NOAA Technical Memorandum NMFS

JANUARY 2003

ICHTHYOPLANKTON AND STATION DATA FOR SURFACE (MANTA) AND OBLIQUE (BONGO) PLANKTON TOWS FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATION SURVEY CRUISES IN 2001

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NOAA-TM-NMFS-SWFSC-348

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

This report provides ichthyoplankton data from Manta net tows (surface) and Bongo net tows (oblique) and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises conducted in the Southern California Bight region in 2001. It is the 59th report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 260 stations was occupied during quarterly cruises over the survey area which extended from Avila Beach 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 75 larval fish taxa identified in Manta net tows and standardized counts of each of the 130 larval fish categories identified in Bongo net tows. This series of reports makes the CalCOFI ichthyoplankton and station data available to all investigators and serves as a guide to the computer data base.

INTRODUCTION

This report, the 59th 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 2001. 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 (Figure 1) was initiated in 1977– 1978. Alhstrom and Stevens (1976), Gruber et al. (1982), and Doyle (1992a,b) provided initial information on the distribution and abundance of surface ichthyoplankton

[1]Useage of 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).

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 2001 have been published by the Scripps Institution of Oceanography (Univ. of Calif., SIO 2002a, b). All available records for all four 2001 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. Previously 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. 2000b	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
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
1992	Watson et al. 1999b		

SAMPLING AREA AND PATTERN

A total of 260 standard CalCOFI survey stations was occupied on four cruises in 2001, employing two research vessels:

0101, RV *David Starr Jordan*, 63 stations, January 7 – 22;

0104, RV *David Starr Jordan*, 66 stations, April 6 – 23;

0107, RV *New Horizon*, 66 stations, July 10 – 26;

0110, RV *New Horizon*, 65 stations, October 25 – November 8.

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 1and 2).[2] Cruise 0101 occupied nine lines, extending northward to Monterey Bay and cruise 0104 occupied 11 lines northward to San Francisco; however, manta and oblique plankton tows were made only in the core area. The most seaward oblique plankton tow station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. On all cruises, lines 76.7 and 80.0 extended seaward to station 100.0, lines 83.3 and 86.7 extended to station 110.0, and lines 90.0 and 93.3 extended to station 120.0 (Figures 1 and 2).

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

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[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 1 and 2 and see Univ. of Calif., SIO 2002a, b).

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 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% buffered formalin 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 tow in 2001 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 ~ 210 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.

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

Tow depth, volume of water strained, and standard haul factor are listed in Table 5 for each tow taken during 2001. 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 2001 surveys could be identified to species. A total of 75 larval fish taxa was identified in Manta net tows for 2001: 67 to species and 8 to genus. A total of 130 larval fish categories (including disintegrated) was identified in the Bongo net tows: 108 to species, 18 to genus, 1 to subfamily, and 2 to family. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Fisheries Resources Division by S. R. Charter, E. M. Sandknop, 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:

Citharichthys spp. – small or damaged larvae, probably *C. sordidus* and/or *C. stigmaeus* lacking diagnostic characters.

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

Cyclothone pseudopallida – larger larvae (primarily postflexion stage) having diagnostic pigmentation 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; separated from the "unidentified" category to monitor the general condition of the ichthyoplankton samples through the time series.

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

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).

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.

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, Matarese et al. 1989, and Moser 1996).

Scopelosaurus spp.– according to Balanov and Savinykh (1999) there are two valid species of this genus in 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 2001, Pacific sardine (*Sardinops sagax*) ranked first in abundance with 43.7% of the total fish larvae and fourth in occurrence with larvae collected in 13.8% of the total samples (Tables 2 and 3). It was over twice as abundant as the second most abundant species, northern anchovy (*Engraulis mordax*), which accounted for 20.3% of the total larvae and ranked second in occurrence (27.7% of the samples). California grunion (*Leuresthes tenuis*) was the third most abundant with 12.5% of the total larvae; it tied for ninth in frequency of occurrence (4.2 % of the samples). The high abundance of California grunion was attributable to a single collection (454 larvae) at station 90.0 28.0 on Cruise 0004JD. The rockfish genus (*Sebastes*) ranked fourth in abundance with 5.4% of the total larvae and third in total occurrence (14.2% of the samples). Pacific saury (*Cololabis saira*) ranked fifth in abundance (5.2% of total larvae) and first in total occurrence (28.1% of the samples). The next five most abundant taxa were mussel blenny *Hypsoblennius jenkinsi* (2.5% of total larvae), jacksmelt *Atherinopsis californiensis* (1.3%), blacksmith *Chromis punctipinnis* (1.2%), Panama lightfish *Vinciguerria lucetia* (0.8%), and dogtooth lanternfish *Ceratoscopelus townsendi* (0.8%). These species ranked 5th, tied for 19th, tied for 12th, tied for 9th, and 8th in frequency of occurrence, respectively. The ten most abundant taxa comprised 93.7% of all the larvae collected in Manta net tows on CalCOFI cruises in 2001. The remaining 6.3% was distributed among 65 other taxa. Of the ten most abundant taxa, two were coastal demersal taxa, two were coastal pelagic species, one was epipelagic, three were nearshore schooling species, and two were midwater species that migrate to the epipelagic zone at night.

Of the five most abundant larvae collected in Bongo net tows on the 2001 CalCOFI survey, the Pacific sardine (*Sardinops sagax*) ranked first in abundance, with 20.7% of the total larvae, and 19th in occurrence, with 11.2% positive tows (Tables 6 and 7). Panama lightfish (*Vinciguerria lucetia*) ranked second in abundance with 19.7% of the total larvae and tied for 10th in occurrence (20.5% of the samples). Northern anchovy (*Engraulis mordax*) ranked third with 16.8% of the larvae and first in occurrence (33.2 % of the stations). The rockfish genus *Sebastes* ranked fourth in abundance with 8.5% of the total larvae and fourth in frequency of occurrence with 27.8% positive tows. California smoothtongue (*Leuroglossus stilbius*) ranked fifth in abundance (4.0% of total larvae) and third in occurrence (29.0% positive tows). The next five most abundant taxa were snubnose blacksmelt *Bathylagus wesethi* (3.2% of total larvae), Pacific hake *Merluccius productus* (3.2%), northern lampfish *Stenobrachius leucopsarus* (2.6%), Pacific sanddab *Citharichthys sordidus* (2.4%), and speckled sanddab *Citharichthys stigmaeus*

9th, 8th, 7th, 6th, and 5th in frequency of occurrence, respectively. The ten most abundant taxa comprised 83.5% of all the larvae collected in Bongo net tows on CalCOFI cruises in 2001. The remaining 16.5% was distributed among 120 other taxa (including the disintegrated category). Of the ten most abundant taxa, four were midwater species, two were coastal pelagic species, and four were coastal demersal taxa.

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 2001 CalCOFI survey. Cruises are designated by a six character alphanumeric code; the first two digits indicate the year and the second two the month, followed by the ship code, JD (*David Starr Jordan*) or NH (*New Horizon*). 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 and 3). 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. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for volume of water filtered). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast.

Table 2. Pooled occurrences of all larval fish taxa taken in Manta nets on the RV *David Starr Jordan* and the RV *New Horizon* during the 2001 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* and the RV *New Horizon* during the 2001 CalCOFI survey. Taxa are listed in rank order.

Table 4. Numbers of fish larvae for each taxon taken in Manta net tows on the RV *David Starr Jordan* and the RV *New Horizon* during the 2001 CalCOFI survey. Numbers of larvae are listed as number per 100 m^3 of water filtered. Orders and families are listed in phylogenetic sequence (Eschmeyer 1998); other taxa 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 2001 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 and 3). 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* or NH, *New Horizon*. Plankton displacement volumes were determined after removal of large organisms (those with individual displacement volumes > 5 ml) and expressed as ml per 1000 m^3 of water filtered. Time is listed as Pacific Standard Time 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 and 3 for the beginning and end of each cruise are based on Pacific Standard time at the first and last oblique 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 2001 listed in rank order.

Table 7. Pooled counts of all larval fish taxa taken in Bongo net tows on CalCOFI survey cruises in 2001 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. The orders and families are listed in phylogenetic sequence (Eschmeyer 1998); other taxa are listed alphabetically.

ACKNOWLEDGMENTS

The following NMFS personnel were responsible for making the collections at sea: Ronald Dotson (all cruises), David Griffith (0101, 0104), Amy Hays (all cruises), Beverly Macewicz (0104), Susan Manion (0101), and Elaine Sandknop (0104). The samples were sorted by Lucy Dunn. Susan Manion entered the data and Susan Jacobson provided programming assistance. The cooperation and assistance provided by the crews of the CalCOFI research vessels were instrumental in making the collections and observations at sea.

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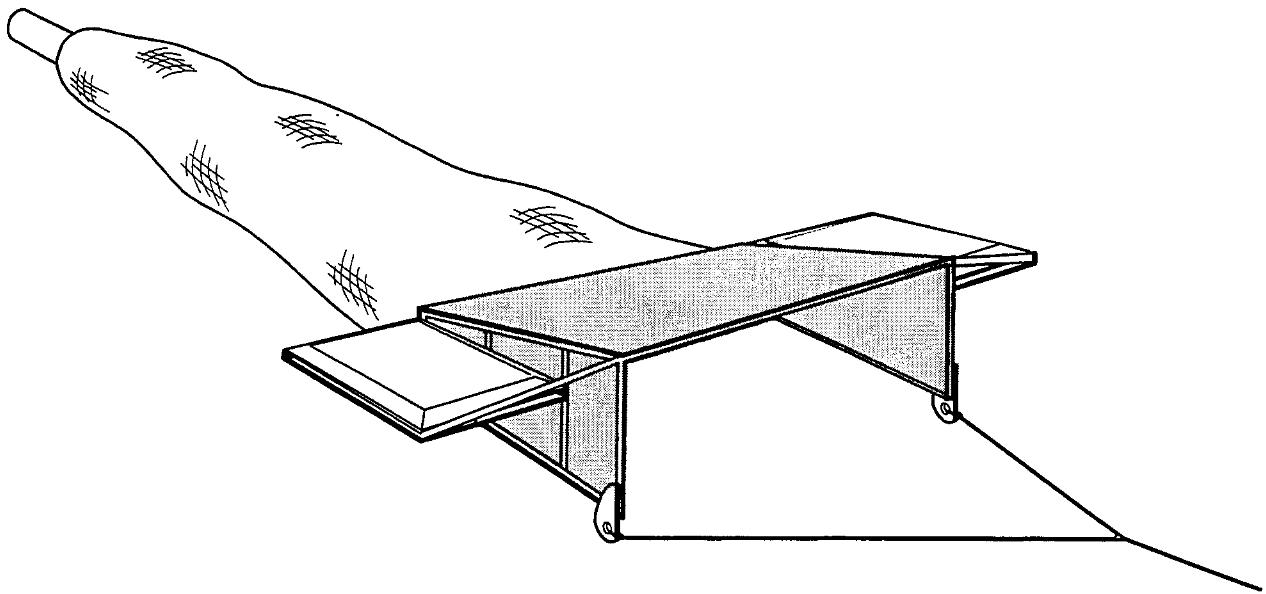

Figure 1. Diagram of the Manta net used on CalCOFI surveys.

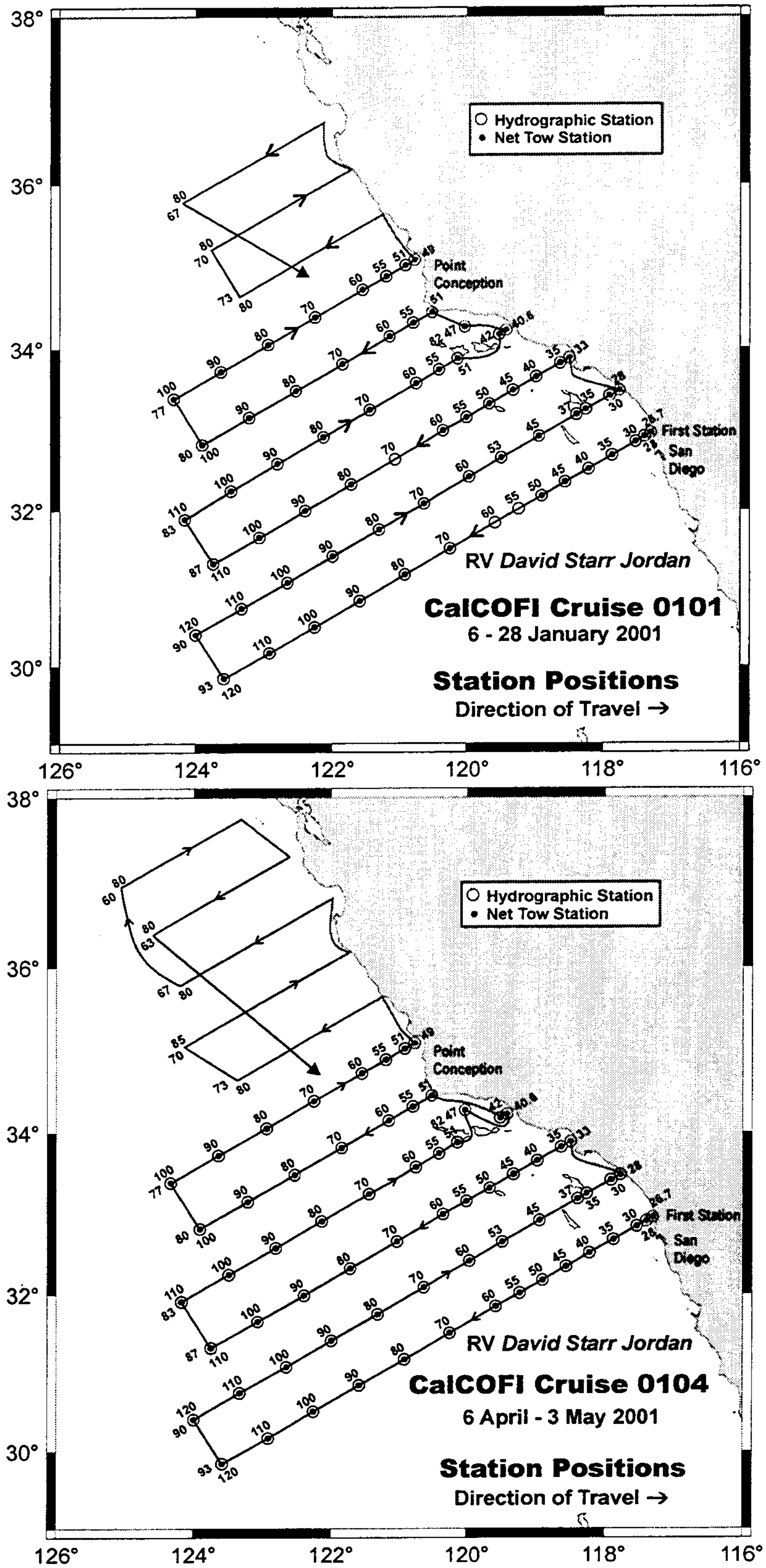

Figure 2. Stations and cruise tracks for CalCOFI cruises 0101 (above) and 0104 (below). Circles indicate hydrographic stations; dots indicate net tow stations. On cruise 0104, a Manta tow was taken unaccompanied by a Bongo tow at station 93. 120.

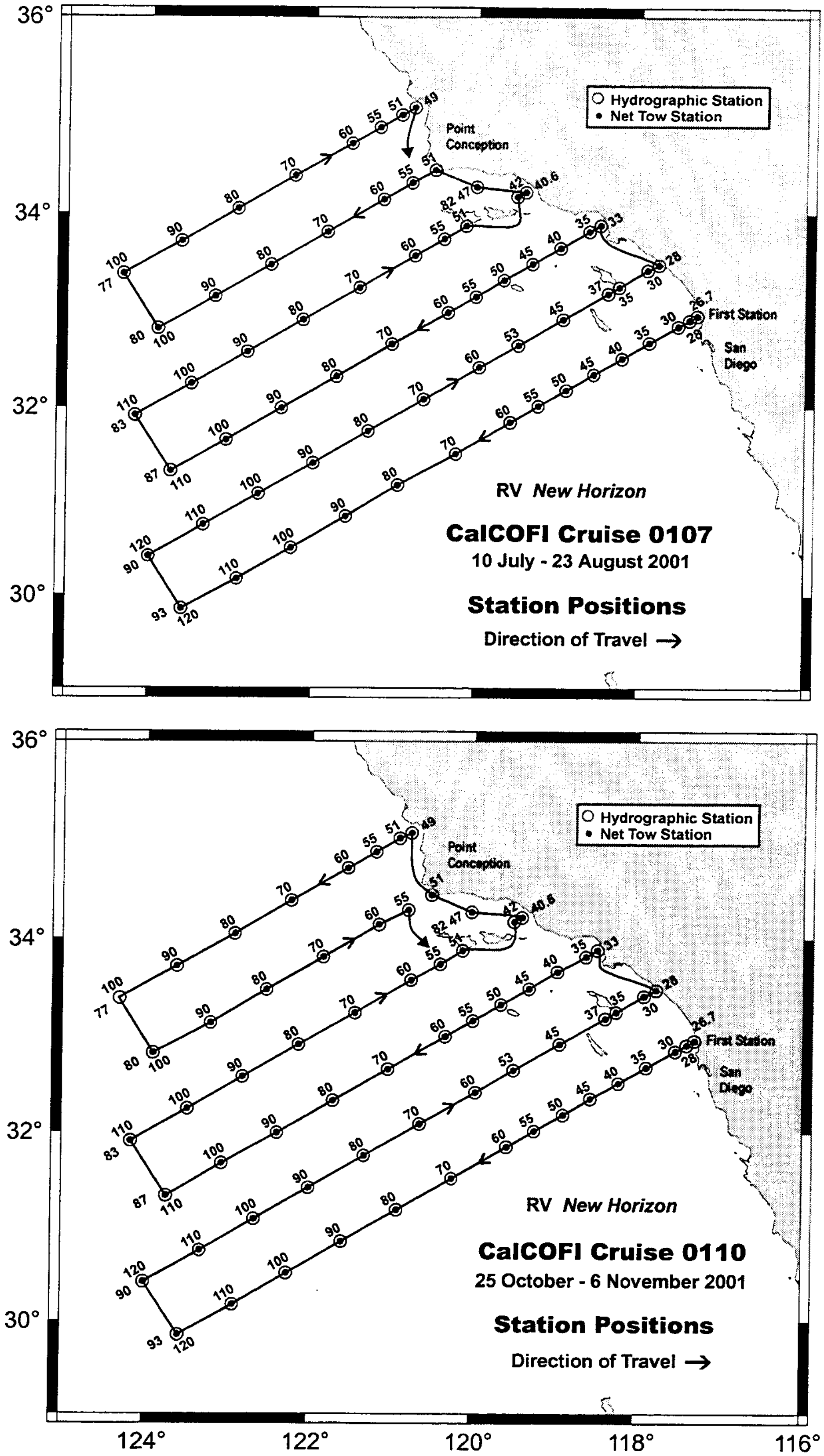

Figure 3. Stations and cruise tracks for CalCOFI cruises 0107 (above) and 0110 (below). Symbols as in Figure 2.

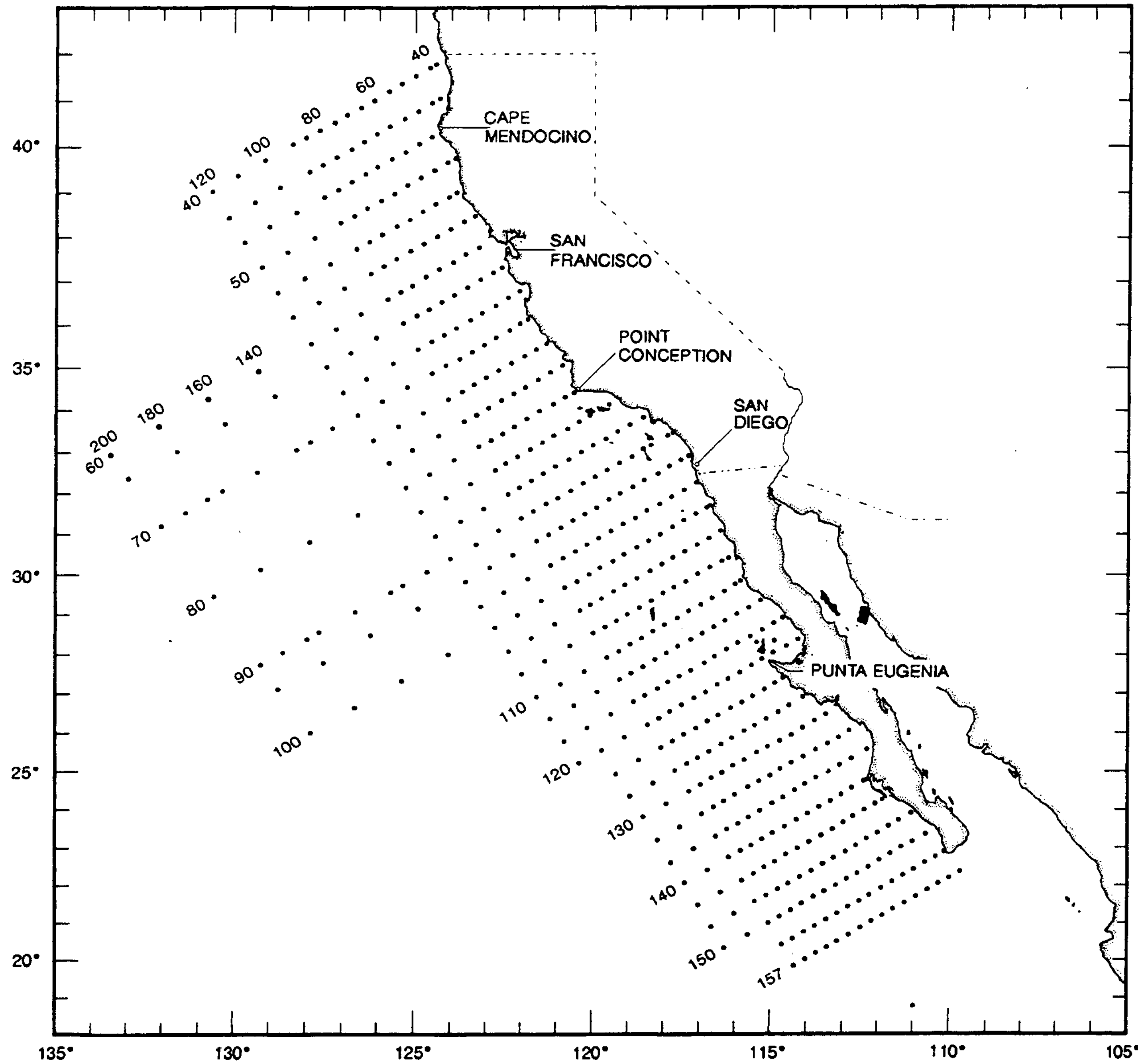

Figure 4. The basic CalCOFI station pattern occupied, in part, by cruises during 1951-1984.

