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ICHTHYOPLANKTON AND STATION DATA FOR SURFACE (MANTA) AND OBLIQUE (BONGO) PLANKTON TOWS FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES AND CALIFORNIA CURRENT ECOSYSTEM SURVEY IN 2006

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center

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CONTENTS

LIST OF FIGURES

Page

LIST OF TABLES

Page

ABSTRACT

This report provides ichthyoplankton data from Manta net (surface) tows and Bongo net (oblique) tows and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises and the California Current Ecosystem Survey (CCES) conducted in the Southern California Bight region, central California, and along the majority of the California Current System in 2006. It is the 65th report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. The CCES cruise is the first of its kind in that it covers much of the California Current pelagic ecosystem, including the CalCOFI survey region. A total of 322 stations was occupied during quarterly CalCOFI cruises over the survey area which extended from Point Reyes (winter, spring), and Avila Beach (summer, fall) to San Diego, California. Transects extended seaward in a southwesterly direction to a maximum of approximately 330 n. mi. The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. During the CCES cruise (spring) 113 stations were occupied over the survey area which extended from the northern coast of Vancouver Island, British Columbia, Canada to San Diego, California. Of the 26 transects that were completed, 10 of the northern transects extended seaward in a westerly direction to a maximum of approximately 160 n. mi., while two of the northern transects extended seaward in a southwesterly direction to a maximum of approximately 120 n. mi. The 14 southern transects extended seaward in a southwesterly direction to a maximum of approximately 250 n. mi. The data are listed in a series of fourteen 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 eighth tables. Other tables list, by station and month, counts (number per 100 cubic meters of water filtered) of each of the 84 larval fish categories identified in Manta net tows and standardized counts (number under 10 square meters of sea surface) of each of the 167 larval fish categories identified in Bongo net tows. This series of reports makes the CalCOFI, and now the CCES, ichthyoplankton and station data available to all investigators and serves as a guide to the computer data base.

INTRODUCTION

This report, the 65th 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 2006. 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 (SWFSC) of the National Marine Fisheries Service (NMFS), the Scripps Institution of Oceanography (SIO), and the California Department of Fish and Game (CDFG). NMFS and SIO supply ships and personnel to conduct the sea surveys. NMFS processes the plankton samples and analyzes the ichthyoplankton from them. SIO processes and analyzes hydrographic and biological samples and analyzes invertebrate groups from the plankton samples.

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

winter and spring cruises. Neuston[1] sampling with the Manta net (Figure 1) was initiated in 1977–78. Ahlstrom and Stevens (1976), Gruber et al. (1982), and Doyle (1992a, b) provided initial information on the distribution and abundance of surface ichthyoplankton in the northeastern Pacific. Moser et al. (2002) summarized the spatial and temporal distribution and abundance of ichthyoplankton collected in Manta net tows on CalCOFI survey cruises from 1977–2000.

This report also includes ichthyoplankton and associated station and tow data from the California Current Ecosystem Survey (CCES), which was conducted in conjunction with the Spring CalCOFI cruise. The CCES cruise is unique because its purpose was to obtain a synoptic view of the greater part of the California Current pelagic ecosystem, ranging from British Columbia to Baja California, during the spring peak in the Pacific sardine spawning season. In addition to the routine CalCOFI-like collection of ichthyoplankton and associated biological and hydrographic data, adult sardine samples were collected for use in the spawning biomass estimate, which resulted in an updated stock assessment.

Hydrographic and biological data from CalCOFI surveys are published by Scripps Institution of Oceanography and can be obtained on line at the CalCOFI web site <http://www.calcofi.org/newhome/publications/Data_Reports/data_reports.htm>. All available records for all four CalCOFI cruises and the CCES cruise in 2006 were verified and edited to produce this ichthyoplankton data report. These reports make the CalCOFI and CCES ichthyoplankton and station data available to all investigators and serve as guides to the computer data base. They are the basic documents against which changes in the data base can be compared as it is modified to correct errors and update earlier identifications. This report includes both Manta net tow data and Bongo net tow data. Prior to the 2001 survey these data were reported separately. Citations for other reports in this series are:

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

[1]The term “neuston” was applied originally to organisms associated with the surface film in freshwater habitats (Naumann 1917). Banse (1975) reviewed in detail the evolution of this term, a related term “pleuston”, and the various subdivisions of each. Neuston is now used by most workers in referring to the uppermost (upper –10 – 20 cm) layer of the sea and to the assemblage of organisms that lives in that zone, either permanently or 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).

Survey	Oblique Tow Report
1951	Ambrose et al. 1987a
1952	Sandknop et al. 1987a
1953	Stevens et al. 1987a
1954	Sumida et al. 1987a
1955	Ambrose et al. 1987b
1956	Stevens et al. 1987b
1957	Sumida et al. 1987b
1958	Sandknop et al. 1987b
1959	Stevens et al. 1987c
1960	Ambrose et al. 1987c
1961	Sandknop et al. 1988a
1962	Sumida et al. 1988a
1963	Ambrose et al. 1988a
1964	Sandknop et al. 1988b
1965	Stevens et al. 1988a
1966	Sumida et al. 1988b
1967	Ambrose et al. 1988b
1968	Sandknop et al. 1988c
1969	Stevens et al. 1988b
1972	Sumida et al. 1988c
1975	Ambrose et al. 1988c
1978	Sandknop et al. 1988d
1981	Ambrose et al. 1988d
1984	Stevens et al. 1990
1985	Ambrose et al. 1999a
1986	Charter et al. 1999a
1987	Sandknop et al. 1999a
1988	Watson et al. 1999a
1989	Ambrose et al. 1999b
1990	Charter et al. 1999b
1991	Sandknop et al. 1999b
1992	Watson et al. 1999b
1993	Ambrose et al. 1999c
1994	Charter et al. 1999c
1995	Sandknop et al. 1999c
1996	Watson et al. 1999c
1997	Ambrose et al. 1999d
1998	Charter et al. 1999d
1999	Ambrose et al. 2001
2000	Watson et al. 2001

Survey	Manta and Oblique Tows Report
2001	Ambrose et al. 2003a
2002	Charter et al. 2003
2003	Acuña et al. 2005
2004	Watson et al. 2005
2005	Ambrose et al. 2006

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

SAMPLING AREA AND PATTERN

A total of 322 standard CalCOFI survey and added inshore stations was occupied on four cruises in 2006, employing two research vessels:

0602, RV *David Starr Jordan*, 96 stations, February 3 – 25;

0604, RV *New Horizon*, 75 stations, April 1 – 17;

0607, RV *New Horizon*, 76 stations, July 8 – 24;

0610, RV *New Horizon*, 75 stations, October 21 – November 5.

The core survey area extended from Avila Beach to San Diego, California and seaward on six survey lines to approximately 120–330 n. mi. (Figures 2 and 5).[2] During the winter (February) CalCOFI cruise an additional five survey lines were sampled northward to the vicinity of Point Reyes, California (Figure 2). The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. On cruise 0602, line 60.0 extended seaward to station 70.0, while lines 63.3 through 73.3 extended seaward to station 80.0. On all four CalCOFI cruises, lines 76.7 and 80.0 extended seaward to station 100.0. Lines 83.3 and 86.7 extended seaward to station 110.0, and lines 90.0 and 93.3 extended to station 120.0. Also on all cruises, nine nearshore stations were added between lines 80.0 and 93.3, except on cruise 0602 stations 81.7 43.5 and 85.4 35.8 were canceled.

A total of 113 standard CalCOFI stations was occupied on the CCES cruise in 2006, employing two research vessels:

0604, RV *David Starr Jordan*, 66 stations, April 6 – 28;

0604, RV *Oscar Dyson*, 47 stations, April 11 – May 7.

The survey area of the CCES cruise extended from the northern coast of Vancouver Island, B.C., Canada to San Diego, California (Figures 3 and 4). On cruise 0604OD, of the standard CalCOFI lines occupied, stations were only occupied on line 53.3 which extended seaward to station 90.0. The northern lines on this cruise did not adhere to the standard CalCOFI spacing (Figure 3). On cruise 0604JD all lines extended seaward to station 90.0 except lines 86.7 and 66.7 extended seaward to station 100.0, while line 56.7 extended out to station 60.0 (Figure 4). Occupied stations on these lines all extended seaward to approximately 120–160 n. mi.

SAMPLING GEAR AND METHODS

Surface plankton tows were made with a modified version of the Manta net originally described by Brown and Cheng (1981). It consists of a rectangular mouth 15.5 cm deep and 86 cm wide attached to a frame that supports square lateral extensions covered with plywood and urethane foam (Figure 1). These extensions stabilize the net when it is towed and keep the top of the net at the sea surface. The net is

[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.

constructed of 0.505 mm nylon mesh. The towing bridle is asymmetrical with one side longer than the other; when the net is towed, this bridle arrangement forces the mouth away from the ship at a slight angle. A General Oceanics flowmeter was suspended across the center of the net mouth to measure the amount of water filtered during each tow. At each Manta net tow station the tow line from the bridle was attached to the hydrographic wire and then lowered to slightly below the surface of the water before the net was deployed. The net was towed at a ship speed of 1.0–2.0 knots for 15 minutes. Samples were preserved in 5% formalin buffered with sodium borate and returned to the plankton sorting laboratory at the SWFSC at the end of the cruise.

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

The standard bongo tow in 2006 was a double oblique haul to 212 m depth (to 15 m from the bottom in shallow areas) designed to filter a constant amount of water per depth interval (~ 2 m^3/m of depth) over the vertical range of most ichthyoplankters. Hauls were made at a ship speed of 1.5–2.0 knots and initiated by clamping the net to the towing cable above a 34 kg weight suspended below the surface. The net was lowered to ~ 212 m depth by paying out 300 m of wire at 50 m/minute (35 m of depth/minute). After fishing at depth for 30 seconds, the net was retrieved at 20 m/minute (14 m of depth/minute). The angle of stray was recorded every 30 seconds and maintained at 45° 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% buffered 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 a large volume of plankton were often fractioned to ~50% of their original volume (Manta net samples are not fractioned). Aliquot percentages for fractioned samples are listed in Table 8

under the "Percent Sorted" column. The sorting process included the removal of all ichthyoplankton from the samples and identification and separation of: eggs and larvae of Pacific sardine, northern anchovy, and Pacific saury and larvae of Pacific hake. Body lengths of sardine, anchovy, and hake larvae were measured to the nearest 0.5 mm. Cephalopod paralarvae also were removed during the sorting process (not included in this report).

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

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

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

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

$$V = R * a * p$$

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

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

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

Station and tow data for Manta net tows are presented in Table 1; station data, tow depth, volume of water strained, and standard haul factor are listed in Table 8 for each Bongo tow taken during 2006. 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 2006 surveys could be identified to species. A total of 84 larval fish categories (including unidentified) was identified in Manta net tows for 2006: 72 to species (85.7% of the total larvae collected in the Manta net tows), 9 to genus (10.7% of the total larvae), 2 to family, and 1 to order. A total of 167 larval fish categories (including unidentified and disintegrated) was identified in the Bongo net tows: 139 to species (83.2% of the total larvae collected in the Bongo net tows), 20 to genus (12.0% of the total larvae), and 6 to family. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Fisheries Resources Division mainly by William Watson, with some assistance from the senior author.

With few exceptions, taxonomic categories above species represent small specimens which were damaged and partly disintegrated during capture. The following taxonomic categories in Tables 2–7 and 9–12 require explanation:

Bathylagidae – Kobyliansky (1986) changed bathylagid generic designations in the CalCOFI region as follows: 1) *Bathylagus longirostris* was changed to *Dolicholagus longirostris*; 2) *Bathylagus milleri* to *Pseudobathylagus milleri*; 3) *Bathylagus ochotensis* to *Lipolagus ochotensis*; and 4) *Leuroglossus stilbius* to *Bathylagus stilbius.*

Bathylagus stilbius – see comment for Bathylagidae.

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

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

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

Glyptocephalus zachirus – see comment for Pleuronectidae.

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

Isopsetta isolepis – see comment for Pleuronectidae.

Lepidopsetta bilineata – see comment for Pleuronectidae.

Lipolagus ochotensis – see comment for Bathylagidae.

Lyopsetta exilis – see comment for Pleuronectidae.

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

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

Nannobrachium – Zahuranec (2000) moved the subgroup of *Lampanyctus* characterized by small or absent pectoral fins in adults to the genus *Nannobrachium*; two *Nannobrachium* species, *N. ritteri* (formerly *L. ritteri*) and *N. regale* (formerly *L. regalis*), occur commonly in the present CalCOFI survey pattern; larvae of these species > ~ 5 mm have been identified in oblique tow samples since 1954; beginning in 1985, larvae of two other species, *N. bristori* and *N. hawaiiensis*, have been identified and included in the CalCOFI data base; prior to the 1999 data report these were referred to as *Lampanyctus* “niger” and *Lampanyctus* “no pectorals”, respectively (see Moser 1996).

Odontopyxis trispinosa – McAllister (1990) changed *O. trispinosus to O. trispinosa.*

Parophrys vetulus – see comment for Pleuronectidae.

Pleuronectidae – Sakamoto (1984) changed pleuronectid generic designations for species in the CalCOFI area as follows: 1) *Glyptocephalus zachirus* was changed to *Errex zachirus*; 2) *Isopsetta isolepis*, *Lepidopsetta bilineata*, and *Parophrys vetulus* were transferred into *Pleuronectes* and 3) *Lyopsetta exilis* was changed to *Eopsetta exilis*; although these changes were incorporated in the

lists of Robins et al. (1991) and Eschmeyer (1998) we follow Nelson (1994) in retaining the older nomenclature because Sakamoto's (1984) changes were based on a phenetic study; also, the older names are used in the major identification guides to fishes of our region (Miller and Lea 1972, Eschmeyer et al. 1983, Moser 1996, and Matarese et al. 1989).

