RR	03	04	11	0414	57	8	2
86.7	50.0	33	19.4	119	39.8	RR	03	04	11	0734	81	34	231
86.7	55.0	33	09.2	120	00.3	RR	03	04	11	2208	62	185	2347
86.7	60.0	32	59.4	120	20.9	RR	03	04	12	0152	99	302	81
86.7	70.0	32	39.4	121	02.0	RR	03	04	12	0621	77	15	11
86.7	80.0	32	19.4	121	42.9	RR	03	04	12	1531	81	2	250
86.7	90.0	31	59.4	122	23.6	RR	03	04	12	2052	87	759	447
86.7	100.0	31	39.4	123	04.2	RR	03	04	13	0322	61	106	20
86.7	110.0	31	19.0	123	45.2	RR	03	04	13	0815	51	0	1
90.0	28.0	33	29.1	117	46.1	RR	03	04	10	0812	60	0	365
90.0	30.0	33	25.1	117	54.3	RR	03	04	10	0550	83	1	67
90.0	35.0	33	15.1	118	15.0	RR	03	04	10	0156	80	23	0
90.0	37.0	33	11.1	118	23.2	RR	03	04	09	2302	88	23	4
90.0	45.0	32	55.1	118	56.1	RR	03	04	09	1727	91	3	4
90.0	53.0	32	39.1	119	28.9	RR	03	04	09	1234	80	6	25
90.0	60.0	32	25.1	119	57.6	RR	03	04	09	0547	67	430	810
90.0	70.0	32	05.1	120	38.3	RR	03	04	08	2355	60	119	137
90.0	80.0	31	45.1	121	18.9	RR	03	04	08	1835	82	1	97
90.0	90.0	31	25.1	121	59.4	RR	03	04	08	1318	92	1	127
90.0	100.0	31	05.1	122	39.7	RR	03	04	08	0541	86	1	67
90.0	110.0	30	45.1	123	20.0	RR	03	04	08	0021	86	2	7
90.0	120.0	30	25.1	124	00.0	RR	03	04	07	1731	87	4	83
93.3	26.7	32	57.4	117	18.3	RR	03	04	04	1236	94	2	1514
93.3	28.0	32	54.8	117	23.7	RR	03	04	04	1641	94	1	15
93.3	30.0	32	50.8	117	31.9	RR	03	04	04	1952	77	105	10
93.3	35.0	32	40.8	117	52.3	RR	03	04	05	0019	92	126	1
93.3	40.0	32	30.8	118	12.8	RR	03	04	05	0505	91	118	576
93.3	45.0	32	20.6	118	34.4	RR	03	04	05	0803	70	2	11
93.3	50.0	32	10.8	118	53.6	RR	03	04	05	1536	62	21	46
93.3	55.0	32	00.8	119	14.0	RR	03	04	05	2000	85	145	187
93.3	60.0	31	50.7	119	34.2	RR	03	04	06	0008	75	53	389
93.3	70.0	31	30.8	120	14.8	RR	03	04	06	0549	69	0	45
93.3	80.0	31	10.8	120	55.2	RR	03	04	06	1206	87	0	21
93.3	90.0	30	50.8	121	35.4	RR	03	04	06	1824	89	7	21
93.3	100.0	30	30.8	122	15.4	RR	03	04	06	2354	73	2	42
93.3	110.0	30	10.8	122	55.4	RR	03	04	07	0518	77	138	11
93.3	120.0	29	50.8	123	35.2	RR	03	04	07	1138	85	4	182

TABLE 1. (cont.) CalCOFI Cruise 0307

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.7	NH	03	07	29	1719	92	0	1229
76.7	51.0	35	01.5	120	55.1	NH	03	07	29	1422	89	0	1201
76.7	55.0	34	53.3	121	11.9	NH	03	07	29	0915	88	0	3
76.7	60.0	34	43.3	121	33.0	NH	03	07	29	0618	81	0	2
76.7	70.0	34	23.3	122	14.8	NH	03	07	29	0040	80	0	26
76.7	80.0	34	03.5	122	56.6	NH	03	07	28	1850	73	0	25
76.7	90.0	33	43.2	123	38.0	NH	03	07	28	1300	75	0	5
76.7	100.0	33	23.3	124	19.3	NH	03	07	28	0717	91	0	0
80.0	51.0	34	26.7	120	31.5	NH	03	07	26	1625	84	0	76
80.0	55.0	34	19.0	120	48.3	NH	03	07	26	1933	73	1	2
80.0	60.0	34	09.0	121	09.3	NH	03	07	26	2304	74	4	0
80.0	70.0	33	49.0	121	50.6	NH	03	07	27	0412	114	2	44
80.0	80.0	33	29.0	122	32.0	NH	03	07	27	1158	84	1	88
80.0	90.0	33	08.8	123	13.0	NH	03	07	27	1953	66	1	11
80.0	100.0	32	49.0	123	54.6	NH	03	07	28	0122	76	5	0
81.8	46.9	34	16.5	120	01.5	NH	03	07	26	1222	81	2	184
83.3	40.6	34	13.4	119	24.7	NH	03	07	26	0644	94	7	675
83.3	42.0	34	10.6	119	30.5	NH	03	07	26	0518	97	0	0
83.3	51.0	33	52.8	120	08.1	NH	03	07	25	2347	78	2	404
83.3	55.0	33	44.7	120	24.7	NH	03	07	25	2030	59	1	15
83.3	60.0	33	34.8	120	45.3	NH	03	07	25	1643	100	0	32
83.3	70.0	33	14.7	121	26.6	NH	03	07	25	0921	94	2	219
83.3	80.0	32	54.6	122	07.6	NH	03	07	25	0453	81	4	11
83.3	90.0	32	34.7	122	48.7	NH	03	07	24	2325	68	0	0
83.3	100.0	32	14.9	123	29.6	NH	03	07	24	1759	75	4	0
86.7	33.0	33	53.5	118	29.4	NH	03	07	22	1648	102	5	178
86.7	35.0	33	49.4	118	37.8	NH	03	07	22	1913	90	57	181
86.7	40.0	33	39.4	118	58.5	NH	03	07	22	2244	82	5	37
86.7	45.0	33	29.5	119	19.1	NH	03	07	23	0235	82	3	64
86.7	50.0	33	19.4	119	39.7	NH	03	07	23	0555	93	0	209
86.7	55.0	33	09.3	120	00.9	NH	03	07	23	0848	76	0	0
86.7	60.0	32	59.3	120	21.0	NH	03	07	23	1453	84	0	117
86.7	70.0	32	39.5	121	02.1	NH	03	07	23	2016	90	2	0
86.7	80.0	32	19.4	121	42.9	NH	03	07	24	0139	99	0	93
86.7	90.0	31	59.4	122	23.6	NH	03	07	24	0655	76	0	0
86.7	100.0	31	39.4	123	04.2	NH	03	07	24	1211	82	0	0
90.0	28.0	33	29.1	117	46.1	NH	03	07	22	0925	95	26	1974
90.0	30.0	33	25.0	117	54.3	NH	03	07	22	0730	107	18	1066
90.0	35.0	33	15.1	118	14.9	NH	03	07	22	0333	81	0	20
90.0	37.0	33	11.1	118	23.3	NH	03	07	22	0027	87	0	0
90.0	45.0	32	55.1	118	56.1	NH	03	07	21	1930	72	3	0
90.0	53.0	32	39.2	119	28.9	NH	03	07	21	1439	79	0	14
90.0	60.0	32	24.7	119	57.4	NH	03	07	21	0714	88	3	17
90.0	70.0	32	05.1	120	38.3	NH	03	07	21	0218	77	5	3
90.0	80.0	31	45.1	121	19.0	NH	03	07	20	2038	90	2	0
90.0	90.0	31	25.1	121	59.5	NH	03	07	20	1439	85	0	0
90.0	100.0	31	05.0	122	39.6	NH	03	07	20	0746	60	0	71
90.0	110.0	30	45.1	123	19.9	NH	03	07	20	0315	73	2	63
93.3	26.7	32	57.4	117	18.4	NH	03	07	17	1111	82	2	529

TABLE 1. (cont.)

CalCOFI Cruise 0307

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	28.0	32	54.7	117	23.8	NH	03	07	17	1357	79	2	53
93.3	30.0	32	50.8	117	32.0	NH	03	07	17	1715	64	3	73
93.3	35.0	32	40.6	117	52.4	NH	03	07	17	2102	87	1	1
93.3	40.0	32	30.9	118	12.8	NH	03	07	18	0054	94	2	0
93.3	45.0	32	20.8	118	33.3	NH	03	07	18	0456	101	0	8
93.3	50.0	32	10.7	118	53.6	NH	03	07	18	0750	85	0	65
93.3	55.0	32	00.8	119	14.0	NH	03	07	18	1318	100	0	238
93.3	60.0	31	50.7	119	34.4	NH	03	07	18	1704	86	0	64
93.3	70.0	31	30.8	120	14.8	NH	03	07	18	2232	70	3	42
93.3	80.0	31	10.9	120	55.2	NH	03	07	19	0354	85	0	0
93.3	90.0	30	51.0	121	35.6	NH	03	07	19	0829	67	0	0
93.3	100.0	30	30.8	122	15.6	NH	03	07	19	1629	83	0	0
93.3	110.0	30	10.8	122	55.5	NH	03	07	19	2141	66	0	241

CalCOFI Cruise 0310

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	NH	03	11	03	0915	87	0	284
76.7	51.0	35	01.3	120	55.2	NH	03	11	03	0716	88	1	492
76.7	55.0	34	53.5	121	12.1	NH	03	11	03	0411	88	3	0
76.7	60.0	34	43.3	121	33.0	NH	03	11	02	2357	92	5	2
76.7	70.0	34	23.2	122	14.9	NH	03	11	02	1754	88	23	0
76.7	80.0	34	03.3	122	56.6	NH	03	11	02	1147	84	0	2
76.7	90.0	33	43.4	123	38.1	NH	03	11	02	0607	57	4	0
76.7	100.0	33	23.2	124	19.3	NH	03	11	02	0023	92	9	0
80.0	51.0	34	27.1	120	31.4	NH	03	10	31	1131	66	0	43
80.0	55.0	34	19.2	120	47.9	NH	03	10	31	1504	109	2	282
80.0	60.0	34	08.9	121	09.2	NH	03	10	31	1908	93	1	1
80.0	70.0	33	49.0	121	50.6	NH	03	11	01	0050	98	1	1
80.0	80.0	33	29.1	122	31.9	NH	03	11	01	0617	81	1	2
80.0	90.0	33	09.1	123	13.2	NH	03	11	01	1141	88	1	1
80.0	100.0	32	49.0	123	54.3	NH	03	11	01	1809	74	5	1
81.8	46.9	34	16.5	120	01.4	NH	03	10	31	0741	98	0	80
83.3	40.6	34	13.7	119	24.9	NH	03	10	31	0250	94	4	18
83.3	42.0	34	10.7	119	30.6	NH	03	10	31	0058	69	0	31
83.3	51.0	33	52.7	120	08.0	NH	03	10	30	1845	111	0	63
83.3	55.0	33	44.7	120	24.8	NH	03	10	30	1443	84	1	15
83.3	60.0	33	34.7	120	45.3	NH	03	10	30	0824	63	0	5
83.3	70.0	33	14.6	121	26.8	NH	03	10	30	0257	78	0	0
83.3	80.0	32	54.5	122	07.5	NH	03	10	29	2103	63	3	2
83.3	90.0	32	34.7	122	48.8	NH	03	10	29	1513	89	5	3
83.3	100.0	32	14.9	123	29.2	NH	03	10	29	0759	89	1	3
83.3	110.0	31	54.6	124	10.1	NH	03	10	29	0241	99	14	0
86.7	33.0	33	53.2	118	29.4	NH	03	10	26	1555	133	50	7
86.7	35.0	33	49.5	118	37.6	NH	03	10	26	1847	110	4	66
86.7	40.0	33	39.5	118	58.4	NH	03	10	26	2256	98	0	177

TABLE 1. (cont.) CalCOFI Cruise 0310

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	45.0	33	29.5	119	19.2	NH	03	10	27	0317	124	1	10
86.7	50.0	33	19.5	119	39.7	NH	03	10	27	0650	129	7	48
86.7	55.0	33	09.6	120	00.2	NH	03	10	27	1051	78	0	8
86.7	63.0	32	54.4	120	31.6	NH	03	10	27	1618	119	0	1
86.7	70.0	32	39.4	121	02.0	NH	03	10	27	2122	63	1	0
86.7	80.0	32	19.5	121	42.9	NH	03	10	28	0311	97	40	0
86.7	90.0	31	59.4	122	23.5	NH	03	10	28	0805	97	1	9
86.7	100.0	31	39.5	123	04.1	NH	03	10	28	1503	107	5	74
86.7	110.0	31	19.5	123	44.5	NH	03	10	28	2032	92	19	0
90.0	28.0	33	29.1	117	46.1	NH	03	10	26	0300	99	11	132
90.0	30.0	33	25.0	117	54.2	NH	03	10	26	0539	146	8	0
90.0	35.0	33	15.1	118	15.0	NH	03	10	26	0847	83	0	2
90.0	37.0	33	11.1	118	23.3	NH	03	10	25	2044	92	7	0
90.0	45.0	32	55.1	118	56.2	NH	03	10	25	1455	106	1	1
90.0	53.0	32	39.2	119	29.1	NH	03	10	25	0814	97	0	6
90.0	60.0	32	25.2	119	57.8	NH	03	10	25	0433	130	4	5
90.0	70.0	32	05.0	120	38.4	NH	03	10	24	2229	91	2	8
90.0	80.0	31	45.1	121	19.0	NH	03	10	24	1527	87	4	2
90.0	90.0	31	25.9	121	59.9	NH	03	10	24	0758	91	6	7
90.0	100.0	31	05.1	122	39.9	NH	03	10	24	0200	79	7	2
90.0	110.0	30	45.0	123	19.9	NH	03	10	23	1919	101	48	2
90.0	120.0	30	24.6	123	59.6	NH	03	10	23	1227	85	5	2
93.3	26.7	32	57.4	117	18.4	NH	03	10	20	1145	117	6	12
93.3	28.0	32	54.8	117	23.3	NH	03	10	20	1509	105	24	7
93.3	30.0	32	50.7	117	32.0	NH	03	10	20	1815	109	20	0
93.3	35.0	32	40.7	117	52.6	NH	03	10	20	2213	93	2	2
93.3	40.0	32	30.9	118	12.7	NH	03	10	21	0214	102	6	1
93.3	45.0	32	21.1	118	33.0	NH	03	10	21	0622	53	1	4
93.3	50.0	32	10.8	118	53.6	NH	03	10	21	0906	78	0	1
93.3	55.0	32	00.7	119	14.0	NH	03	10	21	1325	97	0	1
93.3	60.0	31	50.8	119	34.2	NH	03	10	21	1829	84	0	1
93.3	70.0	31	30.8	120	14.7	NH	03	10	22	0025	89	2	0
93.3	80.0	31	10.9	120	55.3	NH	03	10	22	0551	88	2	0
93.3	90.0	30	50.9	121	35.3	NH	03	10	22	1149	96	1	1
93.3	100.0	30	30.8	122	15.4	NH	03	10	22	1741	95	5	1
93.3	110.0	30	10.9	122	55.4	NH	03	10	23	0057	93	1	0
93.3	120.0	29	50.8	123	34.9	NH	03	10	23	0636	66	2	3

TABLE 2. Pooled occurrences of fish larvae taken in Manta net tows on the 2003 CalCOFI survey.

Rank	Taxon	Occurrences
1	*Cololabis saira*	91
2	*Sebastes* spp.	46
3	*Sardinops sagax*	44
4	*Engraulis mordax*	43
5	*Scorpaenichthys marmoratus*	37
6	*Hypsoblennius jenkinsi*	23
7	*Trachurus symmetricus*	18
8	*Sebastes diploproa*	16
9	*Sebastes jordani*	12
10	*Ophiodon elongatus*	10
10	*Hexagrammos decagrammus*	10
12	*Vinciguerria lucetia*	8
13	*Stenobrachius leucopsarus*	7
14	*Chromis punctipinnis*	6
15	*Atherinopsis californiensis*	5
16	*Sebastes aurora*	4
16	*Merluccius productus*	4
16	*Ceratoscopelus townsendi*	4
16	*Tetragonurus cuvieri*	4
20	*Nannobrachium ritteri*	3
20	*Nannobrachium* spp.	3
20	*Citharichthys stigmaeus*	3
20	*Leptocottus armatus*	3
20	*Hemilepidotus spinosus*	3
20	*Leuresthes tenuis*	3
26	*Triphoturus mexicanus*	2
26	*Lampadena urophaos*	2
26	*Cyclothone signata*	2
26	*Oxylebius pictus*	2
26	*Scomber japonicus*	2
26	*Pleuronichthys decurrens*	2
26	*Hermosilla azurea*	2
26	*Medialuna californiensis*	2
26	*Hypsoblennius* spp.	2
26	*Sphyraena argentea*	2
26	*Anoplopoma fimbria*	2
37	*Myctophum nitidulum*	1
37	*Icosteus aenigmaticus*	1
37	*Coryphopterus nicholsii*	1
37	*Typhlogobius californiensis*	1
37	*Tactostoma macropus*	1
37	*Hypsoblennius gilberti*	1
37	*Citharichthys sordidus*	1
37	*Pleuronichthys coenosus*	1
37	*Cyclothone* spp.	1
37	*Bathylagus ochotensis*	1
37	*Lepidopus fitchi*	1
37	*Protomyctophum crockeri*	1
37	*Desmodema lorum*	1

TABLE 2. (cont.)

Rank	Taxon	Occurrences
37	*Artedius lateralis*	1
37	*Chilara taylori*	1
37	*Atherinops affinis*	1
37	Stichaeidae	1
37	*Oxyjulis californica*	1
37	*Cheilopogon pinnatibarbatus*	1
37	*Mugil cephalus*	1
37	*Genyonemus lineatus*	1
37	*Sebastes paucispinis*	1
37	*Howella* spp.	1
37	*Icelinus* spp.	1
37	*Pleuronichthys verticalis*	1
37	*Symbolophorus californiensis*	1
	Total	458

TABLE 3. Pooled raw counts of fish larvae taken in Manta net tows on the 2003 CalCOFI survey.