TABLE 1. Station and plankton tow data for Manta net tows taken on the 2001 CalCOFI survey. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 0101

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	JD	01	01	22	2005	74	13	18
76.7	51.0	35	01.3	120	55.1	JD	01	01	22	1749	65	11	4
76.7	55.0	34	53.2	121	11.9	JD	01	01	22	1404	83	3	33
76.7	60.0	34	43.3	121	32.9	JD	01	01	22	0825	69	3	15
76.7	70.0	34	23.3	122	14.9	JD	01	01	22	0330	62	2	1
76.7	80.0	34	03.3	122	56.6	JD	01	01	21	2135	72	0	2
76.7	90.0	33	43.3	123	38.1	JD	01	01	21	1556	62	1	2
76.7	100.0	33	23.3	124	19.4	JD	01	01	21	0818	72	0	2
80.0	51.0	34	26.9	120	31.0	JD	01	01	19	2123	88	30	97
80.0	55.0	34	19.1	120	47.9	JD	01	01	20	0037	72	28	4
80.0	60.0	34	09.1	121	09.0	JD	01	01	20	0422	61	0	3
80.0	70.0	33	48.9	121	50.5	JD	01	01	20	1054	80	1	234
80.0	80.0	33	29.1	122	32.0	JD	01	01	20	1634	73	0	2
80.0	90.0	33	09.2	123	13.5	JD	01	01	20	2150	87	2	2
80.0	100.0	32	49.1	123	54.3	JD	01	01	21	0333	60	1	5
81.8	46.9	34	16.4	120	01.5	JD	01	01	19	1725	76	22	16
83.3	40.6	34	13.5	119	24.9	JD	01	01	19	1230	80	19	1352
83.3	42.0	34	10.5	119	30.9	JD	01	01	19	1044	87	20	3702
83.3	51.0	33	52.7	120	08.1	JD	01	01	19	0437	76	25	701
83.3	55.0	33	44.7	120	24.6	JD	01	01	19	0139	55	0	4
83.3	60.0	33	34.7	120	45.4	JD	01	01	18	2140	71	2	2
83.3	70.0	33	14.7	121	26.6	JD	01	01	18	1541	59	1	4
83.3	80.0	32	54.7	122	07.7	JD	01	01	18	0807	76	0	5
83.3	90.0	32	34.8	122	48.8	JD	01	01	18	0033	58	1	0
83.3	100.0	32	14.6	123	29.3	JD	01	01	17	1837	61	2	2
83.3	110.0	31	53.0	124	09.6	JD	01	01	17	1236	67	0	0
86.7	33.0	33	53.3	118	29.4	JD	01	01	14	1613	66	5	736
86.7	35.0	33	49.4	118	37.7	JD	01	01	14	1855	63	5	963
86.7	40.0	33	39.4	118	58.6	JD	01	01	14	2301	77	12	2184
86.7	45.0	33	29.4	119	19.1	JD	01	01	15	0303	58	7	18
86.7	50.0	33	19.4	119	39.8	JD	01	01	15	0721	63	39	3
86.7	55.0	33	09.1	119	59.9	JD	01	01	15	1136	63	1	0
86.7	60.0	32	59.4	120	21.0	JD	01	01	15	1556	55	0	2
86.7	80.0	32	19.4	121	42.9	JD	01	01	16	1140	65	0	13
86.7	90.0	31	59.5	122	23.5	JD	01	01	16	1815	56	0	109
86.7	100.0	31	39.4	123	04.2	JD	01	01	17	0027	67	0	118
86.7	110.0	31	19.4	123	44.6	JD	01	01	17	0618	60	3	0
90.0	28.0	33	29.1	117	46.1	JD	01	01	14	0631	66	37	104
90.0	30.0	33	25.1	117	54.3	JD	01	01	14	0438	73	2	2
90.0	35.0	33	15.1	118	14.9	JD	01	01	14	0031	72	1	62
90.0	37.0	33	11.1	118	23.2	JD	01	01	13	2157	74	2	2
90.0	45.0	32	55.2	118	56.1	JD	01	01	13	1658	61	0	0
90.0	53.0	32	39.0	119	28.9	JD	01	01	13	1139	62	0	5
90.0	60.0	32	25.1	119	57.6	JD	01	01	13	0630	63	0	3

CalCOFI Cruise 0101

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
90.0	70.0	32	05.0	120	38.4	JD	01	01	12	2352	56	0	8
90.0	80.0	31	45.4	121	18.4	JD	01	01	12	1715	69	1	3
90.0	90.0	31	25.1	121	59.4	JD	01	01	12	0806	78	0	1
90.0	100.0	31	05.1	122	39.8	JD	01	01	12	0049	62	2	10
90.0	110.0	30	45.1	123	19.9	JD	01	01	11	1827	65	5	2
90.0	120.0	30	25.1	123	59.9	JD	01	01	11	1200	53	0	0
93.3	26.7	32	57.4	117	18.3	JD	01	01	07	1156	97	6	2
93.3	28.0	32	54.8	117	23.7	JD	01	01	07	1420	77	0	1
93.3	30.0	32	51.0	117	31.8	JD	01	01	08	0000	80	0	0
93.3	35.0	32	40.8	117	52.4	JD	01	01	08	0406	84	0	54
93.3	40.0	32	30.8	118	12.8	JD	01	01	08	0807	67	0	0
93.3	45.0	32	21.0	118	33.2	JD	01	01	08	1409	71	0	86
93.3	50.0	32	10.6	118	53.5	JD	01	01	08	1830	60	0	13
93.3	70.0	31	30.8	120	14.8	JD	01	01	09	1710	62	1	1
93.3	80.0	31	11.0	120	55.2	JD	01	01	09	2315	63	0	1
93.3	90.0	30	50.8	121	35.3	JD	01	01	10	0521	62	0	3
93.3	100.0	30	30.8	122	15.4	JD	01	01	10	1200	63	0	6
93.3	110.0	30	10.8	122	55.3	JD	01	01	10	2048	70	3	6
93.3	120.0	29	50.8	123	35.2	JD	01	01	11	0441	66	0	6

CalCOFI Cruise 0104

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.8	JD	01	04	23	0954	75	0	11
76.7	51.0	35	01.3	120	55.2	JD	01	04	23	0803	77	2	10
76.7	55.0	34	53.2	121	12.0	JD	01	04	23	0430	68	42	15
76.7	60.0	34	43.3	121	33.1	JD	01	04	22	2358	71	5	15
76.7	70.0	34	23.2	122	14.9	JD	01	04	22	1626	64	61	348
76.7	80.0	34	03.4	122	56.8	JD	01	04	22	0807	67	58	6
76.7	90.0	33	43.3	123	38.2	JD	01	04	22	0031	71	11	2
76.7	100.0	33	23.2	124	19.6	JD	01	04	21	1737	74	0	1
80.0	51.0	34	27.0	120	31.3	JD	01	04	19	1909	85	1	2
80.0	55.0	34	19.1	120	48.0	JD	01	04	19	2227	71	0	12
80.0	60.0	34	08.9	121	09.3	JD	01	04	20	0224	68	79	27
80.0	70.0	33	48.9	121	50.7	JD	01	04	20	0809	71	16	1760
80.0	80.0	33	29.1	122	31.9	JD	01	04	20	1637	72	114	32
80.0	90.0	33	09.1	123	13.0	JD	01	04	20	2335	67	11	1
80.0	100.0	32	49.1	123	54.3	JD	01	04	21	0803	60	4	4
81.8	46.9	34	16.6	120	01.6	JD	01	04	18	0055	90	0	0
83.3	40.6	34	13.6	119	24.8	JD	01	04	18	0519	89	6	3
83.3	42.0	34	10.7	119	30.4	JD	01	04	19	1154	70	0	2
83.3	51.0	33	52.8	120	08.2	JD	01	04	17	1910	73	96	17
83.3	55.0	33	44.7	120	24.6	JD	01	04	17	1557	74	3	13

TABLE 1. (cont.) CalCOFI Cruise 0104

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
83.3	60.0	33	34.6	120	45.4	JD	01	04	17	1136	65	25	122
83.3	70.0	33	14.8	121	26.6	JD	01	04	17	0418	86	62	220
83.3	80.0	32	54.7	122	08.0	JD	01	04	16	2223	82	90	35
83.3	90.0	32	34.7	122	48.7	JD	01	04	16	1540	81	1	36
83.3	100.0	32	14.7	123	29.4	JD	01	04	16	0830	88	2	1225
83.3	110.0	31	54.8	124	10.2	JD	01	04	16	0336	96	18	19
86.7	33.0	33	53.4	118	29.3	JD	01	04	13	1307	74	14	318
86.7	35.0	33	49.5	118	37.6	JD	01	04	13	1634	77	40	0
86.7	40.0	33	39.4	118	58.5	JD	01	04	13	2049	70	38	0
86.7	45.0	33	29.4	119	18.9	JD	01	04	14	0111	62	8	2
86.7	50.0	33	19.3	119	39.7	JD	01	04	14	0545	74	163	12
86.7	55.0	33	09.5	120	00.2	JD	01	04	14	0846	74	149	85
86.7	60.0	32	59.6	120	20.9	JD	01	04	14	1437	57	113	450
86.7	70.0	32	39.3	121	02.0	JD	01	04	14	2050	71	277	222
86.7	80.0	32	19.5	121	42.9	JD	01	04	15	0300	63	141	46
86.7	90.0	31	59.3	122	23.6	JD	01	04	15	0757	77	2	4
86.7	100.0	31	39.5	123	04.2	JD	01	04	15	1525	76	3	38
86.7	110.0	31	19.5	123	44.7	JD	01	04	15	2128	91	0	44
90.0	28.0	33	29.1	117	46.2	JD	01	04	13	0212	88	531	1178
90.0	30.0	33	25.1	117	54.4	JD	01	04	12	2346	85	56	1332
90.0	35.0	33	15.1	118	15.2	JD	01	04	12	1937	83	204	8012
90.0	37.0	33	11.1	118	23.3	JD	01	04	12	1703	73	0	26
90.0	45.0	32	55.1	118	56.2	JD	01	04	12	1136	72	0	1297
90.0	53.0	32	39.2	119	28.8	JD	01	04	12	0414	63	12	28
90.0	60.0	32	25.1	119	57.7	JD	01	04	11	2303	74	69	164
90.0	70.0	32	05.1	120	38.4	JD	01	04	11	1631	76	150	173
90.0	80.0	31	44.9	121	19.0	JD	01	04	11	0827	74	11	188
90.0	90.0	31	25.1	121	59.5	JD	01	04	11	0024	70	4	14
90.0	100.0	31	04.9	122	39.3	JD	01	04	10	1745	75	2	3
90.0	110.0	30	45.1	123	20.0	JD	01	04	10	0839	68	2	20
90.0	120.0	30	25.1	123	59.8	JD	01	04	10	0253	62	2	10
93.3	26.7	32	57.3	117	18.3	JD	01	04	06	1256	72	1	325
93.3	28.0	32	54.7	117	23.7	JD	01	04	06	1522	72	0	456
93.3	30.0	32	50.8	117	31.9	JD	01	04	06	1826	74	3	80
93.3	35.0	32	40.9	117	52.5	JD	01	04	06	2231	94	24	2707
93.3	40.0	32	30.9	118	12.9	JD	01	04	07	0259	77	446	4715
93.3	45.0	32	20.9	118	33.4	JD	01	04	07	0739	80	36	2280
93.3	50.0	32	10.7	118	53.6	JD	01	04	07	1204	73	0	104
93.3	55.0	32	00.9	119	13.8	JD	01	04	07	1616	75	280	180
93.3	60.0	31	51.0	119	34.2	JD	01	04	07	2211	53	11	168
93.3	70.0	31	30.8	120	14.9	JD	01	04	08	0502	67	6	210
93.3	80.0	31	10.7	120	55.2	JD	01	04	08	1138	71	8	732
93.3	90.0	30	50.9	121	35.4	JD	01	04	08	1741	75	1	2
93.3	100.0	30	31.0	122	15.5	JD	01	04	08	2352	72	0	95
93.3	110.0	30	10.6	122	55.1	JD	01	04	09	0831	76	1	79
93.3	120.0	29	50.8	123	35.0	JD	01	04	09	1704	70	2	60

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.9	NH	01	07	26	0838	66	2	5610
76.7	51.0	35	01.0	120	56.4	NH	01	07	26	0600	72	24	1533
76.7	55.0	34	53.3	121	11.9	NH	01	07	26	0215	84	26	5
76.7	60.0	34	43.3	121	33.0	NH	01	07	25	2216	58	10	32
76.7	70.0	34	23.4	122	15.0	NH	01	07	25	1640	74	7	9
76.7	80.0	34	03.3	122	56.6	NH	01	07	25	1024	68	9	17
76.7	90.0	33	43.3	123	38.2	NH	01	07	25	0137	70	3	9
76.7	100.0	33	23.1	124	19.5	NH	01	07	24	1933	56	0	3
80.0	51.0	34	26.9	120	31.5	NH	01	07	22	2315	65	1	153
80.0	55.0	34	19.2	120	48.3	NH	01	07	23	0307	68	8	4
80.0	60.0	34	09.1	121	09.0	NH	01	07	23	0814	58	0	4
80.0	70.0	33	49.0	121	50.6	NH	01	07	23	1632	68	0	0
80.0	80.0	33	28.8	122	32.0	NH	01	07	23	2225	57	2	4
80.0	90.0	33	09.1	123	13.2	NH	01	07	24	0409	63	5	17
80.0	100.0	32	49.0	123	54.4	NH	01	07	24	0853	76	1	4
81.8	46.9	34	16.8	120	00.9	NH	01	07	22	1702	60	0	231
83.3	40.6	34	13.6	119	24.6	NH	01	07	22	0858	80	57	8397
83.3	42.0	34	10.7	119	30.5	NH	01	07	22	0648	62	9	1372
83.3	51.0	33	52.8	120	08.3	NH	01	07	22	0029	54	20	329
83.3	55.0	33	44.8	120	24.6	NH	01	07	21	2006	67	43	1
83.3	60.0	33	34.5	120	45.5	NH	01	07	21	1546	78	6	0
83.3	70.0	33	14.7	121	26.5	NH	01	07	21	0818	63	1	26
83.3	80.0	32	54.6	122	08.0	NH	01	07	21	0247	71	3	4
83.3	90.0	32	34.7	122	48.9	NH	01	07	20	2100	79	7	4
83.3	100.0	32	14.7	123	30.0	NH	01	07	20	1505	76	1	8
83.3	110.0	31	54.8	124	10.2	NH	01	07	20	0746	71	1	28
86.7	33.0	33	53.3	118	29.4	NH	01	07	17	1045	96	12	2854
86.7	35.0	33	49.6	118	37.6	NH	01	07	17	1340	91	14	26
86.7	40.0	33	39.4	118	58.5	NH	01	07	17	1729	70	22	198
86.7	45.0	33	29.4	119	19.1	NH	01	07	18	0712	76	0	156
86.7	50.0	33	19.4	119	39.9	NH	01	07	18	1048	71	2	159
86.7	55.0	33	09.2	120	00.5	NH	01	07	18	1809	58	5	6
86.7	60.0	32	59.3	120	21.3	NH	01	07	18	2158	80	10	4
86.7	70.0	32	39.7	121	01.7	NH	01	07	19	0328	66	145	201
86.7	80.0	32	19.5	121	42.8	NH	01	07	19	0819	69	0	8
86.7	90.0	31	59.6	122	23.3	NH	01	07	19	1514	75	3	2
86.7	100.0	31	39.4	123	04.3	NH	01	07	19	2048	65	9	71
86.7	110.0	31	19.7	123	44.3	NH	01	07	20	0225	72	5	23
90.0	28.0	33	29.0	117	46.2	NH	01	07	17	0413	80	59	9107
90.0	30.0	33	25.7	117	54.3	NH	01	07	17	0136	89	11	34
90.0	35.0	33	15.2	118	15.3	NH	01	07	16	1908	74	65	64
90.0	37.0	33	11.1	118	23.3	NH	01	07	16	1303	95	56	1274
90.0	45.0	32	55.2	118	56.0	NH	01	07	16	0545	71	14	0
90.0	53.0	32	39.0	119	28.9	NH	01	07	16	0033	81	20	21
90.0	60.0	32	25.2	119	57.6	NH	01	07	15	1939	75	4	5
90.0	70.0	32	05.0	120	38.3	NH	01	07	15	1339	116	4	185
90.0	80.0	31	45.1	121	19.0	NH	01	07	15	0612	70	3	109

TABLE 1. (cont.) CalCOFI Cruise 0107

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
90.0	90.0	31	24.8	121	59.7	NH	01	07	15	0010	73	11	119
90.0	100.0	31	05.2	122	39.9	NH	01	07	14	1808	69	23	13
90.0	110.0	30	45.7	123	20.3	NH	01	07	14	1133	75	1	35
90.0	120.0	30	25.4	123	59.8	NH	01	07	14	0120	93	21	12
93.3	26.7	32	57.4	117	18.3	NH	01	07	10	1125	54	1	1028
93.3	28.0	32	54.8	117	23.6	NH	01	07	10	1426	92	9	82
93.3	30.0	32	50.8	117	31.9	NH	01	07	10	1813	68	7	43
93.3	35.0	32	40.8	117	52.4	NH	01	07	10	2231	77	126	31
93.3	40.0	32	30.9	118	12.6	NH	01	07	11	0224	69	27	5
93.3	45.0	32	20.9	118	33.2	NH	01	07	11	0622	56	22	14
93.3	50.0	32	10.9	118	53.4	NH	01	07	11	1036	57	4	172
93.3	55.0	32	01.1	119	13.9	NH	01	07	11	1547	61	3	10
93.3	60.0	31	50.8	119	34.2	NH	01	07	11	1940	74	15	31
93.3	70.0	31	30.9	120	14.4	NH	01	07	12	0131	70	6	263
93.3	80.0	31	10.9	120	56.8	NH	01	07	12	0801	63	3	47
93.3	90.0	30	51.1	121	35.2	NH	01	07	12	1540	72	0	298
93.3	100.0	30	30.9	122	15.4	NH	01	07	12	2355	73	7	345
93.3	110.0	30	10.9	122	55.2	NH	01	07	13	0826	69	12	42
93.3	120.0	29	51.4	123	36.0	NH	01	07	13	1625	73	13	5

CalCOFI Cruise 0110

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	04.5	120	46.2	NH	01	11	05	0918	69	2	612
76.7	51.0	35	01.4	120	54.8	NH	01	11	05	1235	76	0	2
76.7	55.0	34	53.3	121	11.6	NH	01	11	05	1624	72	0	2
76.7	60.0	34	43.4	121	32.7	NH	01	11	05	2013	71	0	3
76.7	70.0	34	23.5	122	14.5	NH	01	11	06	0220	75	0	2
76.7	80.0	34	03.0	122	55.7	NH	01	11	06	1510	77	0	4
76.7	90.0	33	43.3	123	38.0	NH	01	11	06	1551	53	0	5
80.0	51.0	34	26.9	120	31.1	NH	01	11	05	0413	80	16	410
80.0	55.0	34	17.7	120	48.0	NH	01	11	08	0815	80	9	852
80.0	60.0	34	08.9	121	09.2	NH	01	11	08	0434	73	9	6
80.0	70.0	33	48.7	121	50.5	NH	01	11	07	2234	74	0	1
80.0	80.0	33	28.7	122	32.2	NH	01	11	07	1649	75	0	5
80.0	90.0	33	08.2	123	13.3	NH	01	11	07	0851	67	0	0
80.0	100.0	32	49.3	123	54.6	NH	01	11	07	0352	64	0	2
81.8	46.9	34	16.6	120	01.5	NH	01	11	05	0014	86	10	4504
83.3	40.6	34	13.3	119	24.7	NH	01	11	04	1926	76	12	74
83.3	42.0	34	10.5	119	30.2	NH	01	11	04	1728	80	55	771
83.3	51.0	33	52.7	120	08.1	NH	01	11	04	1123	68	0	509
83.3	55.0	33	44.5	120	24.6	NH	01	11	04	0804	72	0	117
83.3	60.0	33	34.7	120	45.5	NH	01	11	04	0351	86	1	20
83.3	70.0	33	14.3	121	26.7	NH	01	11	03	2132	72	0	2