Pseudobathylagus milleri – see comment for Bathylagidae.

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

Scopelogadus m. bispinosus – Scopelogadus mizolepis has two valid subspecies: *S. mizolepis mizolepis*, occurring in the Atlantic, Indian, and Western Pacific oceans; and *S. mizolepis bispinosus* in the Eastern Pacific ocean, including the California Current region (McAllister 1990); prior to this report *S. m. bispinosus* was reported as *S. bispinosus*.

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

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

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

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

SPECIES SUMMARY

Manta Net

In total, the number of fish larvae collected in surface samples south of and including line 60.0 on CalCOFI cruises and the CCES cruise during 2006 decreased by 39.1% compared with 2005. Of the five most abundant taxa collected in Manta net tows in this southern region in 2006, Pacific sardine (*Sardinops sagax*) ranked first in abundance, as it has each year since 1997, with 29.5% of the total fish larvae, and second in occurrence with larvae collected in 8.4% of the samples (Tables 3 and 5). The total number of Pacific sardine larvae in the 2006 Manta net tows was one third of the 2005 value, and their occurrence decreased by 1.1%. The second most abundant species, northern anchovy (*Engraulis mordax*), accounted for 15.3% of the total larvae collected and was third in occurrence with 7.7% of the samples. The total number of northern anchovy larvae collected in the southern region in 2006 was about 43% of the 2005 value and occurred 1.3% less frequently. Unidentified larvae of the rockfish genus *Sebastes* were the third most abundant taxon with 11.2% of the total larvae, and fourth in occurrence with 7.5% of the samples. Almost twice as many unidentified rockfish larvae were collected during 2006 compared with 2005, but their frequency of occurrence decreased by 1.4%. Shortbelly rockfish (*Sebastes jordani*) ranked fourth with 10.8% of the total larvae, and tied for 17th in frequency of occurrence with 1.3% of the samples. Just over 100 times more Shortbelly rockfish larvae were collected during 2006, and they occurred in 60% more samples, compared with 2005. Pacific saury (*Cololabis saira*) ranked fifth in abundance with 7.4% of the total larvae, and was first in frequency of occurrence with 15% of the

samples. The abundance of Pacific saury larvae decreased by almost 20% during 2006 compared with 2005, and their frequency of occurrence decreased by 2.9%. The next six most abundant taxa were cabezon (*Scorpaenichthys marmoratus*) with 4.8% of the total larvae, mussel blenny (*Hypsoblennius jenkinsi*) with 2.4% of the total, California grunion (*Leuresthes tenuis*) with 2.0% of the total, halfmoon (*Medialuna californiensis*) with 1.5% of the samples, and jack mackerel (*Trachurus symmetricus*) tied with zebraperch (*Hermosilla azurea*) with 1.4% of the total larvae. These species ranked 5th, 7th, 39th (tied with 13 other species), 10th (tied with *Chromis punctipinnis* and *Atherinopsis californiensis*), 6th, and 17th (tied with four other species) in frequency of occurrence, respectively. The eleven most abundant taxa comprised 87.7% of all the larvae collected in Manta net tows south of and including line 60.0 on CalCOFI cruises and the CCES cruise in 2006. The remaining 12.3% was distributed among 66 other categories. Of the eleven most abundant taxa, one is an epipelagic species, six are coastal pelagic species, and four are coastal demersal taxa.

Inclusion of the larvae collected in the northern region (stations north of line 60.0) during the 2006 CCES cruise, increases the total larvae collected in surface samples by 16.3% (Tables 2 and 4) and changes the percentages and rankings for many taxa. Of the five most abundant taxa collected in Manta net tows from the entire survey region in 2006, Pacific sardine ranked first in abundance with 25.3% of the total larvae, and second in occurrence with 7.9% of the total samples. Northern anchovy, was second in abundance with 13.2% of the total larvae, and was third in frequency of occurrence (tied with *S. marmoratus* and *Sebastes* spp.) with 7.2% of the total samples. Third in abundance were unidentified larvae of the rockfish genus *Sebastes*, with 9.6% of the total larvae, and tied for third in occurrence with 7.2% of the samples. The fourth most abundant species in 2006, shortbelly rockfish, accounted for 9.3% of the total larvae and was 13th in frequency of occurrence with 1.2% of the samples. Pacific saury ranked fifth in abundance with 6.4% of the total larvae, and was first in total occurrence with 14.0% of the samples. The next five most abundant taxa were kelp greenling (*Hexagrammos decagrammus*) with 5.1% of the total larvae, brown Irish lord (*Hemilepidotus spinosus*) with 4.8% of the total, cabezon with 4.5% of the total, lingcod (*Ophiodon elongatus*) with 3.1% of the total, and mussel blenny with 2.0% of the total larvae. These species ranked 5th, 8th, 3rd (tied with *E. mordax* and *Sebastes* spp.), 10th, and 6th in frequency of occurrence, respectively. The ten most abundant taxa comprised 83.3% of all the larvae collected in Manta net tows on CalCOFI cruises and the CCES cruise in 2006. The remaining 16.7% was distributed among 74 other categories. Of the ten most abundant taxa, seven are coastal demersal taxa, and three are coastal pelagic species.

Bongo Net

The total abundance of fish larvae collected in oblique samples in the southern region (south of and including line 60.0) during the 2006 CalCOFI survey and the CCES cruise decreased by 49.4% compared with 2005. Of the five most abundant taxa collected in Bongo net tows in the southern region during 2006, northern anchovy was the most abundant, as it was in 2005, with 17.4% of the total larvae, and was fifth in occurrence, with 4.4% positive tows (Tables 10 and 12). The abundance of northern anchovy larvae collected during 2006 decreased by 84.4% (0.4% more occurrences) compared with 2005. The second most abundant species, Pacific sardine, accounted for 16.4% of the total larvae and was 18th in occurrence with 2.0% of the samples. The total larval Pacific sardine abundance in 2006 decreased by 38.1% compared with 2005, and they occurred 0.8% less frequently. Northern lampfish (*Stenobrachius leucopsarus*) larvae ranked third in abundance with 10.7% of the larvae, and were first in occurrence (5.9% of the samples). Northern lampfish were almost twice as abundant during 2006 compared with 2005, and their occurrence increased by 0.1%. Panama lightfish (*Vinciguerria lucetia*) larvae ranked fourth in abundance with 9.1% of the larvae, and were 11th in occurrence with 2.8% of the samples. Compared with 2005, larval abundance of Panama lightfish increased by 16%, but they occurred 0.1% less frequently. California smoothtongue (*Bathylagus stilbius*) larvae ranked fifth in abundance with 7.7% of the total larvae, and were fourth in frequency of occurrence (5.3% of the samples). The abundance of larval California smoothtongue increased by 110% compared with 2005, and they occurred 1.0% more frequently. The next five most abundant taxa were unidentified rockfish larvae of the genus *Sebastes* (7.6%), Pacific hake, *Merluccius productus* (3.8%), popeye blacksmelt, *Lipolagus ochotensis*

(2.6%), Mexican lampfish, *Triphoturus mexicanus* (2.4%), and shortbelly rockfish (2.3%). These species ranked 3rd, 9th, 6th, 7th, and 20th, respectively. The ten most abundant taxa comprised 80% of all the larvae collected in the southern region in Bongo net tows on CalCOFI and CCES cruises in 2006. The remaining 20% were distributed among 153 other categories (including the unidentified and disintegrated categories). Of the ten most abundant taxa three were coastal pelagic species, two were coastal demersal taxa, and five were mesopelagic species that migrate into the epipelagic zone at night.

Addition of the northern region (north of line 60.0) larvae collected in Bongo net tows during the 2006 CCES cruise increases the total abundance by 10.4% (Tables 9 and 11). Combining the northern and southern regions resulted in northern anchovy larvae being the most abundant species in the Bongo net tows during 2006, with 17.7% of the total larvae, and ranked 6th in occurrence, with 4.4% positive tows. The second most abundant species was Pacific sardine with 15.2% of the total larvae, and was 12th in occurrence (tied with *B. wesethi*) with 2.2% of the samples. Ranking third in abundance were Northern lampfish larvae with 14.5% of the total, and first in occurrence with 7.0% of the samples. The fourth most abundant species, Panama lightfish, accounted for 8.2% of the total larvae and was 10th in occurrence (tied with *Diogenichthys atlanticus*) with 2.5% of the samples. Unidentified rockfish larvae ranked fifth in abundance with 8.1% of the total larvae, and were second in frequency of occurrence (5.9% of the samples). The next five most abundant taxa were California smoothtongue (7.0%), Pacific hake (4.4%), popeye blacksmelt (3.0%), Mexican lampfish (2.2%), and shortbelly rockfish (2.1%). These species ranked 4th, 7th, 5th, 8th, and 17th in frequency of occurrence, respectively. The ten most abundant taxa comprised 80.5% of all the larvae collected in Bongo net tows on CalCOFI and CCES cruises in 2006. The remaining 19.5% were distributed among 157 other categories (including the unidentified and disintegrated categories). Of the ten most abundant taxa, three were coastal pelagic species, two were coastal demersal taxa, and five were mesopelagic species.

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 2006 CalCOFI survey and CCES cruise. 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 2–5). Stations are designated by two groups of numbers; the first set indicates the line and decimal fraction and the second set indicates the station and decimal fraction. Ship codes are JD, *David Starr Jordan*, NH, *New Horizon*, OD, *Oscar Dyson*, and RR, *Roger Revelle*. Time is listed as Pacific Standard Time (PST) at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for volume of water filtered). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast.

Table 2. Pooled occurrences of all larval fish taxa taken in Manta net tows north of line 60.0 on the RV *Oscar Dyson*, during the 2006 CCES cruise. Taxa are listed in rank order.

Table 3. Pooled occurrences of all larval fish taxa taken in Manta net tows south of and including line 60.0 on the RV *David Starr Jordan*, RV *New Horizon*, RV *Oscar Dyson*, and RV *Roger Revelle* during the 2006 CalCOFI survey and the CCES cruise. Taxa are listed in rank order.

Table 4. Pooled raw counts (not adjusted for volume of water filtered) of all larval fish taxa taken in Manta net tows north of line 60.0 on the RV *Oscar Dyson* during the 2006 CCES cruise. Taxa are listed in rank order.

Table 5. Pooled raw counts (not adjusted for volume of water filtered) of fish larvae taken in Manta net tows south of and including line 60.0 on the RV *David Starr Jordan,* RV *New Horizon,* RV *Oscar Dyson,* and RV *Roger Revelle* during the 2006 CalCOFI survey and the CCES cruise. Taxa are listed in rank order.

Table 6. Numbers of fish larvae for each taxon taken in Manta net tows north of line 60.0 on the RV *Oscar Dyson* during the 2006 CCES cruise. Numbers of larvae are listed as number per 100 m^3 of water filtered. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

Table 7. Numbers of fish larvae for each taxon taken in Manta net tows south of and including line 60.0 on the RV *David Starr Jordan,* RV *New Horizon,* RV *Oscar Dyson,* and RV *Roger Revelle* during the 2006 CalCOFI survey and the CCES cruise. Numbers of larvae are listed as number per 100 m^3 of water filtered. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

Table 8. 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 2006 CalCOFI survey and the CCES cruise. 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 2-5). Stations are designated by two groups of numbers; the first set indicates the line and decimal fraction and the second set indicates the station and decimal fraction. Ship codes are JD, *David Starr Jordan,* NH, *New Horizon,* OD, *Oscar Dyson,* and RR, *Roger Revelle.* Plankton displacement volumes were determined after removal of large organisms (those with individual displacement volumes > 5 ml) and expressed as ml per 1000 m^3 of water filtered. Time is listed as Pacific Standard Time (PST) at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for percent of sample sorted or standard haul factor). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast. Dates given here and in Figures 2–5 for the beginning and end of each cruise are based on PST at the first and last Bongo net tow station of the cruise and do not include transit time from port to the first station and to port after the last station. Thus, our cruise dates may differ slightly from those in SIO reports which are based on GMT prior to 1990 and include transit time to the first station and from the last station.

Table 9. Pooled occurrences of all larval fish taxa taken in Bongo net tows north of line 60.0 on the 2006 CCES cruise, listed in rank order.

Table 10. Pooled occurrences of all larval fish taxa taken in Bongo net tows south of and including line 60.0 on the 2006 CalCOFI survey and the CCES cruise listed in rank order.

Table 11. Pooled counts (adjusted for percent of sample sorted and standard haul factor) of all larval fish taxa taken in Bongo net tows north of line 60.0 on the 2006 CCES cruise, listed in rank order.

Table 12. Pooled raw counts (adjusted for percent of sample sorted and standard haul factor) of fish larvae taken in Bongo net tows south of and including line 60.0 taken on the 2006 CalCOFI survey and the CCES cruise, listed in rank order.

Table 13. Numbers of fish larvae for each taxon, listed by station and calendar month of the Bongo net tow, north of line 60.0. Counts are adjusted for percentage of sample sorted and standard haul factor. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

Table 14. Numbers of fish larvae for each taxon, listed by station and calendar month of the Bongo net tow, south of and including line 60.0. Counts are adjusted for percentage of sample sorted and standard haul factor. Taxa are listed in phylogenetic sequence (Eschmeyer 1998); genera are listed alphabetically.