Rank	Taxon	Count
1	*Sardinops sagax*	3755
2	*Engraulis mordax*	637
3	*Scorpaenichthys marmoratus*	398
4	*Cololabis saira*	368
5	*Sebastes* spp.	252
6	*Hypsoblennius jenkinsi*	109
7	*Hexagrammos decagrammus*	50
8	*Sebastes diploproa*	40
8	*Ophiodon elongatus*	40
10	*Sebastes jordani*	32
11	*Trachurus symmetricus*	29
12	*Hermosilla azurea*	28
12	*Chromis punctipinnis*	28
14	*Atherinopsis californiensis*	26
15	*Scomber japonicus*	21
16	*Stenobrachius leucopsarus*	18
17	*Vinciguerria lucetia*	15
18	*Ceratoscopelus townsendi*	6
18	*Leptocottus armatus*	6
18	*Tetragonurus cuvieri*	6
18	*Merluccius productus*	6
22	*Cheilopogon pinnatibarbatus*	5
23	*Nannobrachium* spp.	4
23	*Anoplopoma fimbria*	4
23	*Hypsoblennius* spp.	4
23	*Hemilepidotus spinosus*	4
23	*Nannobrachium ritteri*	4
23	*Sebastes aurora*	4
29	*Oxylebius pictus*	3
29	*Citharichthys stigmaeus*	3
29	*Medialuna californiensis*	3
29	*Triphoturus mexicanus*	3
29	*Sphyraena argentea*	3
29	*Leuresthes tenuis*	3
35	*Cyclothone signata*	2
35	*Lampadena urophaos*	2
35	*Pleuronichthys decurrens*	2
35	*Mugil cephalus*	2
35	*Oxyjulis californica*	2
40	*Artedius lateralis*	1
40	*Bathylagus ochotensis*	1
40	*Cyclothone* spp.	1
40	*Pleuronichthys coenosus*	1
40	*Citharichthys sordidus*	1
40	*Tactostoma macropus*	1
40	*Chilara taylori*	1
40	*Atherinops affinis*	1
40	*Hypsoblennius gilberti*	1
40	Stichaeidae	1

TABLE 3. (cont.)

Rank	Taxon	Count
40	*Genyonemus lineatus*	1
40	*Coryphopterus nicholsii*	1
40	*Icosteus aenigmaticus*	1
40	*Icelinus* spp.	1
40	*Sebastes paucispinis*	1
40	*Myctophum nitidulum*	1
40	*Protomyctophum crockeri*	1
40	*Symbolophorus californiensis*	1
40	*Pleuronichthys verticalis*	1
40	*Desmodema lorum*	1
40	*Howella* spp.	1
40	*Lepidopus fitchi*	1
40	*Typhlogobius californiensis*	1
	Total	5950

TABLE 4. Numbers of fish larvae taken in Manta net tows on the 2003 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	70.0	-	0.0	-	1.6	-	-	-	-	-	-	-	-
66.7	55.0	-	0.0	-	2.9	-	-	-	-	-	-	-	-
66.7	70.0	-	0.0	-	1.5	-	-	-	-	-	-	-	-
70.0	55.0	-	1.5	-	0.0	-	-	-	-	-	-	-	-
70.0	60.0	-	1.5	-	-	-	-	-	-	-	-	-	-
70.0	70.0	-	0.8	-	-	-	-	-	-	-	-	-	-
70.0	80.0	-	0.0	-	12.6	-	-	-	-	-	-	-	-
73.3	60.0	-	0.0	-	1.7	-	-	-	-	-	-	-	-
73.3	70.0	-	0.0	-	7.6	-	-	-	-	-	-	-	-
73.3	80.0	-	0.0	-	472.4	-	-	-	-	-	-	-	-
76.7	55.0	-	0.0	-	1.4	-	-	0.0	-	-	-	0.0	-
76.7	70.0	-	0.0	-	59.8	-	-	0.0	-	-	-	0.0	-
76.7	80.0	-	0.0	-	13.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	4.4	-	-	0.0	-	-	0.0	-	-
80.0	60.0	-	-	-	0.9	-	-	0.0	-	-	0.0	-	-
80.0	80.0	-	0.0	-	449.4	-	-	0.0	-	-	-	0.0	-
80.0	90.0	-	0.0	-	152.6	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	0.0	-	6.7	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	0.0	-	2.3	-	-	0.0	-	-	0.0	-	-
83.3	90.0	-	0.0	-	30.0	-	-	0.0	-	-	0.0	-	-
83.3	100.0	-	0.0	-	13.7	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	0.0	-	2.3	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	0.0	-	6.5	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	0.0	-	110.8	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	0.0	-	297.8	-	-	0.0	-	-	-	-	-
86.7	70.0	-	0.0	-	5.4	-	-	0.9	-	-	0.0	-	-
86.7	80.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
86.7	90.0	-	0.0	-	658.2	-	-	0.0	-	-	0.0	-	-
86.7	100.0	-	0.0	-	64.2	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sardinops sagax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	0.0	-	286.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	0.0	-	71.3	-	-	0.8	-	-	0.0	-	-
90.0	100.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	12.4	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	115.8	-	-	0.0	-	-	0.0	-	-
93.3	60.0	0.0	-	-	38.9	-	-	0.0	-	-	0.0	-	-
93.3	90.0	-	0.0	-	6.2	-	-	0.0	-	-	0.0	-	-
93.3	100.0	-	0.0	-	1.5	-	-	0.0	-	-	0.0	-	-
93.3	110.0	-	0.0	-	94.2	-	-	0.0	-	-	0.0	-	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	-	8.3	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	-	2.4	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	-	1.7	-	0.0	-	-	-	-	-	-	-	-
76.7	51.0	-	3.1	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	2.6	-
76.7	70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	3.5	-
80.0	51.0	-	24.0	-	0.0	-	-	0.0	-	-	0.0	-	-
81.8	46.9	-	16.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	40.6	-	23.0	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	0.9	-	0.8	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	3.8	-	26.9	-	-	0.8	-	-	0.0	-	-
83.3	55.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
86.7	33.0	-	12.4	-	0.0	-	-	0.0	-	-	59.6	-	-
86.7	35.0	-	33.6	-	3.3	-	-	0.0	-	-	2.2	-	-
86.7	40.0	-	0.0	-	8.9	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
86.7	50.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	0.9	-	0.0	-	-	0.0	-	-	-	-	-
90.0	28.0	-	0.0	-	0.0	-	-	2.9	-	-	7.0	-	-
90.0	30.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Engraulis mordax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	-	0.0	-	13.6	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.8	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-
93.3 26.7	0.0	-	-	0.0	-	-	1.6	-	-	1.2	-	-
93.3 28.0	0.8	-	-	0.0	-	-	1.6	-	-	0.0	-	-
93.3 30.0	0.0	-	-	74.9	-	-	0.0	-	-	0.0	-	-
93.3 35.0	2.5	-	-	115.5	-	-	0.0	-	-	0.9	-	-
93.3 40.0	0.0	-	-	76.2	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-

Bathylagus ochotensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 80.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-

Cyclothone spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.8	-	0.0	-	-	-	-	-	0.0	-	-

Vinciguerria lucetia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.6	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	1.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
90.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.5	-	-
90.0 110.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-
93.3 100.0	-	2.1	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 110.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Tactostoma macropus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 110.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	1.9	-	-
93.3 120.0	-	0.0	-	0.0	-	-	-	-	-	1.3	-	-

Lampadena urophaos

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 110.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Nannobrachium spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 60.0	-	1.6	-	0.0	-	-	-	-	-	-	-	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7 110.0	-	0.8	-	0.0	-	-	-	-	-	0.0	-	-

Nannobrachium ritteri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 70.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	1.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-

Stenobrachius leucopsarus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	-	2.3	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	5.8	-	0.0	-	-	-	-	-	-	-	-
66.7 60.0	-	2.3	-	0.0	-	-	-	-	-	-	-	-
70.0 70.0	-	1.5	-	-	-	-	-	-	-	-	-	-
76.7 49.0	-	0.0	-	0.6	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-

Triphoturus mexicanus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 90.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	2.1	-	-

TABLE 4. (cont.)

Myctophum nitidulum

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Protomyctophum crockeri

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

Symbolophorus californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 110.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Desmodema lorum

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

Merluccius productus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 70.0	-	2.3	-	-	-	-	-	-	-	-	-	-
76.7 49.0	-	0.9	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.7	-	-	0.0	-	-	-	0.0	-

Chilara taylori

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-

Atherinops affinis

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

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	17.9	-	0.0	-	-	-	-	-	-	-	-
86.7 33.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	0.0	-	-	2.0	-	-
93.3 26.7	0.8	-	-	0.9	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Leuresthes tenuis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	1.0	-	-	0.0	-	-

Cololabis saira

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	0.0	-	0.8	-	-	-	-	-	-	-	-
60.0 90.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-
63.3 80.0	-	0.0	-	0.7	-	-	-	-	-	-	-	-
66.7 50.0	-	5.6	-	0.0	-	-	-	-	-	-	-	-
66.7 55.0	-	0.0	-	0.7	-	-	-	-	-	-	-	-
66.7 70.0	-	0.0	-	0.7	-	-	-	-	-	-	-	-
70.0 90.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-
70.0 100.0	-	12.8	-	-	-	-	-	-	-	-	-	-
73.3 70.0	-	0.7	-	0.0	-	-	-	-	-	-	-	-
73.3 80.0	-	0.7	-	6.5	-	-	-	-	-	-	-	-
73.3 90.0	-	0.0	-	0.8	-	-	-	-	-	-	-	-
73.3 100.0	-	2.4	-	0.0	-	-	-	-	-	-	-	-
76.7 80.0	-	0.7	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	1.3	-	-	0.0	-	-	-	1.7	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	7.4	-
80.0 55.0	-	-	-	0.0	-	-	0.0	-	-	1.1	-	-
80.0 60.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-
80.0 70.0	-	0.0	-	0.0	-	-	1.1	-	-	-	1.0	-
80.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.8	-
80.0 90.0	-	1.6	-	0.7	-	-	0.7	-	-	-	0.9	-
80.0 100.0	-	0.8	-	2.4	-	-	3.8	-	-	-	3.7	-
83.3 40.6	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
83.3 42.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	1.8	-	0.0	-	-	0.9	-	-	0.0	-	-
83.3 80.0	-	0.8	-	0.0	-	-	1.6	-	-	0.6	-	-
83.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.4	-	-
83.3 100.0	-	9.6	-	1.1	-	-	1.5	-	-	0.9	-	-
83.3 110.0	-	1.6	-	3.4	-	-	-	-	-	11.8	-	-
86.7 45.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-

TABLE 4. (cont.)

Cololabis saira (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 70.0	-	0.0	-	0.0	-	-	0.9	-	-	0.6	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	37.7	-	-
86.7 90.0	-	0.0	-	1.7	-	-	0.0	-	-	1.0	-	-
86.7 100.0	-	4.4	-	0.0	-	-	0.0	-	-	5.3	-	-
86.7 110.0	-	9.9	-	0.0	-	-	-	-	-	17.5	-	-
90.0 37.0	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	0.9	-	-	0.7	-	-	1.1	-	-
90.0 60.0	-	0.0	-	0.0	-	-	1.8	-	-	5.2	-	-
90.0 70.0	-	0.0	-	0.6	-	-	0.0	-	-	1.8	-	-
90.0 80.0	-	0.0	-	0.8	-	-	0.9	-	-	1.7	-	-
90.0 90.0	-	5.5	-	0.0	-	-	0.0	-	-	0.9	-	-
90.0 100.0	-	9.1	-	0.0	-	-	0.0	-	-	5.5	-	-
90.0 110.0	-	2.3	-	1.7	-	-	0.0	-	-	48.4	-	-
90.0 120.0	-	1.4	-	3.5	-	-	-	-	-	2.5	-	-
93.3 30.0	0.0	-	-	0.8	-	-	1.9	-	-	3.3	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.9	-	-	1.0	-	-
93.3 55.0	3.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	1.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	3.8	-	0.0	-	-	2.1	-	-	1.8	-	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 110.0	-	0.0	-	8.5	-	-	0.0	-	-	0.9	-	-
93.3 120.0	-	0.0	-	3.4	-	-	-	-	-	0.0	-	-

Cheilopogon pinnatibarbatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	5.2	-	-

Sebastes spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	0.8	-	0.8	-	-	-	-	-	-	-	-
60.0 70.0	-	48.8	-	0.0	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

Station		*Sebastes* spp. (cont.)											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	52.0	-	13.6	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	5.8	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	-	6.4	-	1.5	-	-	-	-	-	-	-	-
66.7	60.0	-	0.0	-	3.1	-	-	-	-	-	-	-	-
70.0	55.0	-	0.7	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	-	1.7	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	-	0.7	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	-	1.5	-	0.9	-	-	-	-	-	-	-	-
76.7	49.0	-	1.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	-	2.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	7.0	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	51.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	60.0	-	-	-	0.9	-	-	0.0	-	-	0.0	-	-
81.8	46.9	-	0.0	-	1.1	-	-	0.0	-	-	0.0	-	-
83.3	40.6	-	0.8	-	0.7	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	1.7	-	7.5	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	0.0	-	0.8	-	-	0.0	-	-	0.8	-	-
86.7	33.0	-	0.0	-	1.9	-	-	0.0	-	-	0.0	-	-
86.7	35.0	-	0.7	-	5.8	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	0.0	-	2.3	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	9.3	-	13.0	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	0.7	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0	28.0	-	1.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	0.0	-	3.2	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	-	6.1	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
90.0	53.0	-	4.4	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3	26.7	3.4	-	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3	28.0	2.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	3.1	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	23.6	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	-	0.0	-	0.9	-	-	0.0	-	-	-	0.0	-
86.7	55.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	80.0	-	0.0	-	3.7	-	-	-	-	-	-	-	-
76.7	51.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-
76.7	60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.8	-
76.7	70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.1	-
76.7	90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.6	-
80.0	60.0	-	-	-	0.0	-	-	1.5	-	-	0.9	-	-
80.0	80.0	-	0.0	-	0.9	-	-	0.0	-	-	-	0.0	-
80.0	90.0	-	0.0	-	1.4	-	-	0.0	-	-	-	0.0	-
83.3	42.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	70.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
83.3	80.0	-	0.0	-	0.0	-	-	1.6	-	-	0.0	-	-
86.7	45.0	-	0.0	-	0.0	-	-	0.0	-	-	1.2	-	-
86.7	50.0	-	0.0	-	0.8	-	-	0.0	-	-	3.9	-	-
90.0	60.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	3.0	-	-	-	-	-	-	-	-	-	-
63.3	52.0	-	2.3	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	0.0	-	0.8	-	-	-	-	-	-	-	-
66.7	55.0	-	0.0	-	1.5	-	-	-	-	-	-	-	-
66.7	60.0	-	0.0	-	2.4	-	-	-	-	-	-	-	-
76.7	49.0	-	0.0	-	3.1	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	1.6	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	51.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	0.0	-	0.0	-	-	0.0	-	-	3.9	-	-
86.7	55.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sebastes paucispinis

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

Anoplopoma fimbria

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 50.0	-	1.6	-	0.0	-	-	-	-	-	-	-	-
83.3 80.0	-	1.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Oxylebius pictus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	1.8	-	-	0.0	-	-	0.0	-	-

Hexagrammos decagrammus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	2.2	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	17.6	-	0.0	-	-	-	-	-	-	-	-
66.7 80.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-
70.0 51.0	-	5.4	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	2.6	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	6.1	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	1.7	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 51.0	-	2.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.9	-	0.0	-	-	0.0	-	-	-	-	-
90.0 45.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-

Ophiodon elongatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 50.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-
70.0 51.0	-	3.1	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	15.8	-	0.6	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	0.0	-	0.5	-	-	0.0	-	-	0.0	-	-
83.3 42.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
83.3 51.0	-	0.0	-	1.4	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	4.1	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Artedius lateralis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-

Hemilepidotus spinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	-	0.8	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	1.6	-	0.0	-	-	-	-	-	-	-	-
83.3 80.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Icelinus spp.

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

Leptocottus armatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	3.4	-	0.0	-	-	-	-	-	-	-	-
73.3 55.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-
73.3 60.0	-	0.8	-	0.0	-	-	-	-	-	-	-	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
60.0 70.0	-	3.9	-	0.0	-	-	-	-	-	-	-	-
63.3 60.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-
66.7 50.0	-	183.2	-	0.0	-	-	-	-	-	-	-	-
70.0 51.0	-	49.1	-	-	-	-	-	-	-	-	-	-
70.0 55.0	-	1.5	-	0.0	-	-	-	-	-	-	-	-
73.3 50.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	0.0	-	2.5	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	0.0	-	0.7	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	3.1	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.0	-	0.8	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-
80.0 55.0	-	-	-	3.7	-	-	0.0	-	-	0.0	-	-
80.0 80.0	-	0.0	-	7.2	-	-	0.0	-	-	-	0.0	-
83.3 40.6	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Scorpaenichthys marmoratus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	4.8	-	4.2	-	-	0.0	-	-	0.0	-	-
83.3 55.0	-	1.5	-	0.8	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	0.0	-	2.3	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	1.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 33.0	-	7.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	1.4	-	1.7	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	1.8	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	3.2	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	2.5	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	1.8	-	0.0	-	-	0.0	-	-	-	-	-
86.7 70.0	-	1.5	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	1.8	-	-	0.0	-	-	0.0	-	-
93.3 28.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3 30.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 40.0	0.0	-	-	5.4	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-

Howella spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	1.0	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 80.0	-	0.0	-	2.7	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	0.8	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	0.0	-	0.0	-	-	1.1	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.9	-	-	0.8	-	-	-	0.0	-
80.0 90.0	-	0.0	-	2.1	-	-	0.0	-	-	-	0.0	-
86.7 70.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	1.7	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.7	-	0.6	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	2.4	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Trachurus symmetricus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 40.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	0.6	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	2.5	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	2.3	-	-	0.0	-	-	0.0	-	-

Genyonemus lineatus

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

Hermosilla azurea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	-	0.0	-	0.0	-	-	9.9	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	18.2	-	-	0.0	-	-

Medialuna californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	2.2	-	-

Mugil cephalus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	2.1	-	-

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	0.0	-	0.0	-	-	1.6	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	4.6	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	2.1	-	-
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	14.2	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.0	-	-	5.1	-	-

Oxyjulis californica

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

TABLE 4. (cont.)

Stichaeidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	0.9	-	0.0	-	-	-	-	-	-	-	-

***Hypsoblennius* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-
86.7 33.0	-	0.0	-	0.0	-	-	3.1	-	-	0.0	-	-

Hypsoblennius gilberti

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

Hypsoblennius jenkinsi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-
76.7 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.8	-
80.0 55.0	-	-	-	0.0	-	-	0.0	-	-	1.1	-	-
80.0 60.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-
83.3 40.6	-	0.0	-	0.0	-	-	4.7	-	-	3.8	-	-
86.7 33.0	-	0.0	-	0.0	-	-	1.0	-	-	6.6	-	-
86.7 35.0	-	0.0	-	0.0	-	-	39.6	-	-	2.2	-	-
86.7 40.0	-	0.0	-	0.0	-	-	4.1	-	-	0.0	-	-
86.7 45.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
86.7 50.0	-	0.0	-	0.0	-	-	0.0	-	-	1.3	-	-
90.0 28.0	-	0.0	-	0.0	-	-	0.0	-	-	2.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	11.7	-	-
90.0 45.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	5.9	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	13.6	-	-
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	2.2	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	0.0	-	-	0.5	-	-

TABLE 4. (cont.)