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
83.3	80.0	32	54.6	122	08.0	NH	01	11	03	1535	65	0	5
83.3	90.0	32	34.7	122	49.1	NH	01	11	03	0804	73	1	17
83.3	100.0	32	14.6	123	29.7	NH	01	11	03	0315	84	1	4
83.3	110.0	31	54.3	124	10.0	NH	01	11	02	2121	80	2	18
86.7	33.0	33	53.2	118	29.0	NH	01	10	31	1130	77	20	1375
86.7	35.0	33	49.3	118	37.5	NH	01	10	31	1401	82	0	21
86.7	40.0	33	40.0	118	58.2	NH	01	10	31	1743	65	3	265
86.7	45.0	33	29.6	119	18.8	NH	01	10	31	2132	66	0	337
86.7	50.0	33	19.7	119	39.4	NH	01	11	01	0044	75	0	119
86.7	55.0	33	09.6	119	59.9	NH	01	11	01	0445	69	0	9
86.7	60.0	32	59.8	120	20.3	NH	01	11	01	0809	64	1	2
86.7	70.0	32	39.5	121	01.8	NH	01	11	01	1512	74	0	6
86.7	80.0	32	19.6	121	42.4	NH	01	11	01	2041	69	2	7
86.7	90.0	31	59.6	122	23.3	NH	01	11	02	0230	76	9	2
86.7	100.0	31	40.2	123	04.2	NH	01	11	02	0757	66	4	24
86.7	110.0	31	19.7	123	44.5	NH	01	11	02	1520	90	5	257
90.0	28.0	33	28.8	117	45.8	NH	01	10	31	0459	89	26	291
90.0	30.0	33	25.0	117	54.5	NH	01	10	31	0300	66	11	66
90.0	35.0	33	15.1	118	15.0	NH	01	10	30	2259	85	13	483
90.0	37.0	33	11.1	118	23.2	NH	01	10	30	2017	87	38	208
90.0	45.0	32	55.1	118	56.1	NH	01	10	30	1440	77	1	4
90.0	53.0	32	38.9	119	29.6	NH	01	10	30	0759	103	1	23
90.0	60.0	32	24.9	119	57.7	NH	01	10	30	0326	80	0	144
90.0	70.0	32	05.1	120	38.3	NH	01	10	29	2115	75	0	43
90.0	80.0	31	45.1	121	18.9	NH	01	10	29	1520	76	0	86
90.0	90.0	31	24.9	122	00.0	NH	01	10	29	0807	78	0	6
90.0	100.0	31	05.1	122	40.0	NH	01	10	29	0315	81	19	90
90.0	110.0	30	45.1	123	19.9	NH	01	10	28	2106	87	1	42
90.0	120.0	30	25.1	123	59.9	NH	01	10	28	1536	82	1	4
93.3	26.7	32	57.4	117	18.3	NH	01	10	25	1101	86	7	15
93.3	28.0	32	54.8	117	23.7	NH	01	10	25	1353	89	0	62
93.3	30.0	32	50.8	117	31.9	NH	01	10	25	1649	68	1	80
93.3	35.0	32	40.8	117	52.4	NH	01	10	25	2056	73	0	1452
93.3	40.0	32	30.8	118	12.8	NH	01	10	26	0100	76	0	18
93.3	45.0	32	21.1	118	33.4	NH	01	10	26	0510	80	0	3
93.3	50.0	32	10.9	118	53.1	NH	01	10	26	0802	83	0	24
93.3	55.0	32	00.8	119	14.0	NH	01	10	26	1423	79	0	106
93.3	60.0	31	50.8	119	34.3	NH	01	10	26	1827	79	0	19
93.3	70.0	31	30.8	120	14.8	NH	01	10	26	2358	82	0	144
93.3	80.0	31	10.9	120	54.7	NH	01	10	27	0806	82	0	51
93.3	90.0	30	50.8	121	35.4	NH	01	10	27	1549	77	0	32
93.3	100.0	30	30.8	122	15.5	NH	01	10	27	2133	79	1	97
93.3	110.0	30	10.9	122	55.2	NH	01	10	28	0315	75	1	13
93.3	120.0	29	51.2	123	35.0	NH	01	10	28	0816	84	2	15

TABLE 2. Pooled occurrences of fish larvae taken in Manta net tows on the 2001 CalCOFI survey.

Rank	Taxon	Occurrences
1	*Cololabis saira*	73
2	*Engraulis mordax*	72
3	*Sebastes* spp.	37
4	*Sardinops sagax*	36
5	*Hypsoblennius jenkinsi*	17
6	*Trachurus symmetricus*	14
6	*Scorpaenichthys marmoratus*	14
8	*Ceratoscopelus townsendi*	13
9	*Vinciguerria lucetia*	11
9	*Leuresthes tenuis*	11
11	*Tetragonurus cuvieri*	10
12	*Stenobrachius leucopsarus*	9
12	*Chromis punctipinnis*	9
12	*Hypsoblennius gilberti*	9
15	*Scomber japonicus*	7
15	*Sebastes diploproa*	7
17	*Citharichthys sordidus*	6
17	*Oxyjulis californica*	6
19	*Atherinopsis californiensis*	5
19	*Hypsoblennius* spp.	5
19	*Lampadena urophaos*	5
19	*Citharichthys stigmaeus*	5
23	*Triphoturus mexicanus*	4
23	*Cyclothone signata*	4
23	*Sebastes jordani*	4
23	*Nannobrachium* spp.	4
23	*Medialuna californiensis*	4
28	*Icichthys lockingtoni*	3
28	*Nannobrachium ritteri*	3
28	*Diaphus* spp.	3
28	*Sphyraena argentea*	3
28	*Aristostomias scintillans*	3
28	*Merluccius productus*	3
34	*Coryphopterus nicholsii*	2
34	*Paralabrax* spp.	2
34	*Tactostoma macropus*	2
34	*Neoclinus stephensae*	2
34	*Peprilus simillimus*	2
34	*Diogenichthys atlanticus*	2
34	*Bathylagus ochotensis*	2
34	*Xenistius californiensis*	2
34	*Brama japonica*	2
34	*Pleuronichthys coenosus*	2
34	*Oxylebius pictus*	2
34	*Hexagrammos decagrammus*	2
34	*Ophiodon elongatus*	2
34	*Microstomus pacificus*	2
48	*Leuroglossus stilbius*	1
48	*Bathylagus wesethi*	1

TABLE 2. (cont.)

Rank	Taxon	Occurrences
48	*Stomias atriventer*	1
48	*Cyclothone* spp.	1
48	*Neoclinus blanchardi*	1
48	*Neoclinus* spp.	1
48	*Sebastes paucispinis*	1
48	*Symbolophorus californiensis*	1
48	*Cataetyx rubrirostris*	1
48	*Oneirodes* spp.	1
48	*Girella nigricans*	1
48	*Seriphus politus*	1
48	*Cheilopogon pinnatibarbatus*	1
48	*Fodiator acutus*	1
48	*Genyonemus lineatus*	1
48	*Sebastes aurora*	1
48	*Leptocottus armatus*	1
48	*Hygophum reinhardtii*	1
	Total	465

TABLE 3. Pooled raw counts of fish larvae taken in Manta net tows on the 2001 CalCOFI survey.

Rank	Taxon	Count
1	*Sardinops sagax*	2245
2	*Engraulis mordax*	1044
3	*Leuresthes tenuis*	644
4	*Sebastes* spp.	280
5	*Cololabis saira*	267
6	*Hypsoblennius jenkinsi*	127
7	*Atherinopsis californiensis*	67
8	*Chromis punctipinnis*	64
9	*Vinciguerria lucetia*	42
10	*Ceratoscopelus townsendi*	39
11	*Scorpaenichthys marmoratus*	36
12	*Sebastes diploproa*	28
13	*Scomber japonicus*	22
14	*Sebastes jordani*	18
14	*Hypsoblennius gilberti*	18
14	*Trachurus symmetricus*	18
17	*Lampadena urophaos*	17
18	*Hypsoblennius* spp.	16
19	*Oxyjulis californica*	14
20	*Stenobrachius leucopsarus*	11
21	*Tetragonurus cuvieri*	10
22	*Citharichthys stigmaeus*	8
23	*Citharichthys sordidus*	6
23	*Medialuna californiensis*	6
23	*Sphyraena argentea*	6
26	*Cyclothone signata*	5
27	*Peprilus simillimus*	4
27	*Triphoturus mexicanus*	4
27	*Nannobrachium* spp.	4
27	*Hexagrammos decagrammus*	4
27	*Merluccius productus*	4
32	*Symbolophorus californiensis*	3
32	*Nannobrachium ritteri*	3
32	*Aristostomias scintillans*	3
32	*Bathylagus ochotensis*	3
32	*Diaphus* spp.	3
32	*Microstomus pacificus*	3
32	*Icichthys lockingtoni*	3
32	*Brama japonica*	3
32	*Ophiodon elongatus*	3
41	*Fodiator acutus*	2
41	*Pleuronichthys coenosus*	2
41	*Neoclinus stephensae*	2
41	*Tactostoma macropus*	2
41	*Neoclinus* spp.	2
41	*Coryphopterus nicholsii*	2
41	*Leptocottus armatus*	2
41	*Oxylebius pictus*	2
41	*Xenistius californiensis*	2

TABLE 3. (cont.)

Rank	Taxon	Count
41	*Paralabrax* spp.	2
41	*Diogenichthys atlanticus*	2
52	*Genyonemus lineatus*	1
52	*Bathylagus wesethi*	1
52	*Leuroglossus stilbius*	1
52	*Cyclothone* spp.	1
52	*Cataetyx rubrirostris*	1
52	*Cheilopogon pinnatibarbatus*	1
52	*Stomias atriventer*	1
52	*Seriphus politus*	1
52	*Neoclinus blanchardi*	1
52	*Girella nigricans*	1
52	*Sebastes paucispinis*	1
52	*Sebastes aurora*	1
52	*Hygophum reinhardtii*	1
52	*Oneirodes* spp.	1
	Total	5141

TABLE 4. Numbers of fish larvae taken in Manta net tows on the 2001 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.
76.7	55.0	0.0	-	-	1.4	-	-	3.4	-	-	-	0.0	-
76.7	60.0	0.0	-	-	0.0	-	-	1.7	-	-	-	0.0	-
76.7	70.0	0.0	-	-	36.9	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	38.4	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	7.1	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	53.6	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	6.4	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	82.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	6.7	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	2.4	-	-	0.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
83.3	60.0	0.0	-	-	14.4	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	53.4	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	71.2	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	13.4	-	-	0.0	-	-	-	0.0	-
86.7	40.0	0.0	-	-	0.0	-	-	10.6	-	-	0.0	-	-
86.7	55.0	0.0	-	-	106.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	64.6	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	197.8	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	88.1	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	0.0	-	-	7.2	-	-	0.0	-	-
90.0	60.0	0.0	-	-	47.8	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	111.7	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	8.1	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	1.9	-	-	5.4	-	-	0.0	-	-
93.3	40.0	0.0	-	-	344.3	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	28.9	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sardinops sagax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 55.0	-	-	-	207.7	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	-	-	3.2	-	-	0.0	-	-	0.0	-	-
93.3 70.0	0.0	-	-	3.3	-	-	0.0	-	-	0.0	-	-
93.3 80.0	0.0	-	-	2.9	-	-	0.0	-	-	0.0	-	-

Engraulis mordax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.7	-	-	0.0	-	-	0.7	-	-	-	0.7	-
76.7 55.0	0.0	-	-	0.7	-	-	17.6	-	-	-	0.0	-
76.7 60.0	0.7	-	-	0.0	-	-	4.0	-	-	-	0.0	-
76.7 70.0	0.6	-	-	1.3	-	-	0.0	-	-	-	0.0	-
80.0 51.0	22.0	-	-	0.9	-	-	0.0	-	-	-	8.0	-
80.0 55.0	13.0	-	-	0.0	-	-	3.4	-	-	-	1.6	-
80.0 60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.6	-
80.0 70.0	0.0	-	-	2.8	-	-	0.0	-	-	-	0.0	-
80.0 90.0	0.0	-	-	0.0	-	-	1.3	-	-	-	0.0	-
81.8 46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	7.7	-
83.3 40.6	2.4	-	-	0.0	-	-	43.1	-	-	-	4.6	-
83.3 42.0	0.0	-	-	0.0	-	-	3.1	-	-	-	22.3	-
83.3 51.0	4.6	-	-	49.0	-	-	7.6	-	-	-	0.0	-
83.3 55.0	0.0	-	-	0.0	-	-	23.3	-	-	-	0.0	-
83.3 60.0	0.0	-	-	0.0	-	-	2.3	-	-	-	0.0	-
83.3 80.0	0.0	-	-	0.0	-	-	1.4	-	-	-	0.0	-
86.7 33.0	1.3	-	-	5.9	-	-	1.0	-	-	13.0	-	-
86.7 35.0	3.1	-	-	8.5	-	-	1.8	-	-	0.0	-	-
86.7 40.0	0.0	-	-	14.1	-	-	2.8	-	-	2.0	-	-
86.7 45.0	0.0	-	-	2.5	-	-	0.0	-	-	0.0	-	-
86.7 50.0	0.0	-	-	14.8	-	-	0.0	-	-	-	0.0	-
86.7 55.0	0.6	-	-	0.0	-	-	0.6	-	-	-	0.0	-
86.7 60.0	0.0	-	-	0.0	-	-	3.2	-	-	-	0.0	-
86.7 70.0	-	-	-	0.0	-	-	92.4	-	-	-	0.0	-
86.7 90.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7 100.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.7	-
90.0 28.0	0.0	-	-	10.5	-	-	6.4	-	-	8.0	-	-
90.0 30.0	0.7	-	-	45.7	-	-	2.7	-	-	0.7	-	-

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	-	-	167.7	-	-	0.7	-	-	11.1	-	-
90.0 37.0	0.0	-	-	0.0	-	-	1.0	-	-	30.4	-	-
90.0 53.0	0.0	-	-	3.1	-	-	0.0	-	-	0.0	-	-
90.0 60.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 26.7	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 30.0	0.0	-	-	2.2	-	-	2.7	-	-	0.0	-	-
93.3 35.0	0.0	-	-	16.0	-	-	56.4	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	1.4	-	-	0.0	-	-
93.3 60.0	-	-	-	0.5	-	-	7.4	-	-	0.0	-	-

Bathylagus ochotensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	0.0	-	-	1.4	-	-	0.0	-	-	-	0.0	-
76.7 60.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Bathylagus wesethi

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

Leuroglossus stilbius

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

***Cyclothone* spp.**

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

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 90.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 60.0	-	-	-	1.1	-	-	0.0	-	-	0.0	-	-

Vinciguerria lucetia

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

TABLE 4. (cont.)

***Vinciguerria lucetia* (cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 70.0	0.0	-	-	0.0	-	-	1.2	-	-	0.0	-	-
90.0 80.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 90.0	0.0	-	-	0.0	-	-	5.8	-	-	0.0	-	-
90.0 100.0	1.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	-	0.0	-	-	16.7	-	-	0.0	-	-
93.3 70.0	0.0	-	-	0.0	-	-	2.8	-	-	0.0	-	-
93.3 100.0	0.0	-	-	0.0	-	-	2.9	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 120.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-

Stomias atriventer

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

Tactostoma macropus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
93.3 100.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-

Aristostomias scintillans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 90.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-
90.0 100.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 90.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 100.0	0.0	-	-	0.8	-	-	13.7	-	-	0.0	-	-
90.0 120.0	0.0	-	-	0.6	-	-	0.9	-	-	0.0	-	-
93.3 70.0	0.6	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 80.0	0.0	-	-	0.0	-	-	1.3	-	-	0.0	-	-
93.3 90.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 110.0	2.1	-	-	0.0	-	-	3.4	-	-	0.0	-	-
93.3 120.0	0.0	-	-	0.7	-	-	0.7	-	-	0.0	-	-

TABLE 4. (cont.)

***Diaphus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3 90.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
86.7 35.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-

Lampadena urophaos

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-
90.0 100.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 80.0	0.0	-	-	0.0	-	-	0.6	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	3.4	-	-	0.0	-	-
93.3 120.0	0.0	-	-	0.0	-	-	6.6	-	-	0.0	-	-

***Nannobrachium* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 60.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 40.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
86.7 55.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
90.0 90.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-

Nannobrachium ritteri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
86.7 70.0	-	-	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	0.9	-	-

Stenobrachius leucopsarus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	1.5	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3 60.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 33.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7 35.0	0.0	-	-	1.5	-	-	0.0	-	-	0.0	-	-
86.7 45.0	0.0	-	-	0.6	-	-	0.0	-	-	0.0	-	-
90.0 28.0	0.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-

TABLE 4. (cont.)

Triphoturus mexicanus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 110.0	0.0	-	-	0.7	-	-	0.8	-	-	0.0	-	-
93.3 120.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-

Diogenichthys atlanticus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 110.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Hygophum reinhardtii

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

Symbolophorus californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.4	-

Merluccius productus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 70.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3 51.0	1.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Cataetyx rubrirostris

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	-

***Oneirodes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	7.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 42.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 33.0	2.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	23.7	-	-	0.0	-	-	0.0	-	-	8.0	-	-

TABLE 4. (cont.)

Leuresthes tenuis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	-	2.2	-	-	8.6	-	-	0.0	-	-
86.7	35.0	0.0	-	-	7.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	-	10.5	-	-	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	-	61.3	-	-	0.0	-	-	-	0.0	-
86.7	55.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	454.8	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	0.0	-	-	0.5	-	-	0.0	-	-
93.3	28.0	0.0	-	-	0.0	-	-	1.8	-	-	0.0	-	-

Cololabis saira

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	4.3	-	-	-	0.0	-
76.7	55.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
76.7	70.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
76.7	80.0	0.0	-	-	0.0	-	-	6.1	-	-	-	0.0	-
76.7	90.0	0.0	-	-	0.7	-	-	2.1	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
80.0	80.0	0.0	-	-	0.0	-	-	1.1	-	-	-	0.0	-
80.0	90.0	1.7	-	-	0.0	-	-	1.3	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
83.3	80.0	0.0	-	-	1.6	-	-	0.7	-	-	-	0.0	-
83.3	90.0	0.6	-	-	0.0	-	-	5.6	-	-	-	0.7	-
83.3	100.0	1.2	-	-	0.0	-	-	0.8	-	-	-	0.0	-
83.3	110.0	0.0	-	-	2.9	-	-	0.7	-	-	-	1.6	-
86.7	33.0	0.0	-	-	0.0	-	-	1.0	-	-	0.0	-	-
86.7	35.0	0.0	-	-	0.0	-	-	1.8	-	-	0.0	-	-
86.7	50.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7	55.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
86.7	60.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	2.0	-	-	-	0.0	-

TABLE 4. (cont.)

Cololabis saira **(cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.4	-
86.7 90.0	0.0	-	-	0.8	-	-	1.5	-	-	-	4.5	-
86.7 100.0	0.0	-	-	2.3	-	-	4.5	-	-	-	1.3	-
86.7 110.0	0.6	-	-	0.0	-	-	3.6	-	-	-	1.8	-
90.0 28.0	0.0	-	-	0.9	-	-	1.6	-	-	0.0	-	-
90.0 30.0	0.0	-	-	0.0	-	-	2.7	-	-	0.0	-	-
90.0 35.0	0.0	-	-	0.8	-	-	11.0	-	-	0.0	-	-
90.0 37.0	0.7	-	-	0.0	-	-	6.7	-	-	1.7	-	-
90.0 45.0	0.0	-	-	0.0	-	-	9.9	-	-	0.8	-	-
90.0 53.0	0.0	-	-	0.0	-	-	14.5	-	-	0.0	-	-
90.0 60.0	0.0	-	-	0.0	-	-	2.3	-	-	0.0	-	-
90.0 70.0	0.0	-	-	0.0	-	-	3.5	-	-	0.0	-	-
90.0 80.0	0.7	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 90.0	0.0	-	-	0.0	-	-	1.5	-	-	0.0	-	-
90.0 100.0	0.0	-	-	0.0	-	-	0.7	-	-	15.4	-	-
90.0 110.0	0.0	-	-	0.0	-	-	0.0	-	-	0.9	-	-
90.0 120.0	0.0	-	-	0.0	-	-	0.9	-	-	0.8	-	-
93.3 28.0	0.0	-	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 30.0	0.0	-	-	0.0	-	-	2.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.9	-	-	9.3	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	6.2	-	-	0.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	11.7	-	-	0.0	-	-
93.3 50.0	0.0	-	-	0.0	-	-	2.3	-	-	0.0	-	-
93.3 55.0	-	-	-	0.0	-	-	1.8	-	-	0.0	-	-
93.3 60.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 100.0	0.0	-	-	0.0	-	-	1.5	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	0.0	-	-	0.7	-	-
93.3 120.0	0.0	-	-	0.0	-	-	0.0	-	-	1.7	-	-

Cheilopogon pinnatibarbatus

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

Fodiator acutus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	0.0	-	-	0.0	-	-	1.6	-	-	0.0	-	-

TABLE 4. (cont.)

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	5.2	-	-	0.0	-	-	0.7	-	-	-	0.0	-
76.7	51.0	1.9	-	-	0.8	-	-	0.0	-	-	-	0.0	-
76.7	55.0	0.0	-	-	16.2	-	-	0.0	-	-	-	0.0	-
76.7	60.0	1.4	-	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0	55.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	1.4	-	-	0.7	-	-	-	1.6	-
81.8	46.9	15.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	40.6	4.8	-	-	5.4	-	-	0.0	-	-	-	0.0	-
83.3	42.0	8.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	3.0	-	-	18.3	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	2.2	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	2.0	-	-	0.7	-	-	-	0.0	-
86.7	33.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	13.1	-	-	0.0	-	-	0.0	-	-
86.7	40.0	9.2	-	-	1.4	-	-	0.9	-	-	0.0	-	-
86.7	45.0	2.9	-	-	1.9	-	-	0.0	-	-	0.0	-	-
86.7	50.0	23.5	-	-	41.3	-	-	0.0	-	-	0.0	-	-
86.7	55.0	0.0	-	-	1.5	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	53.0	0.0	-	-	3.8	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	2.9	-	-	0.0	-	-	0.0	-	-
93.3	26.7	3.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	1.9	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	0.7	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	1.1	-	-	0.0	-	-	0.0	-	-

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	0.0	-	-	12.9	-	-	-	0.0	-
76.7	55.0	1.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	3.2	-
83.3	42.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-

TABLE 4. (cont.)