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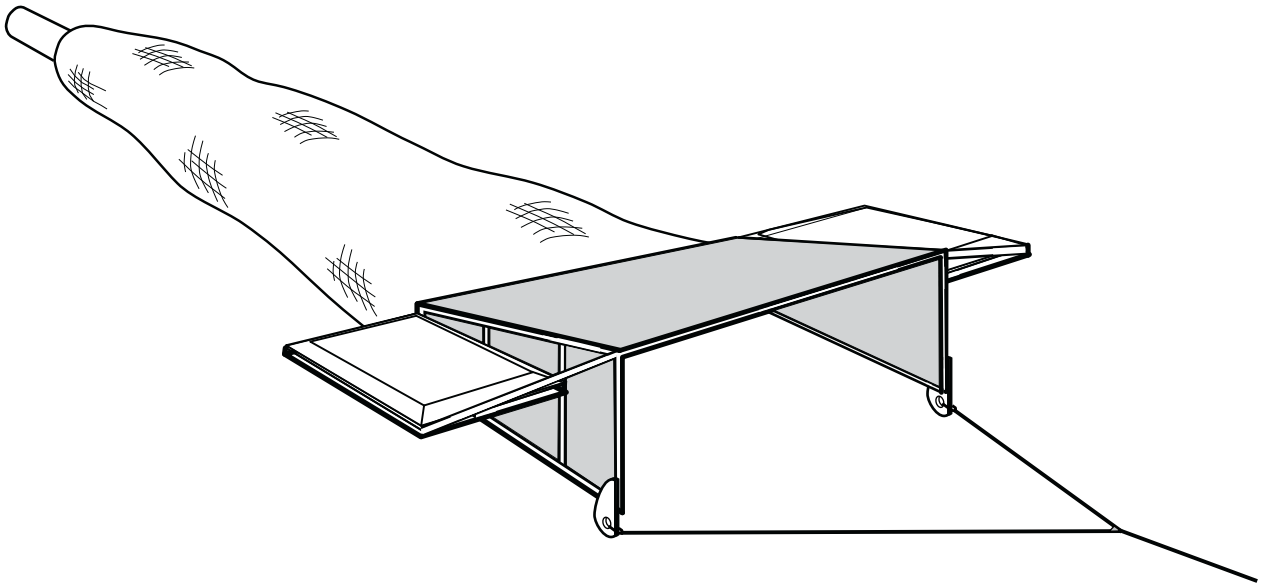

Figure 1. Diagram of the Manta net used on CalCOFI cruises and the CCES cruise.

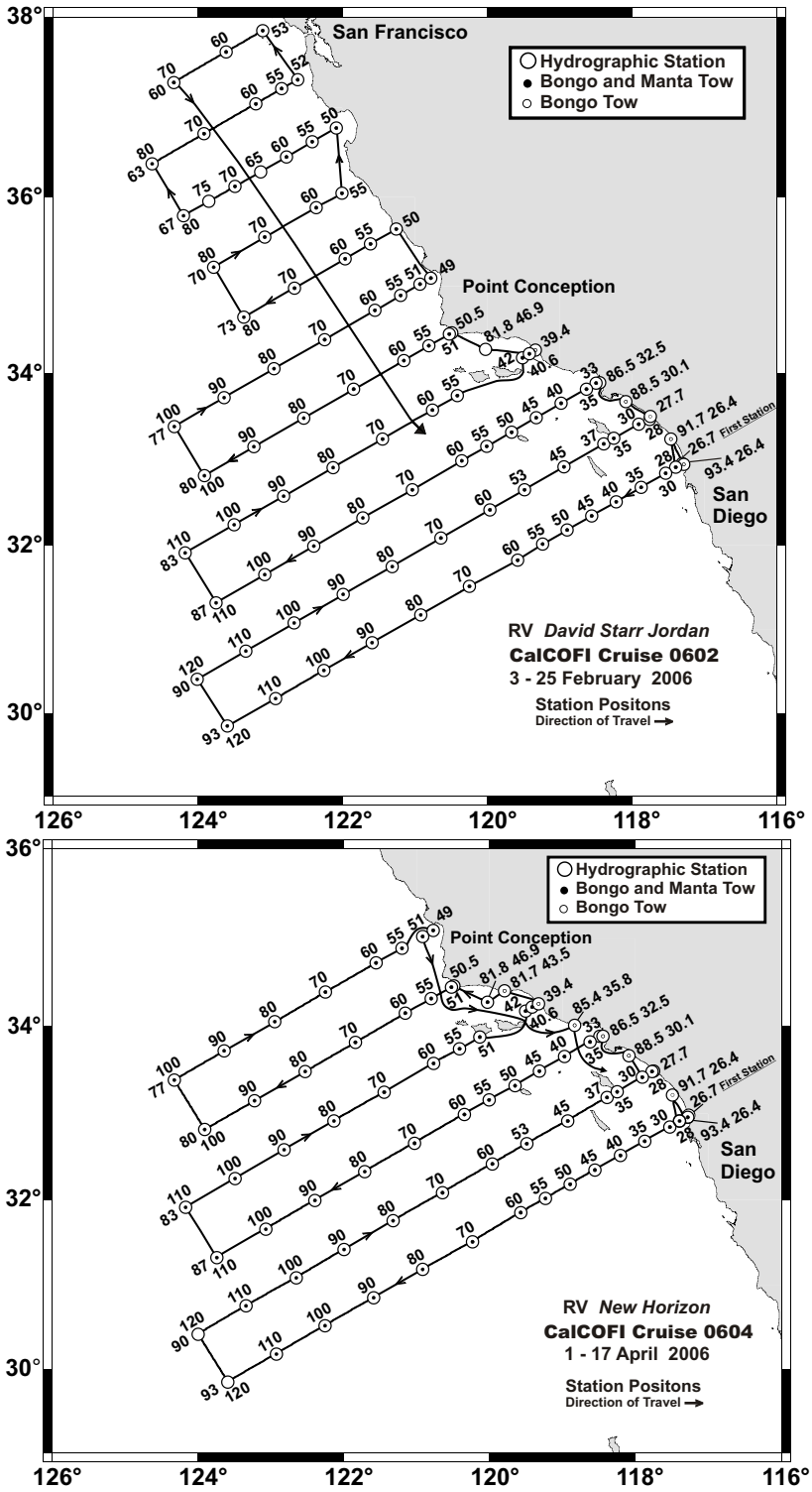

Figure 2. Stations and cruise tracks for CalCOFI cruises 0602JD (above) and 0604NH (below). On cruise 0602JD, a Bongo tow was taken unaccompanied by a Manta tow at seven added inshore stations: 80.0 50.5, 83.3 39.4, 86.8 32.5, 88.5 30.1, 90.0 27.7, 91.7 26.4, and 93.4 26.4. On cruise 0604NH, a Bongo tow was taken at these inshore stations, plus two additional stations: 81.7 43.5, 85.4 35.8.

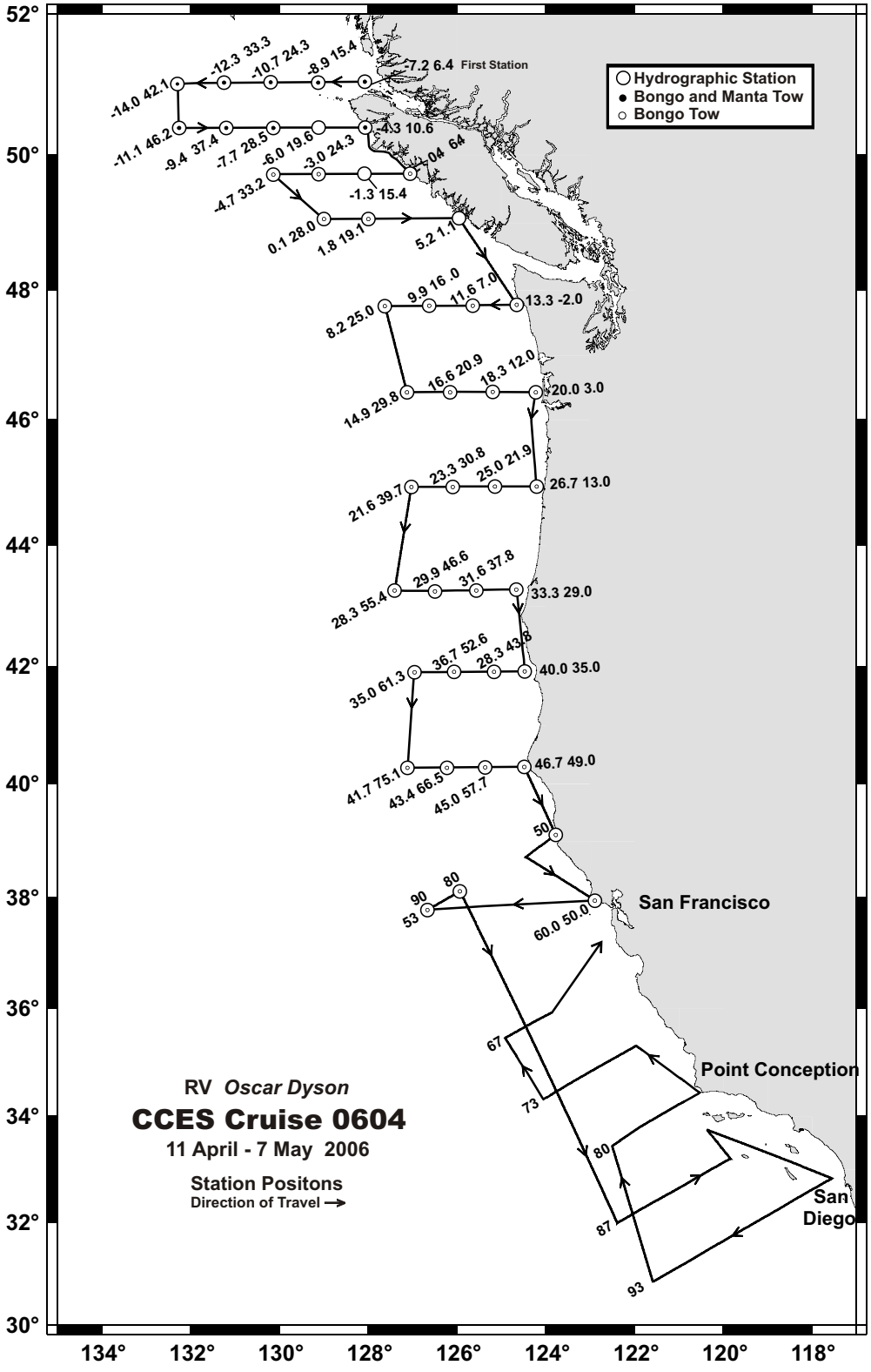

Figure 3. Stations and cruise track for CCES cruise 0604OD. Bongo tows were taken at all stations north of and including line 60.0 except stations -6.0 19.6, -1.3 15.4, and 5.2 1.1. Manta tows were taken on the two northern-most lines except station -6.0 19.6.

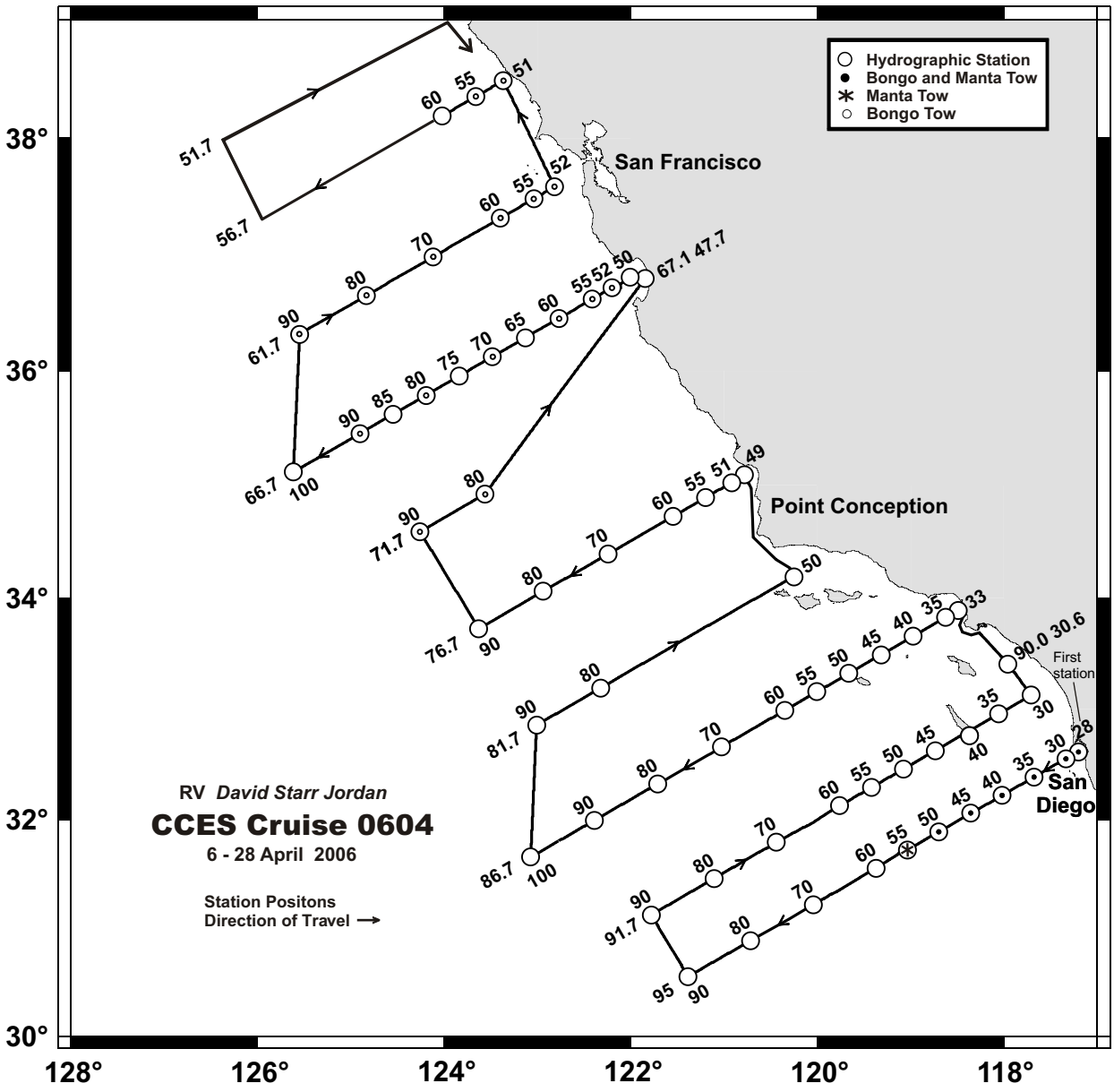

Figure 4. Stations and cruise track for CCES cruise 0604JD. Bongo and Manta tows were taken at all stations on line 95.0 out to station 50.0. A Manta tow unaccompanied by a Bongo tow was taken at station 95.0 55.0. Bongo tows were taken at stations 51.0 and 55.0 on line 56.7, all stations on line 61.7 and 71.7, and most stations on line 66.7 (52, 55, 60, 70, 80, and 90).