Icosteus aenigmaticus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-

Coryphopterus nicholsii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	-	0.8	-	-	-	-	-	-	-	-	-	-

Typhlogobius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-

Sphyraena argentea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	0.0	-	0.0	-	-	1.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	1.9	-	-	0.0	-	-

Lepidopus fitchi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	-	0.0	-	0.0	-	-	19.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	1.1	-	-	0.0	-	-

Tetragonurus cuvieri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.6	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	1.0	-	-
90.0 120.0	-	0.0	-	0.0	-	-	-	-	-	1.7	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	1.9	-	-

Citharichthys sordidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.9	-

Citharichthys stigmaeus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 55.0	-	0.7	-	0.0	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

Citharichthys stigmaeus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	0.0	-	0.7	-	-	0.0	-	-	-	0.0	-
93.3 35.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-

Pleuronichthys coenosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-

Pleuronichthys decurrens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	0.0	-	0.9	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Pleuronichthys verticalis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 90.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-

TABLE 5. Station and Bongo net tow data for CalCOFI cruises in 2003. 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 0302

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
60.0	53.0	37	50.8	123	06.0	JD	03	02	22	0827	83	204	4.08	24	100.0	3	229
60.0	60.0	37	36.7	123	36.6	JD	03	02	22	1242	190	533	3.57	36	100.0	61	80
60.0	70.0	37	16.9	124	19.9	JD	03	02	22	1806	196	529	3.71	47	100.0	38	209
60.0	80.0	36	56.9	125	03.1	JD	03	02	22	2330	212	481	4.40	96	52.1	5	4
60.0	90.0	36	36.9	125	46.3	JD	03	02	23	0451	210	482	4.35	83	47.5	29	6
60.0	100.0	36	16.9	126	29.1	JD	03	02	23	1026	210	478	4.39	59	100.0	10	6
63.3	52.0	37	18.6	122	37.2	JD	03	02	22	0221	84	197	4.26	86	100.0	60	3988
63.3	55.0	37	12.5	122	50.2	JD	03	02	21	2344	216	459	4.71	57	50.0	31	15
63.3	60.0	37	02.6	123	11.7	JD	03	02	21	2030	207	494	4.20	61	50.0	2	6
63.3	70.0	36	42.3	123	54.6	JD	03	02	21	1422	216	454	4.76	42	100.0	10	5
63.3	80.0	36	22.6	124	37.7	JD	03	02	21	0814	212	492	4.32	47	100.0	10	17
63.3	90.0	36	02.6	125	20.6	JD	03	02	20	0439	201	493	4.08	83	51.2	19	6
63.3	100.0	35	42.4	126	03.0	JD	03	02	19	2225	214	465	4.61	58	100.0	20	3
66.7	50.0	36	47.2	122	03.3	JD	03	02	18	0622	94	227	4.17	88	100.0	706	55
66.7	55.0	36	37.2	122	24.7	JD	03	02	18	1247	209	447	4.67	47	100.0	89	82
66.7	60.0	36	27.3	122	46.3	JD	03	02	18	1614	212	438	4.83	34	100.0	20	262
66.7	70.0	36	07.3	123	30.0	JD	03	02	18	2201	217	436	4.97	103	53.3	9	3
66.7	80.0	35	47.2	124	11.6	JD	03	02	19	0348	210	472	4.44	121	52.6	19	10
66.7	90.0	35	27.2	124	54.0	JD	03	02	19	0917	212	425	4.99	47	100.0	2	18
66.7	100.0	35	07.3	125	36.3	JD	03	02	19	1510	211	439	4.81	18	100.0	1	11
70.0	51.0	36	10.9	121	43.7	JD	03	02	18	0020	106	229	4.63	109	100.0	36	4
70.0	55.0	36	02.9	122	00.8	JD	03	02	17	2045	209	504	4.14	62	48.3	49	375
70.0	60.0	35	52.9	122	21.9	JD	03	02	17	1730	211	491	4.30	39	100.0	9	2539
70.0	70.0	35	32.8	123	04.5	JD	03	02	17	1131	209	496	4.21	48	100.0	118	2426
70.0	80.0	35	12.8	123	46.7	JD	03	02	17	0541	215	489	4.39	47	100.0	22	15
70.0	90.0	34	52.8	124	28.9	JD	03	02	16	2352	211	462	4.56	39	100.0	15	12
70.0	100.0	34	32.9	125	10.7	JD	03	02	16	1821	213	474	4.50	27	100.0	3	3
73.3	50.0	35	38.6	121	15.3	JD	03	02	15	0803	30	95	3.14	74	100.0	127	13
73.3	55.0	35	28.7	121	36.5	JD	03	02	15	1040	211	429	4.92	49	100.0	25	521
73.3	60.0	35	18.6	121	57.7	JD	03	02	15	1416	214	459	4.66	41	100.0	33	673
73.3	70.0	34	58.7	122	39.8	JD	03	02	15	1951	213	472	4.51	102	52.0	22	13

TABLE 5. (cont.)

CalCOFI Cruise 0302

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
73.3	80.0	34	38.6	123	21.8	JD	03	02	16	0204	216	458	4.72	98	53.3	53	16
73.3	90.0	34	18.7	124	03.7	JD	03	02	16	0734	211	465	4.53	49	100.0	11	21
73.3	100.0	33	58.6	124	45.6	JD	03	02	16	1247	213	483	4.41	79	100.0	12	27
76.7	49.0	35	05.3	120	46.5	JD	03	02	15	0233	56	135	4.15	74	100.0	45	83
76.7	51.0	35	01.2	120	55.2	JD	03	02	15	0003	210	498	4.23	108	46.2	16	24
76.7	55.0	34	53.4	121	12.0	JD	03	02	14	2021	209	516	4.06	29	100.0	28	681
76.7	60.0	34	43.2	121	33.0	JD	03	02	14	1558	209	496	4.21	22	100.0	12	7
76.7	70.0	34	23.3	122	14.9	JD	03	02	14	0827	210	473	4.43	38	100.0	36	8
76.7	80.0	34	03.3	122	56.5	JD	03	02	14	0106	213	482	4.43	37	100.0	5	5
76.7	90.0	33	43.3	123	38.1	JD	03	02	13	1830	213	495	4.31	30	100.0	12	11
76.7	100.0	33	23.3	124	19.4	JD	03	02	13	1209	211	500	4.22	16	100.0	3	7
80.0	51.0	34	27.1	120	32.4	JD	03	02	11	0446	64	184	3.46	120	100.0	63	31
80.0	60.0	34	09.1	121	09.1	JD	03	02	24	1548	208	471	4.43	32	100.0	7	88
80.0	70.0	33	49.0	121	50.5	JD	03	02	12	0833	211	509	4.15	26	100.0	7	4
80.0	80.0	33	28.8	122	31.6	JD	03	02	12	1700	210	508	4.14	8	100.0	10	5
80.0	90.0	33	08.9	123	13.2	JD	03	02	12	2313	213	477	4.46	42	100.0	15	34
80.0	100.0	32	49.0	123	54.6	JD	03	02	13	0544	212	450	4.71	73	100.0	10	91
81.8	46.9	34	16.5	120	01.4	JD	03	02	10	2355	220	437	5.02	43	100.0	58	83
83.3	40.6	34	13.5	119	24.7	JD	03	02	10	0929	20	62	3.27	32	100.0	5	965
83.3	42.0	34	10.7	119	30.5	JD	03	02	10	0759	101	222	4.55	77	100.0	79	93
83.3	51.0	33	52.7	120	08.1	JD	03	02	10	0158	96	230	4.15	74	100.0	27	52
83.3	55.0	33	44.6	120	24.7	JD	03	02	09	2228	214	466	4.58	32	100.0	77	86
83.3	60.0	33	34.6	120	45.4	JD	03	02	09	1807	210	458	4.58	52	100.0	43	694
83.3	70.0	33	14.7	121	26.6	JD	03	02	09	1148	213	449	4.73	33	100.0	6	3
83.3	80.0	32	54.8	122	07.7	JD	03	02	09	0558	210	468	4.48	53	100.0	8	15
83.3	90.0	32	34.7	122	48.6	JD	03	02	09	0020	212	472	4.50	32	100.0	39	42
83.3	100.0	32	14.7	123	29.6	JD	03	02	08	1823	210	454	4.62	46	100.0	36	24
83.3	110.0	31	54.6	124	10.1	JD	03	02	08	1221	216	453	4.76	29	100.0	17	71
86.7	33.0	33	53.3	118	29.4	JD	03	02	06	0107	49	118	4.14	42	100.0	52	310
86.7	35.0	33	49.4	118	37.8	JD	03	02	06	0343	210	448	4.68	47	100.0	97	459
86.7	40.0	33	39.4	118	58.5	JD	03	02	06	0806	214	435	4.91	37	100.0	100	316
86.7	45.0	33	29.4	119	19.1	JD	03	02	06	1212	213	437	4.87	39	100.0	56	350
86.7	50.0	33	19.5	119	39.7	JD	03	02	06	1555	67	166	4.00	54	100.0	185	4
86.7	55.0	33	09.4	120	00.3	JD	03	02	06	2005	214	469	4.56	34	100.0	17	25

TABLE 5. (cont.)

CalCOFI Cruise 0302

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	60.0	32	59.4	120	21.0	JD	03	02	07	0025	214	443	4.82	68	50.0	2	1
86.7	70.0	32	39.4	121	02.0	JD	03	02	07	0610	209	470	4.45	53	100.0	31	62
86.7	80.0	32	19.4	121	42.8	JD	03	02	07	1211	210	472	4.45	25	100.0	6	7
86.7	90.0	31	59.5	122	23.6	JD	03	02	07	1814	223	489	4.56	27	100.0	9	11
86.7	100.0	31	39.5	123	04.1	JD	03	02	08	0007	213	475	4.50	40	100.0	47	30
86.7	110.0	31	19.4	123	44.6	JD	03	02	08	0605	213	458	4.65	46	100.0	37	13
90.0	28.0	33	29.1	117	46.1	JD	03	02	05	1816	211	463	4.55	125	50.0	7	3
90.0	30.0	33	25.1	117	54.3	JD	03	02	05	1532	211	459	4.60	20	100.0	9	5
90.0	35.0	33	15.1	118	15.0	JD	03	02	05	1143	210	455	4.62	20	100.0	26	182
90.0	37.0	33	11.2	118	23.2	JD	03	02	05	0854	214	438	4.89	50	100.0	84	577
90.0	45.0	32	55.1	118	56.2	JD	03	02	05	0327	212	454	4.67	24	100.0	24	83
90.0	53.0	32	39.1	119	28.8	JD	03	02	04	2207	211	463	4.54	67	54.8	35	20
90.0	60.0	32	25.1	119	57.6	JD	03	02	04	1715	210	449	4.67	51	100.0	36	469
90.0	70.0	32	05.3	120	38.3	JD	03	02	04	1119	211	466	4.52	26	100.0	7	4
90.0	80.0	31	45.0	121	18.8	JD	03	02	04	0441	210	462	4.54	37	100.0	15	9
90.0	90.0	31	25.0	121	59.3	JD	03	02	03	2234	216	460	4.69	46	100.0	11	14
90.0	100.0	31	05.1	122	39.7	JD	03	02	03	1622	210	474	4.43	40	100.0	13	15
90.0	110.0	30	45.3	123	19.9	JD	03	02	03	0824	212	473	4.49	19	100.0	13	36
90.0	120.0	30	25.3	123	59.8	JD	03	02	03	0047	212	490	4.32	27	100.0	16	14
93.3	26.7	32	57.6	117	18.3	JD	03	01	30	1519	209	478	4.36	33	100.0	4	1
93.3	28.0	32	54.8	117	23.7	JD	03	01	30	1832	211	461	4.59	28	100.0	16	0
93.3	30.0	32	50.9	117	31.8	JD	03	01	30	2200	211	476	4.42	67	53.1	18	3
93.3	35.0	32	40.8	117	52.4	JD	03	01	31	0205	213	467	4.57	47	100.0	60	73
93.3	40.0	32	30.8	118	12.8	JD	03	01	31	0555	210	461	4.55	46	100.0	23	181
93.3	45.0	32	20.8	118	33.1	JD	03	01	31	0855	210	452	4.65	35	100.0	3	43
93.3	50.0	32	10.9	118	53.5	JD	03	01	31	1426	228	472	4.84	17	100.0	13	19
93.3	55.0	32	00.8	119	14.0	JD	03	01	31	1829	209	466	4.48	28	100.0	27	11
93.3	60.0	31	51.0	119	34.3	JD	03	01	31	2239	214	451	4.74	38	100.0	28	8
93.3	70.0	31	30.9	120	14.7	JD	03	02	01	0502	212	476	4.46	92	47.7	11	5
93.3	80.0	31	10.9	120	55.2	JD	03	02	01	1136	215	434	4.94	16	100.0	0	16
93.3	90.0	30	50.9	121	35.3	JD	03	02	01	1803	222	501	4.43	26	100.0	6	14
93.3	100.0	30	30.8	122	15.4	JD	03	02	02	0022	206	519	3.97	42	100.0	13	28
93.3	110.0	30	10.8	122	55.4	JD	03	02	02	0829	217	497	4.37	22	100.0	13	38
93.3	120.0	29	50.8	123	35.1	JD	03	02	02	1705	217	477	4.55	19	100.0	8	20

TABLE 5. (cont.)

CalCOFI Cruise 0304

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	55.0	37	46.8	123	14.7	JD	03	04	25	2150	209	478	4.36	234	46.4	8	24
60.0	60.0	37	36.8	123	36.4	JD	03	04	25	1743	211	461	4.57	76	51.4	20	30
60.0	70.0	37	16.9	124	19.9	JD	03	04	25	1023	211	434	4.87	64	53.5	11	76
60.0	80.0	36	56.7	125	03.2	JD	03	04	25	0432	205	512	4.00	129	50.0	7	62
60.0	90.0	36	36.9	125	46.4	JD	03	04	24	2238	211	472	4.46	51	100.0	11	4
63.3	50.0	37	22.6	122	28.6	JD	03	04	23	2252	20	61	3.35	410	100.0	5	0
63.3	55.0	37	12.5	122	50.1	JD	03	04	23	1852	209	470	4.44	160	49.3	4	55
63.3	60.0	37	02.5	123	11.8	JD	03	04	23	1505	208	468	4.46	111	50.0	17	42
63.3	70.0	36	42.5	123	54.9	JD	03	04	23	0843	210	457	4.60	48	100.0	20	185
63.3	80.0	36	22.6	124	37.7	JD	03	04	23	0227	217	461	4.70	78	52.7	9	5
63.3	90.0	36	02.6	125	20.3	JD	03	04	22	2018	209	452	4.62	82	51.3	7	18
66.7	50.0	36	47.1	122	03.3	JD	03	04	21	1541	214	439	4.89	148	52.3	7	7
66.7	55.0	36	37.2	122	24.9	JD	03	04	21	1954	206	475	4.34	95	46.6	12	53
66.7	60.0	36	27.2	122	46.5	JD	03	04	21	0558	211	442	4.78	115	49.0	24	189
66.7	70.0	36	07.2	123	29.2	JD	03	04	20	2201	211	446	4.72	92	51.2	22	141
66.7	80.0	35	47.2	124	11.7	JD	03	04	20	1512	212	461	4.60	41	100.0	23	145
66.7	90.0	35	27.3	124	54.2	JD	03	04	20	0900	216	454	4.76	26	100.0	14	23
70.0	52.0	36	08.9	121	48.0	JD	03	04	19	0817	216	444	4.86	56	100.0	3	5
70.0	55.0	36	02.9	122	00.7	JD	03	04	19	0446	211	458	4.61	120	47.2	3	15
70.0	80.0	35	12.9	123	46.7	JD	03	04	18	1127	207	482	4.29	46	100.0	783	226
70.0	90.0	34	52.8	124	28.8	JD	03	04	18	0353	211	465	4.54	32	100.0	50	39
73.3	50.0	35	38.6	121	15.3	JD	03	04	17	0059	207	445	4.67	135	51.6	4	7
73.3	55.0	35	28.6	121	36.4	JD	03	04	16	2122	211	422	5.00	185	48.7	15	46
73.3	60.0	35	18.6	121	57.7	JD	03	04	16	1600	212	408	5.19	64	53.8	23	274
73.3	70.0	34	58.5	122	40.0	JD	03	04	16	0726	211	429	4.93	72	48.3	11	26
73.3	80.0	34	38.5	123	21.9	JD	03	04	15	2336	204	438	4.66	84	51.3	178	746
73.3	90.0	34	18.6	124	03.7	JD	03	04	15	1736	216	457	4.72	15	100.0	4	14
73.3	100.0	33	58.8	124	45.4	JD	03	04	15	1055	207	491	4.22	31	100.0	6	16
76.7	49.0	35	05.3	120	46.6	RR	03	04	19	0507	44	105	4.14	1229	52.7	3	2
76.7	51.0	35	01.3	120	55.1	RR	03	04	19	0233	213	437	4.87	96	52.3	2	15
76.7	55.0	34	53.3	121	11.8	RR	03	04	18	2153	207	487	4.25	170	50.6	10	10
76.7	60.0	34	43.3	121	32.9	RR	03	04	18	1658	211	468	4.52	53	100.0	74	17
76.7	70.0	34	23.7	122	15.6	RR	03	04	18	0855	200	478	4.17	59	53.5	44	6
76.7	80.0	34	03.3	122	56.5	RR	03	04	18	0348	218	426	5.12	38	100.0	13	37

TABLE 5. (cont.)