***Sebastes diploproa* (cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-
86.7 45.0	0.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	0.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Sebastes jordani

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	0.0	-	-	8.1	-	-	0.0	-	-	-	0.0	-
83.3 51.0	1.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 50.0	0.0	-	-	2.2	-	-	0.0	-	-	-	0.0	-

Sebastes paucispinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Oxylebius pictus

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

Hexagrammos decagrammus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 55.0	2.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Ophiodon elongatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	1.5	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Leptocottus armatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	1.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	2.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	2.6	-	-	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.
80.0 55.0	3.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.5	-
80.0 70.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8 46.9	1.5	-	-	0.0	-	-	0.0	-	-	-	0.9	-
83.3 42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.6	-
83.3 51.0	4.6	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3 70.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 45.0	0.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-

***Paralabrax* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
90.0 30.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 70.0	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-
80.0 90.0	0.0	-	-	0.7	-	-	0.6	-	-	-	0.0	-
83.3 80.0	0.0	-	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3 110.0	0.0	-	-	1.0	-	-	0.0	-	-	-	0.0	-
86.7 33.0	0.0	-	-	0.0	-	-	1.0	-	-	0.0	-	-
86.7 40.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 70.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	-	-	0.0	-	-	1.5	-	-	0.0	-	-
93.3 70.0	0.0	-	-	0.7	-	-	0.7	-	-	0.0	-	-
93.3 80.0	0.0	-	-	2.9	-	-	0.0	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-

Brama japonica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	1.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	0.0	-	-	0.0	-	-	0.0	-	-	0.8	-	-

TABLE 4. (cont.)

Xenistius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-

Genyonemus lineatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Seriphus politus

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

Girella nigricans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	0.0	-	-	0.0	-	-	1.0	-	-	0.0	-	-

Medialuna californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	0.0	-	-	0.0	-	-	1.6	-	-	0.0	-	-
90.0 53.0	0.0	-	-	0.0	-	-	1.6	-	-	1.0	-	-
93.3 45.0	0.0	-	-	0.0	-	-	0.6	-	-	0.0	-	-

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	0.0	-	-	0.0	-	-	1.6	-	-	-	0.0	-
83.3 60.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7 35.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
86.7 70.0	-	-	-	0.0	-	-	0.7	-	-	-	0.0	-
90.0 28.0	0.0	-	-	0.0	-	-	4.8	-	-	0.0	-	-
90.0 30.0	0.0	-	-	0.8	-	-	0.9	-	-	0.0	-	-
90.0 35.0	0.0	-	-	0.0	-	-	8.1	-	-	0.0	-	-
90.0 37.0	0.0	-	-	0.0	-	-	38.2	-	-	0.0	-	-

Oxyjulis californica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 60.0	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
86.7 40.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 35.0	0.0	-	-	0.0	-	-	5.9	-	-	0.0	-	-

TABLE 4. (cont.)

***Oxyjulis californica* (cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 37.0	0.0	-	-	0.0	-	-	1.9	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 55.0	-	-	-	0.7	-	-	0.0	-	-	0.0	-	-

***Neoclinus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.6	-

Neoclinus blanchardi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	0.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Neoclinus stephensae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 40.0	0.0	-	-	0.7	-	-	0.0	-	-	0.0	-	-

***Hypsoblennius* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	0.0	-	-	0.0	-	-	0.8	-	-	-	0.0	-
90.0 28.0	0.0	-	-	0.0	-	-	1.6	-	-	0.0	-	-
90.0 35.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0 37.0	0.0	-	-	0.0	-	-	1.9	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	3.9	-	-	0.0	-	-

Hypsoblennius gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	0.0	-	-	0.0	-	-	1.2	-	-	-	0.0	-
86.7 35.0	0.0	-	-	0.0	-	-	2.7	-	-	0.0	-	-
86.7 50.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7 55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0 28.0	0.0	-	-	0.0	-	-	0.8	-	-	0.9	-	-
90.0 35.0	0.0	-	-	0.0	-	-	5.2	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-

TABLE 4. (cont.)

Hypsoblennius jenkinsi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
83.3 40.6	0.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
83.3 42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	17.5	-
86.7 33.0	0.0	-	-	0.0	-	-	0.0	-	-	2.3	-	-
86.7 35.0	0.0	-	-	0.0	-	-	4.6	-	-	0.0	-	-
90.0 28.0	0.0	-	-	0.0	-	-	12.0	-	-	6.2	-	-
90.0 30.0	0.0	-	-	0.0	-	-	1.8	-	-	6.6	-	-
90.0 35.0	0.0	-	-	0.0	-	-	12.5	-	-	0.0	-	-
90.0 37.0	0.0	-	-	0.0	-	-	2.9	-	-	0.0	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	5.2	-	-
93.3 28.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 30.0	0.0	-	-	0.0	-	-	0.0	-	-	0.7	-	-
93.3 35.0	0.0	-	-	0.0	-	-	11.6	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	8.3	-	-	0.0	-	-
93.3 60.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-

Coryphopterus nicholsii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
90.0 53.0	0.0	-	-	0.6	-	-	0.0	-	-	0.0	-	-

Sphyraena argentea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
90.0 28.0	0.0	-	-	0.0	-	-	2.4	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	1.5	-	-	0.0	-	-

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7 55.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0 28.0	0.0	-	-	0.0	-	-	5.6	-	-	0.0	-	-
90.0 30.0	0.0	-	-	0.0	-	-	0.9	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	6.2	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	2.1	-	-	0.0	-	-
93.3 60.0	-	-	-	0.0	-	-	0.7	-	-	0.0	-	-

TABLE 4. (cont.)

Icichthys lockingtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.9	-

Tetragonurus cuvieri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	0.9	-	-	0.0	-	-	-	0.8	-
86.7	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.6	-
86.7	80.0	0.0	-	-	0.6	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
86.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.7	-
90.0	70.0	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0	120.0	0.0	-	-	0.6	-	-	0.0	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3	120.0	0.0	-	-	0.0	-	-	0.7	-	-	0.0	-	-

Peprilus simillimus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	2.4	-
83.3	51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.6	-	-	-	0.0	-
80.0	55.0	0.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.8	-
83.3	51.0	0.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
86.7	50.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	1.5	-
83.3	51.0	0.0	-	-	0.0	-	-	0.5	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	1.3	-	-	-	0.0	-
86.7	50.0	1.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Microstomus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	0.0	-	-	0.7	-	-	0.0	-	-	-	0.0	-
76.7 60.0	0.0	-	-	1.4	-	-	0.0	-	-	-	0.0	-

Pleuronichthys coenosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	0.0	-	-	0.0	-	-	0.7	-	-	-	0.0	-
90.0 37.0	0.0	-	-	0.0	-	-	0.0	-	-	0.9	-	-

TABLE 5. Station and Bongo net tow data for CalCOFI cruises in 2001. 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 0101

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.7	JD	01	01	22	2024	57	123	4.59	146	100.0	107	73
76.7	51.0	35	01.3	120	55.1	JD	01	01	22	1809	214	429	5.00	168	50.0	130	23
76.7	55.0	34	53.2	121	11.9	JD	01	01	22	1423	211	412	5.12	49	100.0	88	181
76.7	60.0	34	43.3	121	32.9	JD	01	01	22	0846	213	440	4.83	41	100.0	20	114
76.7	70.0	34	23.3	122	14.9	JD	01	01	22	0349	215	439	4.89	219	51.0	50	17
76.7	80.0	34	03.3	122	56.6	JD	01	01	21	2153	220	444	4.95	74	51.5	2	5
76.7	90.0	33	43.3	123	38.1	JD	01	01	21	1615	216	442	4.89	32	100.0	7	12
76.7	100.0	33	23.3	124	19.4	JD	01	01	21	0838	212	454	4.67	29	100.0	0	12
80.0	51.0	34	26.9	120	31.0	JD	01	01	19	2142	46	117	3.88	119	100.0	36	114
80.0	55.0	34	19.1	120	47.9	JD	01	01	20	0056	213	440	4.85	73	46.8	27	48
80.0	60.0	34	09.1	121	09.0	JD	01	01	20	0441	214	431	4.95	90	46.1	18	8
80.0	70.0	33	48.9	121	50.5	JD	01	01	20	1114	201	460	4.37	219	48.5	35	72
80.0	80.0	33	29.1	122	32.0	JD	01	01	20	1653	212	443	4.78	38	100.0	12	36
80.0	90.0	33	09.2	123	13.5	JD	01	01	20	2208	211	445	4.73	85	52.6	12	9
80.0	100.0	32	49.1	123	54.3	JD	01	01	21	0352	214	421	5.08	64	100.0	3	5
81.8	46.9	34	16.4	120	01.5	JD	01	01	19	1744	211	433	4.86	76	54.5	12	231
83.3	40.6	34	13.5	119	24.9	JD	01	01	19	1249	20	59	3.35	85	100.0	29	1861
83.3	42.0	34	10.5	119	30.9	JD	01	01	19	1105	77	200	3.84	20	100.0	33	1445
83.3	51.0	33	52.7	120	08.1	JD	01	01	19	0456	81	181	4.44	83	100.0	268	124
83.3	55.0	33	44.7	120	24.6	JD	01	01	19	0158	213	434	4.90	122	50.9	6	14
83.3	60.0	33	34.7	120	45.4	JD	01	01	18	2158	209	444	4.71	106	53.1	2	10
83.3	70.0	33	14.7	121	26.6	JD	01	01	18	1600	220	409	5.38	34	100.0	8	22
83.3	80.0	32	54.7	122	07.7	JD	01	01	18	0828	200	470	4.26	30	100.0	8	12
83.3	90.0	32	34.8	122	48.8	JD	01	01	18	0052	214	430	4.97	100	100.0	9	18
83.3	100.0	32	14.6	123	29.3	JD	01	01	17	1857	215	429	4.99	28	100.0	3	7
83.3	110.0	31	53.0	124	09.6	JD	01	01	17	1259	213	432	4.94	25	100.0	5	8
86.7	33.0	33	53.3	118	29.4	JD	01	01	14	1633	50	109	4.56	37	100.0	16	482
86.7	35.0	33	49.4	118	37.7	JD	01	01	14	1914	213	418	5.08	60	100.0	31	111
86.7	40.0	33	39.4	118	58.6	JD	01	01	14	2320	219	395	5.54	78	48.3	46	179
86.7	45.0	33	29.4	119	19.1	JD	01	01	15	0323	216	428	5.06	58	100.0	321	80
86.7	50.0	33	19.4	119	39.8	JD	01	01	15	0740	44	122	3.63	82	100.0	86	2

Table 5. (cont.)

CalCOFI Cruise 0101

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	55.0	33	09.1	119	59.9	JD	01	01	15	1159	211	460	4.59	28	100.0	19	119
86.7	60.0	32	59.4	120	21.0	JD	01	01	15	1616	218	456	4.78	24	100.0	1	11
86.7	80.0	32	19.4	121	42.9	JD	01	01	16	1200	210	473	4.45	17	100.0	6	16
86.7	90.0	31	59.5	122	23.5	JD	01	01	16	1835	215	434	4.94	21	100.0	2	124
86.7	100.0	31	39.4	123	04.2	JD	01	01	17	0047	210	484	4.34	41	100.0	1	1
86.7	110.0	31	19.4	123	44.6	JD	01	01	17	0636	214	431	4.97	28	100.0	2	6
90.0	28.0	33	29.1	117	46.1	JD	01	01	14	0642	56	123	4.55	49	100.0	2	55
90.0	30.0	33	25.1	117	54.3	JD	01	01	14	0456	213	406	5.25	59	100.0	4	4
90.0	35.0	33	15.1	118	14.9	JD	01	01	14	0051	212	382	5.53	191	50.6	21	216
90.0	37.0	33	11.1	118	23.2	JD	01	01	13	2218	208	424	4.91	113	47.9	11	147
90.0	45.0	32	55.2	118	56.1	JD	01	01	13	1718	212	424	5.01	59	100.0	10	17
90.0	53.0	32	39.0	119	28.9	JD	01	01	13	1158	213	428	4.98	37	100.0	3	6
90.0	60.0	32	25.1	119	57.6	JD	01	01	13	0650	217	447	4.86	49	100.0	2	4
90.0	70.0	32	05.0	120	38.4	JD	01	01	13	0011	217	434	5.00	35	100.0	7	5
90.0	80.0	31	45.4	121	18.4	JD	01	01	12	1737	216	458	4.71	15	100.0	4	10
90.0	90.0	31	25.1	121	59.4	JD	01	01	12	0827	204	436	4.67	18	100.0	12	3
90.0	100.0	31	05.1	122	39.8	JD	01	01	12	0111	212	483	4.40	27	100.0	18	4
90.0	110.0	30	45.1	123	19.9	JD	01	01	11	1849	218	466	4.69	28	100.0	22	3
90.0	120.0	30	25.1	123	59.9	JD	01	01	11	1221	221	474	4.66	21	100.0	4	11
93.3	26.7	32	57.4	117	18.3	JD	01	01	07	1220	131	276	4.75	36	100.0	17	0
93.3	28.0	32	54.8	117	23.7	JD	01	01	07	1448	217	438	4.96	16	100.0	0	0
93.3	30.0	32	51.0	117	31.8	JD	01	01	08	0024	214	429	5.00	35	100.0	2	2
93.3	35.0	32	40.8	117	52.4	JD	01	01	08	0426	214	431	4.97	58	100.0	8	21
93.3	40.0	32	30.8	118	12.8	JD	01	01	08	0828	218	428	5.10	35	100.0	5	10
93.3	45.0	32	21.0	118	33.2	JD	01	01	08	1430	214	428	4.99	51	100.0	9	52
93.3	50.0	32	10.6	118	53.5	JD	01	01	08	1850	165	572	2.88	61	48.5	3	70
93.3	70.0	31	30.8	120	14.8	JD	01	01	09	1729	217	488	4.46	25	100.0	3	4
93.3	80.0	31	11.0	120	55.2	JD	01	01	09	2337	219	447	4.89	29	100.0	15	9
93.3	90.0	30	50.8	121	35.3	JD	01	01	10	0543	212	444	4.77	32	100.0	9	7
93.3	100.0	30	30.8	122	15.4	JD	01	01	10	1221	210	446	4.71	11	100.0	6	19
93.3	110.0	30	10.8	122	55.3	JD	01	01	10	2109	209	481	4.34	21	100.0	6	12
93.3	120.0	29	50.8	123	35.2	JD	01	01	11	0503	221	445	4.97	25	100.0	6	11

Table 5. (cont.)

CalCOFI Cruise 0104

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	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	46.8	JD	01	04	23	1014	63	158	3.95	126	100.0	4	19
76.7	51.0	35	01.3	120	55.2	JD	01	04	23	0823	213	444	4.79	218	49.4	5	30
76.7	55.0	34	53.2	121	12.0	JD	01	04	23	0452	212	434	4.88	196	50.5	4	37
76.7	60.0	34	43.3	121	33.1	JD	01	04	23	0017	201	472	4.27	153	48.6	24	26
76.7	70.0	34	23.2	122	14.9	JD	01	04	22	1646	216	450	4.81	91	48.7	38	92
76.7	80.0	34	03.4	122	56.8	JD	01	04	22	0826	218	453	4.82	97	52.2	60	30
76.7	90.0	33	43.3	123	38.2	JD	01	04	22	0052	210	480	4.37	115	52.7	16	45
76.7	100.0	33	23.2	124	19.6	JD	01	04	21	1756	215	490	4.40	31	100.0	5	16
80.0	51.0	34	27.0	120	31.3	JD	01	04	19	1928	70	160	4.40	470	52.0	1	0
80.0	55.0	34	19.1	120	48.0	JD	01	04	19	2246	214	452	4.73	268	49.5	6	2
80.0	60.0	34	08.9	121	09.3	JD	01	04	20	0243	210	456	4.61	217	50.5	72	19
80.0	70.0	33	48.9	121	50.7	JD	01	04	20	0909	217	428	5.08	192	50.0	40	252
80.0	80.0	33	29.1	122	31.9	JD	01	04	20	1654	199	474	4.21	84	47.5	71	45
80.0	90.0	33	09.1	123	13.0	JD	01	04	20	2354	191	507	3.77	120	52.4	12	13
80.0	100.0	32	49.1	123	54.3	JD	01	04	21	0824	211	502	4.20	60	100.0	14	72
81.8	46.9	34	16.6	120	01.6	JD	01	04	18	0114	218	438	4.97	199	51.7	9	17
83.3	40.6	34	13.6	119	24.8	JD	01	04	18	0539	24	80	3.05	587	48.9	1	1
83.3	42.0	34	10.7	119	30.4	JD	01	04	19	1212	145	303	4.80	446	51.1	3	11
83.3	51.0	33	52.8	120	08.2	JD	01	04	17	1929	114	236	4.83	352	50.6	33	16
83.3	55.0	33	44.7	120	24.6	JD	01	04	17	1615	207	465	4.44	277	51.1	6	64
83.3	60.0	33	34.6	120	45.4	JD	01	04	17	1155	199	491	4.06	189	51.6	22	44
83.3	70.0	33	14.8	121	26.6	JD	01	04	17	0437	213	427	4.98	131	50.0	40	21
83.3	80.0	32	54.7	122	08.0	JD	01	04	16	2240	212	434	4.88	187	49.3	138	32
83.3	90.0	32	34.7	122	48.7	JD	01	04	16	1632	224	472	4.75	125	100.0	20	11
83.3	100.0	32	14.7	123	29.4	JD	01	04	16	0849	210	425	4.94	195	100.0	245	631
83.3	110.0	31	54.8	124	10.2	JD	01	04	16	0356	213	440	4.84	61	100.0	39	112
86.7	33.0	33	53.4	118	29.3	JD	01	04	13	1327	38	103	3.68	222	100.0	51	404
86.7	35.0	33	49.5	118	37.6	JD	01	04	13	1652	214	434	4.93	58	100.0	60	32
86.7	40.0	33	39.4	118	58.5	JD	01	04	13	2108	215	442	4.86	81	47.2	44	31
86.7	45.0	33	29.4	119	18.9	JD	01	04	14	0131	212	428	4.95	348	51.0	23	13
86.7	50.0	33	19.3	119	39.7	JD	01	04	14	0606	49	119	4.14	336	52.5	18	12
86.7	55.0	33	09.5	120	00.2	JD	01	04	14	0907	213	448	4.74	241	48.1	18	53
86.7	60.0	32	59.6	120	20.9	JD	01	04	14	1456	219	444	4.94	56	100.0	13	38
86.7	70.0	32	39.3	121	02.0	JD	01	04	14	2110	214	452	4.73	95	48.8	149	58

Table 5. (cont.)

CalCOFI Cruise 0104

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	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	JD	01	04	15	0320	219	440	4.97	143	50.7	156	66
86.7	90.0	31	59.3	122	23.6	JD	01	04	15	0816	212	444	4.77	61	100.0	170	106
86.7	100.0	31	39.5	123	04.2	JD	01	04	15	1543	211	455	4.64	26	100.0	35	27
86.7	110.0	31	19.5	123	44.7	JD	01	04	15	2147	211	457	4.61	46	100.0	59	36
90.0	28.0	33	29.1	117	46.2	JD	01	04	13	0306	214	428	5.00	157	49.2	46	1387
90.0	30.0	33	25.1	117	54.4	JD	01	04	13	0006	216	414	5.21	164	51.4	148	1006
90.0	35.0	33	15.1	118	15.2	JD	01	04	12	1956	203	455	4.47	106	52.0	99	452
90.0	37.0	33	11.1	118	23.3	JD	01	04	12	1720	217	439	4.94	52	100.0	17	8
90.0	45.0	32	55.1	118	56.2	JD	01	04	12	1155	217	433	5.02	97	52.3	9	598
90.0	53.0	32	39.2	119	28.8	JD	01	04	12	0435	211	458	4.61	168	51.9	30	52
90.0	60.0	32	25.1	119	57.7	JD	01	04	11	2323	207	463	4.48	108	48.0	38	170
90.0	70.0	32	05.1	120	38.4	JD	01	04	11	1650	211	453	4.65	53	100.0	540	299
90.0	80.0	31	44.9	121	19.0	JD	01	04	11	0847	224	489	4.57	47	100.0	203	404
90.0	90.0	31	25.1	121	59.5	JD	01	04	11	0044	219	465	4.70	24	100.0	45	25
90.0	100.0	31	04.9	122	39.3	JD	01	04	10	1805	212	505	4.19	16	100.0	19	21
90.0	110.0	30	45.1	123	20.0	JD	01	04	10	0900	212	502	4.22	20	100.0	41	35
90.0	120.0	30	25.1	123	59.8	JD	01	04	10	0313	214	492	4.35	26	100.0	26	45
93.3	26.7	32	57.3	117	18.3	JD	01	04	06	1317	46	127	3.66	95	100.0	23	29
93.3	28.0	32	54.7	117	23.7	JD	01	04	06	1541	210	473	4.43	53	100.0	98	26
93.3	30.0	32	50.8	117	31.9	JD	01	04	06	1845	214	457	4.68	52	100.0	44	38
93.3	35.0	32	40.9	117	52.5	JD	01	04	06	2251	213	451	4.73	93	52.3	102	241
93.3	40.0	32	30.9	118	12.9	JD	01	04	07	0318	217	432	5.02	51	100.0	386	775
93.3	45.0	32	20.9	118	33.4	JD	01	04	07	0800	211	468	4.50	32	100.0	73	199
93.3	50.0	32	10.7	118	53.6	JD	01	04	07	1225	208	463	4.49	35	100.0	34	118
93.3	55.0	32	00.9	119	13.8	JD	01	04	07	1637	204	474	4.30	23	100.0	144	159
93.3	60.0	31	51.0	119	34.2	JD	01	04	07	2232	209	460	4.54	52	100.0	58	220
93.3	70.0	31	30.8	120	14.9	JD	01	04	08	0523	214	476	4.49	42	100.0	17	355
93.3	80.0	31	10.7	120	55.2	JD	01	04	08	1156	214	456	4.70	24	100.0	132	864
93.3	90.0	30	50.9	121	35.4	JD	01	04	08	1800	216	454	4.76	20	100.0	22	34
93.3	100.0	30	31.0	122	15.5	JD	01	04	09	0014	209	473	4.42	34	100.0	12	210
93.3	110.0	30	10.6	122	55.1	JD	01	04	09	0853	213	452	4.72	18	100.0	22	137

Table 5. (cont.)