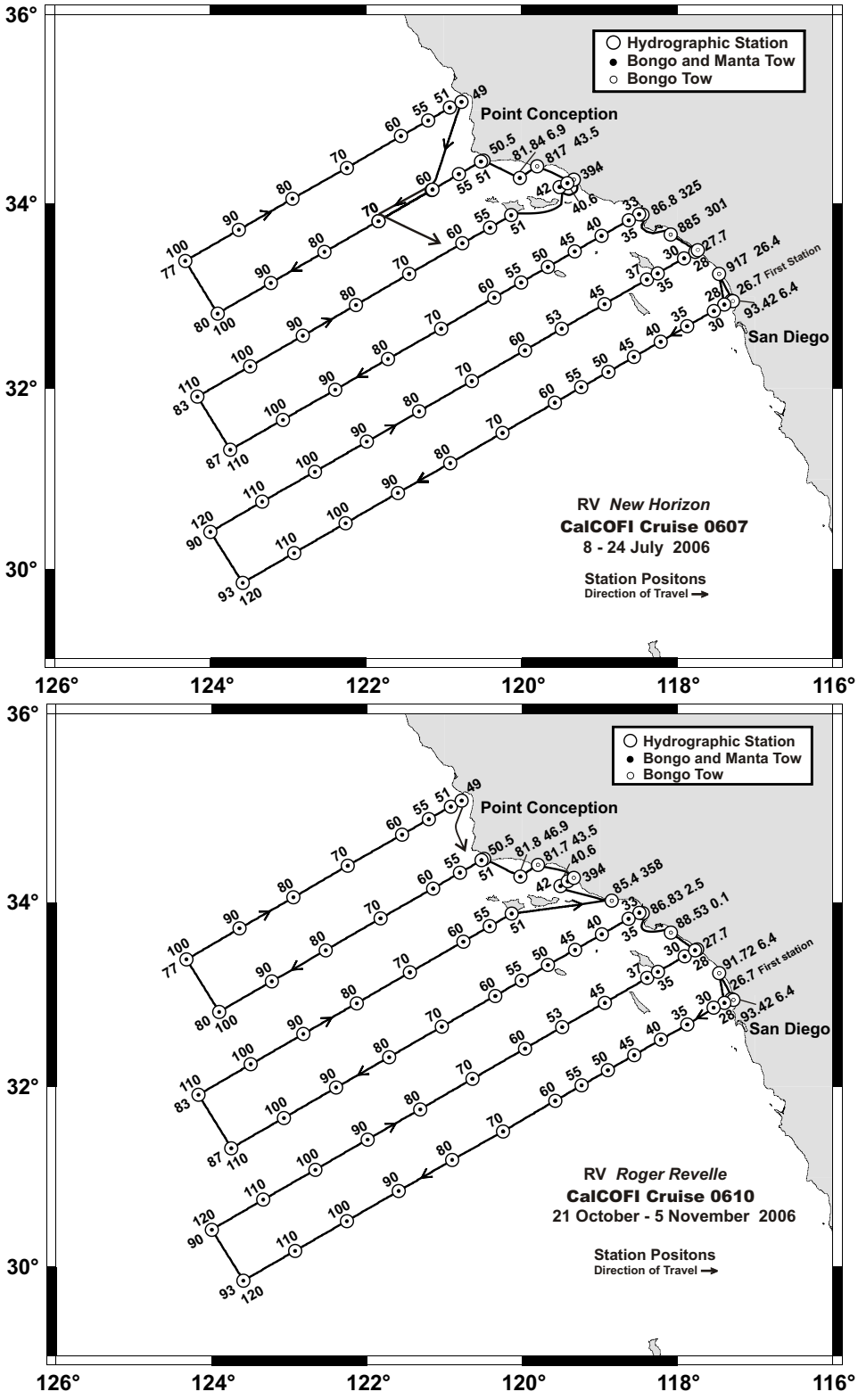

Figure 5. Stations and cruise tracks for CalCOFI cruises 0607NH (above) and 0610RR (below). On both cruises, a Bongo tow was taken unaccompanied by a Manta tow at the nine added inshore stations (see Figure 2. 0604NH, for station designations) except station 85.4 35.8 was canceled on 0607NH.

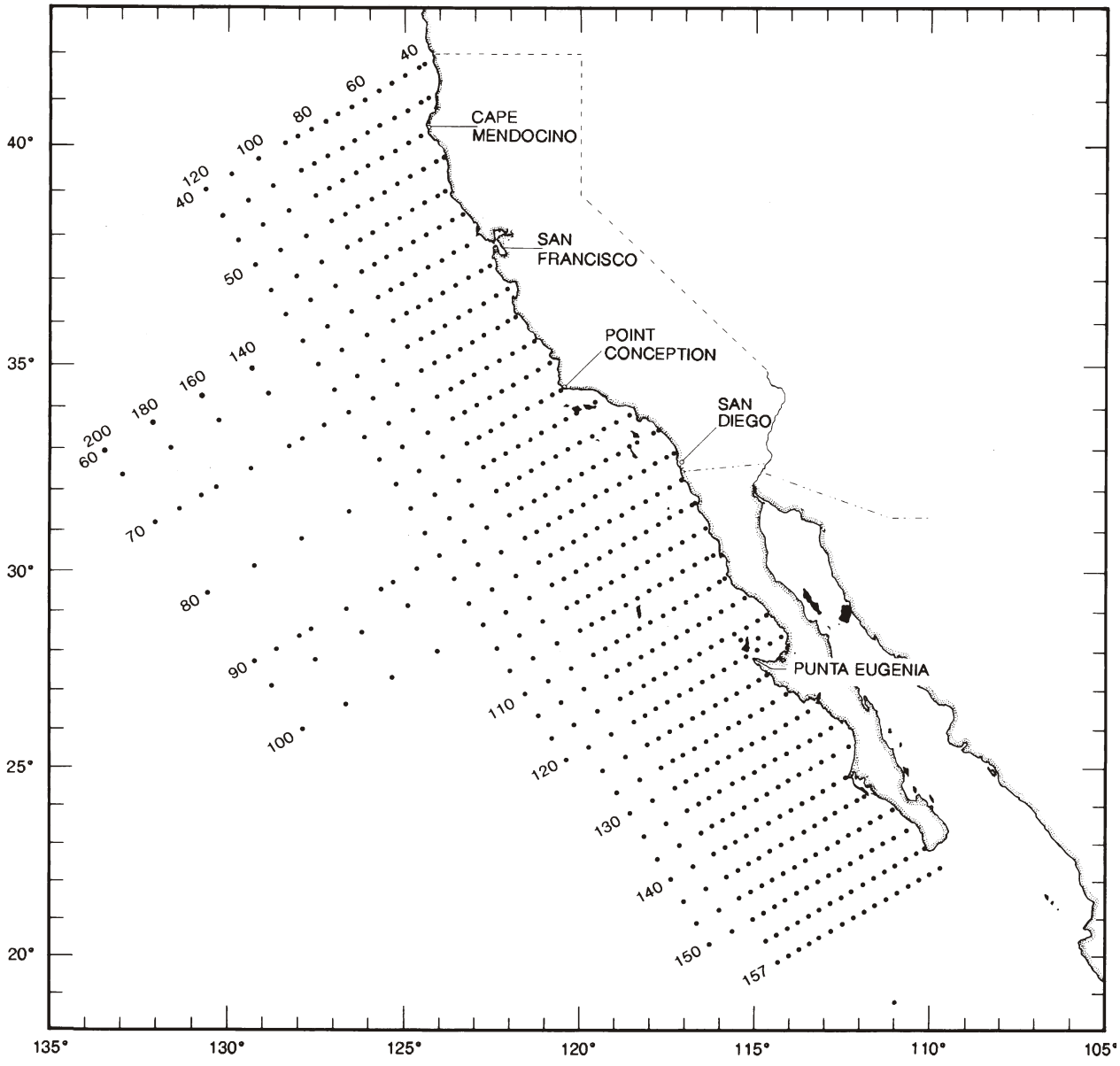

Figure 6. The basic CalCOFI station pattern occupied, in part, by cruises during 1951-1984.

Table 1. Station and Manta net tow data for CalCOFI cruises and the CCES cruise in 2006. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 0602

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
60.0	53.0	37	50.8	123	06.0	JD	06	02	25	0327	82	33	11
60.0	60.0	37	36.9	123	36.5	JD	06	02	25	0803	78	1	0
60.0	70.0	37	16.8	124	19.8	JD	06	02	25	1356	84	2	2
63.3	52.0	37	18.6	122	37.0	JD	06	02	24	2217	95	19	25
63.3	55.0	37	12.6	122	50.2	JD	06	02	24	1927	85	18	43
63.3	60.0	37	02.6	123	11.8	JD	06	02	24	1549	75	1	0
63.3	70.0	36	42.6	123	54.8	JD	06	02	24	0853	55	0	1
63.3	80.0	36	22.6	124	37.6	JD	06	02	24	0231	83	0	1
66.7	50.0	36	46.6	122	04.9	JD	06	02	22	2029	86	58	2
66.7	55.0	36	37.3	122	24.9	JD	06	02	23	0046	90	14	0
66.7	60.0	36	27.2	122	46.3	JD	06	02	23	0453	74	36	0
66.7	70.0	36	07.3	123	29.0	JD	06	02	23	1245	84	1	1
66.7	80.0	35	47.7	124	11.7	JD	06	02	23	1947	78	0	0
70.0	55.0	36	02.7	122	00.3	JD	06	02	22	1034	84	0	2
70.0	60.0	35	53.1	122	21.8	JD	06	02	22	0633	77	2	18
70.0	70.0	35	33.1	123	04.5	JD	06	02	22	0040	83	1	0
70.0	80.0	35	12.8	123	46.6	JD	06	02	21	1836	63	2	8
73.3	50.0	35	38.6	121	15.3	JD	06	02	20	1537	71	1	103
73.3	55.0	35	28.7	121	36.6	JD	06	02	20	1922	63	2	2
73.3	60.0	35	18.5	121	57.6	JD	06	02	20	2330	81	7	0
73.3	70.0	34	58.6	122	39.8	JD	06	02	21	0551	66	1	2
73.3	80.0	34	38.6	123	21.6	JD	06	02	21	1150	88	0	0
76.7	49.0	35	05.3	120	46.7	JD	06	02	20	0952	90	5	37
76.7	51.0	35	01.3	120	55.5	JD	06	02	20	0803	85	4	5
76.7	55.0	34	53.5	121	11.7	JD	06	02	20	0434	75	3	4
76.7	60.0	34	43.3	121	32.9	JD	06	02	18	2036	67	2	7
76.7	70.0	34	23.2	122	14.8	JD	06	02	18	1437	70	0	24
76.7	80.0	34	03.4	122	56.5	JD	06	02	18	0629	90	1	12
76.7	90.0	33	43.4	123	38.0	JD	06	02	18	0138	79	18	2
76.7	100.0	33	23.2	124	19.3	JD	06	02	17	1930	71	0	1
80.0	51.0	34	27.0	120	31.4	JD	06	02	16	0322	90	21	73
80.0	55.0	34	19.1	120	48.2	JD	06	02	16	0714	87	1	9
80.0	60.0	34	08.9	121	09.1	JD	06	02	16	1152	77	0	9
80.0	70.0	33	49.1	121	50.5	JD	06	02	16	1812	95	0	14
80.0	80.0	33	29.1	122	32.0	JD	06	02	17	0011	80	2	2
80.0	90.0	33	09.1	123	13.2	JD	06	02	17	0608	88	2	2
80.0	100.0	32	48.9	123	54.3	JD	06	02	17	1245	77	1	4
83.3	40.6	34	13.6	119	24.9	JD	06	02	15	0937	76	1	39
83.3	42.0	34	10.7	119	30.6	JD	06	02	15	0601	85	2	37
83.3	55.0	33	44.7	120	24.6	JD	06	02	14	2118	68	0	0
83.3	60.0	33	34.8	120	45.2	JD	06	02	14	1648	80	0	1
83.3	70.0	33	14.6	121	26.7	JD	06	02	14	0825	62	1	1

Table 1. (cont.)

CalCOFI Cruise 0602 (cont.)