CalCOFI Cruise 0304

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	90.0	33	43.3	123	38.0	RR	03	04	17	2205	214	476	4.50	31	100.0	11	88
76.7	100.0	33	23.3	124	19.4	RR	03	04	17	1624	215	457	4.71	26	100.0	2	6
80.0	51.0	34	27.0	120	31.4	RR	03	04	16	0058	56	162	3.49	384	48.3	1	1
80.0	55.0	34	19.0	120	48.1	RR	03	04	16	0412	212	421	5.03	242	50.0	14	57
80.0	60.0	34	09.3	121	07.8	RR	03	04	16	0823	179	476	3.76	259	48.7	61	200
80.0	70.0	33	49.0	121	50.6	RR	03	04	16	1615	198	477	4.15	46	100.0	39	246
80.0	80.0	33	29.0	122	32.0	RR	03	04	16	2131	199	469	4.25	134	50.7	187	86
80.0	90.0	33	09.0	123	13.3	RR	03	04	17	0343	214	443	4.83	156	53.6	67	105
80.0	100.0	32	49.4	123	54.8	RR	03	04	17	0753	217	438	4.94	25	100.0	3	8
81.8	46.9	34	16.5	119	59.3	RR	03	04	15	2042	191	496	3.86	172	49.4	4	4
83.3	40.6	34	13.5	119	24.7	RR	03	04	15	1508	29	77	3.73	323	100.0	0	596
83.3	42.0	34	10.7	119	30.5	RR	03	04	15	1242	169	360	4.71	70	100.0	2	379
83.3	51.0	33	52.7	120	08.0	RR	03	04	15	0529	90	206	4.35	247	47.0	3	0
83.3	55.0	33	44.7	120	24.6	RR	03	04	15	0211	205	479	4.29	136	52.3	15	15
83.3	60.0	33	34.8	120	45.1	RR	03	04	14	2201	197	475	4.14	114	51.8	4	35
83.3	70.0	33	14.7	121	26.6	RR	03	04	14	1537	218	458	4.76	65	46.6	9	8
83.3	80.0	32	54.6	122	08.6	RR	03	04	14	0807	193	491	3.93	63	48.3	26	3
83.3	90.0	32	34.7	122	48.7	RR	03	04	14	0355	208	456	4.57	138	100.0	246	71
83.3	100.0	32	14.7	123	29.6	RR	03	04	13	2144	206	481	4.27	62	100.0	106	27
83.3	110.0	31	54.7	124	10.2	RR	03	04	13	1623	215	453	4.76	22	100.0	8	3
86.7	33.0	33	53.5	118	29.4	RR	03	04	10	1755	48	109	4.45	1123	50.0	8	69
86.7	35.0	33	49.4	118	37.4	RR	03	04	10	2033	190	454	4.18	390	49.1	14	5
86.7	40.0	33	39.4	118	58.4	RR	03	04	11	0051	206	406	5.07	256	51.9	21	16
86.7	45.0	33	29.4	119	19.1	RR	03	04	11	0435	214	424	5.05	198	52.3	30	155
86.7	50.0	33	19.4	119	39.8	RR	03	04	11	0755	68	162	4.21	388	50.7	37	13
86.7	55.0	33	09.2	120	00.3	RR	03	04	11	2228	191	462	4.12	154	52.1	38	119
86.7	60.0	32	59.4	120	20.9	RR	03	04	12	0212	185	515	3.60	118	50.8	40	43
86.7	70.0	32	39.4	121	02.0	RR	03	04	12	0641	225	448	5.03	165	51.3	8	11
86.7	80.0	32	19.4	121	42.9	RR	03	04	12	1550	204	470	4.35	51	100.0	24	92
86.7	90.0	31	59.4	122	23.6	RR	03	04	12	2112	221	528	4.18	112	100.0	213	102
86.7	100.0	31	39.4	123	04.2	RR	03	04	13	0343	217	511	4.25	43	100.0	52	119
86.7	110.0	31	19.0	123	45.2	RR	03	04	13	0834	197	481	4.10	46	100.0	7	16
90.0	28.0	33	29.1	117	46.1	RR	03	04	10	0845	55	128	4.29	642	52.4	4	313
90.0	30.0	33	25.1	117	54.3	RR	03	04	10	0611	210	423	4.97	182	51.9	6	92

TABLE 5. (cont.)

CalCOFI Cruise 0304

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	35.0	33	15.1	118	15.0	RR	03	04	10	0219	204	459	4.45	183	53.5	22	24
90.0	37.0	33	11.1	118	23.2	RR	03	04	09	2324	191	475	4.03	255	52.0	11	11
90.0	45.0	32	55.1	118	56.1	RR	03	04	09	1812	208	435	4.79	165	51.3	12	79
90.0	53.0	32	39.1	119	28.9	RR	03	04	09	1254	209	436	4.79	112	53.0	209	78
90.0	60.0	32	25.1	119	57.6	RR	03	04	09	0608	203	464	4.37	65	50.0	108	226
90.0	70.0	32	05.1	120	38.3	RR	03	04	09	0044	210	456	4.60	107	51.0	214	77
90.0	80.0	31	45.1	121	18.9	RR	03	04	08	1854	215	446	4.83	36	100.0	11	82
90.0	90.0	31	25.1	121	59.4	RR	03	04	08	1341	212	457	4.64	33	100.0	12	51
90.0	100.0	31	05.1	122	39.7	RR	03	04	08	0601	202	472	4.28	36	100.0	16	65
90.0	110.0	30	45.1	123	20.0	RR	03	04	08	0043	206	492	4.19	47	100.0	10	24
90.0	120.0	30	25.1	124	00.0	RR	03	04	07	1753	205	484	4.24	21	100.0	8	116
93.3	26.7	32	57.4	117	18.3	RR	03	04	04	1301	104	251	4.14	68	100.0	34	239
93.3	28.0	32	54.8	117	23.7	RR	03	04	04	1705	198	492	4.02	65	53.1	17	66
93.3	30.0	32	50.8	117	31.9	RR	03	04	04	2014	218	442	4.94	115	49.0	127	40
93.3	35.0	32	40.8	117	52.3	RR	03	04	05	0044	206	480	4.30	81	48.7	7	138
93.3	40.0	32	30.8	118	12.8	RR	03	04	05	0528	207	471	4.38	76	52.7	61	287
93.3	45.0	32	20.6	118	34.4	RR	03	04	05	0830	214	532	4.03	49	50.0	19	92
93.3	50.0	32	10.8	118	53.6	RR	03	04	05	1601	192	528	3.65	27	100.0	93	130
93.3	55.0	32	00.8	119	14.0	RR	03	04	05	2024	224	492	4.55	51	100.0	319	189
93.3	60.0	31	50.7	119	34.2	RR	03	04	06	0032	200	507	3.95	73	51.3	56	156
93.3	70.0	31	30.8	120	14.8	RR	03	04	06	0614	201	481	4.18	21	100.0	2	61
93.3	80.0	31	10.8	120	55.2	RR	03	04	06	1230	205	653	3.13	12	100.0	2	37
93.3	90.0	30	50.8	121	35.4	RR	03	04	06	1848	198	556	3.56	31	100.0	17	46
93.3	100.0	30	30.8	122	15.4	RR	03	04	07	0017	207	525	3.95	111	100.0	8	146
93.3	110.0	30	10.8	122	55.4	RR	03	04	07	0549	202	476	4.23	17	100.0	5	71
93.3	120.0	29	50.8	123	35.2	RR	03	04	07	1200	205	481	4.26	17	100.0	19	352

TABLE 5. (cont.)

CalCOFI Cruise 0307

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.7	NH	03	07	29	1739	49	123	3.94	114	100.0	0	218
76.7	51.0	35	01.5	120	55.1	NH	03	07	29	1441	209	417	5.01	141	47.4	0	493
76.7	55.0	34	53.3	121	11.9	NH	03	07	29	0935	203	449	4.52	468	51.9	4	0
76.7	60.0	34	43.3	121	33.0	NH	03	07	29	0635	211	444	4.76	126	51.7	0	0
76.7	70.0	34	23.3	122	14.8	NH	03	07	29	0102	221	448	4.94	89	47.5	0	1
76.7	80.0	34	03.5	122	56.6	NH	03	07	28	1912	210	456	4.61	162	51.3	2	1
76.7	90.0	33	43.2	123	38.0	NH	03	07	28	1319	212	457	4.64	20	100.0	6	1
76.7	100.0	33	23.3	124	19.3	NH	03	07	28	0738	210	458	4.58	13	100.0	3	5
80.0	51.0	34	26.7	120	31.5	NH	03	07	26	1646	56	136	4.12	88	100.0	2	329
80.0	55.0	34	19.0	120	48.3	NH	03	07	26	1955	206	490	4.21	69	52.9	0	50
80.0	60.0	34	09.0	121	09.3	NH	03	07	26	2322	202	462	4.37	204	52.1	2	0
80.0	70.0	33	49.0	121	50.6	NH	03	07	27	0433	214	437	4.90	300	52.6	1	2
80.0	80.0	33	29.0	122	32.0	NH	03	07	27	1218	206	453	4.56	525	50.8	0	1
80.0	90.0	33	08.8	123	13.0	NH	03	07	27	2012	212	455	4.66	79	47.2	4	0
80.0	100.0	32	49.0	123	54.6	NH	03	07	28	0142	211	472	4.46	32	100.0	2	11
81.8	46.9	34	16.5	120	01.5	NH	03	07	26	1242	216	432	4.99	58	100.0	0	22
83.3	40.6	34	13.4	119	24.7	NH	03	07	26	0707	25	76	3.34	40	100.0	0	165
83.3	42.0	34	10.6	119	30.5	NH	03	07	26	0539	69	159	4.33	132	100.0	1	187
83.3	51.0	33	52.8	120	08.1	NH	03	07	26	0010	104	244	4.27	566	52.1	0	0
83.3	55.0	33	44.7	120	24.7	NH	03	07	25	2054	196	470	4.18	345	52.4	0	1
83.3	60.0	33	34.8	120	45.3	NH	03	07	25	1703	210	457	4.60	306	47.8	5	0
83.3	70.0	33	14.7	121	26.6	NH	03	07	25	0940	202	488	4.13	156	51.3	6	2
83.3	80.0	32	54.6	122	07.6	NH	03	07	25	0514	213	415	5.12	516	48.1	3	2
83.3	90.0	32	34.7	122	48.7	NH	03	07	24	2346	217	454	4.79	37	100.0	14	16
83.3	100.0	32	14.9	123	29.6	NH	03	07	24	1817	212	461	4.59	41	100.0	57	93
86.7	33.0	33	53.5	118	29.4	NH	03	07	22	1711	48	119	4.02	68	100.0	6	23
86.7	35.0	33	49.4	118	37.8	NH	03	07	22	1935	210	465	4.52	189	51.1	4	1
86.7	40.0	33	39.4	118	58.5	NH	03	07	22	2302	204	455	4.48	103	51.0	0	0
86.7	45.0	33	29.5	119	19.1	NH	03	07	23	0258	202	430	4.70	536	51.7	1	1
86.7	50.0	33	19.4	119	39.7	NH	03	07	23	0618	63	140	4.52	136	100.0	0	13
86.7	55.0	33	09.3	120	00.9	NH	03	07	23	0907	209	437	4.79	73	53.1	2	0
86.7	60.0	32	59.3	120	21.0	NH	03	07	23	1512	214	457	4.68	162	51.3	5	9
86.7	70.0	32	39.5	121	02.1	NH	03	07	23	2038	211	501	4.21	116	50.0	10	2
86.7	80.0	32	19.4	121	42.9	NH	03	07	24	0159	211	458	4.60	131	53.3	2	2

TABLE 5. (cont.)

CalCOFI Cruise 0307

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	90.0	31	59.4	122	23.6	NH	03	07	24	0713	212	448	4.73	58	100.0	12	40
86.7	100.0	31	39.4	123	04.2	NH	03	07	24	1235	213	469	4.55	51	100.0	26	28
90.0	28.0	33	29.1	117	46.1	NH	03	07	22	0946	74	181	4.10	294	52.8	8	50
90.0	30.0	33	25.0	117	54.3	NH	03	07	22	0754	200	438	4.57	130	52.6	0	23
90.0	35.0	33	15.1	118	14.9	NH	03	07	22	0352	204	458	4.45	98	53.3	3	0
90.0	37.0	33	11.1	118	23.3	NH	03	07	22	0050	208	467	4.44	94	52.2	0	0
90.0	45.0	32	55.1	118	56.1	NH	03	07	21	1949	212	449	4.72	67	53.3	0	0
90.0	53.0	32	39.2	119	28.9	NH	03	07	21	1501	210	448	4.69	181	51.8	2	1
90.0	60.0	32	24.7	119	57.4	NH	03	07	21	0734	208	424	4.90	219	50.5	3	3
90.0	70.0	32	05.1	120	38.3	NH	03	07	21	0244	201	464	4.33	222	53.3	5	1
90.0	80.0	31	45.1	121	19.0	NH	03	07	20	2057	210	469	4.48	160	52.0	8	4
90.0	90.0	31	25.1	121	59.5	NH	03	07	20	1502	205	470	4.37	87	100.0	5	9
90.0	100.0	31	05.0	122	39.6	NH	03	07	20	0807	213	428	4.98	19	100.0	21	69
90.0	110.0	30	45.1	123	19.9	NH	03	07	20	0336	208	457	4.56	42	100.0	163	81
93.3	26.7	32	57.4	117	18.4	NH	03	07	17	1134	41	113	3.62	89	100.0	11	70
93.3	28.0	32	54.7	117	23.8	NH	03	07	17	1423	204	470	4.34	38	100.0	2	3
93.3	30.0	32	50.8	117	32.0	NH	03	07	17	1738	218	448	4.88	45	100.0	2	2
93.3	35.0	32	40.6	117	52.4	NH	03	07	17	2121	198	484	4.10	122	50.8	3	2
93.3	40.0	32	30.9	118	12.8	NH	03	07	18	0122	200	479	4.19	140	52.2	1	0
93.3	45.0	32	20.8	118	33.3	NH	03	07	18	0519	207	458	4.52	120	52.7	1	0
93.3	50.0	32	10.7	118	53.6	NH	03	07	18	0811	210	453	4.63	141	53.1	1	2
93.3	55.0	32	00.8	119	14.0	NH	03	07	18	1342	208	461	4.51	217	52.0	0	11
93.3	60.0	31	50.7	119	34.4	NH	03	07	18	1728	205	467	4.38	73	52.9	7	7
93.3	70.0	31	30.8	120	14.8	NH	03	07	18	2252	206	451	4.55	106	52.0	4	4
93.3	80.0	31	10.9	120	55.2	NH	03	07	19	0424	211	454	4.66	262	52.9	6	2
93.3	90.0	30	51.0	121	35.6	NH	03	07	19	0851	216	440	4.90	52	100.0	11	7
93.3	100.0	30	30.8	122	15.6	NH	03	07	19	1648	212	464	4.57	30	100.0	121	27
93.3	110.0	30	10.8	122	55.5	NH	03	07	19	2203	215	468	4.59	26	100.0	132	188

TABLE 5. (cont.)

CalCOFI Cruise 0310

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	NH	03	11	03	0933	45	114	3.94	35	100.0	1	60
76.7	51.0	35	01.3	120	55.2	NH	03	11	03	0734	204	453	4.51	102	47.8	2	65
76.7	55.0	34	53.5	121	12.1	NH	03	11	03	0431	213	450	4.73	622	51.7	2	0
76.7	60.0	34	43.3	121	33.0	NH	03	11	03	0017	208	458	4.54	221	49.5	4	4
76.7	70.0	34	23.2	122	14.9	NH	03	11	02	1814	211	440	4.79	193	49.4	1	18
76.7	80.0	34	03.3	122	56.6	NH	03	11	02	1210	202	464	4.35	287	53.3	5	25
76.7	90.0	33	43.4	123	38.1	NH	03	11	02	0625	213	452	4.71	951	53.0	0	1
76.7	100.0	33	23.2	124	19.3	NH	03	11	02	0043	208	428	4.87	82	100.0	8	7
80.0	51.0	34	27.1	120	31.4	NH	03	10	31	1150	47	124	3.77	57	100.0	0	15
80.0	55.0	34	19.2	120	47.9	NH	03	10	31	1527	198	471	4.20	23	100.0	3	52
80.0	60.0	34	08.9	121	09.2	NH	03	10	31	1930	210	457	4.60	217	49.4	2	10
80.0	70.0	33	49.0	121	50.6	NH	03	11	01	0110	194	459	4.23	242	50.4	3	11
80.0	80.0	33	29.1	122	31.9	NH	03	11	01	0635	212	462	4.59	251	51.7	5	20
80.0	90.0	33	09.1	123	13.2	NH	03	11	01	1201	186	525	3.54	61	46.8	3	6
80.0	100.0	32	49.0	123	54.3	NH	03	11	01	1830	207	442	4.67	50	100.0	19	31
81.8	46.9	34	16.5	120	01.4	NH	03	10	31	0801	203	467	4.36	30	100.0	4	92
83.3	40.6	34	13.7	119	24.9	NH	03	10	31	0315	22	61	3.56	82	100.0	0	22
83.3	42.0	34	10.7	119	30.6	NH	03	10	31	0117	85	200	4.26	65	100.0	4	66
83.3	51.0	33	52.7	120	08.0	NH	03	10	30	1908	108	313	3.45	51	100.0	0	100
83.3	55.0	33	44.7	120	24.8	NH	03	10	30	1508	217	533	4.07	26	100.0	1	12
83.3	60.0	33	34.7	120	45.3	NH	03	10	30	0843	211	483	4.36	246	52.9	5	1
83.3	70.0	33	14.6	121	26.8	NH	03	10	30	0319	202	449	4.50	477	50.9	2	2
83.3	80.0	32	54.5	122	07.5	NH	03	10	29	2125	194	468	4.14	53	100.0	6	11
83.3	90.0	32	34.7	122	48.8	NH	03	10	29	1534	207	461	4.49	41	100.0	11	14
83.3	100.0	32	14.9	123	29.2	NH	03	10	29	0819	217	454	4.77	29	100.0	18	10
83.3	110.0	31	54.6	124	10.1	NH	03	10	29	0301	197	459	4.30	61	100.0	61	8
86.7	33.0	33	53.2	118	29.4	NH	03	10	26	1622	47	125	3.77	40	100.0	11	13
86.7	35.0	33	49.5	118	37.6	NH	03	10	26	1909	211	442	4.78	66	51.7	2	8
86.7	40.0	33	39.5	118	58.4	NH	03	10	26	2319	200	458	4.36	74	52.9	4	106
86.7	45.0	33	29.5	119	19.2	NH	03	10	27	0336	197	462	4.27	65	50.0	1	24
86.7	50.0	33	19.5	119	39.7	NH	03	10	27	0709	51	124	4.10	185	100.0	0	21
86.7	55.0	33	09.6	120	00.2	NH	03	10	27	1109	212	446	4.74	117	51.9	1	5
86.7	63.0	32	54.4	120	31.6	NH	03	10	27	1638	206	470	4.38	321	47.0	2	2
86.7	70.0	32	39.4	121	02.0	NH	03	10	27	2144	210	458	4.59	245	52.6	2	0

TABLE 5. (cont.)