CalCOFI Cruise 0107

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.9	NH	01	07	26	0923	59	142	4.17	1403	48.7	1	0
76.7	51.0	35	01.0	120	56.4	NH	01	07	26	0618	213	414	5.14	642	48.4	1	0
76.7	55.0	34	53.3	121	11.9	NH	01	07	26	0236	196	457	4.28	230	51.4	8	2
76.7	60.0	34	43.3	121	33.0	NH	01	07	25	2236	214	431	4.97	550	48.5	10	0
76.7	70.0	34	23.4	122	15.0	NH	01	07	25	1659	207	427	4.85	372	48.4	0	0
76.7	80.0	34	03.3	122	56.6	NH	01	07	25	1058	214	416	5.16	51	100.0	5	4
76.7	90.0	33	43.3	123	38.2	NH	01	07	25	0150	199	502	3.96	106	50.9	2	0
76.7	100.0	33	23.1	124	19.5	NH	01	07	24	1952	217	433	5.00	76	100.0	1	13
80.0	51.0	34	26.9	120	31.5	NH	01	07	22	2335	67	134	4.98	127	100.0	1	346
80.0	55.0	34	19.2	120	48.3	NH	01	07	23	0325	198	431	4.59	209	51.1	7	19
80.0	60.0	34	09.1	121	09.0	NH	01	07	23	0833	220	412	5.35	197	51.8	8	0
80.0	70.0	33	49.0	121	50.6	NH	01	07	23	1651	214	451	4.76	166	50.6	1	1
80.0	80.0	33	28.8	122	32.0	NH	01	07	23	2245	217	437	4.96	167	47.9	4	3
80.0	90.0	33	09.1	123	13.2	NH	01	07	24	0430	209	466	4.48	212	50.5	4	3
80.0	100.0	32	49.0	123	54.4	NH	01	07	24	0913	222	419	5.31	86	100.0	4	7
81.8	46.9	34	16.8	120	00.9	NH	01	07	22	1721	212	378	5.62	402	50.6	25	39
83.3	40.6	34	13.6	119	24.6	NH	01	07	22	0927	27	77	3.51	117	100.0	9	354
83.3	42.0	34	10.7	119	30.5	NH	01	07	22	0707	210	429	4.90	154	51.5	14	205
83.3	51.0	33	52.8	120	08.3	NH	01	07	22	0048	166	364	4.55	74	51.8	6	87
83.3	55.0	33	44.8	120	24.6	NH	01	07	21	2118	208	418	4.97	263	51.8	8	0
83.3	60.0	33	34.5	120	45.5	NH	01	07	21	1605	209	449	4.65	234	48.5	36	1
83.3	70.0	33	14.7	121	26.5	NH	01	07	21	0837	212	433	4.90	233	50.4	2	18
83.3	80.0	32	54.6	122	08.0	NH	01	07	21	0306	200	454	4.40	93	52.3	2	3
83.3	90.0	32	34.7	122	48.9	NH	01	07	20	2119	211	425	4.96	191	51.8	1	15
83.3	100.0	32	14.7	123	30.0	NH	01	07	20	1523	196	447	4.39	51	100.0	13	51
83.3	110.0	31	54.8	124	10.2	NH	01	07	20	0805	214	409	5.24	39	100.0	41	86
86.7	33.0	33	53.3	118	29.4	NH	01	07	17	1106	51	108	4.70	130	100.0	5	181
86.7	35.0	33	49.6	118	37.6	NH	01	07	17	1358	202	416	4.85	86	50.0	13	7
86.7	40.0	33	39.4	118	58.5	NH	01	07	17	1748	223	431	5.18	46	100.0	7	13
86.7	45.0	33	29.4	119	19.1	NH	01	07	18	0732	216	434	4.99	129	48.2	19	1
86.7	50.0	33	19.4	119	39.9	NH	01	07	18	1108	80	167	4.78	78	100.0	23	3
86.7	55.0	33	09.2	120	00.5	NH	01	07	18	1830	219	439	5.00	141	51.6	5	0
86.7	60.0	32	59.3	120	21.3	NH	01	07	18	2219	218	435	5.02	85	51.3	3	2
86.7	70.0	32	39.7	121	01.7	NH	01	07	19	0348	216	437	4.94	263	51.3	6	58

Table 5. (cont.)

CalCOFI Cruise 0107

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	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	42.8	NH	01	07	19	0839	216	418	5.17	98	48.7	0	13
86.7	90.0	31	59.6	122	23.3	NH	01	07	19	1533	205	427	4.81	45	100.0	16	39
86.7	100.0	31	39.4	123	04.3	NH	01	07	19	2107	221	410	5.39	39	100.0	47	151
86.7	110.0	31	19.7	123	44.3	NH	01	07	20	0245	193	467	4.14	45	100.0	224	106
90.0	28.0	33	29.0	117	46.2	NH	01	07	17	0432	216	420	5.15	71	100.0	14	427
90.0	30.0	33	25.7	117	54.3	NH	01	07	17	0154	187	431	4.34	109	46.8	19	5
90.0	35.0	33	15.2	118	15.3	NH	01	07	16	1927	214	420	5.10	90	52.6	2	8
90.0	37.0	33	11.1	118	23.3	NH	01	07	16	1341	195	446	4.36	54	100.0	49	81
90.0	45.0	32	55.2	118	56.0	NH	01	07	16	0605	218	420	5.18	64	51.8	1	0
90.0	53.0	32	39.0	119	28.9	NH	01	07	16	0052	193	494	3.92	85	47.6	12	28
90.0	60.0	32	25.2	119	57.6	NH	01	07	15	1958	219	446	4.91	74	45.4	6	18
90.0	70.0	32	05.0	120	38.3	NH	01	07	15	1358	202	473	4.26	25	100.0	98	171
90.0	80.0	31	45.1	121	19.0	NH	01	07	15	0631	214	494	4.33	42	100.0	149	191
90.0	90.0	31	24.8	121	59.7	NH	01	07	15	0030	201	492	4.08	53	100.0	35	130
90.0	100.0	31	05.2	122	39.9	NH	01	07	14	1843	211	512	4.11	27	100.0	265	20
90.0	110.0	30	45.7	123	20.3	NH	01	07	14	1156	198	561	3.52	23	100.0	441	84
90.0	120.0	30	25.4	123	59.8	NH	01	07	14	0139	201	517	3.88	33	100.0	666	48
93.3	26.7	32	57.4	117	18.3	NH	01	07	10	1145	229	382	6.01	71	51.8	17	30
93.3	28.0	32	54.8	117	23.6	NH	01	07	10	1451	215	417	5.16	62	50.0	37	6
93.3	30.0	32	50.8	117	31.9	NH	01	07	10	1835	219	441	4.95	54	100.0	28	6
93.3	35.0	32	40.8	117	52.4	NH	01	07	10	2251	222	435	5.11	182	48.1	14	3
93.3	40.0	32	30.9	118	12.6	NH	01	07	11	0244	214	429	4.98	98	50.0	5	0
93.3	45.0	32	20.9	118	33.2	NH	01	07	11	0641	218	440	4.95	77	50.0	7	0
93.3	50.0	32	10.9	118	53.4	NH	01	07	11	1056	222	431	5.16	77	51.5	2	46
93.3	55.0	32	01.1	119	13.9	NH	01	07	11	1609	216	376	5.75	141	47.1	6	8
93.3	60.0	31	50.8	119	34.2	NH	01	07	11	2003	209	469	4.46	96	46.6	9	8
93.3	70.0	31	30.9	120	14.4	NH	01	07	12	0152	211	475	4.44	44	100.0	151	266
93.3	80.0	31	10.9	120	56.8	NH	01	07	12	0821	212	449	4.73	40	100.0	152	16
93.3	90.0	30	51.1	121	35.2	NH	01	07	12	1600	214	451	4.74	35	100.0	21	353
93.3	100.0	30	30.9	122	15.4	NH	01	07	13	0014	220	432	5.10	49	100.0	292	250
93.3	110.0	30	10.9	122	55.2	NH	01	07	13	0846	214	507	4.22	28	100.0	170	83
93.3	120.0	29	51.4	123	36.0	NH	01	07	13	1646	212	479	4.44	42	100.0	363	32

Table 5. (cont.)

CalCOFI Cruise 0110

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	04.5	120	46.2	NH	01	11	05	0937	57	138	4.17	36	100.0	23	220
76.7	51.0	35	01.4	120	54.8	NH	01	11	05	1256	215	484	4.44	145	48.5	13	46
76.7	55.0	34	53.3	121	11.6	NH	01	11	05	1642	206	493	4.18	189	48.3	6	4
76.7	60.0	34	43.4	121	32.7	NH	01	11	05	2034	208	502	4.14	191	51.0	11	21
76.7	70.0	34	23.5	122	14.5	NH	01	11	06	0243	211	493	4.28	108	49.0	2	3
76.7	80.0	34	03.0	122	55.7	NH	01	11	06	0821	215	458	4.69	109	52.0	0	6
76.7	90.0	33	43.3	123	38.0	NH	01	11	06	1611	213	494	4.32	55	48.1	0	0
80.0	51.0	34	26.9	120	31.1	NH	01	11	05	0433	64	149	4.29	67	100.0	301	317
80.0	55.0	34	17.7	120	48.0	NH	01	11	08	0834	215	444	4.84	214	48.4	286	130
80.0	60.0	34	08.9	121	09.2	NH	01	11	08	0454	209	484	4.32	403	51.7	19	16
80.0	70.0	33	48.7	121	50.5	NH	01	11	07	2253	218	479	4.55	127	47.5	3	2
80.0	80.0	33	28.7	122	32.2	NH	01	11	07	1708	212	477	4.44	765	51.7	1	2
80.0	90.0	33	08.2	123	13.3	NH	01	11	07	0910	213	483	4.42	46	100.0	4	1
80.0	100.0	32	49.3	123	54.6	NH	01	11	07	0413	211	493	4.29	106	100.0	3	4
81.8	46.9	34	16.6	120	01.5	NH	01	11	05	0035	204	470	4.34	62	48.2	87	585
83.3	40.6	34	13.3	119	24.7	NH	01	11	04	1945	21	63	3.35	79	100.0	3	146
83.3	42.0	34	10.5	119	30.2	NH	01	11	04	1747	180	354	5.07	141	100.0	14	226
83.3	51.0	33	52.7	120	08.1	NH	01	11	04	1143	150	346	4.35	78	48.1	5	121
83.3	55.0	33	44.5	120	24.6	NH	01	11	04	0822	206	488	4.22	274	48.5	2	32
83.3	60.0	33	34.7	120	45.5	NH	01	11	04	0410	216	484	4.45	165	48.7	1	14
83.3	70.0	33	14.3	121	26.7	NH	01	11	03	2151	217	460	4.72	139	48.4	3	3
83.3	80.0	32	54.6	122	08.0	NH	01	11	03	1554	219	471	4.65	129	52.4	3	0
83.3	90.0	32	34.7	122	49.1	NH	01	11	03	0823	211	476	4.43	29	100.0	80	27
83.3	100.0	32	14.6	123	29.7	NH	01	11	03	0335	215	467	4.61	66	100.0	122	15
83.3	110.0	31	54.3	124	10.0	NH	01	11	02	2141	209	488	4.29	70	100.0	151	53
86.7	33.0	33	53.2	118	29.0	NH	01	10	31	1151	46	91	5.06	77	100.0	26	1225
86.7	35.0	33	49.3	118	37.5	NH	01	10	31	1421	208	464	4.48	32	100.0	1	3
86.7	40.0	33	40.0	118	58.2	NH	01	10	31	1803	215	459	4.69	65	46.6	9	23
86.7	45.0	33	29.6	119	18.8	NH	01	10	31	2152	204	461	4.43	113	50.0	7	32
86.7	50.0	33	19.7	119	39.4	NH	01	11	01	0106	56	127	4.40	71	100.0	2	16
86.7	55.0	33	09.6	119	59.9	NH	01	11	01	0505	219	482	4.53	127	47.5	5	3
86.7	60.0	32	59.8	120	20.3	NH	01	11	01	0829	209	476	4.40	95	48.8	2	8
86.7	70.0	32	39.5	121	01.8	NH	01	11	01	1532	213	434	4.91	274	48.7	1	1
86.7	80.0	32	19.6	121	42.4	NH	01	11	01	2101	208	467	4.46	167	46.1	31	1

Table 5. (cont.)

CalCOFI Cruise 0110

Line	Station	Latitude (N) deg.	Latitude (N) min.	Longitude (W) deg.	Longitude (W) min.	Ship Code	Tow Date yr.	Tow Date mo.	Tow Date day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	90.0	31	59.6	122	23.3	NH	01	11	02	0250	205	468	4.39	90	100.0	70	24
86.7	100.0	31	40.2	123	04.2	NH	01	11	02	0815	214	486	4.40	39	100.0	86	30
86.7	110.0	31	19.7	123	44.5	NH	01	11	02	1540	219	475	4.60	55	100.0	61	63
90.0	28.0	33	28.8	117	45.8	NH	01	10	31	0520	48	117	4.09	111	100.0	4	10
90.0	30.0	33	25.0	117	54.5	NH	01	10	31	0320	201	452	4.44	55	100.0	2	2
90.0	35.0	33	15.1	118	15.0	NH	01	10	30	2321	211	443	4.76	81	52.7	70	44
90.0	37.0	33	11.1	118	23.2	NH	01	10	30	2037	211	442	4.78	70	54.8	7	8
90.0	45.0	32	55.1	118	56.1	NH	01	10	30	1501	209	454	4.59	35	100.0	5	2
90.0	53.0	32	38.9	119	29.6	NH	01	10	30	0820	199	459	4.34	124	50.8	3	3
90.0	60.0	32	24.9	119	57.7	NH	01	10	30	0347	212	461	4.60	239	53.6	5	15
90.0	70.0	32	05.1	120	38.3	NH	01	10	29	2134	208	451	4.60	122	50.9	3	5
90.0	80.0	31	45.1	121	18.9	NH	01	10	29	1539	209	496	4.21	131	100.0	14	10
90.0	90.0	31	24.9	122	00.0	NH	01	10	29	0825	209	467	4.47	56	100.0	69	15
90.0	100.0	31	05.1	122	40.0	NH	01	10	29	0335	217	453	4.79	115	100.0	97	44
90.0	110.0	30	45.1	123	19.9	NH	01	10	28	2125	203	486	4.17	58	100.0	112	24
90.0	120.0	30	25.1	123	59.9	NH	01	10	28	1556	209	476	4.38	55	100.0	52	19
93.3	26.7	32	57.4	117	18.3	NH	01	10	25	1123	42	113	3.71	53	100.0	5	9
93.3	28.0	32	54.8	117	23.7	NH	01	10	25	1414	210	443	4.73	29	100.0	1	7
93.3	30.0	32	50.8	117	31.9	NH	01	10	25	1709	198	479	4.14	52	100.0	11	67
93.3	35.0	32	40.8	117	52.4	NH	01	10	25	2116	202	462	4.37	71	48.4	3	21
93.3	40.0	32	30.8	118	12.8	NH	01	10	26	0122	200	461	4.34	115	52.8	5	3
93.3	45.0	32	21.1	118	33.4	NH	01	10	26	0531	223	436	5.12	71	48.3	9	4
93.3	50.0	32	10.9	118	53.1	NH	01	10	26	0823	214	451	4.74	69	51.6	3	4
93.3	55.0	32	00.8	119	14.0	NH	01	10	26	1448	218	431	5.07	267	47.8	1	4
93.3	60.0	31	50.8	119	34.3	NH	01	10	26	1856	205	474	4.32	120	50.8	3	8
93.3	70.0	31	30.8	120	14.8	NH	01	10	27	0016	201	465	4.32	146	50.0	0	4
93.3	80.0	31	10.9	120	54.7	NH	01	10	27	0828	208	441	4.72	118	100.0	3	16
93.3	90.0	30	50.8	121	35.4	NH	01	10	27	1610	205	465	4.42	30	100.0	81	19
93.3	100.0	30	30.8	122	15.5	NH	01	10	27	2153	203	457	4.44	94	100.0	34	113
93.3	110.0	30	10.9	122	55.2	NH	01	10	28	0335	206	464	4.44	50	100.0	40	20
93.3	120.0	29	51.2	123	35.0	NH	01	10	28	0834	204	462	4.42	52	100.0	60	57

TABLE 6. Pooled occurrences of fish larvae taken in Bongo net tows on CalCOFI cruises in 2001.

Rank	Taxon	Occurrences
1	*Engraulis mordax*	86
2	*Protomyctophum crockeri*	79
3	*Leuroglossus stilbius*	75
4	*Sebastes* spp.	72
5	*Citharichthys stigmaeus*	70
6	*Citharichthys sordidus*	63
7	*Stenobrachius leucopsarus*	59
8	*Merluccius productus*	58
9	*Bathylagus wesethi*	56
10	*Vinciguerria lucetia*	53
10	*Bathylagus ochotensis*	53
12	*Diogenichthys atlanticus*	47
13	*Triphoturus mexicanus*	44
14	*Symbolophorus californiensis*	42
15	*Diaphus* spp.	38
15	*Cyclothone signata*	38
17	*Nannobrachium ritteri*	34
18	*Ceratoscopelus townsendi*	33
19	*Sardinops sagax*	29
20	*Nannobrachium* spp.	25
21	*Chauliodus macouni*	21
22	*Trachurus symmetricus*	20
23	*Tarletonbeania crenularis*	19
24	*Microstoma* spp.	18
25	*Idiacanthus antrostomus*	17
25	*Danaphos oculatus*	17
27	*Cyclothone* spp.	16
28	*Melamphaes lugubris*	14
28	*Tetragonurus cuvieri*	14
28	*Sebastes jordani*	14
31	*Myctophum nitidulum*	13
32	*Sternoptyx* spp.	12
33	*Sebastes diploproa*	10
33	*Genyonemus lineatus*	10
33	*Nansenia candida*	10
36	*Argentina sialis*	9
36	*Argyropelecus sladeni*	9
36	*Scopelogadus bispinosus*	9
39	*Lestidiops ringens*	8
39	*Icichthys lockingtoni*	8
39	*Coryphopterus nicholsii*	8
39	*Chiasmodon niger*	8
39	*Lampadena urophaos*	8
44	*Microstomus pacificus*	7
45	*Ichthyococcus irregularis*	6
45	*Gigantactis* spp.	6
45	*Vinciguerria poweriae*	6
45	*Sebastes paucispinis*	6
49	*Paralichthys californicus*	5

TABLE 6. (cont.)

Rank	Taxon	Occurrences
49	*Arctozenus risso*	5
49	*Rosenblattichthys volucris*	5
49	*Argyropelecus affinis*	5
49	*Notoscopelus resplendens*	5
49	*Sebastes aurora*	5
55	*Lyopsetta exilis*	4
55	Myctophidae	4
55	*Hygophum reinhardtii*	4
55	*Argyropelecus lychnus*	4
55	*Cololabis saira*	4
55	*Hypsoblennius jenkinsi*	4
55	*Aristostomias scintillans*	4
55	*Tactostoma macropus*	4
55	*Benthalbella dentata*	4
64	*Stomias atriventer*	3
64	*Electrona risso*	3
64	*Vinciguerria* spp.	3
64	*Bathylagus pacificus*	3
64	*Trachipterus altivelis*	3
64	*Poromitra crassiceps*	3
64	*Oxyjulis californica*	3
64	*Brama japonica*	3
64	*Oxylebius pictus*	3
64	*Scomber japonicus*	3
74	*Scopelarchus guentheri*	2
74	*Sebastes levis*	2
74	*Cyclothone pseudopallida*	2
74	*Lepidogobius lepidus*	2
74	*Argyropelecus hemigymnus*	2
74	*Sphyraena argentea*	2
74	*Scopelarchus analis*	2
74	*Desmodema lorum*	2
74	*Bathophilus flemingi*	2
74	*Seriphus politus*	2
74	*Icelinus quadriseriatus*	2
74	*Parophrys vetulus*	2
74	*Nannobrachium regale*	2
74	*Melamphaes parvus*	2
74	*Chilara taylori*	2
74	*Pleuronichthys verticalis*	2
74	*Cataetyx rubrirostris*	2
91	*Symphurus atricaudus*	1
91	*Girella nigricans*	1
91	*Mugil cephalus*	1
91	*Rathbunella* spp.	1
91	*Gibbonsia* spp.	1
91	*Typhlogobius californiensis*	1
91	*Neoclinus stephensae*	1
91	*Peprilus simillimus*	1
91	*Lepidopsetta bilineata*	1
91	*Bathylagus milleri*	1
91	*Glyptocephalus zachirus*	1

TABLE 6. (cont.)