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	54.7	122	07.8	JD	06	02	14	0055	78	1	10
83.3	90.0	32	34.6	122	48.7	JD	06	02	13	1846	89	1	0
83.3	100.0	32	14.6	123	29.7	JD	06	02	13	1232	76	1	1
83.3	110.0	31	54.7	124	10.2	JD	06	02	13	0608	83	0	2
86.7	33.0	33	53.3	118	29.5	JD	06	02	10	1908	94	3	12
86.7	35.0	33	49.3	118	37.8	JD	06	02	10	2149	72	2	0
86.7	40.0	33	39.4	118	58.6	JD	06	02	11	0151	81	12	67
86.7	45.0	33	29.5	119	19.2	JD	06	02	11	0613	91	7	270
86.7	50.0	33	19.4	119	39.8	JD	06	02	11	1006	77	753	55
86.7	55.0	33	09.4	120	00.4	JD	06	02	11	1358	79	4	0
86.7	60.0	32	59.4	120	20.9	JD	06	02	11	1801	92	6	0
86.7	70.0	32	39.1	121	02.1	JD	06	02	12	0005	83	3	0
86.7	80.0	32	19.4	121	42.9	JD	06	02	12	0558	88	2	2
86.7	90.0	31	59.4	122	23.6	JD	06	02	12	1153	74	0	1
86.7	100.0	31	39.4	123	04.2	JD	06	02	12	1725	78	1	10
86.7	110.0	31	19.4	123	44.5	JD	06	02	12	2310	61	1	2
90.0	28.0	33	29.1	117	46.0	JD	06	02	10	0241	90	12	6
90.0	30.0	33	24.9	117	54.4	JD	06	02	10	0011	75	3	3
90.0	35.0	33	15.0	118	14.9	JD	06	02	09	2003	80	0	6
90.0	37.0	33	11.1	118	23.3	JD	06	02	09	1701	93	0	98
90.0	45.0	32	55.2	118	56.4	JD	06	02	09	1121	87	5	4713
90.0	53.0	32	39.2	119	28.9	JD	06	02	09	0548	92	0	8
90.0	60.0	32	25.1	119	57.7	JD	06	02	09	0049	79	6	6
90.0	70.0	32	05.1	120	38.3	JD	06	02	08	1801	95	1	21
90.0	80.0	31	45.0	121	18.8	JD	06	02	08	1147	73	0	3
90.0	90.0	31	25.2	121	59.3	JD	06	02	08	0512	91	6	0
90.0	100.0	31	04.9	122	39.9	JD	06	02	07	2237	72	0	2
90.0	110.0	30	45.0	123	20.0	JD	06	02	07	1620	90	0	68
90.0	120.0	30	24.7	124	00.4	JD	06	02	07	0751	100	3	46
93.3	26.7	32	57.4	117	18.3	JD	06	02	03	1720	72	0	7
93.3	28.0	32	54.8	117	23.7	JD	06	02	04	0235	74	4	81
93.3	30.0	32	50.8	117	31.9	JD	06	02	04	0809	74	0	0
93.3	35.0	32	40.8	117	52.5	JD	06	02	04	1233	58	0	62
93.3	40.0	32	30.8	118	12.9	JD	06	02	04	1652	72	0	3
93.3	45.0	32	20.9	118	33.3	JD	06	02	04	2053	56	5	1
93.3	50.0	32	10.8	118	53.6	JD	06	02	05	0105	78	11	21
93.3	55.0	32	00.8	119	13.9	JD	06	02	05	0505	78	0	6
93.3	60.0	31	49.6	119	34.6	JD	06	02	05	0811	68	0	3
93.3	70.0	31	31.0	120	14.5	JD	06	02	05	1608	83	0	0
93.3	80.0	31	10.8	120	55.1	JD	06	02	05	2228	72	2	9
93.3	90.0	30	51.0	121	35.2	JD	06	02	06	0448	101	18	16
93.3	100.0	30	31.1	122	15.3	JD	06	02	06	1116	73	0	15
93.3	110.0	30	10.8	122	55.4	JD	06	02	06	1831	103	8	38
93.3	120.0	29	51.0	123	35.2	JD	06	02	07	0018	84	14	20

Table 1. (cont.)

CalCOFI Cruise 0604 and CCES cruise

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
-14.0	42.1	51	01.1	132	17.3	OD	06	04	12	2011	90	243	17
-12.3	33.3	51	02.3	131	14.6	OD	06	04	12	1328	102	70	8
-11.1	46.2	50	23.4	132	15.2	OD	06	04	13	0638	109	20	7
-10.7	24.3	51	02.6	130	11.1	OD	06	04	12	0807	113	13	90
-9.4	37.4	50	23.3	131	11.1	OD	06	04	13	1205	94	31	2
-8.9	15.4	51	02.2	129	06.9	OD	06	04	12	0009	84	186	5
-7.7	28.5	50	23.4	130	07.8	OD	06	04	13	1752	107	96	53
-7.2	6.4	51	03.0	128	04.2	OD	06	04	11	1852	90	2	0
-4.3	10.6	50	23.8	128	03.3	OD	06	04	14	0622	118	113	5
76.7	49.0	35	05.3	120	46.5	NH	06	04	16	2117	71	17	17
76.7	51.0	35	01.3	120	55.0	NH	06	04	16	2340	64	7	3
76.7	55.0	34	53.3	121	12.0	NH	06	04	16	1512	79	6	12
76.7	60.0	34	43.4	121	33.3	NH	06	04	16	1054	67	21	60
76.7	70.0	34	23.5	122	15.1	NH	06	04	16	0446	72	63	0
76.7	80.0	34	03.2	122	56.5	NH	06	04	15	2250	70	9	11
76.7	90.0	33	43.2	123	38.2	NH	06	04	15	1704	76	5	61
76.7	100.0	33	23.3	124	19.4	NH	06	04	15	1046	70	1	4
80.0	51.0	34	26.9	120	31.3	NH	06	04	13	1725	76	9	245
80.0	55.0	34	19.1	120	47.9	NH	06	04	13	2120	71	3	24
80.0	60.0	34	09.2	121	09.2	NH	06	04	14	0135	85	14	253
80.0	70.0	33	49.2	121	50.2	NH	06	04	14	0639	73	0	1
80.0	80.0	33	29.0	122	31.8	NH	06	04	14	1608	60	3	43
80.0	90.0	33	08.9	123	13.2	NH	06	04	14	2231	67	23	34
80.0	100.0	32	49.0	123	54.3	NH	06	04	15	0438	67	86	64
81.8	46.9	34	16.6	120	01.6	NH	06	04	13	1146	67	112	7338
83.3	40.6	34	13.4	119	25.1	NH	06	04	13	0342	76	2	42
83.3	42.0	34	10.6	119	30.4	NH	06	04	13	0150	74	2	36
83.3	51.0	33	52.7	120	08.1	NH	06	04	12	1940	70	1	115
83.3	55.0	33	44.6	120	24.8	NH	06	04	12	1629	75	27	22
83.3	60.0	33	34.8	120	46.0	NH	06	04	12	1157	64	4	202
83.3	70.0	33	14.7	121	26.5	NH	06	04	12	0549	70	15	39
83.3	80.0	32	54.9	122	07.9	NH	06	04	11	2318	78	255	143
83.3	90.0	32	34.8	122	48.9	NH	06	04	11	1716	70	84	139
83.3	100.0	32	14.8	123	29.2	NH	06	04	11	0932	76	1	3
83.3	110.0	31	54.6	124	10.0	NH	06	04	11	0455	71	41	8
86.7	33.0	33	53.4	118	29.4	NH	06	04	08	1147	80	0	132
86.7	35.0	33	49.5	118	37.5	NH	06	04	08	1613	72	36	215
86.7	40.0	33	39.3	118	58.2	NH	06	04	08	2045	72	33	360
86.7	45.0	33	29.4	119	19.0	NH	06	04	09	0134	63	2	193
86.7	50.0	33	19.2	119	38.9	NH	06	04	09	0509	75	99	843
86.7	55.0	33	09.4	120	00.4	NH	06	04	09	1050	56	5	29
86.7	60.0	32	59.5	120	20.7	NH	06	04	09	1511	73	1	106
86.7	70.0	32	39.5	121	01.7	NH	06	04	09	2145	100	20	369
86.7	80.0	32	19.6	121	42.8	NH	06	04	10	0418	76	47	505
86.7	90.0	31	59.4	122	23.8	NH	06	04	10	0900	74	10	2656

Table 1. (cont.)

CalCOFI Cruise 0604 and CCES cruise (cont.)

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
86.7	100.0	31	39.4	123	03.9	NH	06	04	10	1627	87	1	225
86.7	110.0	31	19.4	123	44.4	NH	06	04	10	2211	69	15	19
90.0	28.0	33	29.0	117	46.2	NH	06	04	08	0111	79	149	44838
90.0	30.0	33	25.3	117	54.4	NH	06	04	08	0424	86	44	3439
90.0	35.0	33	15.1	118	15.0	NH	06	04	07	1912	62	40	185
90.0	37.0	33	11.1	118	23.2	NH	06	04	07	1604	78	82	2478
90.0	45.0	32	55.0	118	55.8	NH	06	04	07	0911	65	5	234
90.0	53.0	32	39.1	119	29.2	NH	06	04	07	0445	80	11	3704
90.0	60.0	32	25.1	119	57.6	NH	06	04	06	2318	59	109	1704
90.0	70.0	32	05.0	120	38.5	NH	06	04	06	1629	80	15	182
90.0	80.0	31	45.2	121	19.3	NH	06	04	06	0817	69	1	57
90.0	90.0	31	25.0	121	59.6	NH	06	04	06	0238	69	5	16
90.0	100.0	31	05.0	122	38.9	NH	06	04	05	2021	71	14	37
90.0	110.0	30	45.1	123	20.2	NH	06	04	05	1247	58	0	0
93.3	26.7	32	57.6	117	18.4	NH	06	04	01	1224	89	0	6687
93.3	28.0	32	54.8	117	23.7	NH	06	04	01	2111	66	63	409
93.3	30.0	32	50.8	117	31.8	NH	06	04	02	0020	82	47	270
93.3	35.0	32	40.8	117	52.4	NH	06	04	02	0435	76	13	169
93.3	40.0	32	30.9	118	12.5	NH	06	04	02	0801	53	8	863
93.3	45.0	32	20.8	118	33.3	NH	06	04	02	1347	84	1	324
93.3	50.0	32	10.8	118	53.6	NH	06	04	02	1816	81	9	1763
93.3	55.0	32	00.8	119	14.0	NH	06	04	02	2239	71	40	989
93.3	60.0	31	50.9	119	34.5	NH	06	04	03	0259	81	201	1050
93.3	70.0	31	30.5	120	14.0	NH	06	04	03	0757	66	12	883
93.3	80.0	31	10.9	120	55.0	NH	06	04	03	1626	76	8	7
93.3	90.0	30	50.8	121	35.3	NH	06	04	03	2251	83	8	77
93.3	100.0	30	30.9	122	15.5	NH	06	04	04	0537	75	4	421
93.3	110.0	30	10.8	122	55.3	NH	06	04	04	1206	73	3	55
95.0	28.0	32	36.7	117	12.2	JD	06	04	06	0107	79	58	541
95.0	30.0	32	33.1	117	20.3	JD	06	04	06	0318	75	8	351
95.0	35.0	32	23.1	117	40.8	JD	06	04	06	1445	89	0	462
95.0	40.0	32	13.1	118	01.1	JD	06	04	06	2105	77	1	399
95.0	45.0	32	03.4	118	21.4	JD	06	04	07	0150	87	61	360
95.0	50.0	31	53.2	118	41.8	JD	06	04	07	0535	86	288	191
95.0	55.0	31	43.1	119	02.2	JD	06	04	07	0940	87	3	1604

Table 1. (cont.) CalCOFI Cruise 0607

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.1	120	46.5	NH	06	07	23	1954	67	142	33
76.7	51.0	35	01.4	120	55.2	NH	06	07	23	1734	75	6	34
76.7	55.0	34	53.3	121	12.0	NH	06	07	23	1354	71	1	16
76.7	60.0	34	43.3	121	32.9	NH	06	07	23	0807	78	14	20
76.7	70.0	34	23.0	122	14.8	NH	06	07	23	0144	68	17	26
76.7	80.0	34	03.3	122	56.6	NH	06	07	22	1835	64	38	61
76.7	90.0	33	43.2	123	38.1	NH	06	07	22	1211	66	3	13
76.7	100.0	33	23.2	124	19.3	NH	06	07	22	0606	77	6	12
80.0	51.0	34	27.1	120	31.5	NH	06	07	20	1512	73	24	156
80.0	55.0	34	19.0	120	48.2	NH	06	07	20	1913	86	23	532
80.0	60.0	34	08.8	121	09.2	NH	06	07	20	2359	81	29	18
80.0	70.0	33	49.0	121	50.4	NH	06	07	21	0543	73	17	28
80.0	80.0	33	29.0	122	31.9	NH	06	07	21	1157	93	2	262
80.0	90.0	33	09.0	123	13.3	NH	06	07	21	1813	80	3	10
80.0	100.0	32	49.1	123	54.5	NH	06	07	22	0021	79	12	8
81.8	46.9	34	16.5	120	01.5	NH	06	07	20	0828	85	19	238
83.3	40.6	34	13.4	119	24.7	NH	06	07	20	0041	76	5	324
83.3	42.0	34	10.7	119	30.7	NH	06	07	19	2056	59	113	72
83.3	51.0	33	52.7	120	08.0	NH	06	07	19	1500	90	11	2367
83.3	55.0	33	44.6	120	24.5	NH	06	07	19	1125	100	1	74
83.3	60.0	33	34.6	120	45.6	NH	06	07	19	0630	75	5	10714
83.3	70.0	33	14.8	121	26.7	NH	06	07	19	0005	89	15	1780
83.3	80.0	32	54.6	122	07.7	NH	06	07	18	1723	85	17	2958
83.3	90.0	32	34.5	122	48.7	NH	06	07	18	1110	82	19	12
83.3	100.0	32	14.5	123	29.4	NH	06	07	18	0445	70	50	30
83.3	110.0	31	54.6	124	10.1	NH	06	07	17	2235	70	22	57
86.7	33.0	33	53.4	118	29.4	NH	06	07	15	0250	87	14	2601
86.7	35.0	33	49.4	118	37.5	NH	06	07	15	0548	73	3	220
86.7	40.0	33	39.4	118	58.4	NH	06	07	15	1034	67	3	3398
86.7	45.0	33	29.4	119	19.1	NH	06	07	15	1511	77	0	6
86.7	50.0	33	19.2	119	39.7	NH	06	07	15	2004	56	70	98
86.7	55.0	33	09.3	120	00.5	NH	06	07	16	0034	75	23	0
86.7	60.0	32	59.5	120	21.0	NH	06	07	16	0505	85	0	36
86.7	70.0	32	39.2	121	01.9	NH	06	07	16	1200	71	3	26
86.7	80.0	32	19.4	121	43.0	NH	06	07	16	1901	61	9	41
86.7	90.0	31	59.2	122	23.5	NH	06	07	17	0121	69	2	0
86.7	100.0	31	39.4	123	04.1	NH	06	07	17	0807	58	2	6
86.7	110.0	31	19.5	123	44.6	NH	06	07	17	1602	71	3	78
90.0	28.0	33	29.0	117	46.1	NH	06	07	14	1721	80	0	123
90.0	30.0	33	25.0	117	54.8	NH	06	07	14	1430	76	2	1
90.0	35.0	33	15.1	118	15.0	NH	06	07	14	0823	77	2	3
90.0	37.0	33	11.1	118	23.2	NH	06	07	14	0525	80	47	208
90.0	45.0	32	55.2	118	56.1	NH	06	07	13	2333	59	1	1
90.0	53.0	32	39.2	119	28.9	NH	06	07	13	1749	67	0	0
90.0	60.0	32	25.0	119	57.5	NH	06	07	13	1211	80	0	24
90.0	70.0	32	05.0	120	38.3	NH	06	07	13	0540	71	6	7