CalCOFI Cruise 0310

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	80.0	32	19.5	121	42.9	NH	03	10	28	0331	204	472	4.33	78	48.6	8	2
86.7	90.0	31	59.4	122	23.5	NH	03	10	28	0824	211	450	4.69	42	100.0	19	8
86.7	100.0	31	39.5	123	04.1	NH	03	10	28	1524	198	478	4.13	33	100.0	13	33
86.7	110.0	31	19.5	123	44.5	NH	03	10	28	2053	210	464	4.53	30	100.0	143	15
90.0	28.0	33	29.1	117	46.1	NH	03	10	26	0322	124	288	4.32	70	100.0	1	23
90.0	30.0	33	25.0	117	54.2	NH	03	10	26	0557	216	432	5.00	93	50.0	17	0
90.0	35.0	33	15.1	118	15.0	NH	03	10	26	0907	210	439	4.79	57	100.0	13	30
90.0	37.0	33	11.1	118	23.3	NH	03	10	25	2106	206	443	4.64	144	48.4	8	0
90.0	45.0	32	55.1	118	56.2	NH	03	10	25	1518	200	468	4.26	64	53.3	2	0
90.0	53.0	32	39.2	119	29.1	NH	03	10	25	0833	199	472	4.22	38	100.0	6	1
90.0	60.0	32	25.2	119	57.8	NH	03	10	25	0452	212	479	4.44	90	51.1	3	1
90.0	70.0	32	05.0	120	38.4	NH	03	10	24	2252	203	474	4.27	152	50.0	3	0
90.0	80.0	31	45.1	121	19.0	NH	03	10	24	1552	208	480	4.34	371	53.9	0	3
90.0	90.0	31	25.9	121	59.9	NH	03	10	24	0818	215	460	4.67	39	100.0	5	2
90.0	100.0	31	05.1	122	39.9	NH	03	10	24	0220	196	475	4.12	76	100.0	15	2
90.0	110.0	30	45.0	123	19.9	NH	03	10	23	1941	211	478	4.41	80	100.0	15	8
90.0	120.0	30	24.6	123	59.6	NH	03	10	23	1251	202	507	3.98	20	100.0	18	8
93.3	26.7	32	57.4	117	18.4	NH	03	10	20	1213	193	466	4.13	54	100.0	12	8
93.3	28.0	32	54.8	117	23.3	NH	03	10	20	1543	211	434	4.87	58	100.0	13	2
93.3	30.0	32	50.7	117	32.0	NH	03	10	20	1838	212	439	4.83	96	50.0	5	0
93.3	35.0	32	40.7	117	52.6	NH	03	10	20	2238	209	454	4.61	163	48.6	21	1
93.3	40.0	32	30.9	118	12.7	NH	03	10	21	0235	202	459	4.40	63	51.7	1	0
93.3	45.0	32	21.1	118	33.0	NH	03	10	21	0640	222	438	5.07	94	48.7	3	4
93.3	50.0	32	10.8	118	53.6	NH	03	10	21	0925	207	454	4.55	29	100.0	0	0
93.3	55.0	32	00.7	119	14.0	NH	03	10	21	1351	187	492	3.81	100	48.9	4	0
93.3	60.0	31	50.8	119	34.2	NH	03	10	21	1852	200	479	4.17	40	100.0	1	1
93.3	70.0	31	30.8	120	14.7	NH	03	10	22	0044	189	504	3.74	75	52.6	4	1
93.3	80.0	31	10.9	120	55.3	NH	03	10	22	0610	215	449	4.79	51	100.0	2	2
93.3	90.0	30	50.9	121	35.3	NH	03	10	22	1213	201	493	4.08	26	100.0	5	17
93.3	100.0	30	30.8	122	15.4	NH	03	10	22	1803	214	465	4.60	49	100.0	6	11
93.3	110.0	30	10.9	122	55.4	NH	03	10	23	0118	197	478	4.12	63	100.0	6	10
93.3	120.0	29	50.8	123	34.9	NH	03	10	23	0655	211	463	4.56	24	100.0	44	11

TABLE 6. Pooled occurrences of fish larvae taken in Bongo net tows on CalCOFI cruises in 2003.

Rank	Taxon	Occurrences
1	*Stenobrachius leucopsarus*	139
2	*Sebastes* spp.	101
2	*Bathylagus ochotensis*	101
4	*Protomyctophum crockeri*	100
5	*Symbolophorus californiensis*	61
6	*Nannobrachium ritteri*	58
7	*Diogenichthys atlanticus*	55
8	*Tarletonbeania crenularis*	53
9	*Sardinops sagax*	51
10	*Engraulis mordax*	50
11	*Leuroglossus stilbius*	48
12	*Vinciguerria lucetia*	46
12	*Merluccius productus*	46
14	*Sebastes jordani*	44
15	*Cyclothone signata*	43
16	*Nannobrachium* spp.	39
17	*Lestidiops ringens*	33
18	*Citharichthys stigmaeus*	30
19	*Bathylagus wesethi*	29
20	*Ceratoscopelus townsendi*	28
21	*Triphoturus mexicanus*	26
22	*Danaphos oculatus*	25
23	*Citharichthys sordidus*	24
24	*Diaphus* spp.	24
25	*Chauliodus macouni*	22
25	*Idiacanthus antrostomus*	22
27	*Trachurus symmetricus*	20
27	*Melamphaes lugubris*	20
29	*Sebastes paucispinis*	19
30	*Nansenia candida*	15
31	*Chiasmodon niger*	11
32	*Argyropelecus sladeni*	10
33	*Bathylagus pacificus*	9
33	*Sternoptyx* spp.	9
33	*Melamphaes parvus*	9
36	*Lyopsetta exilis*	8
36	*Coryphopterus nicholsii*	8
36	*Sebastes aurora*	8
39	*Tetragonurus cuvieri*	7
40	*Nannobrachium regale*	6
40	*Genyonemus lineatus*	6
40	*Cyclothone* spp.	6
43	*Microstoma* spp.	5
43	*Chilara taylori*	5
43	*Stomias atriventer*	5
43	*Argentina sialis*	5
43	*Parophrys vetulus*	5
43	*Microstomus pacificus*	5
43	*Sebastes levis*	5

TABLE 6. (cont.)

Rank	Taxon	Occurrences
50	*Sebastes goodei*	4
50	*Argyropelecus lychnus*	4
50	*Notoscopelus resplendens*	4
50	Disintegrated fish larvae	4
50	*Aristostomias scintillans*	4
55	*Scopelogadus bispinosus*	3
55	*Scopelosaurus* spp.	3
55	*Argyropelecus affinis*	3
55	*Icichthys lockingtoni*	3
55	*Argyropelecus hemigymnus*	3
55	*Sebastes diploproa*	3
55	*Poromitra crassiceps*	3
55	*Hypsoblennius jenkinsi*	3
55	*Scopelarchus analis*	3
55	*Cololabis saira*	3
55	*Bathylagus milleri*	3
66	*Rathbunella* spp.	2
66	*Benthalbella dentata*	2
66	*Electrona risso*	2
66	*Chromis punctipinnis*	2
66	*Anisotremus davidsoni*	2
66	*Rosenblattichthys volucris*	2
66	*Cyclothone pseudopallida*	2
66	*Howella* spp.	2
66	*Cyclothone acclinidens*	2
66	*Trachipterus altivelis*	2
66	*Sebastolobus* spp.	2
66	*Zaniolepis frenata*	2
66	*Melamphaes* spp.	2
66	*Brosmophycis marginata*	2
66	*Lepidogobius lepidus*	2
66	*Myctophum nitidulum*	2
66	*Scorpaenichthys marmoratus*	2
66	*Pleuronichthys verticalis*	2
84	*Glyptocephalus zachirus*	1
84	*Lepidopsetta bilineata*	1
84	*Paralichthys californicus*	1
84	*Scomber japonicus*	1
84	*Sphyraena argentea*	1
84	*Hypsoblennius gilberti*	1
84	*Leptocephalus holti*	1
84	*Ilypnus gilberti*	1
84	*Kali* spp.	1
84	*Ichthyococcus irregularis*	1
84	*Plectobranchus evides*	1
84	*Xeneretmus latifrons*	1
84	*Atherinopsis californiensis*	1
84	Atherinidae	1
84	*Zaniolepis latipinnis*	1
84	*Cyema atrum*	1
84	*Hexagrammos decagrammus*	1
84	*Ophiodon elongatus*	1

TABLE 6. (cont.)

Rank	Taxon	Occurrences
84	*Icelinus quadriseriatus*	1
84	*Loweina rara*	1
84	*Hygophum atratum*	1
84	*Arctozenus risso*	1
84	*Leptocottus armatus*	1
84	Stichaeidae	1
84	*Liparis fucensis*	1
84	*Nannobrachium bristori*	1
84	*Paralabrax* spp.	1
84	*Oxyjulis californica*	1
84	*Albatrossia pectoralis*	1
84	*Scopelarchus guentheri*	1
84	*Scopelarchus* spp.	1
84	*Semicossyphus pulcher*	1
84	*Tactostoma macropus*	1
84	*Gonichthys tenuiculus*	1
	Total	1627

TABLE 7. Pooled counts of fish larvae taken in Bongo net tows on CalCOFI cruises in 2003. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Sardinops sagax*	16784
2	*Stenobrachius leucopsarus*	7966
3	*Sebastes* spp.	4907
4	*Engraulis mordax*	3773
5	*Vinciguerria lucetia*	3004
6	*Bathylagus ochotensis*	1819
7	*Sebastes jordani*	1316
8	*Protomyctophum crockeri*	1125
9	*Merluccius productus*	1030
10	*Nannobrachium ritteri*	672
11	*Symbolophorus californiensis*	652
12	*Leuroglossus stilbius*	545
13	*Diogenichthys atlanticus*	503
14	*Triphoturus mexicanus*	474
15	*Tarletonbeania crenularis*	464
16	*Cyclothone signata*	428
17	*Bathylagus wesethi*	406
18	*Diaphus* spp.	324
19	*Nannobrachium* spp.	302
20	*Citharichthys stigmaeus*	269
21	*Ceratoscopelus townsendi*	265
22	*Trachurus symmetricus*	217
23	*Lestidiops ringens*	200
24	*Citharichthys sordidus*	195
25	*Danaphos oculatus*	184
26	*Nansenia candida*	174
27	*Idiacanthus antrostomus*	172
28	*Sebastes paucispinis*	171
29	*Parophrys vetulus*	154
30	*Chauliodus macouni*	146
31	*Genyonemus lineatus*	145
32	*Melamphaes lugubris*	141
33	*Lyopsetta exilis*	84
34	*Bathylagus pacificus*	67
35	*Chiasmodon niger*	65
36	*Argyropelecus sladeni*	61
37	*Sebastes aurora*	58
38	*Melamphaes parvus*	56
39	*Sternoptyx* spp.	49
39	*Cyclothone* spp.	49
41	*Nannobrachium regale*	47
42	*Tetragonurus cuvieri*	42
42	*Chilara taylori*	42
44	*Coryphopterus nicholsii*	39
44	*Sebastes diploproa*	39
44	*Microstomus pacificus*	39
47	Stichaeidae	38
47	*Argentina sialis*	38
49	*Lepidogobius lepidus*	32

TABLE 7. (cont.)

Rank	Taxon	Count
50	*Scomber japonicus*	27
50	*Sebastes levis*	27
52	*Anisotremus davidsoni*	25
52	*Microstoma* spp.	25
54	Disintegrated fish larvae	24
55	*Stomias atriventer*	23
55	*Argyropelecus lychnus*	23
55	*Notoscopelus resplendens*	23
58	*Hypsoblennius jenkinsi*	21
58	*Aristostomias scintillans*	21
60	*Icichthys lockingtoni*	20
61	*Argyropelecus hemigymnus*	19
62	*Brosmophycis marginata*	18
63	*Benthalbella dentata*	15
63	*Sebastes goodei*	15
65	*Argyropelecus affinis*	14
65	*Bathylagus milleri*	14
65	*Scopelogadus bispinosus*	14
68	*Cololabis saira*	13
68	*Scorpaenichthys marmoratus*	13
68	*Scopelarchus analis*	13
68	*Rosenblattichthys volucris*	13
68	*Poromitra crassiceps*	13
73	*Scopelosaurus* spp.	12
73	*Cyclothone pseudopallida*	12
73	*Rathbunella* spp.	12
76	*Zaniolepis frenata*	11
77	*Melamphaes* spp.	10
77	*Howella* spp.	10
77	*Ichthyococcus irregularis*	10
77	*Cyclothone acclinidens*	10
77	*Atherinopsis californiensis*	10
82	*Trachipterus altivelis*	9
82	*Paralabrax* spp.	9
82	*Icelinus quadriseriatus*	9
82	*Hypsoblennius gilberti*	9
82	*Plectobranchus evides*	9
82	*Sebastolobus* spp.	9
82	*Chromis punctipinnis*	9
90	*Pleuronichthys verticalis*	8
90	*Myctophum nitidulum*	8
90	*Glyptocephalus zachirus*	8
90	*Electrona risso*	8
94	*Scopelarchus* spp.	7
95	*Semicossyphus pulcher*	5
95	*Albatrossia pectoralis*	5
95	*Kali* spp.	5
95	*Xeneretmus latifrons*	5
95	*Zaniolepis latipinnis*	5
95	*Cyema atrum*	5

TABLE 7. (cont.)

Rank	Taxon	Count
95	*Hexagrammos decagrammus*	5
95	*Tactostoma macropus*	5
95	*Sphyraena argentea*	5
95	Atherinidae	5
95	*Leptocephalus holti*	5
95	*Scopelarchus guentheri*	5
95	*Arctozenus risso*	5
95	*Loweina rara*	5
95	*Hygophum atratum*	5
110	*Oxyjulis californica*	4
110	*Nannobrachium bristori*	4
110	*Liparis fucensis*	4
110	*Ilypnus gilberti*	4
110	*Gonichthys tenuiculus*	4
110	*Ophiodon elongatus*	4
116	*Leptocottus armatus*	3
116	*Paralichthys californicus*	3
116	*Lepidopsetta bilineata*	3
	Total	50512

TABLE 8. Number of fish larvae taken in Bongo net tows at stations occupied on CalCOFI cruises in 2003. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Cyema atrum

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 70.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-

Leptocephalus holti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 80.0	-	0.0	-	4.6	-	-	-	-	-	-	-	-

Sardinops sagax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 70.0	-	0.0	-	9.1	-	-	-	-	-	-	-	-
66.7 50.0	-	37.5	-	0.0	-	-	-	-	-	-	-	-
66.7 55.0	-	0.0	-	27.9	-	-	-	-	-	-	-	-
66.7 70.0	-	0.0	-	119.8	-	-	-	-	-	-	-	-
66.7 80.0	-	0.0	-	4.6	-	-	-	-	-	-	-	-
70.0 70.0	-	4.2	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	0.0	-	3118.8	-	-	-	-	-	-	-	-
73.3 55.0	-	0.0	-	41.1	-	-	-	-	-	-	-	-
73.3 60.0	-	0.0	-	28.9	-	-	-	-	-	-	-	-
73.3 70.0	-	0.0	-	40.8	-	-	-	-	-	-	-	-
73.3 80.0	-	0.0	-	1417.1	-	-	-	-	-	-	-	-
76.7 55.0	-	0.0	-	16.8	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.0	-	180.8	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.0	-	304.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	15.4	-	-	0.0	-	-	-	0.0	-
80.0 55.0	-	-	-	30.2	-	-	0.0	-	-	0.0	-	-
80.0 60.0	-	0.0	-	370.6	-	-	0.0	-	-	0.0	-	-
80.0 70.0	-	0.0	-	107.9	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	1307.7	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	414.5	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3 55.0	-	0.0	-	16.4	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	0.0	-	71.5	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	0.0	-	57.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	946.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Sardinops sagax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	307.4	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	4.8	-	-	-	-	-	0.0	-	-
86.7 35.0	-	9.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	24.9	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	229.3	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	163.0	-	-	0.0	-	-	-	-	-
86.7 70.0	-	0.0	-	19.6	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.0	-	65.3	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	752.4	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	123.3	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	13.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	7.8	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	1662.9	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	839.0	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	1885.1	-	-	8.1	-	-	0.0	-	-
90.0 80.0	-	0.0	-	33.8	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	13.9	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	12.6	-	-	0.0	-	-	0.0	-	-
93.3 30.0	0.0	-	-	20.2	-	-	0.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	17.7	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	48.4	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	240.9	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	1242.2	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	338.8	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	4.0	-	-	0.0	-	-	0.0	-	-

Engraulis mordax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	17.9	-	0.0	-	-	-	-	-	-	-	-
63.3 52.0	-	21.3	-	-	-	-	-	-	-	-	-	-
70.0 55.0	-	102.9	-	0.0	-	-	-	-	-	-	-	-
70.0 70.0	-	25.3	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	128.7	-	0.0	-	-	-	-	-	-	-	-
73.3 60.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	99.6	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	45.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	12.2	-	0.0	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	-	76.1	-	0.0	-	-	0.0	-	-	0.0	-	-
81.8	46.9	-	105.4	-	0.0	-	-	0.0	-	-	8.7	-	-
83.3	40.6	-	9.8	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	109.2	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	8.3	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	33.0	-	58.0	-	26.7	-	-	8.0	-	-	0.0	-	-
86.7	35.0	-	145.1	-	17.0	-	-	17.7	-	-	9.2	-	-
86.7	40.0	-	49.1	-	58.6	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	28.0	-	0.0	-	24.6	-	-	54.4	-	-	0.0	-	-
90.0	30.0	-	9.2	-	19.2	-	-	0.0	-	-	130.0	-	-
90.0	35.0	-	124.7	-	25.0	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	244.5	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0	70.0	-	0.0	-	0.0	-	-	24.4	-	-	0.0	-	-
93.3	26.7	4.4	-	-	111.8	-	-	39.8	-	-	12.4	-	-
93.3	28.0	13.8	-	-	53.0	-	-	4.3	-	-	0.0	-	-
93.3	30.0	0.0	-	-	1058.6	-	-	0.0	-	-	0.0	-	-
93.3	35.0	73.1	-	-	17.7	-	-	0.0	-	-	66.4	-	-
93.3	40.0	9.1	-	-	440.5	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	24.2	-	-	0.0	-	-	0.0	-	-
93.3	80.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-

Argentina sialis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
90.0	30.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-
90.0	35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3	35.0	0.0	-	-	8.8	-	-	0.0	-	-	0.0	-	-

Microstoma spp.