Rank	Taxon	Occurrences
91	*Argyropelecus* spp.	1
91	*Citharichthys* spp.	1
91	*Scorpaenichthys marmoratus*	1
91	*Pleuronichthys ritteri*	1
91	*Sebastolobus alascanus*	1
91	Disintegrated fish larvae	1
91	*Loweina rara*	1
91	*Oneirodes* spp.	1
91	*Diogenichthys laternatus*	1
91	*Atherinopsis californiensis*	1
91	Melamphaidae	1
91	*Melamphaes* spp.	1
91	*Notolychnus valdiviae*	1
91	*Nannobrachium hawaiiensis*	1
91	*Nannobrachium bristori*	1
91	*Liparis mucosus*	1
91	*Sebastolobus* spp.	1
91	*Paralabrax* spp.	1
91	*Zaniolepis latipinnis*	1
91	*Artedius lateralis*	1
91	*Synodus lucioceps*	1
91	*Scopelosaurus* spp.	1
91	*Leptocottus armatus*	1
91	*Cyema atrum*	1
91	*Odontopyxis trispinosa*	1
91	*Howella* spp.	1
91	Melanostomiinae	1
91	*Howella pammelas*	1
91	*Lampanyctus tenuiformes*	1
	Total	1547

TABLE 7. Pooled counts of fish larvae taken in Bongo net tows on CalCOFI cruises in 2001. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Sardinops sagax*	13657
2	*Vinciguerria lucetia*	12989
3	*Engraulis mordax*	11112
4	*Sebastes* spp.	5622
5	*Leuroglossus stilbius*	2658
6	*Bathylagus wesethi*	2141
7	*Merluccius productus*	2098
8	*Stenobrachius leucopsarus*	1734
9	*Citharichthys sordidus*	1584
10	*Citharichthys stigmaeus*	1571
11	*Ceratoscopelus townsendi*	823
12	*Protomyctophum crockeri*	820
13	*Bathylagus ochotensis*	770
14	*Triphoturus mexicanus*	714
15	*Diaphus* spp.	680
16	*Diogenichthys atlanticus*	626
17	*Sebastes jordani*	606
18	*Symbolophorus californiensis*	598
19	*Cyclothone signata*	563
20	*Nannobrachium ritteri*	354
21	*Trachurus symmetricus*	352
22	*Idiacanthus antrostomus*	308
23	*Nannobrachium* spp.	247
24	*Genyonemus lineatus*	162
25	*Chauliodus macouni*	146
26	*Danaphos oculatus*	136
27	*Tarletonbeania crenularis*	135
27	*Nansenia candida*	135
29	*Microstoma* spp.	121
30	*Tetragonurus cuvieri*	116
31	*Cyclothone* spp.	103
32	*Lestidiops ringens*	102
33	*Melamphaes lugubris*	101
34	*Microstomus pacificus*	89
35	*Myctophum nitidulum*	87
36	*Sternoptyx* spp.	78
37	*Argentina sialis*	77
38	*Sebastes diploproa*	76
39	*Tactostoma macropus*	74
39	*Lampadena urophaos*	74
41	*Coryphopterus nicholsii*	67
42	*Paralichthys californicus*	58
43	*Icichthys lockingtoni*	55
44	*Sebastes aurora*	52
45	*Scopelogadus bispinosus*	48
46	*Scomber japonicus*	45
47	*Argyropelecus sladeni*	43
47	*Sebastes paucispinis*	43
47	*Chiasmodon niger*	43

TABLE 7. (cont.)

Rank	Taxon	Count
50	*Gigantactis* spp.	39
51	*Lyopsetta exilis*	38
52	*Hypsoblennius jenkinsi*	35
53	*Vinciguerria poweriae*	32
54	*Rosenblattichthys volucris*	30
54	*Oxyjulis californica*	30
56	*Leptocottus armatus*	29
56	*Cololabis saira*	29
56	*Notoscopelus resplendens*	29
59	*Ichthyococcus irregularis*	27
59	*Sphyraena argentea*	27
61	Myctophidae	26
62	*Benthalbella dentata*	25
62	*Bathylagus pacificus*	25
64	*Hygophum reinhardtii*	24
65	*Icelinus quadriseriatus*	23
66	*Argyropelecus affinis*	22
66	*Arctozenus risso*	22
66	*Aristostomias scintillans*	22
69	*Argyropelecus lychnus*	20
70	*Stomias atriventer*	18
70	*Chilara taylori*	18
70	*Cyclothone pseudopallida*	18
70	*Vinciguerria* spp.	18
74	*Pleuronichthys verticalis*	17
75	*Brama japonica*	16
75	*Bathophilus flemingi*	16
75	*Seriphus politus*	16
78	*Poromitra crassiceps*	15
79	*Nannobrachium regale*	14
79	*Lepidogobius lepidus*	14
79	*Cataetyx rubrirostris*	14
79	*Melamphaes parvus*	14
79	*Sebastes levis*	14
79	*Desmodema lorum*	14
85	*Parophrys vetulus*	13
85	*Electrona risso*	13
85	*Trachipterus altivelis*	13
88	*Oxylebius pictus*	12
89	*Citharichthys* spp.	11
90	*Symphurus atricaudus*	10
90	*Pleuronichthys ritteri*	10
90	*Argyropelecus hemigymnus*	10
90	*Notolychnus valdiviae*	10
90	*Neoclinus stephensae*	10
90	*Typhlogobius californiensis*	10
90	*Peprilus simillimus*	10
90	*Artedius lateralis*	10
90	*Paralabrax* spp.	10
90	*Girella nigricans*	10
90	*Odontopyxis trispinosa*	10

TABLE 7. (cont.)

Rank	Taxon	Count
101	*Glyptocephalus zachirus*	9
101	*Liparis mucosus*	9
101	*Mugil cephalus*	9
101	*Scopelarchus guentheri*	9
101	*Scopelarchus analis*	9
106	*Howella* spp.	8
106	Disintegrated fish larvae	8
108	*Bathylagus milleri*	5
108	*Zaniolepis latipinnis*	5
108	Melamphaidae	5
108	*Loweina rara*	5
112	*Sebastolobus* spp.	4
112	*Lepidopsetta bilineata*	4
112	*Scopelosaurus* spp.	4
112	*Rathbunella* spp.	4
112	*Gibbonsia* spp.	4
112	*Synodus lucioceps*	4
112	Melanostomiinae	4
112	*Scorpaenichthys marmoratus*	4
112	*Melamphaes* spp.	4
112	*Sebastolobus alascanus*	4
112	*Argyropelecus* spp.	4
112	*Lampanyctus tenuiformes*	4
112	*Howella pammelas*	4
112	*Cyema atrum*	4
112	*Nannobrachium bristori*	4
112	*Atherinopsis californiensis*	4
112	*Oneirodes* spp.	4
112	*Nannobrachium hawaiiensis*	4
112	*Diogenichthys laternatus*	4
	Total	66012

TABLE 8. Number of fish larvae taken in Bongo net tows at stations occupied on CalCOFI cruises in 2001. 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.
90.0	110.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-

Sardinops sagax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	0.0	-	-	17.6	-	-	0.0	-	-	-	0.0	-
76.7	70.0	0.0	-	-	276.6	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	452.5	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	33.2	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	429.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	325.1	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	469.7	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	21.6	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	16.8	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	15.7	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	169.3	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	1177.9	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	948.5	-	-	0.0	-	-	-	0.0	-
86.7	55.0	0.0	-	-	19.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	1357.0	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	1274.4	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	605.8	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	121.3	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	2222.7	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	818.0	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	18.1	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	1762.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	126.0	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	13.5	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	425.7	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	49.9	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

***Sardinops sagax* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	80.0	0.0	-	-	465.3	-	-	0.0	-	-	0.0	-	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	18.4	-	-	0.0	-	-	0.0	-	-	-	58.4	-
76.7	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	73.2	-
76.7	55.0	15.4	-	-	0.0	-	-	33.3	-	-	-	0.0	-
80.0	51.0	77.6	-	-	0.0	-	-	5.0	-	-	-	952.4	-
80.0	55.0	20.7	-	-	0.0	-	-	9.0	-	-	-	2500.0	-
80.0	60.0	10.7	-	-	9.1	-	-	0.0	-	-	-	66.8	-
81.8	46.9	0.0	-	-	0.0	-	-	22.2	-	-	-	432.2	-
83.3	40.6	50.3	-	-	0.0	-	-	21.1	-	-	-	10.1	-
83.3	42.0	84.5	-	-	0.0	-	-	66.6	-	-	-	40.6	-
83.3	51.0	13.3	-	-	143.2	-	-	35.1	-	-	-	18.1	-
83.3	55.0	0.0	-	-	8.7	-	-	38.4	-	-	-	8.7	-
83.3	60.0	0.0	-	-	0.0	-	-	115.1	-	-	-	0.0	-
86.7	33.0	54.7	-	-	88.3	-	-	0.0	-	-	55.7	-	-
86.7	35.0	61.0	-	-	88.7	-	-	77.6	-	-	4.5	-	-
86.7	40.0	0.0	-	-	144.2	-	-	5.2	-	-	10.1	-	-
86.7	45.0	0.0	-	-	67.9	-	-	134.6	-	-	0.0	-	-
86.7	50.0	0.0	-	-	23.7	-	-	86.0	-	-	-	0.0	-
86.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.5	-
86.7	60.0	0.0	-	-	0.0	-	-	19.6	-	-	-	0.0	-
86.7	70.0	-	-	-	0.0	-	-	48.1	-	-	-	0.0	-
90.0	28.0	9.1	-	-	365.9	-	-	72.1	-	-	8.2	-	-
90.0	30.0	21.0	-	-	1155.5	-	-	176.2	-	-	0.0	-	-
90.0	35.0	0.0	-	-	498.6	-	-	9.7	-	-	569.0	-	-
90.0	37.0	0.0	-	-	39.5	-	-	161.3	-	-	43.6	-	-
90.0	45.0	0.0	-	-	19.2	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	17.8	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	28.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
93.3	26.7	4.8	-	-	73.2	-	-	150.8	-	-	7.4	-	-
93.3	28.0	0.0	-	-	274.7	-	-	350.9	-	-	0.0	-	-
93.3	30.0	0.0	-	-	131.0	-	-	123.8	-	-	41.4	-	-
93.3	35.0	9.9	-	-	506.5	-	-	106.2	-	-	18.1	-	-

TABLE 8. (cont.)

***Engraulis mordax* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	40.0	5.1	-	-	10.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	5.0	-	-	112.5	-	-	0.0	-	-	0.0	-	-
93.3	50.0	5.9	-	-	4.5	-	-	10.0	-	-	9.2	-	-
93.3	60.0	-	-	-	0.0	-	-	9.6	-	-	0.0	-	-

Argentina sialis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	20.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	70.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	9.5	-	-	-	0.0	-
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	35.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0	37.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-

***Microstoma* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
83.3	70.0	10.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	0.0	-	-	8.4	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	5.2	-	-	-	8.6	-
86.7	55.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
86.7	80.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	60.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
93.3	80.0	0.0	-	-	0.0	-	-	9.5	-	-	0.0	-	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	8.8	-	-
93.3	100.0	0.0	-	-	0.0	-	-	5.1	-	-	4.4	-	-
93.3	110.0	0.0	-	-	0.0	-	-	4.2	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	4.4	-	-	0.0	-	-

Nansenia candida

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

TABLE 8. (cont.)

***Nansenia candida* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	29.6	-	-	4.4	-	-	-	0.0	-
83.3	110.0	0.0	-	-	14.5	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	38.2	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-

Bathylagus milleri

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

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	10.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	9.7	-	-	8.8	-	-	0.0	-	-	-	0.0	-
76.7	70.0	9.6	-	-	9.9	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	24.9	-	-	0.0	-	-	-	0.0	-
80.0	60.0	21.5	-	-	36.5	-	-	0.0	-	-	-	0.0	-
80.0	70.0	54.1	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	28.8	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	29.4	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	10.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	19.8	-	-	4.4	-	-	-	0.0	-
86.7	35.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	-	10.3	-	-	0.0	-	-	0.0	-	-
86.7	55.0	0.0	-	-	69.0	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	19.4	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	49.0	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	10.9	-	-	8.6	-	-	0.0	-	-	0.0	-	-
90.0	37.0	10.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	45.0	5.0	-	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	8.9	-	-	8.2	-	-	0.0	-	-
90.0	60.0	0.0	-	-	9.3	-	-	10.8	-	-	0.0	-	-
90.0	70.0	0.0	-	-	23.3	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	9.1	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
93.3	26.7	0.0	-	-	0.0	-	-	11.6	-	-	0.0	-	-
93.3	28.0	0.0	-	-	17.7	-	-	0.0	-	-	0.0	-	-
93.3	30.0	5.0	-	-	9.4	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	15.1	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	9.9	-	-	0.0	-	-
93.3	55.0	-	-	-	17.2	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	9.6	-	-	0.0	-	-
93.3	70.0	0.0	-	-	22.5	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	14.1	-	-	0.0	-	-	0.0	-	-
93.3	100.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Bathylagus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-

Bathylagus wesethi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	8.3	-	-	0.0	-	-	-	0.0	-
76.7	100.0	0.0	-	-	8.8	-	-	0.0	-	-	-	-	-
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	22.2	-
83.3	100.0	0.0	-	-	0.0	-	-	13.2	-	-	-	124.5	-
83.3	110.0	0.0	-	-	9.7	-	-	94.3	-	-	-	124.4	-
86.7	45.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	80.0	4.5	-	-	0.0	-	-	0.0	-	-	-	96.7	-
86.7	90.0	0.0	-	-	19.1	-	-	24.1	-	-	-	30.7	-

TABLE 8. (cont.)

***Bathylagus wesethi* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	27.8	-	-	21.6	-	-	-	17.6	-
86.7	110.0	0.0	-	-	32.3	-	-	124.2	-	-	-	59.8	-
90.0	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	0.0	-	-	8.2	-	-	0.0	-	-
90.0	60.0	0.0	-	-	0.0	-	-	10.8	-	-	0.0	-	-
90.0	70.0	0.0	-	-	0.0	-	-	115.0	-	-	9.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	147.2	-	-	0.0	-	-
90.0	90.0	0.0	-	-	32.9	-	-	24.5	-	-	26.8	-	-
90.0	100.0	0.0	-	-	8.4	-	-	8.2	-	-	28.7	-	-
90.0	110.0	0.0	-	-	42.2	-	-	10.6	-	-	37.5	-	-
90.0	120.0	0.0	-	-	13.1	-	-	15.5	-	-	13.1	-	-
93.3	40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	21.2	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	70.0	0.0	-	-	4.5	-	-	151.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	0.0	-	-	184.5	-	-	9.4	-	-
93.3	90.0	0.0	-	-	9.5	-	-	37.9	-	-	13.3	-	-
93.3	100.0	0.0	-	-	0.0	-	-	137.7	-	-	22.2	-	-
93.3	110.0	0.0	-	-	14.2	-	-	4.2	-	-	31.1	-	-
93.3	120.0	0.0	-	-	-	-	-	22.2	-	-	35.4	-	-

Leuroglossus stilbius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	9.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	620.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
76.7	55.0	112.6	-	-	9.7	-	-	0.0	-	-	-	0.0	-
76.7	60.0	43.5	-	-	35.1	-	-	10.2	-	-	-	0.0	-
76.7	70.0	105.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	18.5	-	-	0.0	-	-	-	0.0	-
76.7	90.0	4.9	-	-	8.3	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
80.0	55.0	72.5	-	-	9.6	-	-	0.0	-	-	-	40.0	-
80.0	60.0	21.5	-	-	9.1	-	-	10.3	-	-	-	8.4	-
80.0	70.0	135.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	8.9	-	-	0.0	-	-	-	0.0	-
80.0	90.0	0.0	-	-	14.4	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

***Leuroglossus stilbius* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	35.7	-	-	38.5	-	-	0.0	-	-	-	117.1	-
83.3	42.0	0.0	-	-	0.0	-	-	9.5	-	-	-	0.0	-
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	8.9	-	-	15.7	-	-	0.0	-	-	-	0.0	-
83.3	70.0	5.4	-	-	10.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	35.0	30.5	-	-	19.7	-	-	0.0	-	-	0.0	-	-
86.7	40.0	160.6	-	-	20.6	-	-	5.2	-	-	10.1	-	-
86.7	45.0	111.3	-	-	9.7	-	-	0.0	-	-	0.0	-	-
86.7	50.0	10.9	-	-	15.8	-	-	0.0	-	-	-	0.0	-
86.7	55.0	9.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7	80.0	4.5	-	-	19.6	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	30.5	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
90.0	35.0	98.4	-	-	34.4	-	-	0.0	-	-	0.0	-	-
90.0	37.0	41.0	-	-	9.9	-	-	4.4	-	-	0.0	-	-
90.0	45.0	15.0	-	-	28.8	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	62.2	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	28.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	51.2	-	-	4.3	-	-	0.0	-	-
90.0	80.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
93.3	28.0	0.0	-	-	35.4	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	9.4	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	40.2	-	-	10.0	-	-	8.2	-	-
93.3	45.0	0.0	-	-	45.0	-	-	0.0	-	-	10.6	-	-
93.3	50.0	0.0	-	-	13.5	-	-	0.0	-	-	9.2	-	-
93.3	70.0	0.0	-	-	18.0	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	14.1	-	-	0.0	-	-	0.0	-	-

***Cyclothone* spp.**

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

TABLE 8. (cont.)

***Cyclothone* spp. (cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 80.0	4.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7 100.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
86.7 110.0	0.0	-	-	4.6	-	-	0.0	-	-	-	4.6	-
90.0 90.0	9.3	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0 100.0	8.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	-	8.7	-	-	7.8	-	-	17.5	-	-
93.3 80.0	4.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 110.0	4.3	-	-	0.0	-	-	0.0	-	-	4.4	-	-

Cyclothone pseudopallida

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.9	-
83.3 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.2	-

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	17.7	-
83.3 100.0	5.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
83.3 110.0	0.0	-	-	14.5	-	-	5.2	-	-	-	34.3	-
86.7 80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.7	-
86.7 90.0	0.0	-	-	23.9	-	-	0.0	-	-	-	0.0	-
86.7 100.0	0.0	-	-	27.8	-	-	0.0	-	-	-	22.0	-
86.7 110.0	0.0	-	-	46.1	-	-	8.3	-	-	-	0.0	-
90.0 80.0	0.0	-	-	9.1	-	-	4.3	-	-	0.0	-	-
90.0 90.0	0.0	-	-	75.2	-	-	0.0	-	-	13.4	-	-
90.0 100.0	4.4	-	-	4.2	-	-	12.3	-	-	14.4	-	-
90.0 110.0	9.4	-	-	29.5	-	-	10.6	-	-	8.3	-	-
90.0 120.0	0.0	-	-	17.4	-	-	15.5	-	-	0.0	-	-
93.3 40.0	0.0	-	-	0.0	-	-	0.0	-	-	8.2	-	-
93.3 80.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 90.0	0.0	-	-	19.0	-	-	0.0	-	-	4.4	-	-
93.3 100.0	0.0	-	-	4.4	-	-	15.3	-	-	0.0	-	-
93.3 110.0	0.0	-	-	14.2	-	-	12.7	-	-	4.4	-	-
93.3 120.0	0.0	-	-	-	-	-	13.3	-	-	13.3	-	-

TABLE 8. (cont.)

Argyropelecus spp.

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

Argyropelecus affinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
86.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
93.3	40.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	90.0	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Argyropelecus hemigymnus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
90.0	70.0	0.0	-	-	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	-	-	0.0	-	-	5.2	-	-	-	0.0	-
93.3	40.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3	90.0	0.0	-	-	4.8	-	-	0.0	-	-	0.0	-	-

Argyropelecus sladeni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
86.7	110.0	0.0	-	-	4.6	-	-	4.1	-	-	-	4.6	-
90.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0	110.0	0.0	-	-	4.2	-	-	0.0	-	-	4.2	-	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	8.8	-	-

Danaphos oculatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	5.3	-	-	-	0.0	-
83.3	80.0	8.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	5.2	-	-	-	8.6	-
86.7	55.0	0.0	-	-	0.0	-	-	19.4	-	-	-	0.0	-
86.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	110.0	0.0	-	-	0.0	-	-	8.3	-	-	-	4.6	-

TABLE 8. (cont.)