Table 1. (cont.) CalCOFI Cruise 0607 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
90.0	80.0	31	45.0	121	19.0	NH	06	07	12	2252	58	7	0
90.0	90.0	31	25.0	121	59.3	NH	06	07	12	1622	63	2	1
90.0	100.0	31	05.0	122	39.3	NH	06	07	12	0822	51	2	32
90.0	110.0	30	45.1	123	20.0	NH	06	07	12	0114	92	7	91
90.0	120.0	30	24.9	123	59.9	NH	06	07	11	1824	76	3	6
93.3	26.7	32	57.4	117	18.2	NH	06	07	08	1130	78	3	1
93.3	28.0	32	54.8	117	23.6	NH	06	07	08	1934	60	73	0
93.3	30.0	32	50.8	117	31.8	NH	06	07	08	2220	56	3	0
93.3	35.0	32	40.8	117	52.4	NH	06	07	09	0245	73	20	5
93.3	40.0	32	30.8	118	12.8	NH	06	07	09	0656	74	0	0
93.3	45.0	32	20.8	118	33.2	NH	06	07	09	1125	88	0	5
93.3	50.0	32	10.9	118	53.0	NH	06	07	09	1537	90	1	0
93.3	55.0	32	00.8	119	14.1	NH	06	07	09	1943	56	4	3
93.3	60.0	31	50.7	119	34.2	NH	06	07	09	2333	48	5	169
93.3	70.0	31	30.8	120	14.8	NH	06	07	10	0546	68	4	13
93.3	80.0	31	10.7	120	55.1	NH	06	07	10	1151	72	1	7
93.3	90.0	30	50.9	121	35.4	NH	06	07	10	1752	67	1	0
93.3	100.0	30	30.8	122	15.6	NH	06	07	10	2341	66	39	27
93.3	110.0	30	10.8	122	55.3	NH	06	07	11	0535	68	12	67
93.3	120.0	29	50.7	123	35.1	NH	06	07	11	1146	70	0	47

CalCOFI Cruise 0610

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
76.7	49.0	35	05.2	120	46.8	RR	06	11	05	0317	84	28	122
76.7	51.0	35	01.3	120	55.1	RR	06	11	05	0005	90	30	37
76.7	55.0	34	53.3	121	12.1	RR	06	11	04	2014	61	9	1
76.7	60.0	34	43.4	121	32.6	RR	06	11	04	1604	68	0	0
76.7	70.0	34	23.6	122	14.8	RR	06	11	04	0837	67	1	0
76.7	80.0	34	03.2	122	56.5	RR	06	11	04	0343	58	4	0
76.7	90.0	33	43.2	123	38.2	RR	06	11	03	2129	82	2	1
76.7	100.0	33	23.1	124	19.2	RR	06	11	03	1530	90	3	38
80.0	51.0	34	27.0	120	31.3	RR	06	11	01	2223	83	2	37
80.0	55.0	34	19.0	120	48.0	RR	06	11	02	0220	98	3	1
80.0	60.0	34	09.0	121	08.7	RR	06	11	02	0634	75	0	46
80.0	70.0	33	49.7	121	49.3	RR	06	11	02	1228	100	6	73
80.0	80.0	33	29.2	122	31.6	RR	06	11	02	1824	86	8	3
80.0	90.0	33	09.0	123	13.2	RR	06	11	03	0043	102	9	13
80.0	100.0	32	49.1	123	54.1	RR	06	11	03	0821	84	0	16
81.8	46.9	34	16.6	120	01.4	RR	06	11	01	1701	81	0	11
83.3	40.6	34	13.5	119	24.7	RR	06	11	01	0846	98	4	936
83.3	42.0	34	10.6	119	30.3	RR	06	11	01	0708	84	0	1
83.3	51.0	33	52.7	120	08.0	RR	06	10	31	1927	83	1	112
83.3	55.0	33	44.6	120	24.9	RR	06	10	31	1549	76	2	1

Table 1. (cont.) CalCOFI Cruise 0610 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Volume Water Strained	Total Larvae	Total Eggs
83.3	60.0	33	34.7	120	45.4	RR	06	10	31	1154	84	0	1
83.3	70.0	33	14.7	121	26.7	RR	06	10	31	0509	89	18	5
83.3	80.0	32	54.7	122	07.7	RR	06	10	30	2232	74	7	3
83.3	90.0	32	34.6	122	48.9	RR	06	10	30	1648	87	0	3
83.3	100.0	32	14.7	123	29.6	RR	06	10	30	1021	86	0	0
83.3	110.0	31	54.6	124	10.1	RR	06	10	30	0436	83	4	2
86.7	33.0	33	53.4	118	29.4	RR	06	10	27	1659	76	2	28
86.7	35.0	33	49.4	118	37.7	RR	06	10	27	1947	86	2	0
86.7	40.0	33	39.4	118	58.4	RR	06	10	28	0019	86	4	3
86.7	45.0	33	29.4	119	19.1	RR	06	10	28	0448	96	0	2
86.7	50.0	33	19.5	119	40.0	RR	06	10	28	0748	84	0	0
86.7	55.0	33	09.5	120	00.3	RR	06	10	28	1233	86	0	0
86.7	60.0	32	59.5	120	20.8	RR	06	10	28	1629	85	0	0
86.7	70.0	32	39.4	121	01.9	RR	06	10	28	2238	77	0	0
86.7	80.0	32	19.5	121	42.6	RR	06	10	29	0409	82	4	0
86.7	90.0	31	59.4	122	23.6	RR	06	10	29	0825	90	0	1
86.7	100.0	31	39.4	123	04.0	RR	06	10	29	1628	79	0	11
86.7	110.0	31	19.4	123	44.6	RR	06	10	29	2200	72	3	1
90.0	28.0	33	29.1	117	46.2	RR	06	10	27	0850	107	1	1764
90.0	30.0	33	25.2	117	54.3	RR	06	10	27	0532	97	3	1
90.0	35.0	33	15.1	118	15.1	RR	06	10	27	0102	94	5	0
90.0	37.0	33	11.1	118	23.2	RR	06	10	26	2148	92	0	0
90.0	45.0	32	55.0	118	56.1	RR	06	10	26	1621	92	0	0
90.0	53.0	32	39.2	119	29.0	RR	06	10	26	0857	94	0	0
90.0	60.0	32	25.1	119	57.7	RR	06	10	26	0452	76	0	0
90.0	70.0	32	05.1	120	38.3	RR	06	10	25	2248	81	2	0
90.0	80.0	31	45.1	121	18.8	RR	06	10	25	1648	84	0	5
90.0	90.0	31	25.1	121	59.4	RR	06	10	25	1057	87	0	1
90.0	100.0	31	05.1	122	39.6	RR	06	10	25	0444	76	1	2
90.0	110.0	30	45.1	123	19.9	RR	06	10	24	2243	73	9	2
90.0	120.0	30	25.0	123	59.8	RR	06	10	24	1640	80	1	5
93.3	26.7	32	57.3	117	18.3	RR	06	10	21	1119	74	6	11
93.3	28.0	32	54.8	117	23.7	RR	06	10	21	1906	95	2	0
93.3	30.0	32	51.7	117	31.9	RR	06	10	21	2303	86	3	0
93.3	35.0	32	40.8	117	52.3	RR	06	10	22	0338	51	2	1
93.3	40.0	32	30.9	118	12.8	RR	06	10	22	0700	70	2	0
93.3	45.0	32	20.8	118	33.3	RR	06	10	22	1253	103	1	0
93.3	50.0	32	10.8	118	53.6	RR	06	10	22	1649	79	0	0
93.3	55.0	32	00.8	119	14.0	RR	06	10	22	2115	79	2	0
93.3	60.0	31	50.8	119	34.4	RR	06	10	23	0117	76	0	0
93.3	70.0	31	30.6	120	14.5	RR	06	10	23	0544	64	0	0
93.3	80.0	31	11.5	120	53.9	RR	06	10	23	1212	94	2	0
93.3	90.0	30	50.8	121	35.4	RR	06	10	23	1742	82	3	7
93.3	100.0	30	30.8	122	15.5	RR	06	10	23	2325	77	5	1
93.3	110.0	30	10.8	122	55.4	RR	06	10	24	0501	90	0	6
93.3	120.0	29	50.8	123	35.2	RR	06	10	24	1041	82	0	2

Table 2. Pooled occurrences of fish larvae taken north of line 60.0 in Manta net tows on the CCES cruise in 2006.

Rank	Taxon	Occurrences
1	*Hexagrammos decagrammus*	8
2	*Anoplopoma fimbria*	5
3	*Hemilepidotus hemilepidotus*	4
4	*Parophrys vetulus*	3
4	*Ammodytes hexapturus*	3
4	*Hemilepidotus spinosus*	3
7	*Cryptacanthodes aleutensis*	2
7	Stichaeidae	2
7	*Ronquilus jordani*	2
7	*Scorpaenichthys marmoratus*	2
7	*Ophiodon elongatus*	2
12	Disintegrated fish larvae	1
12	*Liparis fucensis*	1
12	*Hemilepidotus* spp.	1
12	*Sebastes* spp.	1
	Total	40

Table 3. Pooled occurrences of fish larvae taken south of and including line 60.0 in Manta net tows on CalCOFI cruises and the CCES cruise in 2006.

Rank	Taxon	Occurrences
1	*Cololabis saira*	82
2	*Sardinops sagax*	46
3	*Engraulis mordax*	42
4	*Sebastes* spp.	41
5	*Scorpaenichthys marmoratus*	40
6	*Trachurus symmetricus*	22
7	*Hypsoblennius jenkinsi*	18
8	*Hypsoblennius gilberti*	16
9	*Hexagrammos decagrammus*	12
10	*Chromis punctipinnis*	11
10	*Medialuna californiensis*	11
10	*Atherinopsis californiensis*	11
13	*Vinciguerria lucetia*	9
13	*Hemilepidotus spinosus*	9
15	*Scomber japonicus*	8
15	*Ophiodon elongatus*	8
17	*Sebastes jordani*	7
17	*Tetragonurus cuvieri*	7
17	*Ceratoscopelus townsendi*	7
17	*Girella nigricans*	7
17	*Hermosilla azurea*	7
22	*Triphoturus mexicanus*	6
22	*Sebastes diploproa*	6
22	*Merluccius productus*	6
25	*Pleuronichthys verticalis*	5
25	*Oxylebius pictus*	5
25	*Lampadena urophaos*	5
28	*Citharichthys stigmaeus*	4
28	*Sphyraena argentea*	4
28	*Paralabrax* spp.	4
28	*Nannobrachium ritteri*	4
28	*Pleuronichthys coenosus*	4
33	*Nannobrachium* spp.	3
33	Disintegrated fish larvae	3
33	*Paralichthys californicus*	3
33	*Xenistius californiensis*	3
33	*Hypsoblennius gentilis*	3
33	*Cyclothone signata*	3
39	*Leuresthes tenuis*	2
39	*Macroramphosus gracilis*	2
39	*Stenobrachius leucopsarus*	2
39	*Oxyjulis californica*	2
39	*Citharichthys sordidus*	2
39	*Typhlogobius californiensis*	2
39	*Neoclinus stephensae*	2

Table 3. (cont.)