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	80.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
76.7	70.0	-	0.0	-	7.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
93.3	90.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Nansenia candida

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	90.0	-	0.0	-	9.0	-	-	-	-	-	-	-	-
70.0	80.0	-	0.0	-	21.5	-	-	-	-	-	-	-	-
70.0	90.0	-	4.6	-	4.5	-	-	-	-	-	-	-	-
73.3	70.0	-	0.0	-	10.2	-	-	-	-	-	-	-	-
73.3	90.0	-	4.5	-	0.0	-	-	-	-	-	-	-	-
76.7	90.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
80.0	90.0	-	0.0	-	18.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	-	0.0	-	32.5	-	-	0.0	-	-	0.0	-	-
83.3	90.0	-	0.0	-	9.1	-	-	0.0	-	-	0.0	-	-
83.3	100.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
86.7	80.0	-	0.0	-	8.7	-	-	0.0	-	-	0.0	-	-
86.7	90.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0	53.0	-	0.0	-	27.1	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-

Bathylagus milleri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	-	3.6	-	0.0	-	-	-	-	-	-	-	-
73.3	55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-
76.7	80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	-	21.4	-	53.3	-	-	-	-	-	-	-	-
60.0	70.0	-	29.7	-	45.5	-	-	-	-	-	-	-	-
60.0	80.0	-	8.4	-	16.0	-	-	-	-	-	-	-	-
60.0	90.0	-	54.9	-	0.0	-	-	-	-	-	-	-	-
60.0	100.0	-	8.8	-	-	-	-	-	-	-	-	-	-
63.3	52.0	-	8.5	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	9.4	-	9.0	-	-	-	-	-	-	-	-
63.3	60.0	-	0.0	-	17.8	-	-	-	-	-	-	-	-
63.3	70.0	-	0.0	-	18.4	-	-	-	-	-	-	-	-
63.3	80.0	-	13.0	-	8.9	-	-	-	-	-	-	-	-
63.3	90.0	-	8.0	-	0.0	-	-	-	-	-	-	-	-
63.3	100.0	-	18.4	-	-	-	-	-	-	-	-	-	-
66.7	50.0	-	16.7	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	-	28.0	-	27.9	-	-	-	-	-	-	-	-
66.7	70.0	-	9.3	-	36.9	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Station		*Bathylagus ochotensis* (cont.)											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	80.0	-	50.6	-	0.0	-	-	-	-	-	-	-	-
70.0	55.0	-	17.1	-	19.5	-	-	-	-	-	-	-	-
70.0	70.0	-	37.9	-	-	-	-	-	-	-	-	-	-
70.0	80.0	-	35.1	-	64.4	-	-	-	-	-	-	-	-
70.0	90.0	-	0.0	-	4.5	-	-	-	-	-	-	-	-
73.3	50.0	-	0.0	-	18.1	-	-	-	-	-	-	-	-
73.3	55.0	-	0.0	-	20.5	-	-	-	-	-	-	-	-
73.3	60.0	-	14.0	-	67.5	-	-	-	-	-	-	-	-
73.3	70.0	-	60.7	-	10.2	-	-	-	-	-	-	-	-
73.3	80.0	-	17.7	-	27.3	-	-	-	-	-	-	-	-
73.3	90.0	-	13.6	-	0.0	-	-	-	-	-	-	-	-
73.3	100.0	-	8.8	-	0.0	-	-	-	-	-	-	-	-
76.7	60.0	-	8.4	-	31.6	-	-	0.0	-	-	-	0.0	-
76.7	70.0	-	35.4	-	15.6	-	-	0.0	-	-	-	0.0	-
76.7	80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	8.2	-
76.7	90.0	-	17.2	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	-	-	20.1	-	-	0.0	-	-	0.0	-	-
80.0	60.0	-	0.0	-	30.9	-	-	0.0	-	-	0.0	-	-
80.0	70.0	-	4.2	-	8.3	-	-	0.0	-	-	-	0.0	-
80.0	80.0	-	0.0	-	58.7	-	-	0.0	-	-	-	8.9	-
80.0	90.0	-	4.5	-	36.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	0.0	-	8.0	-	-	0.0	-	-	0.0	-	-
83.3	70.0	-	4.7	-	20.4	-	-	0.0	-	-	0.0	-	-
83.3	80.0	-	4.5	-	32.5	-	-	0.0	-	-	0.0	-	-
83.3	90.0	-	0.0	-	50.3	-	-	0.0	-	-	0.0	-	-
83.3	100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	110.0	-	4.8	-	4.8	-	-	-	-	-	0.0	-	-
86.7	40.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	4.9	-	9.7	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	8.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	9.1	-	7.9	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	9.6	-	56.7	-	-	0.0	-	-	-	-	-
86.7	70.0	-	17.8	-	0.0	-	-	8.4	-	-	0.0	-	-

TABLE 8. (cont.)

Bathylagus ochotensis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	25.1	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	16.6	-	27.1	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	14.0	-	35.0	-	-	9.7	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	9.3	-	-	4.4	-	-	0.0	-	-
90.0 100.0	-	0.0	-	21.4	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 35.0	4.6	-	-	8.8	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3 50.0	4.8	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	13.7	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	7.7	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	26.4	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
93.3 100.0	-	0.0	-	4.0	-	-	0.0	-	-	0.0	-	-

Bathylagus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 70.0	-	3.7	-	0.0	-	-	-	-	-	-	-	-
60.0 90.0	-	18.3	-	0.0	-	-	-	-	-	-	-	-
66.7 50.0	-	0.0	-	9.3	-	-	-	-	-	-	-	-
66.7 80.0	-	8.4	-	0.0	-	-	-	-	-	-	-	-
70.0 90.0	-	0.0	-	4.5	-	-	-	-	-	-	-	-
73.3 55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-
73.3 70.0	-	0.0	-	10.2	-	-	-	-	-	-	-	-
83.3 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-

Bathylagus wesethi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 100.0	-	0.0	-	4.2	-	-	-	-	-	-	-	-
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.2	-
76.7 90.0	-	0.0	-	4.5	-	-	4.6	-	-	-	0.0	-

TABLE 8. (cont.)

Bathylagus wesethi (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
83.3 100.0	-	0.0	-	4.3	-	-	18.4	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	14.2	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.3	-	-	13.7	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	4.5	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	12.4	-	-
90.0 110.0	-	0.0	-	0.0	-	-	91.2	-	-	0.0	-	-
90.0 120.0	-	0.0	-	0.0	-	-	-	-	-	15.9	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.5	-	-
93.3 60.0	0.0	-	-	0.0	-	-	41.4	-	-	0.0	-	-
93.3 70.0	-	9.4	-	0.0	-	-	8.8	-	-	0.0	-	-
93.3 90.0	-	0.0	-	3.6	-	-	14.7	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	22.9	-	-	0.0	-	-
93.3 110.0	-	0.0	-	4.2	-	-	55.1	-	-	4.1	-	-
93.3 120.0	-	4.6	-	4.3	-	-	-	-	-	0.0	-	-

Leuroglossus stilbius

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	3.6	-	0.0	-	-	-	-	-	-	-	-
66.7 50.0	-	8.3	-	0.0	-	-	-	-	-	-	-	-
70.0 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-
70.0 55.0	-	8.6	-	0.0	-	-	-	-	-	-	-	-
70.0 60.0	-	8.6	-	-	-	-	-	-	-	-	-	-
73.3 55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-
73.3 60.0	-	4.7	-	38.6	-	-	-	-	-	-	-	-
73.3 80.0	-	8.9	-	0.0	-	-	-	-	-	-	-	-
76.7 60.0	-	0.0	-	4.5	-	-	0.0	-	-	-	9.2	-
76.7 70.0	-	4.4	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	16.3	-
80.0 51.0	-	6.9	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0 55.0	-	-	-	0.0	-	-	0.0	-	-	4.2	-	-
80.0 60.0	-	4.4	-	7.7	-	-	0.0	-	-	0.0	-	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.4	-
80.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Leuroglossus stilbius (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	9.2	-	8.0	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	9.1	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	23.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	93.3	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	8.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	7.1	-	-	0.0	-	-	-	-	-
86.7 90.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	18.5	-	16.6	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	34.2	-	7.8	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	16.6	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0 60.0	-	23.4	-	8.7	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
93.3 35.0	4.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	0.0	-	-	8.3	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	15.4	-	-	0.0	-	-	0.0	-	-

***Cyclothone* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	8.3	-	-
83.3 90.0	-	13.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0 120.0	-	4.3	-	0.0	-	-	-	-	-	0.0	-	-

Cyclothone acclinidens

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

TABLE 8. (cont.)

Cyclothone pseudopallida

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	7.6	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	4.3	-	-

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 70.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-
63.3 90.0	-	0.0	-	9.0	-	-	-	-	-	-	-	-
66.7 90.0	-	0.0	-	4.8	-	-	-	-	-	-	-	-
70.0 90.0	-	0.0	-	4.5	-	-	-	-	-	-	-	-
70.0 100.0	-	4.5	-	-	-	-	-	-	-	-	-	-
73.3 80.0	-	8.9	-	0.0	-	-	-	-	-	-	-	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 90.0	-	4.5	-	0.0	-	-	9.9	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.0	-
83.3 90.0	-	13.5	-	0.0	-	-	14.4	-	-	0.0	-	-
83.3 100.0	-	13.9	-	4.3	-	-	4.6	-	-	4.8	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	25.8	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	17.8	-	-
86.7 90.0	-	0.0	-	0.0	-	-	0.0	-	-	9.4	-	-
86.7 100.0	-	18.0	-	8.5	-	-	0.0	-	-	16.5	-	-
86.7 110.0	-	9.3	-	4.1	-	-	-	-	-	40.8	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0 53.0	-	0.0	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	8.7	-	-
90.0 90.0	-	0.0	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0 100.0	-	8.9	-	0.0	-	-	5.0	-	-	0.0	-	-
90.0 110.0	-	4.5	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0 120.0	-	0.0	-	4.2	-	-	-	-	-	4.0	-	-
93.3 55.0	13.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	18.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	7.1	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	4.0	-	0.0	-	-	9.1	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	9.2	-	-	0.0	-	-
93.3 120.0	-	0.0	-	4.3	-	-	-	-	-	22.8	-	-

Argyropelecus affinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-

TABLE 8. (cont.)

Argyropelecus affinis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 50.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-

Argyropelecus hemigymnus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.7	-
83.3 100.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-

Argyropelecus lychnus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	4.8	-	-	-	-	-	0.0	-	-
86.7 100.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-

Argyropelecus sladeni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	-	-	-	0.0	-	-	0.0	-	-	4.2	-	-
83.3 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	4.8	-	4.8	-	-	-	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	-	-	-	4.5	-	-
90.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.5	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	9.2	-	-
93.3 110.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Danaphos oculatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 70.0	-	0.0	-	9.2	-	-	-	-	-	-	-	-
73.3 80.0	-	0.0	-	9.1	-	-	-	-	-	-	-	-
76.7 60.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.9	-
83.3 70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
83.3 90.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
83.3 100.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	4.8	-	-	-	-	-	8.6	-	-
86.7 45.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.0	-	-	9.0	-	-	0.0	-	-

TABLE 8. (cont.)

Danaphos oculatus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
86.7 100.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	4.5	-	0.0	-	-	8.6	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	9.7	-	-
93.3 35.0	0.0	-	-	0.0	-	-	8.1	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	8.6	-	-	0.0	-	-
93.3 50.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	4.0	-	-	0.0	-	-	0.0	-	-

Sternoptyx spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.3	-
81.8 46.9	-	0.0	-	0.0	-	-	0.0	-	-	4.4	-	-
83.3 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
90.0 120.0	-	0.0	-	4.2	-	-	-	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 120.0	-	0.0	-	4.3	-	-	-	-	-	0.0	-	-

Ichthyococcus irregularis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	9.7	-	-

Vinciguerria lucetia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 100.0	-	0.0	-	0.0	-	-	8.9	-	-	-	14.0	-
83.3 90.0	-	18.0	-	0.0	-	-	9.6	-	-	13.5	-	-
83.3 100.0	-	13.9	-	0.0	-	-	146.9	-	-	38.2	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	180.6	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	17.8	-	-
86.7 90.0	-	0.0	-	0.0	-	-	18.9	-	-	42.2	-	-

TABLE 8. (cont.)

Vinciguerria lucetia (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	31.5	-	0.0	-	-	45.5	-	-	8.3	-	-
86.7 110.0	-	14.0	-	0.0	-	-	-	-	-	498.3	-	-
90.0 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.0	-	-	4.4	-	-	4.7	-	-
90.0 100.0	-	4.4	-	0.0	-	-	74.7	-	-	4.1	-	-
90.0 110.0	-	0.0	-	4.2	-	-	501.6	-	-	26.5	-	-
90.0 120.0	-	13.0	-	4.2	-	-	-	-	-	39.8	-	-
93.3 55.0	26.9	-	-	0.0	-	-	0.0	-	-	7.8	-	-
93.3 60.0	37.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	28.1	-	0.0	-	-	17.5	-	-	0.0	-	-
93.3 90.0	-	0.0	-	3.6	-	-	24.5	-	-	4.1	-	-
93.3 100.0	-	15.9	-	0.0	-	-	379.3	-	-	0.0	-	-
93.3 110.0	-	4.4	-	4.2	-	-	454.4	-	-	12.4	-	-
93.3 120.0	-	0.0	-	29.8	-	-	-	-	-	141.4	-	-

Chauliodus macouni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	3.6	-	0.0	-	-	-	-	-	-	-	-
60.0 90.0	-	9.2	-	4.5	-	-	-	-	-	-	-	-
63.3 70.0	-	9.5	-	0.0	-	-	-	-	-	-	-	-
63.3 100.0	-	4.6	-	-	-	-	-	-	-	-	-	-
66.7 55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
66.7 80.0	-	8.4	-	0.0	-	-	-	-	-	-	-	-
70.0 80.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
73.3 80.0	-	8.9	-	9.1	-	-	-	-	-	-	-	-
76.7 70.0	-	4.4	-	0.0	-	-	0.0	-	-	-	9.7	-
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	7.6	-
83.3 60.0	-	0.0	-	8.0	-	-	9.6	-	-	8.2	-	-
83.3 90.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
86.7 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	8.3	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.6	-	-

Stomias atriventer

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Stomias atriventer (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	4.5	-	0.0	-	-	0.0	-	-	4.1	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-
93.3 110.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-

Tactostoma macropus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-

Aristostomias scintillans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 100.0	-	0.0	-	4.2	-	-	-	-	-	-	-	-
83.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.5	-	-
90.0 120.0	-	0.0	-	8.5	-	-	-	-	-	0.0	-	-
93.3 120.0	-	4.6	-	0.0	-	-	-	-	-	0.0	-	-

Idiacanthus antrostomus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	4.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.6	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.0	-
83.3 70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
83.3 90.0	-	0.0	-	0.0	-	-	4.8	-	-	4.5	-	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	8.6	-	-
86.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	9.1	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	8.9	-	-
86.7 90.0	-	0.0	-	0.0	-	-	9.5	-	-	9.4	-	-
86.7 100.0	-	13.5	-	0.0	-	-	0.0	-	-	4.1	-	-
86.7 110.0	-	0.0	-	0.0	-	-	-	-	-	9.1	-	-
90.0 53.0	-	0.0	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.5	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
90.0 110.0	-	4.5	-	0.0	-	-	9.1	-	-	0.0	-	-
93.3 55.0	0.0	-	-	0.0	-	-	0.0	-	-	7.8	-	-
93.3 70.0	-	0.0	-	0.0	-	-	0.0	-	-	7.1	-	-

Benthalbella dentata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-
93.3 50.0	9.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Rosenblattichthys volucris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	8.3	-	-

***Scopelarchus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 70.0	-	0.0	-	0.0	-	-	0.0	-	-	7.1	-	-

Scopelarchus analis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	4.3	-	-
93.3 55.0	4.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.6	-	0.0	-	-	-	-	-	0.0	-	-

Scopelarchus guentheri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	0.0	-	0.0	-	-	-	-	-	4.5	-	-

***Scopelosaurus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 90.0	-	0.0	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0 110.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	0.0	-	4.3	-	-	-	-	-	0.0	-	-

Arctozenus risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	-	0.0	-	4.6	-	-	0.0	-	-	0.0	-	-

Lestidiops ringens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 70.0	-	0.0	-	13.8	-	-	-	-	-	-	-	-
66.7 55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
70.0 80.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
70.0 90.0	-	4.6	-	4.5	-	-	-	-	-	-	-	-
76.7 90.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
83.3 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	4.6	-	-	4.8	-	-	0.0	-	-
83.3 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 63.0	-	-	-	-	-	-	-	-	-	9.3	-	-
86.7 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	4.1	-	-	-	-	-	4.5	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-

TABLE 8. (cont.)

Lestidiops ringens (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 53.0	-	8.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.5	-	-
90.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
90.0 100.0	-	0.0	-	4.3	-	-	0.0	-	-	8.2	-	-
90.0 110.0	-	0.0	-	0.0	-	-	9.1	-	-	4.4	-	-
90.0 120.0	-	4.3	-	0.0	-	-	-	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.4	-	-
93.3 50.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	0.0	-	-	8.3	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.6	-	-
93.3 110.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 70.0	-	0.0	-	4.6	-	-	-	-	-	-	-	-
66.7 90.0	-	0.0	-	9.5	-	-	-	-	-	-	-	-
70.0 90.0	-	0.0	-	40.9	-	-	-	-	-	-	-	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.7	-
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
83.3 90.0	-	0.0	-	0.0	-	-	4.8	-	-	9.0	-	-
83.3 100.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	4.8	-	0.0	-	-	-	-	-	8.6	-	-
86.7 70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.7	-	-
86.7 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
86.7 100.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	13.6	-	-
90.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
90.0 100.0	-	0.0	-	0.0	-	-	10.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	22.8	-	-	4.4	-	-
90.0 120.0	-	4.3	-	0.0	-	-	-	-	-	4.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	0.0	-	-	7.1	-	-
93.3 90.0	-	4.4	-	0.0	-	-	0.0	-	-	4.1	-	-

TABLE 8. (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	-	-	9.1	-	-	0.0	-	-
93.3	110.0	-	0.0	-	0.0	-	-	36.7	-	-	0.0	-	-
93.3	120.0	-	0.0	-	0.0	-	-	-	-	-	9.1	-	-

***Diaphus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	90.0	-	0.0	-	18.0	-	-	-	-	-	-	-	-
66.7	80.0	-	0.0	-	18.4	-	-	-	-	-	-	-	-
73.3	60.0	-	0.0	-	9.6	-	-	-	-	-	-	-	-
76.7	80.0	-	0.0	-	5.1	-	-	9.0	-	-	-	0.0	-
76.7	90.0	-	0.0	-	0.0	-	-	4.6	-	-	-	0.0	-
83.3	60.0	-	0.0	-	0.0	-	-	28.9	-	-	0.0	-	-
83.3	70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
83.3	80.0	-	0.0	-	0.0	-	-	10.6	-	-	0.0	-	-
83.3	90.0	-	4.5	-	0.0	-	-	4.8	-	-	0.0	-	-
86.7	60.0	-	0.0	-	0.0	-	-	18.2	-	-	-	-	-
86.7	70.0	-	0.0	-	0.0	-	-	58.9	-	-	0.0	-	-
86.7	80.0	-	0.0	-	0.0	-	-	0.0	-	-	8.9	-	-
86.7	90.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7	100.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0	35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0	80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
90.0	110.0	-	0.0	-	0.0	-	-	0.0	-	-	8.8	-	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3	30.0	0.0	-	-	0.0	-	-	0.0	-	-	19.3	-	-
93.3	35.0	0.0	-	-	0.0	-	-	0.0	-	-	37.9	-	-
93.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	7.8	-	-
93.3	60.0	0.0	-	-	0.0	-	-	8.3	-	-	0.0	-	-

***Nannobrachium* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	70.0	-	0.0	-	9.2	-	-	-	-	-	-	-	-
63.3	80.0	-	8.6	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	-	0.0	-	4.3	-	-	-	-	-	-	-	-
70.0	90.0	-	9.1	-	0.0	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Nannobrachium **spp.** (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-
73.3 60.0	-	4.7	-	9.6	-	-	-	-	-	-	-	-
73.3 90.0	-	0.0	-	4.7	-	-	-	-	-	-	-	-
76.7 60.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	8.3	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.7	-
83.3 90.0	-	36.0	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	14.3	-	0.0	-	-	-	-	-	0.0	-	-
86.7 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	13.7	-	0.0	-	-	0.0	-	-	4.7	-	-
86.7 100.0	-	9.0	-	0.0	-	-	9.1	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-
90.0 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0 45.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	13.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	4.7	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	13.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	4.5	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 50.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	4.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	8.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	4.0	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	0.0	-	8.5	-	-	-	-	-	0.0	-	-

Nannobrachium bristori

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 120.0	-	4.3	-	0.0	-	-	-	-	-	0.0	-	-

Nannobrachium regale

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 70.0	-	0.0	-	10.2	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Nannobrachium regale (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	-	0.0	-	0.0	-	-	9.3	-	-	-	0.0	-
86.7	100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
90.0	80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
93.3	80.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-

Nannobrachium ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	90.0	-	0.0	-	13.4	-	-	-	-	-	-	-	-
63.3	70.0	-	0.0	-	4.6	-	-	-	-	-	-	-	-
63.3	80.0	-	4.3	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	-	41.7	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-
66.7	70.0	-	9.3	-	0.0	-	-	-	-	-	-	-	-
66.7	80.0	-	0.0	-	23.0	-	-	-	-	-	-	-	-
70.0	90.0	-	18.2	-	54.5	-	-	-	-	-	-	-	-
73.3	70.0	-	8.7	-	0.0	-	-	-	-	-	-	-	-
73.3	100.0	-	4.4	-	4.2	-	-	-	-	-	-	-	-
76.7	80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-
76.7	90.0	-	0.0	-	0.0	-	-	13.9	-	-	-	0.0	-
76.7	100.0	-	0.0	-	0.0	-	-	4.6	-	-	-	0.0	-
80.0	90.0	-	4.5	-	9.0	-	-	0.0	-	-	-	7.6	-
80.0	100.0	-	9.4	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	42.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	80.0	-	0.0	-	16.3	-	-	10.6	-	-	0.0	-	-
83.3	90.0	-	4.5	-	9.1	-	-	0.0	-	-	0.0	-	-
83.3	100.0	-	18.5	-	21.4	-	-	0.0	-	-	0.0	-	-
83.3	110.0	-	19.0	-	0.0	-	-	-	-	-	0.0	-	-
86.7	60.0	-	0.0	-	0.0	-	-	9.1	-	-	-	-	-
86.7	70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7	90.0	-	9.1	-	8.4	-	-	0.0	-	-	4.7	-	-
86.7	100.0	-	18.0	-	8.5	-	-	0.0	-	-	8.3	-	-
86.7	110.0	-	14.0	-	0.0	-	-	-	-	-	0.0	-	-
90.0	35.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	9.8	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	14.0	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	53.0	-	16.6	-	0.0	-	-	0.0	-	-	4.2	-	-

TABLE 8. (cont.)