***Danaphos oculatus* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	0.0	-	-	0.0	-	-	10.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	4.5	-	-
93.3	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3	35.0	14.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.6	-	-
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3	120.0	0.0	-	-	-	-	-	0.0	-	-	4.4	-	-

***Sternoptyx* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	9.2	-	-	4.1	-	-	-	0.0	-
90.0	70.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0	100.0	0.0	-	-	0.0	-	-	8.2	-	-	0.0	-	-
90.0	110.0	0.0	-	-	0.0	-	-	14.1	-	-	0.0	-	-
90.0	120.0	0.0	-	-	13.1	-	-	3.9	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	-	5.1	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	4.2	-	-	4.4	-	-
93.3	120.0	0.0	-	-	-	-	-	4.4	-	-	0.0	-	-

Ichthyococcus irregularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
90.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3	40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-

***Vinciguerria* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	8.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	110.0	4.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	120.0	5.0	-	-	-	-	-	0.0	-	-	0.0	-	-

Vinciguerria lucetia

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
								Vinciguerria lucetia **(cont.)**					
80.0	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.6	-
83.3	70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.8	-
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	208.2	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	272.0	-
83.3	110.0	0.0	-	-	0.0	-	-	52.4	-	-	-	373.2	-
86.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	135.4	-
86.7	90.0	0.0	-	-	9.5	-	-	0.0	-	-	-	237.1	-
86.7	100.0	0.0	-	-	0.0	-	-	107.8	-	-	-	255.2	-
86.7	110.0	0.0	-	-	4.6	-	-	281.5	-	-	-	138.0	-
90.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	8.6	-	-
90.0	70.0	5.0	-	-	0.0	-	-	153.4	-	-	9.0	-	-
90.0	80.0	4.7	-	-	0.0	-	-	415.7	-	-	37.9	-	-
90.0	90.0	23.4	-	-	14.1	-	-	73.4	-	-	228.0	-	-
90.0	100.0	0.0	-	-	0.0	-	-	957.6	-	-	306.6	-	-
90.0	110.0	14.1	-	-	0.0	-	-	1408.0	-	-	250.2	-	-
90.0	120.0	0.0	-	-	4.4	-	-	2312.5	-	-	109.5	-	-
93.3	40.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	17.0	-	-
93.3	70.0	4.5	-	-	0.0	-	-	408.5	-	-	0.0	-	-
93.3	80.0	24.5	-	-	0.0	-	-	373.7	-	-	0.0	-	-
93.3	90.0	9.5	-	-	0.0	-	-	19.0	-	-	251.9	-	-
93.3	100.0	14.1	-	-	8.8	-	-	1167.9	-	-	62.2	-	-
93.3	110.0	0.0	-	-	23.6	-	-	481.1	-	-	88.8	-	-
93.3	120.0	0.0	-	-	-	-	-	1451.9	-	-	137.0	-	-

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
								Vinciguerria poweriae					
86.7	110.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
90.0	80.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0	90.0	9.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	100.0	4.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	110.0	4.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	120.0	5.0	-	-	-	-	-	0.0	-	-	0.0	-	-

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
								Chauliodus macouni					
76.7	51.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Chauliodus macouni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	9.6	-	-	9.2	-	-	5.2	-	-	-	0.0	-
76.7	90.0	0.0	-	-	0.0	-	-	7.8	-	-	-	0.0	-
76.7	100.0	0.0	-	-	0.0	-	-	5.0	-	-	-	-	-
80.0	60.0	0.0	-	-	0.0	-	-	10.3	-	-	-	0.0	-
80.0	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	5.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
83.3	100.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	4.8	-	-	10.5	-	-	-	0.0	-
86.7	60.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0	37.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0	45.0	0.0	-	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	0.0	-	-	8.2	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	0.0	-	-	8.4	-	-
93.3	60.0	-	-	-	0.0	-	-	9.6	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	0.0	-	-	4.4	-	-

Stomias atriventer

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	80.0	0.0	-	-	0.0	-	-	8.7	-	-	0.0	-	-
90.0	100.0	4.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	80.0	4.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Melanostomiinae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	0.0	-	-	4.1	-	-	-	0.0	-

Bathophilus flemingi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	110.0	0.0	-	-	0.0	-	-	12.4	-	-	-	0.0	-
90.0	110.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-

Tactostoma macropus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	0.0	-	-	27.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	16.6	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	-	25.5	-	-	0.0	-	-

TABLE 8. (cont.)

Aristostomias scintillans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
90.0	110.0	0.0	-	-	8.4	-	-	0.0	-	-	0.0	-	-
93.3	70.0	4.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Idiacanthus antrostomus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	35.4	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	46.1	-
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	12.9	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	100.0	4.3	-	-	0.0	-	-	0.0	-	-	-	22.0	-
86.7	110.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	8.9	-	-
90.0	100.0	4.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	75.1	-	-
90.0	120.0	4.7	-	-	0.0	-	-	0.0	-	-	17.5	-	-
93.3	70.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	-	20.4	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	8.4	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	0.0	-	-	26.5	-	-

Benthalbella dentata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
93.3	40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	-	5.1	-	-	0.0	-	-

Rosenblattichthys volucris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
90.0	90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	8.4	-	-	0.0	-	-	0.0	-	-
90.0	120.0	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	0.0	-	-	9.5	-	-	4.4	-	-

TABLE 8. (cont.)

						Scopelarchus analis						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
93.3 80.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
						Scopelarchus guentheri						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 70.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 90.0	0.0	-	-	4.8	-	-	0.0	-	-	0.0	-	-
						***Scopelosaurus* spp.**						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	0.0	-	-	0.0	-	-	4.1	-	-	-	0.0	-
						Synodus lucioceps						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
						Arctozenus risso						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 90.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
90.0 80.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-
93.3 70.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
						Lestidiops ringens						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
83.3 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
86.7 90.0	0.0	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7 110.0	0.0	-	-	0.0	-	-	70.4	-	-	-	0.0	-
90.0 70.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 80.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 110.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
						Myctophidae						
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
90.0 60.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0 100.0	4.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	9.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
							Ceratoscopelus townsendi						
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	22.2	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	46.1	-
83.3	110.0	0.0	-	-	24.2	-	-	5.2	-	-	-	17.2	-
86.7	90.0	4.9	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.6	-	-	10.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.6	-	-	29.0	-	-	-	4.6	-
90.0	70.0	10.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	23.5	-	-	0.0	-	-	0.0	-	-
90.0	100.0	35.2	-	-	4.2	-	-	57.5	-	-	4.8	-	-
90.0	110.0	28.1	-	-	25.3	-	-	56.3	-	-	37.5	-	-
90.0	120.0	0.0	-	-	0.0	-	-	131.9	-	-	13.1	-	-
93.3	80.0	0.0	-	-	0.0	-	-	18.9	-	-	0.0	-	-
93.3	90.0	9.5	-	-	0.0	-	-	14.2	-	-	0.0	-	-
93.3	100.0	0.0	-	-	4.4	-	-	20.4	-	-	0.0	-	-
93.3	110.0	4.3	-	-	0.0	-	-	118.2	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	17.8	-	-	8.8	-	-

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
							***Diaphus* spp.**						
76.7	80.0	0.0	-	-	9.2	-	-	10.3	-	-	-	0.0	-
76.7	100.0	0.0	-	-	4.4	-	-	0.0	-	-	-	-	-
80.0	70.0	0.0	-	-	30.5	-	-	0.0	-	-	-	0.0	-
80.0	80.0	0.0	-	-	17.7	-	-	31.1	-	-	-	0.0	-
80.0	90.0	0.0	-	-	21.6	-	-	17.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	9.6	-	-	0.0	-	-	-	0.0	-
83.3	40.6	0.0	-	-	6.2	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	19.9	-	-	9.7	-	-	-	0.0	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	8.9	-
83.3	90.0	0.0	-	-	9.5	-	-	9.6	-	-	-	0.0	-
83.3	100.0	0.0	-	-	9.9	-	-	4.4	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	21.0	-	-	-	4.3	-
86.7	35.0	0.0	-	-	0.0	-	-	9.7	-	-	0.0	-	-
86.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.5	-
86.7	100.0	0.0	-	-	0.0	-	-	59.3	-	-	-	0.0	-

TABLE 8. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	0.0	-	-	0.0	-	-	182.2	-	-	-	0.0	-
90.0 53.0	0.0	-	-	8.9	-	-	49.4	-	-	0.0	-	-
90.0 60.0	0.0	-	-	0.0	-	-	21.6	-	-	8.6	-	-
90.0 80.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 90.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
90.0 110.0	0.0	-	-	0.0	-	-	7.0	-	-	0.0	-	-
93.3 60.0	-	-	-	0.0	-	-	9.6	-	-	0.0	-	-
93.3 70.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
93.3 100.0	0.0	-	-	0.0	-	-	10.2	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	4.2	-	-	0.0	-	-
93.3 120.0	0.0	-	-	-	-	-	8.9	-	-	0.0	-	-

Lampadena urophaos

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
83.3 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
90.0 100.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
90.0 110.0	0.0	-	-	0.0	-	-	3.5	-	-	0.0	-	-
90.0 120.0	0.0	-	-	0.0	-	-	19.4	-	-	0.0	-	-
93.3 90.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3 100.0	0.0	-	-	0.0	-	-	10.2	-	-	0.0	-	-
93.3 110.0	0.0	-	-	0.0	-	-	25.3	-	-	0.0	-	-

Lampanyctus tenuiformes

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	0.0	-	-	0.0	-	-	3.5	-	-	0.0	-	-

***Nannobrachium* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	9.2	-	-	0.0	-	-	-	0.0	-
76.7 90.0	0.0	-	-	8.3	-	-	0.0	-	-	-	0.0	-
80.0 60.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
80.0 70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0 80.0	0.0	-	-	8.9	-	-	0.0	-	-	-	0.0	-
83.3 90.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
83.3 100.0	0.0	-	-	19.8	-	-	0.0	-	-	-	0.0	-
86.7 70.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7 80.0	0.0	-	-	19.6	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Nannobrachium spp. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	18.6	-	-	0.0	-	-	-	0.0	-
86.7	110.0	0.0	-	-	18.4	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.0	-	-
90.0	60.0	0.0	-	-	0.0	-	-	0.0	-	-	8.6	-	-
90.0	80.0	0.0	-	-	22.9	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	9.4	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	8.4	-	-	0.0	-	-	0.0	-	-
90.0	110.0	4.7	-	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0	120.0	4.7	-	-	4.4	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	80.0	9.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	90.0	4.8	-	-	0.0	-	-	0.0	-	-	4.4	-	-

Nannobrachium bristori

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

Nannobrachium hawaiiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-

Nannobrachium regale

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	45.0	0.0	-	-	0.0	-	-	0.0	-	-	8.9	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-

Nannobrachium ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	10.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	14.3	-	-	8.9	-	-	0.0	-	-	-	0.0	-
80.0	100.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
83.3	42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.1	-
83.3	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.7	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	39.5	-	-	0.0	-	-	-	9.2	-
83.3	110.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7	40.0	11.5	-	-	0.0	-	-	0.0	-	-	10.1	-	-

TABLE 8. (cont.)

							***Nannobrachium ritteri* (cont.)**					
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	90.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.6	-	-	5.4	-	-	-	4.4	-
86.7	110.0	0.0	-	-	23.1	-	-	33.1	-	-	-	0.0	-
90.0	70.0	0.0	-	-	0.0	-	-	17.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-
90.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	9.6	-	-
93.3	26.7	0.0	-	-	0.0	-	-	0.0	-	-	3.7	-	-
93.3	30.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3	70.0	0.0	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	-	4.8	-	-	4.7	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	-	10.2	-	-	8.9	-	-
93.3	110.0	0.0	-	-	4.7	-	-	0.0	-	-	22.2	-	-

Notolychnus valdiviae

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

Notoscopelus resplendens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	110.0	0.0	-	-	0.0	-	-	3.5	-	-	0.0	-	-
90.0	120.0	0.0	-	-	4.4	-	-	3.9	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	8.4	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	8.9	-	-	0.0	-	-

Stenobrachius leucopsarus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	41.3	-	-	11.9	-	-	0.0	-	-	-	4.2	-
76.7	51.0	50.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	66.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	4.8	-	-	61.5	-	-	0.0	-	-	-	0.0	-
76.7	70.0	57.5	-	-	69.1	-	-	0.0	-	-	-	0.0	-
76.7	80.0	0.0	-	-	27.7	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	33.2	-	-	0.0	-	-	-	0.0	-
80.0	55.0	31.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	43.0	-	-	73.0	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
						Stenobrachius leucopsarus (cont.)							
80.0	70.0	27.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	80.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	36.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	26.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	7.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	173.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	8.5	-	-	49.5	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	19.0	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	74.1	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	14.5	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	-	47.8	-	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	-	29.6	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	-	30.9	-	-	0.0	-	-	0.0	-	-
86.7	45.0	0.0	-	-	67.9	-	-	0.0	-	-	0.0	-	-
86.7	50.0	3.6	-	-	23.7	-	-	4.8	-	-	-	0.0	-
86.7	55.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	9.8	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	9.5	-	-	4.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	4.6	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	-	71.0	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	-	77.4	-	-	0.0	-	-	0.0	-	-
90.0	37.0	20.5	-	-	4.9	-	-	0.0	-	-	0.0	-	-
90.0	45.0	0.0	-	-	19.2	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	35.5	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	18.7	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	9.1	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	-	-	62.0	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	32.8	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	10.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	22.5	-	-	9.9	-	-	0.0	-	-

TABLE 8. (cont.)

***Stenobrachius leucopsarus* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	50.0	0.0	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	8.6	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	70.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0	80.0	0.0	-	-	17.7	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	5.1	-	-
86.7	40.0	0.0	-	-	0.0	-	-	5.2	-	-	20.1	-	-
86.7	50.0	0.0	-	-	15.8	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	9.3	-	-	0.0	-	-	-	4.4	-
86.7	110.0	0.0	-	-	0.0	-	-	12.4	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.0	-	-	0.0	-	-	18.1	-	-
90.0	37.0	0.0	-	-	0.0	-	-	17.4	-	-	0.0	-	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	9.2	-	-
90.0	70.0	0.0	-	-	0.0	-	-	42.6	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	21.7	-	-	0.0	-	-
90.0	90.0	0.0	-	-	4.7	-	-	16.3	-	-	4.5	-	-
90.0	100.0	0.0	-	-	0.0	-	-	20.6	-	-	0.0	-	-
90.0	110.0	0.0	-	-	0.0	-	-	24.6	-	-	0.0	-	-
90.0	120.0	0.0	-	-	0.0	-	-	58.2	-	-	0.0	-	-
93.3	30.0	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-
93.3	35.0	0.0	-	-	18.1	-	-	10.6	-	-	0.0	-	-
93.3	40.0	0.0	-	-	0.0	-	-	0.0	-	-	8.2	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	31.8	-	-
93.3	50.0	0.0	-	-	0.0	-	-	10.0	-	-	0.0	-	-
93.3	55.0	-	-	-	0.0	-	-	12.2	-	-	0.0	-	-
93.3	60.0	-	-	-	0.0	-	-	9.6	-	-	0.0	-	-
93.3	70.0	0.0	-	-	0.0	-	-	71.0	-	-	0.0	-	-

TABLE 8. (cont.)

***Triphoturus mexicanus* (cont.)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	80.0	0.0	-	-	0.0	-	-	42.6	-	-	0.0	--
93.3	90.0	0.0	-	-	4.8	-	-	4.7	-	-	4.4	--
93.3	100.0	0.0	-	-	0.0	-	-	15.3	-	-	26.6	--
93.3	110.0	0.0	-	-	4.7	-	-	12.7	-	-	0.0	--
93.3	120.0	0.0	-	-	-	-	-	35.5	-	-	8.8	--

Diogenichthys atlanticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	3.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	10.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.9	-
83.3	110.0	9.9	-	-	0.0	-	-	0.0	-	-	-	27.7	-
86.7	45.0	5.1	-	-	0.0	-	-	0.0	-	-	-	21.5	-
86.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	19.3	-
86.7	100.0	0.0	-	-	9.5	-	-	4.8	-	-	-	13.2	-
86.7	110.0	0.0	-	-	13.9	-	-	0.0	-	-	-	4.4	-
90.0	37.0	10.3	-	-	55.3	-	-	0.0	-	-	-	13.8	-
90.0	70.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	-	-	8.5	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	4.5	-	-
90.0	110.0	9.4	-	-	21.0	-	-	0.0	-	-	38.3	-	-
90.0	120.0	9.3	-	-	4.2	-	-	0.0	-	-	12.5	-	-
93.3	35.0	0.0	-	-	17.4	-	-	0.0	-	-	30.7	-	-
93.3	45.0	0.0	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	70.0	4.5	-	-	9.1	-	-	0.0	-	-	0.0	-	-
93.3	80.0	14.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	-	33.3	-	-	0.0	-	-	26.5	-	-

TABLE 8. (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
***Diogenichthys atlanticus* (cont.)**												
93.3 110.0	0.0	-	-	9.4	-	-	12.7	-	-	0.0	-	-
93.3 120.0	9.9	-	-	-	-	-	31.1	-	-	8.8	-	-
Diogenichthys laternatus												
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 70.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
Electrona risso												
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 100.0	0.0	-	-	4.2	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
Hygophum reinhardtii												
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	0.0	-	-	0.0	-	-	7.0	-	-	4.2	-	-
90.0 120.0	0.0	-	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	0.0	-	-	0.0	-	-	9.5	-	-	0.0	-	-
Loweina rara												
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
Myctophum nitidulum												
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.8	-
83.3 100.0	5.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 110.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7 100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-
86.7 110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.2	-
90.0 100.0	0.0	-	-	0.0	-	-	0.0	-	-	19.2	-	-
90.0 110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0 120.0	0.0	-	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	4.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
93.3 110.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	-	-	-	-	0.0	-	-	4.4	-	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
						Protomyctophum crockeri							
76.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	17.3	-
76.7	60.0	9.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	90.0	4.9	-	-	0.0	-	-	7.8	-	-	-	0.0	-
76.7	100.0	0.0	-	-	8.8	-	-	0.0	-	-	-	-	-
80.0	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	5.3	-	-	-	8.6	-
83.3	60.0	0.0	-	-	0.0	-	-	19.2	-	-	-	0.0	-
83.3	70.0	0.0	-	-	0.0	-	-	9.7	-	-	-	9.8	-
83.3	80.0	0.0	-	-	19.8	-	-	8.4	-	-	-	8.9	-
83.3	90.0	9.9	-	-	0.0	-	-	0.0	-	-	-	13.3	-
83.3	100.0	0.0	-	-	9.9	-	-	4.4	-	-	-	18.4	-
83.3	110.0	4.9	-	-	0.0	-	-	0.0	-	-	-	8.6	-
86.7	35.0	0.0	-	-	0.0	-	-	9.7	-	-	0.0	-	-
86.7	45.0	10.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.5	-
86.7	60.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
86.7	70.0	-	-	-	9.7	-	-	9.6	-	-	-	0.0	-
86.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	29.0	-
86.7	90.0	0.0	-	-	14.3	-	-	19.2	-	-	-	8.8	-
86.7	100.0	0.0	-	-	13.9	-	-	5.4	-	-	-	8.8	-
86.7	110.0	0.0	-	-	27.7	-	-	12.4	-	-	-	13.8	-
90.0	37.0	0.0	-	-	0.0	-	-	8.7	-	-	0.0	-	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	4.6	-	-
90.0	60.0	0.0	-	-	9.3	-	-	10.8	-	-	8.6	-	-
90.0	70.0	10.0	-	-	4.7	-	-	8.5	-	-	9.0	-	-
90.0	80.0	0.0	-	-	13.7	-	-	0.0	-	-	0.0	-	-
90.0	90.0	4.7	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	12.6	-	-	0.0	-	-	9.6	-	-
90.0	110.0	4.7	-	-	4.2	-	-	3.5	-	-	4.2	-	-
90.0	120.0	0.0	-	-	0.0	-	-	3.9	-	-	4.4	-	-
93.3	28.0	0.0	-	-	0.0	-	-	10.3	-	-	0.0	-	-
93.3	30.0	0.0	-	-	4.7	-	-	5.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	15.1	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.6	-	-

TABLE 8. (cont.)

***Protomyctophum crockeri* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	50.0	0.0	-	-	0.0	-	-	0.0	-	-	9.2	-	-
93.3	60.0	-	-	-	27.2	-	-	9.6	-	-	0.0	-	-
93.3	70.0	0.0	-	-	0.0	-	-	17.8	-	-	0.0	-	-
93.3	80.0	4.9	-	-	4.7	-	-	0.0	-	-	4.7	-	-
93.3	90.0	14.3	-	-	9.5	-	-	0.0	-	-	17.7	-	-
93.3	100.0	0.0	-	-	26.5	-	-	0.0	-	-	17.8	-	-
93.3	110.0	4.3	-	-	0.0	-	-	4.2	-	-	8.9	-	-
93.3	120.0	0.0	-	-	-	-	-	8.9	-	-	0.0	-	-

Symbolophorus californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	4.9	-	-	4.4	-	-	-	0.0	-
83.3	110.0	0.0	-	-	43.6	-	-	0.0	-	-	-	0.0	-
86.7	90.0	0.0	-	-	23.9	-	-	9.6	-	-	-	4.4	-
86.7	100.0	0.0	-	-	18.6	-	-	16.2	-	-	-	4.4	-
86.7	110.0	5.0	-	-	13.8	-	-	95.2	-	-	-	0.0	-
90.0	53.0	0.0	-	-	0.0	-	-	8.2	-	-	0.0	-	-
90.0	60.0	0.0	-	-	0.0	-	-	10.8	-	-	0.0	-	-
90.0	70.0	0.0	-	-	0.0	-	-	21.3	-	-	0.0	-	-
90.0	80.0	4.7	-	-	0.0	-	-	21.7	-	-	0.0	-	-
90.0	90.0	9.3	-	-	14.1	-	-	8.2	-	-	8.9	-	-
90.0	100.0	0.0	-	-	0.0	-	-	8.2	-	-	4.8	-	-
90.0	110.0	14.1	-	-	25.3	-	-	0.0	-	-	0.0	-	-
90.0	120.0	0.0	-	-	30.5	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	0.0	-	-	9.9	-	-	0.0	-	-
93.3	60.0	-	-	-	9.1	-	-	9.6	-	-	8.5	-	-
93.3	80.0	4.9	-	-	9.4	-	-	47.3	-	-	0.0	-	-
93.3	90.0	0.0	-	-	14.3	-	-	4.7	-	-	0.0	-	-
93.3	100.0	9.4	-	-	4.4	-	-	15.3	-	-	0.0	-	-
93.3	110.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	120.0	5.0	-	-	-	-	-	0.0	-	-	4.4	-	-

Tarletonbeania crenularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	5.1	-	-	0.0	-	-	8.3	-	-	-	0.0	-
76.7	80.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-

TABLE 8. (cont.)