Rank	Taxon	Occurrences
39	*Tactostoma macropus*	2
39	*Hypsypops rubicundus*	2
39	*Menticirrhus undulatus*	2
39	*Genyonemus lineatus*	2
39	*Anisotremus davidsoni*	2
39	*Seriola lalandi*	2
39	Clupeiformes	2
53	*Notolychnus valdiviae*	1
53	*Diaphus pacificus*	1
53	*Atherinops affinis*	1
53	*Cyclothone* spp.	1
53	Myctophidae	1
53	*Brama* spp.	1
53	*Symphurus atricaudus*	1
53	*Pleuronichthys ritteri*	1
53	*Rhinogobiops nicholsii*	1
53	*Neoclinus blanchardi*	1
53	*Neoclinus* spp.	1
53	*Cryptacanthodes aleutensis*	1
53	*Rathbunella* spp.	1
53	*Liparis mucosus*	1
53	*Seriphus politus*	1
53	*Cheilopogon heterurus*	1
53	*Howella* spp.	1
53	*Ruscarius creaseri*	1
53	*Orthonopias triacis*	1
53	*Hexagrammos lagocephalus*	1
53	*Anoplopoma fimbria*	1
53	*Scorpaena guttata*	1
53	*Sebastes aurora*	1
53	*Cheilopogon pinnatibarbatus*	1
53	*Mugil cephalus*	1
	Total	545

Table 4. Pooled raw counts of fish larvae taken north of line 60.0 in Manta net tows on the CCES cruise in 2006.

Rank	Taxon	Count
1	*Hexagrammos decagrammus*	234
2	*Hemilepidotus spinosus*	209
3	*Ophiodon elongatus*	143
4	*Anoplopoma fimbria*	58
5	*Ammodytes hexapturus*	42
6	*Cryptacanthodes aleutensis*	28
7	*Scorpaenichthys marmoratus*	21
8	*Hemilepidotus hemilepidotus*	18
9	*Parophrys vetulus*	8
10	*Ronquilus jordani*	3
10	Stichaeidae	3
10	Disintegrated fish larvae	3
13	*Liparis fucensis*	2
14	*Hemilepidotus* spp.	1
14	*Sebastes* spp.	1
	Total	774

Table 5. Pooled raw counts of fish larvae taken south of and including line 60.0 in Manta net tows on CalCOFI cruises and the CCES cruise in 2006.

Rank	Taxon	Count
1	*Sardinops sagax*	1399
2	*Engraulis mordax*	727
3	*Sebastes* spp.	531
4	*Sebastes jordani*	515
5	*Cololabis saira*	352
6	*Scorpaenichthys marmoratus*	228
7	*Hypsoblennius jenkinsi*	113
8	*Leuresthes tenuis*	94
9	*Medialuna californiensis*	71
10	*Trachurus symmetricus*	66
10	*Hermosilla azurea*	66
12	*Atherinopsis californiensis*	58
13	*Hemilepidotus spinosus*	56
14	*Hypsoblennius gilberti*	52
15	*Hexagrammos decagrammus*	50
16	*Vinciguerria lucetia*	45
17	*Chromis punctipinnis*	31
18	*Ophiodon elongatus*	28
19	*Liparis mucosus*	24
20	*Orthonopias triacis*	17
20	*Scomber japonicus*	17
22	*Paralabrax* spp.	16
23	*Xenistius californiensis*	15
24	*Ceratoscopelus townsendi*	12
25	*Tetragonurus cuvieri*	10
26	*Lampadena urophaos*	9
27	*Girella nigricans*	8
27	*Sebastes diploproa*	8
29	*Sphyraena argentea*	7
29	*Oxylebius pictus*	7
31	*Merluccius productus*	6
31	*Pleuronichthys verticalis*	6
31	*Hypsoblennius gentilis*	6
31	*Triphoturus mexicanus*	6
35	*Cyclothone signata*	5
35	*Pleuronichthys coenosus*	5
37	*Rathbunella* spp.	4
37	*Citharichthys stigmaeus*	4
37	*Hypsypops rubicundus*	4
37	*Nannobrachium ritteri*	4
37	Disintegrated fish larvae	4
37	*Paralichthys californicus*	4
43	*Anisotremus davidsoni*	3
43	*Nannobrachium* spp.	3
43	*Macroramphosus gracilis*	3
43	*Stenobrachius leucopsarus*	3

Table 5. (cont.)

Rank	Taxon	Count
47	*Cheilopogon pinnatibarbatus*	2
47	*Cheilopogon heterurus*	2
47	*Tactostoma macropus*	2
47	*Atherinops affinis*	2
47	Clupeiformes	2
47	*Hexagrammos lagocephalus*	2
47	*Genyonemus lineatus*	2
47	*Citharichthys sordidus*	2
47	*Menticirrhus undulatus*	2
47	*Oxyjulis californica*	2
47	*Neoclinus stephensae*	2
47	*Neoclinus blanchardi*	2
47	*Typhlogobius californiensis*	2
47	*Seriola lalandi*	2
61	*Symphurus atricaudus*	1
61	*Pleuronichthys ritteri*	1
61	*Cyclothone* spp.	1
61	*Neoclinus* spp.	1
61	*Rhinogobiops nicholsii*	1
61	*Ruscarius creaseri*	1
61	*Mugil cephalus*	1
61	*Sebastes aurora*	1
61	Myctophidae	1
61	*Scorpaena guttata*	1
61	*Diaphus pacificus*	1
61	*Cryptacanthodes aleutensis*	1
61	*Notolychnus valdiviae*	1
61	*Seriphus politus*	1
61	*Brama* spp.	1
61	*Howella* spp.	1
61	*Anoplopoma fimbria*	1
	Total	4747

Table 6. Numbers of fish larvae taken north of line 60.0 in Manta net tows on the CCES cruise in 2006, 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.

***Sebastes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-4.3 10.6	-	-	-	1.2	-	-	-	-	-	-	-	-

Anoplopoma fimbria

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	22.5	-	-	-	-	-	-	-	-
-12.3 33.3	-	-	-	6.1	-	-	-	-	-	-	-	-
-11.1 46.2	-	-	-	14.1	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	10.1	-	-	-	-	-	-	-	-
-7.7 28.5	-	-	-	2.1	-	-	-	-	-	-	-	-

Hexagrammos decagrammus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	11.7	-	-	-	-	-	-	-	-
-12.3 33.3	-	-	-	65.4	-	-	-	-	-	-	-	-
-11.1 46.2	-	-	-	4.4	-	-	-	-	-	-	-	-
-10.7 24.3	-	-	-	13.5	-	-	-	-	-	-	-	-
-9.4 37.4	-	-	-	28.2	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	13.5	-	-	-	-	-	-	-	-
-7.7 28.5	-	-	-	99.9	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	2.4	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9 15.4	-	-	-	43.0	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	108.1	-	-	-	-	-	-	-	-

***Hemilepidotus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-7.2 6.4	-	-	-	0.9	-	-	-	-	-	-	-	-

Table 6. (cont.)

Hemilepidotus hemilepidotus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	8.1	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	5.1	-	-	-	-	-	-	-	-
-7.7 28.5	-	-	-	1.1	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	2.4	-	-	-	-	-	-	-	-

Hemilepidotus spinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	172.8	-	-	-	-	-	-	-	-
-11.1 46.2	-	-	-	3.3	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	11.8	-	-	-	-	-	-	-	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9 15.4	-	-	-	16.9	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	1.2	-	-	-	-	-	-	-	-

Liparis fucensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	1.8	-	-	-	-	-	-	-	-

Ronquilus jordani

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9 15.4	-	-	-	1.7	-	-	-	-	-	-	-	-
-7.2 6.4	-	-	-	0.9	-	-	-	-	-	-	-	-

Stichaeidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-9.4 37.4	-	-	-	0.9	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	2.4	-	-	-	-	-	-	-	-

Cryptacanthodes aleutensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9 15.4	-	-	-	21.9	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	2.4	-	-	-	-	-	-	-	-

Table 6. (cont.)

Ammodytes hexapturus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-10.7 24.3	-	-	-	1.1	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	27.0	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	10.6	-	-	-	-	-	-	-	-

Parophrys vetulus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-14.0 42.1	-	-	-	1.8	-	-	-	-	-	-	-	-
-8.9 15.4	-	-	-	3.4	-	-	-	-	-	-	-	-
-4.3 10.6	-	-	-	2.4	-	-	-	-	-	-	-	-

Disintegrated fish larvae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9 15.4	-	-	-	2.5	-	-	-	-	-	-	-	-

Table 7. Numbers of fish larvae taken south of and including line 60.0 in Manta net tows on CalCOFI cruises and the CCES cruise in 2006, 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.

Clupeiformes

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	-
83.3 60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-

Sardinops sagax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	0.8	-	-	-	-	-	-	-	-	-	-
76.7 51.0	-	0.0	-	2.6	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	0.0	-	4.7	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	0.0	-	13.5	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	0.0	-	45.5	-	-	3.4	-	-	-	0.0	-
76.7 80.0	-	0.0	-	1.4	-	-	1.3	-	-	-	0.0	-
76.7 90.0	-	0.0	-	1.5	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	0.7	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	0.0	-	1.5	-	-	0.0	-	-	-	0.0	-
80.0 60.0	-	0.0	-	7.7	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0 90.0	-	0.0	-	12.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	49.7	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	0.0	-	10.5	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	0.0	-	194.4	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	58.4	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	21.9	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	18.0	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.0	-	35.5	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	7.4	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

Sardinops sagax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	9.7	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	59.4	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	7.2	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	1.4	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	3.2	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	16.2	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	158.8	-	-	1.9	-	-	0.0	-	-
93.3 70.0	-	0.0	-	7.9	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	1.5	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	1.6	-	-
93.3 100.0	-	0.0	-	0.0	-	-	15.9	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
95.0 45.0	-	-	-	46.2	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	232.4	-	-	-	-	-	-	-	-
95.0 55.0	-	-	-	1.7	-	-	-	-	-	-	-	-

Engraulis mordax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	89.4	-	-	-	0.0	-
76.7 51.0	-	0.0	-	0.0	-	-	2.2	-	-	-	0.0	-
76.7 60.0	-	0.0	-	0.0	-	-	9.3	-	-	-	0.0	-
80.0 51.0	-	0.0	-	0.0	-	-	14.6	-	-	-	0.0	-
80.0 55.0	-	0.0	-	0.7	-	-	5.1	-	-	-	0.0	-
80.0 60.0	-	0.0	-	0.0	-	-	22.0	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	1.7	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	1.5	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	23.7	-	-	-	0.0	-

Table 7. (cont.)

Engraulis mordax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	-	-	0.0	-	-	9.9	-	-	0.0	-	-
83.3 55.0	-	0.0	-	14.3	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	0.0	-	0.0	-	-	7.1	-	-	0.0	-	-
86.7 35.0	-	0.0	-	24.4	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	19.5	-	-	0.0	-	-	1.7	-	-
86.7 45.0	-	1.8	-	0.6	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.8	-	0.8	-	-	1.7	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.6	-	-	11.2	-	-	0.0	-	-
90.0 28.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	23.3	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	14.9	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	60.2	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	7.2	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	7.1	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	0.0	-	38.6	-	-	1.8	-	-	0.0	-	-
93.3 30.0	-	0.0	-	37.1	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	0.0	-	9.9	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	7.1	-	-	2.3	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.0	-	-	0.5	-	-	0.0	-	-
95.0 28.0	-	-	-	37.1	-	-	-	-	-	-	-	-
95.0 30.0	-	-	-	4.5	-	-	-	-	-	-	-	-
95.0 45.0	-	-	-	0.9	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	9.5	-	-	-	-	-	-	-	-

***Cyclothone* spp.**

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

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-

Table 7. (cont.)

Cyclothone signata (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	1.8	-	-	0.0	-	-
93.3 90.0	-	2.0	-	0.0	-	-	0.0	-	-	0.0	-	-

Vinciguerria lucetia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
83.3 100.0	-	0.0	-	0.0	-	-	22.4	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.5	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	1.5	-	-
90.0 120.0	-	0.0	-	-	-	-	0.8	-	-	0.0	-	-
93.3 45.0	-	0.0	-	0.0	-	-	0.0	-	-	1.0	-	-
93.3 80.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
93.3 110.0	-	0.0	-	0.0	-	-	3.4	-	-	0.0	-	-

Tactostoma macropus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 70.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-

Myctophidae

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

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
90.0 90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	1.8	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 120.0	-	0.8	-	-	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

Diaphus pacificus

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

Lampadena urophaos

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	0.8	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	3.4	-	-	0.0	-	-

***Nannobrachium* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.9	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.6	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.9	-	0.0	-	-	0.0	-	-	-	0.0	-

Nannobrachium ritteri

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

Notolychnus valdiviae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	0.0	-	-	0.6	-	-	-	0.0	-

Stenobrachius leucopsarus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 60.0	-	1.5	-	-	-	-	-	-	-	-	-	-
73.3 70.0	-	0.7	-	-	-	-	-	-	-	-	-	-

Table 7. (cont.)

Triphoturus mexicanus

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	-	-	0.0	-	-	0.9	-	-
90.0 120.0	-	0.0	-	-	-	-	0.0	-	-	0.8	-	-
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	0.7	-	-
93.3 80.0	-	0.0	-	0.8	-	-	0.0	-	-	0.9	-	-

Merluccius productus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	-	-	0.7	-	-	0.0	-	-	-	0.0	-
86.7 40.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	0.8	-	-	-	-	-	-	-	-

Atherinops affinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	-	0.0	-	0.0	-	-	1.6	-	-	0.0	-	-

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	0.8	-	-	-	-	-	-	-	-	-	-
81.8 46.9	-	-	-	0.7	-	-	0.0	-	-	-	0.0	-
83.3 40.6	-	0.8	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 33.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	2.7	-	30.9	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	3.0	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	3.9	-	-	-	-	-	-	-	-

Table 7. (cont.)