Nannobrachium ritteri (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	8.2	-	-
90.0 110.0	-	4.5	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3 28.0	4.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	0.0	-	-	20.2	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.4	-	-
93.3 50.0	0.0	-	-	7.3	-	-	0.0	-	-	0.0	-	-
93.3 55.0	26.9	-	-	4.6	-	-	0.0	-	-	0.0	-	-
93.3 60.0	47.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	9.4	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 110.0	-	13.1	-	0.0	-	-	0.0	-	-	0.0	-	-

Notoscopelus resplendens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	0.0	-	-	9.2	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 60.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
93.3 120.0	-	0.0	-	0.0	-	-	-	-	-	4.6	-	-

Stenobrachius leucopsarus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.1	-	-	-	-	-	-	-	-	-	-
60.0 55.0	-	-	-	28.2	-	-	-	-	-	-	-	-
60.0 60.0	-	64.3	-	0.0	-	-	-	-	-	-	-	-
60.0 70.0	-	59.4	-	36.4	-	-	-	-	-	-	-	-
60.0 80.0	-	16.9	-	24.0	-	-	-	-	-	-	-	-
60.0 90.0	-	146.5	-	26.8	-	-	-	-	-	-	-	-
60.0 100.0	-	30.7	-	-	-	-	-	-	-	-	-	-
63.3 52.0	-	38.3	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	94.2	-	0.0	-	-	-	-	-	-	-	-
63.3 60.0	-	8.4	-	0.0	-	-	-	-	-	-	-	-
63.3 70.0	-	14.3	-	13.8	-	-	-	-	-	-	-	-
63.3 80.0	-	13.0	-	53.5	-	-	-	-	-	-	-	-
63.3 90.0	-	103.6	-	0.0	-	-	-	-	-	-	-	-
63.3 100.0	-	64.5	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	2410.3	-	0.0	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 55.0	-	247.5	-	27.9	-	-	-	-	-	-	-	-
66.7 60.0	-	62.8	-	97.6	-	-	-	-	-	-	-	-
66.7 70.0	-	28.0	-	18.4	-	-	-	-	-	-	-	-
66.7 80.0	-	84.4	-	27.6	-	-	-	-	-	-	-	-
66.7 90.0	-	0.0	-	4.8	-	-	-	-	-	-	-	-
66.7 100.0	-	4.8	-	-	-	-	-	-	-	-	-	-
70.0 55.0	-	137.1	-	0.0	-	-	-	-	-	-	-	-
70.0 60.0	-	17.2	-	-	-	-	-	-	-	-	-	-
70.0 70.0	-	189.5	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	26.3	-	98.7	-	-	-	-	-	-	-	-
70.0 90.0	-	18.2	-	0.0	-	-	-	-	-	-	-	-
73.3 50.0	-	18.8	-	0.0	-	-	-	-	-	-	-	-
73.3 55.0	-	73.8	-	20.5	-	-	-	-	-	-	-	-
73.3 60.0	-	83.9	-	0.0	-	-	-	-	-	-	-	-
73.3 70.0	-	52.0	-	20.4	-	-	-	-	-	-	-	-
73.3 80.0	-	398.5	-	81.8	-	-	-	-	-	-	-	-
73.3 90.0	-	22.7	-	4.7	-	-	-	-	-	-	-	-
73.3 100.0	-	26.5	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	8.3	-	7.9	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	9.2	-	9.3	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	4.1	-	42.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	25.3	-	31.6	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	115.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	17.7	-	5.1	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	17.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	13.8	-	7.2	-	-	0.0	-	-	0.0	-	-
80.0 55.0	-	-	-	40.2	-	-	0.0	-	-	0.0	-	-
80.0 60.0	-	0.0	-	30.9	-	-	8.4	-	-	0.0	-	-
80.0 70.0	-	16.6	-	24.9	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	8.3	-	100.6	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	31.2	-	54.1	-	-	9.9	-	-	-	0.0	-
80.0 100.0	-	9.4	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	50.2	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 42.0	-	72.8	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 51.0	-	58.1	-	9.3	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 55.0	-	55.0	-	16.4	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	27.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	9.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	4.5	-	16.3	-	-	10.6	-	-	0.0	-	-
83.3 90.0	-	0.0	-	45.7	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	0.0	-	21.4	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	187.2	-	34.1	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	63.8	-	19.5	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	34.1	-	48.3	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	64.0	-	99.6	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	41.0	-	7.9	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	42.5	-	-	0.0	-	-	-	-	-
86.7 70.0	-	57.9	-	19.6	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	4.6	-	62.7	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.3	-	-	4.6	-	-	0.0	-	-
90.0 30.0	-	13.8	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	9.2	-	91.5	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	73.4	-	31.0	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	9.3	-	28.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	8.3	-	18.1	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	18.7	-	26.2	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	37.5	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	4.5	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 28.0	50.5	-	-	30.3	-	-	0.0	-	-	0.0	-	-
93.3 30.0	141.5	-	-	60.5	-	-	0.0	-	-	0.0	-	-
93.3 35.0	96.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	95.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3 50.0	4.8	-	-	7.3	-	-	0.0	-	-	0.0	-	-
93.3 55.0	4.5	-	-	22.8	-	-	0.0	-	-	0.0	-	-
93.3 60.0	4.7	-	-	7.7	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	9.4	-	0.0	-	-	8.8	-	-	0.0	-	-
93.3 90.0	-	0.0	-	10.7	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	-	0.0	-	4.0	-	-	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	-	0.0	-	-	0.0	-	-	-	9.2	-
80.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	9.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	59.7	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	0.0	-	-	9.2	-	-
86.7 80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
86.7 100.0	-	13.5	-	0.0	-	-	9.1	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	14.4	-	-
90.0 53.0	-	0.0	-	9.0	-	-	0.0	-	-	8.4	-	-
90.0 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
90.0 110.0	-	0.0	-	0.0	-	-	45.6	-	-	4.4	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	20.7	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	39.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.0	-	-	19.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.0	-	-	8.5	-	-
93.3 50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
93.3 90.0	-	0.0	-	3.6	-	-	0.0	-	-	4.1	-	-
93.3 100.0	-	0.0	-	0.0	-	-	109.7	-	-	0.0	-	-
93.3 110.0	-	0.0	-	12.7	-	-	32.1	-	-	0.0	-	-

Diogenichthys atlanticus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 70.0	-	4.8	-	4.6	-	-	-	-	-	-	-	-
63.3 90.0	-	0.0	-	18.0	-	-	-	-	-	-	-	-
66.7 55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
70.0 55.0	-	8.6	-	0.0	-	-	-	-	-	-	-	-
70.0 70.0	-	4.2	-	-	-	-	-	-	-	-	-	-
70.0 90.0	-	0.0	-	18.2	-	-	-	-	-	-	-	-
70.0 100.0	-	4.5	-	-	-	-	-	-	-	-	-	-
73.3 100.0	-	0.0	-	4.2	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Diogenichthys atlanticus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	4.3	-	9.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	4.7	-	-	0.0	-	-	-	4.9	-
80.0 80.0	-	4.1	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 90.0	-	40.5	-	4.6	-	-	9.6	-	-	4.5	-	-
83.3 100.0	-	18.5	-	4.3	-	-	0.0	-	-	23.9	-	-
83.3 110.0	-	14.3	-	0.0	-	-	-	-	-	4.3	-	-
86.7 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	9.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	9.3	-	12.3	-	-	-	-	-	49.8	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0 45.0	-	14.0	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	13.3	-	0.0	-	-	0.0	-	-	4.1	-	-
90.0 110.0	-	4.5	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0 120.0	-	4.3	-	4.2	-	-	-	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.5	-	-
93.3 50.0	4.8	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 55.0	22.4	-	-	4.6	-	-	0.0	-	-	7.8	-	-
93.3 60.0	19.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	4.4	-	3.6	-	-	0.0	-	-	4.1	-	-
93.3 100.0	-	11.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.6	-	4.3	-	-	-	-	-	9.1	-	-

Electrona risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-

Gonichthys tenuiculus

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

Hygophum atratum

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

TABLE 8. (cont.)

Loweina rara

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 90.0	-	4.5	-	0.0	-	-	-	-	-	-	-	-

Myctophum nitidulum

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	4.3	-	-

Protomyctophum crockeri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	10.7	-	8.9	-	-	-	-	-	-	-	-
60.0 70.0	-	3.7	-	9.1	-	-	-	-	-	-	-	-
60.0 80.0	-	16.9	-	8.0	-	-	-	-	-	-	-	-
60.0 90.0	-	9.2	-	0.0	-	-	-	-	-	-	-	-
60.0 100.0	-	4.4	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	4.8	-	13.8	-	-	-	-	-	-	-	-
63.3 90.0	-	15.9	-	0.0	-	-	-	-	-	-	-	-
66.7 60.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-
66.7 70.0	-	18.6	-	0.0	-	-	-	-	-	-	-	-
66.7 80.0	-	8.4	-	23.0	-	-	-	-	-	-	-	-
66.7 90.0	-	0.0	-	23.8	-	-	-	-	-	-	-	-
70.0 55.0	-	0.0	-	9.8	-	-	-	-	-	-	-	-
70.0 80.0	-	8.8	-	8.6	-	-	-	-	-	-	-	-
70.0 90.0	-	4.6	-	9.1	-	-	-	-	-	-	-	-
70.0 100.0	-	4.5	-	-	-	-	-	-	-	-	-	-
73.3 80.0	-	8.9	-	18.2	-	-	-	-	-	-	-	-
73.3 90.0	-	0.0	-	9.4	-	-	-	-	-	-	-	-
73.3 100.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
76.7 60.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.0	-	7.8	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	4.4	-	0.0	-	-	9.0	-	-	-	0.0	-
76.7 90.0	-	8.6	-	22.5	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	8.4	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 55.0	-	-	-	20.1	-	-	0.0	-	-	0.0	-	-
80.0 70.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	16.6	-	16.8	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	13.4	-	0.0	-	-	9.9	-	-	-	0.0	-
80.0 100.0	-	9.4	-	4.9	-	-	0.0	-	-	-	4.7	-
83.3 70.0	-	9.5	-	0.0	-	-	0.0	-	-	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	-	4.5	-	24.4	-	-	0.0	-	-	4.1	-	-
83.3 90.0	-	9.0	-	9.1	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	27.7	-	8.5	-	-	9.2	-	-	0.0	-	-
83.3 110.0	-	0.0	-	9.5	-	-	-	-	-	4.3	-	-
86.7 45.0	-	0.0	-	0.0	-	-	0.0	-	-	8.5	-	-
86.7 70.0	-	0.0	-	19.6	-	-	0.0	-	-	8.7	-	-
86.7 80.0	-	13.4	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	58.5	-	17.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	41.9	-	4.1	-	-	-	-	-	0.0	-	-
90.0 35.0	-	9.2	-	0.0	-	-	8.3	-	-	0.0	-	-
90.0 45.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	9.0	-	-	9.1	-	-	0.0	-	-
90.0 60.0	-	18.7	-	0.0	-	-	0.0	-	-	8.7	-	-
90.0 70.0	-	13.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	27.2	-	0.0	-	-	8.6	-	-	0.0	-	-
90.0 90.0	-	4.7	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	4.4	-	17.1	-	-	0.0	-	-	8.2	-	-
90.0 110.0	-	4.5	-	0.0	-	-	0.0	-	-	8.8	-	-
90.0 120.0	-	13.0	-	0.0	-	-	-	-	-	4.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	8.0	-	-	0.0	-	-
93.3 45.0	9.3	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	21.9	-	-	0.0	-	-	0.0	-	-
93.3 55.0	13.4	-	-	9.1	-	-	0.0	-	-	0.0	-	-
93.3 60.0	14.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	28.1	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	10.7	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	15.9	-	15.8	-	-	0.0	-	-	4.6	-	-
93.3 110.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.6	-	8.5	-	-	-	-	-	4.6	-	-

Symbolophorus californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	0.0	-	44.5	-	-	-	-	-	-	-	-
63.3 90.0	-	0.0	-	9.0	-	-	-	-	-	-	-	-
66.7 80.0	-	0.0	-	4.6	-	-	-	-	-	-	-	-
66.7 90.0	-	5.0	-	19.0	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Symbolophorus californiensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	90.0	-	0.0	-	68.1	-	-	-	-	-	-	-	-
73.3	60.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
73.3	100.0	-	0.0	-	4.2	-	-	-	-	-	-	-	-
76.7	60.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-
76.7	100.0	-	0.0	-	4.7	-	-	9.2	-	-	-	0.0	-
80.0	90.0	-	0.0	-	0.0	-	-	9.9	-	-	-	0.0	-
80.0	100.0	-	0.0	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	60.0	-	0.0	-	0.0	-	-	9.6	-	-	16.5	-	-
83.3	70.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
83.3	90.0	-	22.5	-	4.6	-	-	0.0	-	-	4.5	-	-
83.3	100.0	-	18.5	-	12.8	-	-	0.0	-	-	4.8	-	-
83.3	110.0	-	19.0	-	0.0	-	-	-	-	-	0.0	-	-
86.7	70.0	-	0.0	-	0.0	-	-	8.4	-	-	0.0	-	-
86.7	80.0	-	4.5	-	0.0	-	-	0.0	-	-	8.9	-	-
86.7	90.0	-	0.0	-	4.2	-	-	0.0	-	-	14.1	-	-
86.7	100.0	-	9.0	-	8.5	-	-	9.1	-	-	0.0	-	-
86.7	110.0	-	46.5	-	0.0	-	-	-	-	-	9.1	-	-
90.0	35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0	53.0	-	16.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	90.0	-	0.0	-	0.0	-	-	4.4	-	-	4.7	-	-
90.0	100.0	-	8.9	-	0.0	-	-	5.0	-	-	0.0	-	-
90.0	110.0	-	18.0	-	0.0	-	-	22.8	-	-	0.0	-	-
90.0	120.0	-	13.0	-	8.5	-	-	-	-	-	4.0	-	-
93.3	26.7	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-
93.3	30.0	0.0	-	-	0.0	-	-	4.9	-	-	0.0	-	-
93.3	35.0	0.0	-	-	0.0	-	-	0.0	-	-	19.0	-	-
93.3	50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
93.3	60.0	0.0	-	-	7.7	-	-	0.0	-	-	0.0	-	-
93.3	70.0	-	0.0	-	4.2	-	-	0.0	-	-	7.1	-	-
93.3	90.0	-	4.4	-	3.6	-	-	0.0	-	-	0.0	-	-
93.3	100.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
93.3	110.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Symbolophorus californiensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	-	9.1	-	8.5	-	-	-	-	-	0.0	-	-

Tarletonbeania crenularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	-	7.1	-	0.0	-	-	-	-	-	-	-	-
60.0	70.0	-	7.4	-	0.0	-	-	-	-	-	-	-	-
60.0	80.0	-	0.0	-	8.0	-	-	-	-	-	-	-	-
60.0	90.0	-	18.3	-	4.5	-	-	-	-	-	-	-	-
63.3	52.0	-	4.3	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	9.4	-	0.0	-	-	-	-	-	-	-	-
63.3	70.0	-	0.0	-	9.2	-	-	-	-	-	-	-	-
63.3	80.0	-	4.3	-	0.0	-	-	-	-	-	-	-	-
63.3	90.0	-	15.9	-	0.0	-	-	-	-	-	-	-	-
66.7	50.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	-	0.0	-	9.3	-	-	-	-	-	-	-	-
66.7	60.0	-	4.8	-	19.5	-	-	-	-	-	-	-	-
66.7	70.0	-	18.6	-	9.2	-	-	-	-	-	-	-	-
70.0	55.0	-	8.6	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	-	8.8	-	4.3	-	-	-	-	-	-	-	-
70.0	90.0	-	4.6	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-
73.3	60.0	-	14.0	-	0.0	-	-	-	-	-	-	-	-
73.3	70.0	-	43.4	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	-	8.9	-	9.1	-	-	-	-	-	-	-	-
73.3	100.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
76.7	49.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.2	-
76.7	80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.2	-
80.0	60.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	70.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	-	0.0	-	8.4	-	-	0.0	-	-	-	8.9	-
83.3	70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.8	-	-
83.3	80.0	-	9.0	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
86.7	35.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	0.0	-	0.0	-	-	9.1	-	-	-	-	-

TABLE 8. (cont.)