***Tarletonbeania crenularis* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	17.7	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	5.3	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	8.8	-	-	-	0.0	-
83.3	55.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3	80.0	4.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	0.0	-	-	9.7	-	-	0.0	-	-
90.0	37.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0	60.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
90.0	70.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	80.0	4.7	-	-	0.0	-	-	0.0	-	-	4.2	-	-
90.0	100.0	4.4	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	35.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	0.0	-	-	10.0	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	9.6	-	-	0.0	-	-

Desmodema lorum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	100.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-

Trachipterus altivelis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	0.0	-	-	0.0	-	-	4.4	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
90.0	70.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	192.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	420.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	66.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	19.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	70.0	38.4	-	-	9.9	-	-	0.0	-	-	-	0.0	-
76.7	90.0	0.0	-	-	16.6	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0	55.0	20.7	-	-	9.6	-	-	0.0	-	-	-	10.0	-
80.0	60.0	21.5	-	-	9.1	-	-	0.0	-	-	-	8.4	-
80.0	70.0	18.0	-	-	10.2	-	-	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	80.0	0.0	-	-	79.8	-	-	0.0	-	-	-	0.0	-
81.8	46.9	17.8	-	-	19.2	-	-	0.0	-	-	-	27.0	-
83.3	42.0	19.2	-	-	9.4	-	-	0.0	-	-	-	0.0	-
83.3	51.0	75.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	0.0	-	-	8.7	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-
83.3	70.0	0.0	-	-	159.4	-	-	0.0	-	-	-	0.0	-
83.3	90.0	0.0	-	-	14.3	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	39.5	-	-	0.0	-	-	-	0.0	-
86.7	35.0	10.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	57.3	-	-	10.3	-	-	0.0	-	-	0.0	-	-
86.7	45.0	30.4	-	-	9.7	-	-	0.0	-	-	0.0	-	-
86.7	50.0	10.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	55.0	4.6	-	-	19.7	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	29.6	-	-	0.0	-	-	-	0.0	-
86.7	70.0	-	-	-	19.4	-	-	0.0	-	-	-	0.0	-
86.7	80.0	0.0	-	-	137.2	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	20.3	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
90.0	35.0	43.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	37.0	20.5	-	-	9.9	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	-	26.6	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	28.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	14.0	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	9.1	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	-	-	8.9	-	-	0.0	-	-	0.0	-	-
93.3	35.0	5.0	-	-	27.1	-	-	0.0	-	-	0.0	-	-
93.3	40.0	5.1	-	-	10.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	68.8	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	86.3	-	-	0.0	-	-	0.0	-	-
93.3	70.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
							Chilara taylori						
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
90.0	35.0	0.0	-	-	0.0	-	-	0.0	-	-	9.0	-	-
							Cataetyx rubrirostris						
86.7	33.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	-	10.3	-	-	0.0	-	-	0.0	-	-
							***Oneirodes* spp.**						
90.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	4.5	-	-
							***Gigantactis* spp.**						
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.9	-
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.6	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	8.3	-	-
90.0	120.0	0.0	-	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	0.0	-	-	4.4	-	-
							Atherinopsis californiensis						
90.0	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-
							Cololabis saira						
80.0	80.0	0.0	-	-	0.0	-	-	10.4	-	-	-	0.0	-
83.3	40.6	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	10.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	26.7	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
							Melamphaidae						
76.7	90.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
							***Melamphaes* spp.**						
93.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
							Melamphaes lugubris						
83.3	70.0	0.0	-	-	19.9	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

***Melamphaes lugubris* (cont.)**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	80.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	9.7	-	-	0.0	-	-	-	0.0	-
86.7	100.0	0.0	-	-	4.6	-	-	0.0	-	-	-	4.4	-
86.7	110.0	0.0	-	-	4.6	-	-	0.0	-	-	-	4.6	-
90.0	80.0	0.0	-	-	4.6	-	-	0.0	-	-	0.0	-	-
90.0	110.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	60.0	-	-	-	0.0	-	-	9.6	-	-	0.0	-	-
93.3	70.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
93.3	110.0	0.0	-	-	9.4	-	-	0.0	-	-	0.0	-	-
93.3	120.0	5.0	-	-	-	-	-	0.0	-	-	4.4	-	-

Melamphaes parvus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	90.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Poromitra crassiceps

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	0.0	-	-	5.2	-	-	-	0.0	-
83.3	70.0	5.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	80.0	4.7	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Scopelogadus bispinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	0.0	-	-	0.0	-	-	5.3	-	-	-	0.0	-
83.3	100.0	0.0	-	-	0.0	-	-	8.8	-	-	-	0.0	-
86.7	110.0	0.0	-	-	0.0	-	-	4.1	-	-	-	4.6	-
90.0	80.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
93.3	90.0	0.0	-	-	0.0	-	-	9.5	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	4.2	-	-	0.0	-	-
93.3	120.0	0.0	-	-	-	-	-	4.4	-	-	0.0	-	-

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	87.2	-	-	4.0	-	-	0.0	-	-	-	16.7	-
76.7	51.0	30.0	-	-	29.1	-	-	0.0	-	-	-	27.5	-
76.7	55.0	71.7	-	-	19.3	-	-	0.0	-	-	-	0.0	-
76.7	60.0	0.0	-	-	79.1	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	19.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	11.6	-	-	0.0	-	-	0.0	-	-	-	34.3	-
80.0	55.0	41.5	-	-	0.0	-	-	9.0	-	-	-	140.0	-
80.0	60.0	0.0	-	-	36.5	-	-	0.0	-	-	-	0.0	-
80.0	70.0	0.0	-	-	10.2	-	-	0.0	-	-	-	0.0	-
80.0	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	4.2	-	-	0.0	-	-	-	0.0	-
81.8	46.9	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	3.8	-	-	0.0	-	-	0.0	-	-	-	15.2	-
83.3	51.0	475.1	-	-	105.0	-	-	0.0	-	-	-	9.0	-
83.3	55.0	19.3	-	-	34.8	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	94.4	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	-	25.8	-	-	0.0	-	-	45.5	-	-
86.7	35.0	20.3	-	-	143.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	252.3	-	-	195.6	-	-	5.2	-	-	30.2	-	-
86.7	45.0	1447.2	-	-	48.5	-	-	20.7	-	-	17.7	-	-
86.7	50.0	214.2	-	-	63.1	-	-	9.6	-	-	-	8.8	-
86.7	55.0	41.3	-	-	39.4	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
90.0	28.0	0.0	-	-	0.0	-	-	0.0	-	-	4.1	-	-
90.0	30.0	0.0	-	-	212.9	-	-	0.0	-	-	4.4	-	-
90.0	35.0	65.6	-	-	180.5	-	-	0.0	-	-	9.0	-	-
90.0	37.0	10.3	-	-	19.8	-	-	0.0	-	-	0.0	-	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	4.6	-	-
90.0	53.0	0.0	-	-	97.7	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	-	65.3	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	144.2	-	-	0.0	-	-	0.0	-	-
93.3	26.7	61.8	-	-	0.0	-	-	0.0	-	-	3.7	-	-
93.3	28.0	0.0	-	-	35.4	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	-	271.3	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	35.1	-	-	10.0	-	-	0.0	-	-
93.3	45.0	34.9	-	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	98.8	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	98.9	-	-	36.6	-	-	0.0	-	-

TABLE 8. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	60.0	-	-	-	22.7	-	-	0.0	-	-	0.0	--

Sebastes aurora

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 51.0	10.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 70.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 60.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
93.3 35.0	0.0	-	-	18.1	-	-	0.0	-	-	0.0	-	-

Sebastes diploproa

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 70.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.0	-
80.0 60.0	10.7	-	-	9.1	-	-	0.0	-	-	-	0.0	-
86.7 50.0	7.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 60.0	4.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 53.0	5.0	-	-	0.0	-	-	0.0	-	-	8.5	-	-
93.3 45.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Sebastes jordani

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	50.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	20.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	5.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 55.0	10.4	-	-	9.6	-	-	0.0	-	-	-	0.0	-
81.8 46.9	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 51.0	399.6	-	-	19.1	-	-	0.0	-	-	-	0.0	-
83.3 60.0	0.0	-	-	15.7	-	-	0.0	-	-	-	0.0	-
86.7 35.0	20.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 40.0	0.0	-	-	10.3	-	-	0.0	-	-	0.0	-	-
86.7 50.0	7.3	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 35.0	0.0	-	-	25.8	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Sebastes levis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	10.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	3.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	10.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	7.9	-	-	0.0	-	-	-	0.0	-
86.7	50.0	10.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	55.0	4.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	45.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-

***Sebastolobus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	0.0	-	-	0.0	-	-	4.3	-	-	0.0	-	-

Sebastolobus alascanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	50.0	3.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3	26.7	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-

Zaniolepis latipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	5.1	-	-

Artedius lateralis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	9.5	-	-	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	-	-	18.4	-	-	4.7	-	-	0.0	-	-

Leptocottus armatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	28.6	-	-	0.0	-	-	-	0.0	-

Scorpaenichthys marmoratus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Odontopyxis trispinosa												
83.3 51.0	0.0	-	-	9.5	-	-	0.0	-	-	-	0.0	-
Liparis mucosus												
83.3 51.0	0.0	-	-	0.0	-	-	8.8	-	-	-	0.0	-
***Howella* spp.**												
86.7 110.0	0.0	-	-	0.0	-	-	8.3	-	-	-	0.0	-
Howella pammelas												
90.0 110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
***Paralabrax* spp.**												
83.3 60.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
Trachurus symmetricus												
80.0 80.0	0.0	-	-	8.9	-	-	0.0	-	-	-	0.0	-
83.3 80.0	0.0	-	-	39.6	-	-	0.0	-	-	-	0.0	-
83.3 100.0	0.0	-	-	4.9	-	-	4.4	-	-	-	0.0	-
83.3 110.0	0.0	-	-	19.4	-	-	5.2	-	-	-	0.0	-
86.7 33.0	0.0	-	-	0.0	-	-	9.4	-	-	0.0	-	-
86.7 90.0	0.0	-	-	19.1	-	-	0.0	-	-	-	0.0	-
86.7 110.0	0.0	-	-	0.0	-	-	4.1	-	-	-	0.0	-
90.0 70.0	0.0	-	-	14.0	-	-	25.6	-	-	0.0	-	-
90.0 80.0	0.0	-	-	22.9	-	-	0.0	-	-	0.0	-	-
93.3 26.7	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	0.0	-	-	0.0	-	-	10.6	-	-	0.0	-	-
93.3 40.0	0.0	-	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	-	-	18.2	-	-	0.0	-	-	0.0	-	-
93.3 70.0	0.0	-	-	0.0	-	-	8.9	-	-	0.0	-	-
93.3 80.0	0.0	-	-	108.1	-	-	0.0	-	-	0.0	-	-
93.3 90.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 110.0	0.0	-	-	14.2	-	-	0.0	-	-	0.0	-	-
Brama japonica												
90.0 110.0	0.0	-	-	8.4	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Brama japonica **(cont.)**

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

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	42.7	-	-	0.0	-	-	0.0	-	-	-	17.2	-
80.0	55.0	20.7	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
83.3	40.6	40.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	7.7	-	-	0.0	-	-	0.0	-	-	-	5.1	-
86.7	33.0	9.1	-	-	0.0	-	-	0.0	-	-	5.1	-	-
86.7	35.0	5.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Seriphus politus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	0.0	-	-	3.7	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	0.0	-	-	11.6	-	-	0.0	-	-

Girella nigricans

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	60.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-

Mugil cephalus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-

Oxyjulis californica

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	40.0	0.0	-	-	0.0	-	-	5.2	-	-	0.0	-	-
86.7	45.0	0.0	-	-	0.0	-	-	20.7	-	-	0.0	-	-

Rathbunella **spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Chiasmodon niger

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	90.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.4	-
86.7	110.0	0.0	-	-	0.0	-	-	8.3	-	-	-	0.0	-
90.0	90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-

TABLE 8. (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
***Chiasmodon niger* (cont.)**												
93.3 80.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 90.0	0.0	-	-	0.0	-	-	0.0	-	-	8.8	-	-
93.3 110.0	4.3	-	-	0.0	-	-	4.2	-	-	0.0	-	-
***Gibbonsia* spp.**												
83.3 51.0	4.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
Neoclinus stephensae												
90.0 28.0	0.0	-	-	10.2	-	-	0.0	-	-	0.0	-	-
Hypsoblennius jenkinsi												
83.3 42.0	0.0	-	-	0.0	-	-	0.0	-	-	-	5.1	-
86.7 33.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 26.7	0.0	-	-	0.0	-	-	0.0	-	-	3.7	-	-
93.3 28.0	0.0	-	-	0.0	-	-	20.6	-	-	0.0	-	-
Coryphopterus nicholsii												
76.7 55.0	10.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 70.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
81.8 46.9	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
86.7 33.0	9.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	0.0	-	-	8.9	-	-	0.0	-	-	0.0	-	-
93.3 35.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	-	-	0.0	-	-	0.0	-	-	10.6	-	-
Lepidogobius lepidus												
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
93.3 26.7	4.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
Typhlogobius californiensis												
90.0 30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
Sphyraena argentea												
80.0 51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	17.2	-
80.0 55.0	0.0	-	-	0.0	-	-	0.0	-	-	-	10.0	-

TABLE 8. (cont.)

Scomber japonicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	3.5	-	-	-	0.0	-
93.3	35.0	0.0	-	-	36.2	-	-	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-

Icichthys lockingtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	0.0	-	-	9.9	-	-	0.0	-	-	-	0.0	-
76.7	90.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	60.0	0.0	-	-	9.1	-	-	0.0	-	-	-	0.0	-
83.3	70.0	10.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	5.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-
83.3	100.0	0.0	-	-	4.9	-	-	0.0	-	-	-	0.0	-
83.3	110.0	0.0	-	-	4.8	-	-	0.0	-	-	-	0.0	-

Tetragonurus cuvieri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	8.6	-
86.7	80.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.7	-
86.7	100.0	0.0	-	-	9.3	-	-	0.0	-	-	-	8.8	-
86.7	110.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.2	-
90.0	45.0	0.0	-	-	0.0	-	-	0.0	-	-	4.6	-	-
90.0	90.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	4.2	-	-	4.1	-	-	24.0	-	-
90.0	110.0	0.0	-	-	0.0	-	-	0.0	-	-	4.2	-	-
93.3	45.0	0.0	-	-	0.0	-	-	0.0	-	-	10.6	-	-
93.3	100.0	0.0	-	-	0.0	-	-	5.1	-	-	0.0	-	-
93.3	110.0	0.0	-	-	0.0	-	-	8.4	-	-	0.0	-	-

Peprilus simillimus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	-	0.0	-	-	9.5	-	-	-	0.0	-

***Citharichthys* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	40.0	11.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	87.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	40.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-

TABLE 8. (cont.)

Citharichthys sordidus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	71.7	-	-	0.0	-	-	0.0	-	-	-	8.7	-
76.7	60.0	4.8	-	-	0.0	-	-	61.5	-	-	-	8.1	-
76.7	70.0	143.8	-	-	0.0	-	-	0.0	-	-	-	8.7	-
76.7	90.0	9.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	158.7	-
80.0	55.0	0.0	-	-	19.1	-	-	18.0	-	-	-	120.0	-
80.0	60.0	21.5	-	-	9.1	-	-	10.3	-	-	-	25.1	-
80.0	70.0	54.1	-	-	0.0	-	-	0.0	-	-	-	9.6	-
80.0	80.0	9.6	-	-	8.9	-	-	0.0	-	-	-	0.0	-
80.0	90.0	9.0	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	100.0	0.0	-	-	0.0	-	-	0.0	-	-	-	4.3	-
81.8	46.9	0.0	-	-	9.6	-	-	66.6	-	-	-	153.1	-
83.3	40.6	3.4	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	42.0	0.0	-	-	0.0	-	-	19.0	-	-	-	0.0	-
83.3	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	9.0	-
83.3	55.0	19.3	-	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3	70.0	10.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	80.0	8.5	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	90.0	19.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	33.0	0.0	-	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7	35.0	0.0	-	-	0.0	-	-	19.4	-	-	0.0	-	-
86.7	40.0	22.9	-	-	20.6	-	-	10.4	-	-	0.0	-	-
86.7	45.0	10.1	-	-	9.7	-	-	0.0	-	-	17.7	-	-
86.7	50.0	32.7	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7	55.0	9.2	-	-	0.0	-	-	19.4	-	-	-	9.5	-
86.7	90.0	4.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	30.0	0.0	-	-	0.0	-	-	0.0	-	-	4.4	-	-
90.0	35.0	0.0	-	-	17.2	-	-	0.0	-	-	18.1	-	-
90.0	37.0	0.0	-	-	0.0	-	-	4.4	-	-	0.0	-	-
90.0	45.0	15.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	60.0	4.9	-	-	9.3	-	-	0.0	-	-	8.6	-	-
90.0	70.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	-	-	9.4	-	-	9.9	-	-	0.0	-	-
93.3	40.0	0.0	-	-	10.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

***Citharichthys sordidus* (cont.)**

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

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	0.0	-	-	-	16.7	-
76.7	51.0	90.0	-	-	0.0	-	-	10.6	-	-	-	18.3	-
76.7	55.0	0.0	-	-	9.7	-	-	16.7	-	-	-	26.0	-
76.7	60.0	4.8	-	-	0.0	-	-	30.7	-	-	-	81.2	-
76.7	70.0	67.1	-	-	0.0	-	-	0.0	-	-	-	8.7	-
76.7	80.0	9.6	-	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	51.0	0.0	-	-	0.0	-	-	0.0	-	-	-	72.9	-
80.0	55.0	0.0	-	-	9.6	-	-	18.0	-	-	-	30.0	-
80.0	60.0	43.0	-	-	9.1	-	-	41.3	-	-	-	50.1	-
80.0	70.0	18.0	-	-	0.0	-	-	9.4	-	-	-	9.6	-
80.0	80.0	4.8	-	-	0.0	-	-	0.0	-	-	-	8.6	-
80.0	90.0	27.0	-	-	0.0	-	-	0.0	-	-	-	8.8	-
81.8	46.9	0.0	-	-	0.0	-	-	177.7	-	-	-	18.0	-
83.3	42.0	0.0	-	-	9.4	-	-	19.0	-	-	-	0.0	-
83.3	51.0	22.2	-	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	55.0	19.3	-	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	172.6	-	-	-	9.1	-
86.7	33.0	0.0	-	-	0.0	-	-	0.0	-	-	15.2	-	-
86.7	35.0	0.0	-	-	0.0	-	-	9.7	-	-	0.0	-	-
86.7	40.0	11.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	45.0	5.1	-	-	9.7	-	-	20.7	-	-	17.7	-	-
86.7	50.0	7.3	-	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7	55.0	4.6	-	-	9.9	-	-	9.7	-	-	-	9.5	-
86.7	70.0	-	-	-	0.0	-	-	0.0	-	-	-	10.1	-
86.7	80.0	8.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0	35.0	0.0	-	-	8.6	-	-	0.0	-	-	0.0	-	-
90.0	37.0	0.0	-	-	0.0	-	-	4.4	-	-	17.4	-	-
90.0	45.0	10.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	53.0	10.0	-	-	0.0	-	-	8.2	-	-	17.1	-	-
90.0	60.0	4.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	-	4.7	-	-	0.0	-	-	0.0	-	-
93.3	30.0	5.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 8. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
						***Citharichthys stigmaeus* (cont.)**							
93.3	35.0	0.0	-	-	0.0	-	-	21.2	-	-	9.0	-	-
93.3	40.0	0.0	-	-	0.0	-	-	10.0	-	-	16.4	-	-
93.3	45.0	0.0	-	-	0.0	-	-	29.7	-	-	0.0	-	-
93.3	50.0	11.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	55.0	-	-	-	0.0	-	-	12.2	-	-	0.0	-	-
93.3	60.0	-	-	-	4.5	-	-	0.0	-	-	0.0	-	-
						Paralichthys californicus							
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	3.9	-	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	0.0	-	-	0.0	-	-	11.1	-	-	-	0.0	-
90.0	28.0	0.0	-	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	-	-	0.0	-	-	23.2	-	-	0.0	-	-
						Glyptocephalus zachirus							
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	-	0.0	-	-	9.0	-	-	-	0.0	-
						Lepidopsetta bilineata							
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	50.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
						Lyopsetta exilis							
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	-	8.5	-	-	0.0	-	-	-	0.0	-
86.7	35.0	0.0	-	-	14.8	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	-	10.2	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	-	4.5	-	-	0.0	-	-	0.0	-	-
						Microstomus pacificus							
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	0.0	-	-	8.3	-	-	-	0.0	-
76.7	60.0	0.0	-	-	8.8	-	-	0.0	-	-	-	0.0	-
80.0	55.0	31.1	-	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7	60.0	0.0	-	-	0.0	-	-	9.8	-	-	-	0.0	-
90.0	70.0	0.0	-	-	9.3	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	0.0	-	-	10.0	-	-	0.0	-	-
93.3	55.0	-	-	-	0.0	-	-	12.2	-	-	0.0	-	-

TABLE 8. (cont.)

Parophrys vetulus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	0.0	-	-	8.6	-	-	-	0.0	-
83.3	42.0	3.8	-	-	0.0	-	-	0.0	-	-	-	0.0	-

Pleuronichthys ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	30.0	0.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-

Pleuronichthys verticalis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	-	0.0	-	-	7.0	-	-	-	0.0	-
83.3	60.0	0.0	-	-	0.0	-	-	9.6	-	-	-	0.0	-

Symphurus atricaudus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	40.0	0.0	-	-	0.0	-	-	0.0	-	-	10.1	-	-

Disintegrated fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	0.0	-	-	0.0	-	-	8.2	-	-	0.0	-	-

PHYLOGENETIC INDEX TO TABLES 4 AND 8

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