Tarletonbeania crenularis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 70.0	-	8.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	19.2	-	-
90.0 53.0	-	16.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	8.7	-	-
90.0 80.0	-	0.0	-	0.0	-	-	17.2	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 28.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	8.1	-	-	0.0	-	-
93.3 55.0	4.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-

Trachipterus altivelis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-

Albatrossia pectoralis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 90.0	-	4.5	-	0.0	-	-	-	-	-	-	-	-

Merluccius productus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	0.0	-	44.5	-	-	-	-	-	-	-	-
66.7 60.0	-	0.0	-	9.8	-	-	-	-	-	-	-	-
70.0 60.0	-	4.3	-	-	-	-	-	-	-	-	-	-
70.0 70.0	-	206.3	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	0.0	-	4.3	-	-	-	-	-	-	-	-
73.3 50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-
73.3 55.0	-	9.8	-	30.8	-	-	-	-	-	-	-	-
73.3 60.0	-	14.0	-	0.0	-	-	-	-	-	-	-	-
73.3 80.0	-	0.0	-	45.4	-	-	-	-	-	-	-	-
76.7 49.0	-	8.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.0	-	58.8	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.0	-	7.8	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Merluccius productus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	-	4.4	-	23.2	-	-	0.0	-	-	0.0	-	-
80.0	70.0	-	0.0	-	16.6	-	-	0.0	-	-	-	0.0	-
80.0	80.0	-	0.0	-	41.9	-	-	0.0	-	-	-	0.0	-
80.0	90.0	-	0.0	-	36.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	8.3	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	9.2	-	8.2	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	0.0	-	8.0	-	-	0.0	-	-	0.0	-	-
83.3	80.0	-	0.0	-	16.3	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	24.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	0.0	-	7.9	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	0.0	-	9.8	-	-	0.0	-	-	0.0	-	-
86.7	80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	14.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	0.0	-	65.4	-	-	0.0	-	-	0.0	-	-
90.0	53.0	-	0.0	-	27.1	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	0.0	-	35.0	-	-	0.0	-	-	0.0	-	-
90.0	80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0	90.0	-	0.0	-	9.3	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	4.1	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	-	-	22.7	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	60.5	-	-	0.0	-	-	0.0	-	-
93.3	35.0	4.6	-	-	8.8	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	16.1	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	7.3	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	36.4	-	-	0.0	-	-	0.0	-	-
93.3	60.0	0.0	-	-	23.1	-	-	0.0	-	-	0.0	-	-
93.3	90.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-

Chilara taylori

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0	37.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0	45.0	-	0.0	-	0.0	-	-	0.0	-	-	8.0	-	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3	35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.5	-	-

TABLE 8. (cont.)

Brosmophycis marginata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	0.0	-	8.9	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.0	-	-	9.0	-	-	0.0	-	-

Atherinidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 60.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 55.0	-	9.8	-	0.0	-	-	-	-	-	-	-	-

Cololabis saira

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	4.3	-	-	0.0	-	-	4.8	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	4.3	-	-

***Melamphaes* spp.**

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

Melamphaes lugubris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 90.0	-	9.2	-	0.0	-	-	-	-	-	-	-	-
66.7 55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
66.7 90.0	-	0.0	-	4.8	-	-	-	-	-	-	-	-
70.0 80.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
70.0 90.0	-	0.0	-	9.1	-	-	-	-	-	-	-	-
83.3 90.0	-	0.0	-	13.7	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	0.0	-	17.1	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	-	-	-	4.3	-	-
86.7 90.0	-	4.6	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 100.0	-	13.5	-	8.5	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0 100.0	-	4.4	-	8.6	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	9.1	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	3.1	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-

TABLE 8. (cont.)

Melamphaes parvus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 60.0	-	8.6	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	0.0	-	4.3	-	-	-	-	-	-	-	-
70.0 90.0	-	4.6	-	4.5	-	-	-	-	-	-	-	-
73.3 55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-
73.3 70.0	-	0.0	-	10.2	-	-	-	-	-	-	-	-
86.7 80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.5	-	-
93.3 50.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Poromitra crassiceps

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 100.0	-	0.0	-	4.2	-	-	-	-	-	-	-	-
86.7 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-

Scopelogadus bispinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	0.0	-	0.0	-	-	-	-	-	4.5	-	-
90.0 100.0	-	0.0	-	4.3	-	-	5.0	-	-	0.0	-	-

***Sebastes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.1	-	-	-	-	-	-	-	-	-	-
60.0 55.0	-	-	-	18.8	-	-	-	-	-	-	-	-
60.0 60.0	-	50.0	-	26.7	-	-	-	-	-	-	-	-
60.0 70.0	-	33.4	-	0.0	-	-	-	-	-	-	-	-
63.3 50.0	-	-	-	10.1	-	-	-	-	-	-	-	-
63.3 52.0	-	132.1	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	75.4	-	18.0	-	-	-	-	-	-	-	-
63.3 60.0	-	0.0	-	89.2	-	-	-	-	-	-	-	-
63.3 80.0	-	0.0	-	17.8	-	-	-	-	-	-	-	-
66.7 50.0	-	258.5	-	0.0	-	-	-	-	-	-	-	-
66.7 55.0	-	51.4	-	9.3	-	-	-	-	-	-	-	-
66.7 60.0	-	9.7	-	58.5	-	-	-	-	-	-	-	-
70.0 51.0	-	162.1	-	-	-	-	-	-	-	-	-	-
70.0 52.0	-	-	-	9.7	-	-	-	-	-	-	-	-
70.0 55.0	-	128.6	-	0.0	-	-	-	-	-	-	-	-
70.0 70.0	-	12.6	-	-	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Sebastes **spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0	80.0	-	0.0	-	4.3	-	-	-	-	-	-	-	-
73.3	50.0	-	62.8	-	9.1	-	-	-	-	-	-	-	-
73.3	55.0	-	0.0	-	41.1	-	-	-	-	-	-	-	-
73.3	60.0	-	0.0	-	38.6	-	-	-	-	-	-	-	-
73.3	70.0	-	8.7	-	0.0	-	-	-	-	-	-	-	-
73.3	80.0	-	8.9	-	0.0	-	-	-	-	-	-	-	-
76.7	49.0	-	45.7	-	7.9	-	-	0.0	-	-	-	3.9	-
76.7	51.0	-	54.9	-	9.3	-	-	0.0	-	-	-	9.4	-
76.7	55.0	-	81.2	-	0.0	-	-	26.1	-	-	-	18.3	-
76.7	60.0	-	0.0	-	9.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	-	79.6	-	0.0	-	-	4.1	-	-	0.0	-	-
80.0	60.0	-	8.9	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	80.0	-	0.0	-	16.8	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	135.5	-	7.8	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	100.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	24.9	-	9.3	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	224.4	-	49.2	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	100.8	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
86.7	33.0	-	4.1	-	26.7	-	-	0.0	-	-	11.3	-	-
86.7	35.0	-	56.2	-	59.6	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	181.7	-	87.9	-	-	0.0	-	-	33.0	-	-
86.7	45.0	-	116.9	-	202.8	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	484.0	-	141.2	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	0.0	-	23.7	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	0.0	-	14.2	-	-	9.1	-	-	-	-	-
86.7	70.0	-	13.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	80.0	-	0.0	-	8.7	-	-	0.0	-	-	0.0	-	-
90.0	28.0	-	54.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	30.0	-	13.8	-	19.2	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	106.3	-	41.6	-	-	8.3	-	-	9.6	-	-
90.0	37.0	-	14.7	-	23.3	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	23.4	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0	53.0	-	190.5	-	63.3	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	79.4	-	0.0	-	-	9.7	-	-	0.0	-	-
90.0	70.0	-	0.0	-	9.0	-	-	8.1	-	-	0.0	-	-

TABLE 8. (cont.)

Sebastes **spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
93.3	26.7	13.1	-	-	12.4	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	-	-	15.1	-	-	0.0	-	-	4.9	-	-
93.3	30.0	8.3	-	-	30.2	-	-	0.0	-	-	9.7	-	-
93.3	35.0	77.7	-	-	0.0	-	-	8.1	-	-	0.0	-	-
93.3	40.0	0.0	-	-	49.9	-	-	0.0	-	-	0.0	-	-
93.3	45.0	4.7	-	-	24.2	-	-	0.0	-	-	0.0	-	-
93.3	50.0	14.5	-	-	14.6	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	50.1	-	-	0.0	-	-	0.0	-	-
93.3	60.0	0.0	-	-	15.4	-	-	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	-	-	0.0	-	-	4.2	-	-
90.0	53.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0	80.0	-	0.0	-	0.0	-	-	8.6	-	-	0.0	-	-
93.3	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
93.3	35.0	4.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	-	0.0	-	0.0	-	-	0.0	-	-	4.4	-	-
83.3	42.0	-	0.0	-	0.0	-	-	0.0	-	-	8.5	-	-
86.7	33.0	-	0.0	-	0.0	-	-	0.0	-	-	26.4	-	-

Sebastes goodei

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
73.3	50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-
76.7	49.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	55.0	-	-	-	18.8	-	-	-	-	-	-	-	-
60.0	60.0	-	28.6	-	0.0	-	-	-	-	-	-	-	-
63.3	52.0	-	17.0	-	-	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Sebastes jordani (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3	55.0	-	94.2	-	0.0	-	-	-	-	-	-	-	-
63.3	60.0	-	0.0	-	44.6	-	-	-	-	-	-	-	-
66.7	50.0	-	141.8	-	56.1	-	-	-	-	-	-	-	-
66.7	55.0	-	56.0	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	-	0.0	-	29.3	-	-	-	-	-	-	-	-
70.0	55.0	-	8.6	-	0.0	-	-	-	-	-	-	-	-
70.0	70.0	-	8.4	-	-	-	-	-	-	-	-	-	-
73.3	60.0	-	0.0	-	28.9	-	-	-	-	-	-	-	-
76.7	49.0	-	4.2	-	7.9	-	-	0.0	-	-	-	0.0	-
76.7	51.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	12.2	-	16.8	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	0.0	-	13.6	-	-	0.0	-	-	-	0.0	-
80.0	51.0	-	41.5	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	55.0	-	-	-	30.2	-	-	0.0	-	-	0.0	-	-
80.0	60.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	90.0	-	0.0	-	18.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	0.0	-	23.4	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	41.0	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3	51.0	-	12.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	55.0	-	18.3	-	24.6	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	41.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	54.0	-	9.8	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	82.8	-	29.0	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	144.0	-	33.2	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	0.0	-	7.9	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	17.8	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	30.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	32.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	9.8	-	15.5	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	4.1	-	-	0.0	-	-	0.0	-	-
93.3	28.0	4.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Sebastes levis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Sebastes levis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 40.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 28.0	0.0	-	-	7.6	-	-	0.0	-	-	0.0	-	-

Sebastes paucispinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 55.0	-	9.4	-	0.0	-	-	-	-	-	-	-	-
66.7 50.0	-	8.3	-	0.0	-	-	-	-	-	-	-	-
66.7 55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
73.3 60.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
73.3 100.0	-	4.4	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	4.1	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
80.0 60.0	-	0.0	-	7.7	-	-	0.0	-	-	0.0	-	-
83.3 55.0	-	22.9	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	29.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	20.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-

***Sebastolobus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	-	0.0	-	4.6	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-

Zaniolepis frenata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-
90.0 28.0	-	0.0	-	8.2	-	-	0.0	-	-	0.0	-	-

Zaniolepis latipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Hexagrammos decagrammus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 55.0	-	4.9	-	0.0	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-

Icelinus quadriseriatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	0.0	-	8.9	-	-	0.0	-	-	0.0	-	-

Leptocottus armatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	9.4	-	0.0	-	-	-	-	-	-	-	-
76.7 49.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-

Xeneretmus latifrons

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

Liparis fucensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	-	4.3	-	-	-	-	-	-	-	-	-	-

***Howella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	0.0	-	0.0	-	-	4.6	-	-	-	0.0	-
83.3 90.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-

***Paralabrax* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 80.0	-	0.0	-	17.2	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	5.1	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	9.0	-	-	0.0	-	-	-	0.0	-
83.3 80.0	-	0.0	-	16.3	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	9.1	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	20.9	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Trachurus symmetricus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	0.0	-	8.5	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	4.1	-	-	-	-	-	0.0	-	-
90.0 45.0	-	23.4	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	11.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	0.0	-	-	36.4	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	7.7	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	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	-	-	16.1	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-

Genyonemus lineatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	9.4	-	0.0	-	-	-	-	-	-	-	-
76.7 51.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 40.6	-	3.3	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 33.0	-	115.9	-	0.0	-	-	0.0	-	-	3.8	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-

Oxyjulis californica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-

Semicossyphus pulcher

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-

TABLE 8. (cont.)

***Rathbunella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	4.0	-	8.3	-	-	0.0	-	-	0.0	-	-

Stichaeidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	37.7	-	0.0	-	-	-	-	-	-	-	-

Plectobranchus evides

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	0.0	-	9.3	-	-	0.0	-	-	0.0	-	-

Chiasmodon niger

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	9.5	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	8.9	-	-
86.7 110.0	-	0.0	-	0.0	-	-	-	-	-	4.5	-	-
90.0 100.0	-	0.0	-	0.0	-	-	5.0	-	-	0.0	-	-
90.0 110.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 120.0	-	8.6	-	0.0	-	-	-	-	-	0.0	-	-
93.3 90.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.6	-	0.0	-	-	-	-	-	4.6	-	-

***Kali* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	4.8	-	-	-	-	-	0.0	-	-

Hypsoblennius gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.9	-

Hypsoblennius jenkinsi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 51.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.4	-
83.3 42.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	7.8	-	-	0.0	-	-

Coryphopterus nicholsii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 90.0	-	8.0	-	0.0	-	-	-	-	-	-	-	-
66.7 50.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
70.0 51.0	-	4.6	-	-	-	-	-	-	-	-	-	-
80.0 51.0	-	0.0	-	0.0	-	-	4.1	-	-	0.0	-	-
83.3 55.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Coryphopterus nicholsii (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 45.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	4.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-

Ilypnus gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	4.1	-	0.0	-	-	0.0	-	-	0.0	-	-

Lepidogobius lepidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 50.0	-	-	-	6.7	-	-	-	-	-	-	-	-
86.7 33.0	-	24.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Sphyraena argentea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 30.0	0.0	-	-	0.0	-	-	4.9	-	-	0.0	-	-

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 53.0	-	0.0	-	27.1	-	-	0.0	-	-	0.0	-	-

Icichthys lockingtoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 90.0	-	5.0	-	0.0	-	-	-	-	-	-	-	-
83.3 60.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-

Tetragonurus cuvieri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.0	-
83.3 100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	4.7	-	0.0	-	-	-	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.6	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
93.3 120.0	-	0.0	-	0.0	-	-	-	-	-	4.6	-	-

Citharichthys sordidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 55.0	-	-	-	9.4	-	-	-	-	-	-	-	-
60.0 60.0	-	3.6	-	0.0	-	-	-	-	-	-	-	-
60.0 70.0	-	3.7	-	0.0	-	-	-	-	-	-	-	-
63.3 60.0	-	8.4	-	0.0	-	-	-	-	-	-	-	-

TABLE 8. (cont.)

Citharichthys sordidus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	55.0	-	4.7	-	9.3	-	-	-	-	-	-	-	-
66.7	70.0	-	0.0	-	9.2	-	-	-	-	-	-	-	-
70.0	70.0	-	8.4	-	-	-	-	-	-	-	-	-	-
76.7	55.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
76.7	80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.2	-
80.0	60.0	-	0.0	-	0.0	-	-	0.0	-	-	9.3	-	-
80.0	70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	16.8	-
80.0	80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.9	-
83.3	40.6	-	3.3	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	42.0	-	4.6	-	0.0	-	-	0.0	-	-	8.5	-	-
83.3	55.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
86.7	33.0	-	4.1	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	35.0	-	23.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	4.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	0.0	-	9.8	-	-	0.0	-	-	0.0	-	-
90.0	30.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-
90.0	37.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	-	3.6	-	0.0	-	-	-	-	-	-	-	-
63.3	55.0	-	0.0	-	9.0	-	-	-	-	-	-	-	-
66.7	50.0	-	4.2	-	0.0	-	-	-	-	-	-	-	-
66.7	55.0	-	4.7	-	0.0	-	-	-	-	-	-	-	-
66.7	60.0	-	9.7	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	-	0.0	-	8.6	-	-	-	-	-	-	-	-
73.3	50.0	-	0.0	-	9.1	-	-	-	-	-	-	-	-
73.3	70.0	-	17.3	-	0.0	-	-	-	-	-	-	-	-
80.0	60.0	-	0.0	-	0.0	-	-	8.4	-	-	9.3	-	-
83.3	42.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	0.0	-	0.0	-	-	0.0	-	-	16.5	-	-
83.3	70.0	-	0.0	-	0.0	-	-	0.0	-	-	8.8	-	-
86.7	40.0	-	9.8	-	9.8	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	9.6	-	0.0	-	-	0.0	-	-	-	-	-
86.7	63.0	-	-	-	-	-	-	-	-	-	9.3	-	-
86.7	70.0	-	0.0	-	0.0	-	-	8.4	-	-	0.0	-	-

TABLE 8. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	-	0.0	-	8.3	-	-	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0	45.0	-	0.0	-	0.0	-	-	0.0	-	-	8.0	-	-
90.0	70.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
90.0	110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3	35.0	9.1	-	-	0.0	-	-	0.0	-	-	19.0	-	-
93.3	40.0	0.0	-	-	8.3	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.4	-	-
93.3	50.0	0.0	-	-	0.0	-	-	8.7	-	-	0.0	-	-
93.3	80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-

Glyptocephalus zachirus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	55.0	-	0.0	-	7.9	-	-	0.0	-	-	0.0	-	-

Lepidopsetta bilineata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3	50.0	-	3.1	-	0.0	-	-	-	-	-	-	-	-

Lyopsetta exilis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	60.0	-	0.0	-	19.5	-	-	-	-	-	-	-	-
76.7	55.0	-	0.0	-	8.4	-	-	0.0	-	-	-	0.0	-
80.0	70.0	-	0.0	-	4.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	-	0.0	-	8.4	-	-	0.0	-	-	-	0.0	-
83.3	55.0	-	0.0	-	8.2	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	0.0	-	19.5	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	0.0	-	7.9	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	8.3	-	-	0.0	-	-	0.0	-	-

Microstomus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	-	0.0	-	8.4	-	-	0.0	-	-	-	0.0	-
80.0	90.0	-	0.0	-	9.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	-	0.0	-	0.0	-	-	8.1	-	-	0.0	-	-
83.3	80.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Microstomus pacificus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 60.0	-	0.0	-	0.0	-	-	9.7	-	-	0.0	-	-

Parophrys vetulus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.1	-	-	-	-	-	-	-	-	-	-
63.3 52.0	-	29.8	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	4.8	-	0.0	-	-	-	-	-	-	-	-
63.3 100.0	-	4.6	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	109.9	-	0.0	-	-	-	-	-	-	-	-

Pleuronichthys verticalis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	4.1	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	0.0	-	-	4.3	-	-

Disintegrated fish larvae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	4.1	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 28.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	0.0	-	-	7.7	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	3.1	-	-	0.0	-	-	0.0	-	-

PHYLOGENETIC INDEX TO TABLES 4 AND 8

ALPHABETICAL INDEX TO TABLES 4 AND 8

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