Leuresthes tenuis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	-	0.0	-	0.0	-	-	1.5	-	-	-	0.0	-
90.0 28.0	-	0.0	-	72.9	-	-	0.0	-	-	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	-	-	0.0	-	-	-	0.9	-
76.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.2	-
76.7 70.0	-	0.0	-	0.0	-	-	1.4	-	-	-	0.7	-
76.7 80.0	-	0.0	-	4.9	-	-	0.6	-	-	-	2.3	-
76.7 90.0	-	14.2	-	2.3	-	-	2.0	-	-	-	1.6	-
76.7 100.0	-	0.0	-	0.0	-	-	3.1	-	-	-	2.7	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	6.0	-
80.0 80.0	-	1.6	-	0.6	-	-	0.0	-	-	-	6.9	-
80.0 90.0	-	0.9	-	2.7	-	-	0.8	-	-	-	8.2	-
80.0 100.0	-	0.8	-	8.1	-	-	9.5	-	-	-	0.0	-
83.3 60.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
83.3 70.0	-	0.0	-	0.0	-	-	2.7	-	-	16.0	-	-
83.3 80.0	-	0.0	-	0.0	-	-	3.4	-	-	3.7	-	-
83.3 90.0	-	0.9	-	0.0	-	-	15.6	-	-	0.0	-	-
83.3 100.0	-	0.8	-	0.8	-	-	12.6	-	-	0.0	-	-
83.3 110.0	-	0.0	-	5.7	-	-	14.7	-	-	2.5	-	-
86.7 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.0	-	-	2.2	-	-	0.0	-	-
86.7 70.0	-	0.0	-	1.0	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.6	-	-	3.3	-	-
86.7 100.0	-	0.8	-	0.0	-	-	0.6	-	-	0.0	-	-
86.7 110.0	-	0.6	-	0.7	-	-	1.4	-	-	2.2	-	-
90.0 28.0	-	0.0	-	2.4	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	3.5	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	1.0	-	4.0	-	-	0.7	-	-	0.0	-	-

Table 7. (cont.)

Cololabis saira (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	-	0.0	-	0.7	-	-	4.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.7	-	-	1.3	-	-	0.0	-	-
90.0 100.0	-	0.0	-	2.9	-	-	0.0	-	-	0.8	-	-
90.0 110.0	-	0.0	-	0.0	-	-	1.8	-	-	2.9	-	-
90.0 120.0	-	3.0	-	-	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	0.0	-	2.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	0.5	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	3.5	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	2.3	-	-	0.7	-	-	0.0	-	-
93.3 90.0	-	16.1	-	6.6	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	6.6	-	-	0.8	-	-
93.3 110.0	-	8.2	-	2.2	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	10.9	-	-	-	-	0.0	-	-	0.0	-	-
95.0 40.0	-	-	-	0.8	-	-	-	-	-	-	-	-
95.0 45.0	-	-	-	2.6	-	-	-	-	-	-	-	-
95.0 55.0	-	-	-	0.9	-	-	-	-	-	-	-	-

Cheilopogon heterurus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 35.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-

Cheilopogon pinnatibarbatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 30.0	-	0.0	-	0.0	-	-	1.1	-	-	0.0	-	-

Macroramphosus gracilis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	-	0.0	-	0.0	-	-	0.0	-	-	0.7	-	-
93.3 100.0	-	0.0	-	1.5	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

Station		***Sebastes* spp.**										
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	2.5	-	-	-	-	-	-	-	-	-	-
70.0	70.0	-	0.8	-	-	-	-	-	-	-	-	-	-
70.0	80.0	-	1.3	-	-	-	-	-	-	-	-	-	-
73.3	55.0	-	0.6	-	-	-	-	-	-	-	-	-	-
76.7	49.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	-	2.6	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.2	-
80.0	51.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	-	-	66.7	-	-	0.0	-	-	-	0.0	-
83.3	40.6	-	0.0	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3	55.0	-	0.0	-	1.5	-	-	0.0	-	-	0.0	-	-
83.3	60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
83.3	70.0	-	0.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	80.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
86.7	33.0	-	0.9	-	0.0	-	-	0.0	-	-	0.8	-	-
86.7	35.0	-	0.7	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	0.0	-	1.4	-	-	0.0	-	-	0.0	-	-
86.7	50.0	-	194.6	-	63.8	-	-	0.6	-	-	0.0	-	-
86.7	55.0	-	3.1	-	0.6	-	-	0.0	-	-	0.0	-	-
86.7	60.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	70.0	-	2.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	80.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	28.0	-	0.9	-	0.8	-	-	0.0	-	-	0.0	-	-
90.0	30.0	-	0.0	-	1.7	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	0.0	-	8.7	-	-	0.0	-	-	0.9	-	-
90.0	37.0	-	0.0	-	3.1	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
93.3	40.0	-	0.0	-	2.1	-	-	0.0	-	-	0.7	-	-
93.3	45.0	-	2.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	50.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	1.5	-	-	-	-	-	-	-	-

Sebastes aurora

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

Sebastes diploproa

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 51.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
76.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.8	-
83.3 42.0	-	0.9	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
90.0 30.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-

Sebastes jordani

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 50.0	-	0.7	-	-	-	-	-	-	-	-	-	-
80.0 55.0	-	0.9	-	0.0	-	-	0.0	-	-	-	0.0	-
86.7 35.0	-	0.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	383.7	-	6.8	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	1.7	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	0.6	-	0.0	-	-	0.0	-	-	0.0	-	-

Scorpaena guttata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-

Anoplopoma fimbria

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 50.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	-	0.0	-	1.7	-	-	0.0	-	-	-	0.0	-
83.3	80.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
86.7	40.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Hexagrammos decagrammus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	3.3	-	-	-	-	-	-	-	-	-	-
63.3	52.0	-	0.9	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	4.2	-	-	-	-	-	-	-	-	-	-
66.7	50.0	-	0.9	-	-	-	-	-	-	-	-	-	-
66.7	55.0	-	3.6	-	-	-	-	-	-	-	-	-	-
66.7	60.0	-	5.9	-	-	-	-	-	-	-	-	-	-
80.0	51.0	-	17.0	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3	51.0	-	-	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	2.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	60.0	-	1.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	50.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Hexagrammos lagocephalus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	60.0	-	1.5	-	-	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	5.8	-	-	-	-	-	-	-	-	-	-
63.3	52.0	-	0.9	-	-	-	-	-	-	-	-	-	-
66.7	60.0	-	0.7	-	-	-	-	-	-	-	-	-	-
76.7	49.0	-	0.0	-	5.0	-	-	0.0	-	-	-	0.0	-
76.7	51.0	-	0.0	-	1.3	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	-	-	3.3	-	-	0.0	-	-	-	0.0	-

Table 7. (cont.)

Ophiodon elongates (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 45.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	3.0	-	-	0.0	-	-	0.0	-	-

Hemilepidotus spinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.1	-	-	-	-	-	-	-	-	-	-
63.3 52.0	-	11.4	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	5.9	-	-	-	-	-	-	-	-	-	-
63.3 60.0	-	0.8	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	14.6	-	-	-	-	-	-	-	-	-	-
66.7 55.0	-	7.2	-	-	-	-	-	-	-	-	-	-
66.7 60.0	-	3.0	-	-	-	-	-	-	-	-	-	-
66.7 70.0	-	0.8	-	-	-	-	-	-	-	-	-	-
73.3 60.0	-	0.8	-	-	-	-	-	-	-	-	-	-

Orthonopias triacis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	9.5	-	-	0.0	-	-

Ruscarius creaseri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	10.7	-	-	-	-	-	-	-	-	-	-
60.0 70.0	-	1.7	-	-	-	-	-	-	-	-	-	-
63.3 52.0	-	4.7	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	4.2	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	34.4	-	-	-	-	-	-	-	-	-	-
66.7 55.0	-	1.8	-	-	-	-	-	-	-	-	-	-
66.7 60.0	-	14.9	-	-	-	-	-	-	-	-	-	-
73.3 55.0	-	0.6	-	-	-	-	-	-	-	-	-	-
73.3 60.0	-	4.1	-	-	-	-	-	-	-	-	-	-

Table 7. (cont.)

Scorpaenichthys marmoratus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	7.1	-	-	0.0	-	-	-	23.6	-
76.7 51.0	-	0.9	-	0.6	-	-	0.0	-	-	-	26.0	-
76.7 55.0	-	1.5	-	0.0	-	-	0.0	-	-	-	0.6	-
76.7 60.0	-	1.3	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	1.8	-	0.8	-	-	0.0	-	-	-	1.7	-
80.0 55.0	-	0.0	-	1.4	-	-	0.0	-	-	-	1.0	-
80.0 60.0	-	0.0	-	2.6	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	1.3	-	-	0.0	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.8	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	0.9	-	1.5	-	-	0.0	-	-	-	0.0	-
83.3 60.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	8.9	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	1.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	6.3	-	3.2	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	1.5	-	6.0	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	1.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	2.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	1.4	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Liparis mucosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	13.4	-	-	0.0	-	-

***Howella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	-	0.0	-	0.0	-	-	0.5	-	-	0.0	-	-

***Paralabrax* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	5.9	-	-	-	0.0	-

Table 7. (cont.)

***Paralabrax* spp.** (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	1.7	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	1.2	-	-	0.0	-	-

Seriola lalandi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 30.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
80.0 70.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.7	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 70.0	-	0.0	-	0.0	-	-	2.7	-	-	0.0	-	-
83.3 80.0	-	0.0	-	3.1	-	-	9.3	-	-	0.0	-	-
83.3 110.0	-	0.0	-	1.4	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	1.0	-	-	0.7	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	1.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	3.6	-	-	0.0	-	-
90.0 90.0	-	0.0	-	2.1	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	3.2	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	2.7	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
95.0 45.0	-	-	-	2.6	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	6.9	-	-	-	-	-	-	-	-

Table 7. (cont.)

***Brama* spp.**

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

Anisotremus davidsoni

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	-
93.3 28.0	-	0.0	-	0.0	-	-	1.2	-	-	0.0	-	-

Xenistius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	-	0.0	-	0.0	-	-	5.1	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
93.3 28.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-

Genyonemus lineatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 40.6	-	0.0	-	0.0	-	-	0.0	-	-	-	1.0	-
90.0 28.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Menticirrhus undulatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
93.3 35.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-

Seriphus politus

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

Girella nigricans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	0.0	-	-	-	2.0	-
86.7 70.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
90.0 28.0	-	0.0	-	0.0	-	-	0.0	-	-	1.1	-	-

Table 7. (cont.)

Girella nigricans (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 45.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
93.3 50.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-

Hermosilla azurea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	-	-	0.0	-	-	3.4	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	1.2	-	-	-	0.0	-
86.7 40.0	-	0.0	-	0.0	-	-	2.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	36.8	-	-	0.0	-	-
93.3 26.7	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	5.4	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-

Medialuna californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	0.0	-	-	0.8	-	-	-	0.0	-
76.7 70.0	-	0.0	-	0.0	-	-	6.8	-	-	-	0.0	-
76.7 80.0	-	0.0	-	0.0	-	-	21.7	-	-	-	0.0	-
80.0 51.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0 70.0	-	0.0	-	0.0	-	-	10.2	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 80.0	-	0.0	-	0.0	-	-	1.7	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
93.3 26.7	-	0.0	-	0.0	-	-	0.0	-	-	3.7	-	-

Mugil cephalus

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

Table 7. (cont.)

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	-	0.0	-	0.0	-	-	2.6	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	3.4	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	0.0	-	-	-	1.0	-
83.3 42.0	-	0.0	-	0.0	-	-	3.6	-	-	-	0.0	-
86.7 33.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
93.3 28.0	-	0.0	-	0.0	-	-	1.8	-	-	0.9	-	-
93.3 35.0	-	0.0	-	0.0	-	-	5.9	-	-	0.5	-	-
93.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	1.6	-	-

Hypsypops rubicundus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	1.8	-	-	-	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	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-

***Rathbunella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	2.2	-	-	0.0	-	-

Cryptacanthodes aleutensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 55.0	-	0.8	-	-	-	-	-	-	-	-	-	-

***Neoclinus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-

Table 7. (cont.)

Neoclinus blanchardi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 30.0	-	0.0	-	1.7	-	-	0.0	-	-	0.0	-	-

Neoclinus stephensae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8 46.9	-	-	-	0.7	-	-	0.0	-	-	-	0.0	-
95.0 28.0	-	-	-	0.8	-	-	-	-	-	-	-	-

Hypsoblennius gentilis

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 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	2.8	-	-

Hypsoblennius gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	2.0	-	-	-	0.0	-
76.7 51.0	-	0.0	-	0.0	-	-	1.5	-	-	-	0.0	-
76.7 55.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0 55.0	-	0.0	-	0.0	-	-	2.6	-	-	-	1.0	-
81.8 46.9	-	-	-	0.0	-	-	0.9	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	13.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	0.0	-	-	1.0	-	-	0.0	-	-
83.3 60.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-
83.3 70.0	-	0.0	-	0.0	-	-	0.9	-	-	0.0	-	-
86.7 33.0	-	0.0	-	0.0	-	-	6.9	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.0	-	-	1.5	-	-	0.0	-	-
90.0 28.0	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-

Table 7. (cont.)

Hypsoblennius jenkinsi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	3.3	-	-	-	0.0	-
76.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	0.6	-
80.0 55.0	-	0.0	-	0.0	-	-	4.3	-	-	-	1.0	-
80.0 60.0	-	0.0	-	0.0	-	-	1.6	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	13.6	-	-	-	0.0	-
86.7 33.0	-	0.0	-	0.0	-	-	5.2	-	-	0.0	-	-
86.7 35.0	-	0.0	-	0.0	-	-	1.5	-	-	1.7	-	-
86.7 50.0	-	0.0	-	0.0	-	-	6.7	-	-	0.0	-	-
86.7 55.0	-	0.0	-	0.0	-	-	2.2	-	-	0.0	-	-
90.0 28.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	1.9	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	22.8	-	-	0.9	-	-
93.3 30.0	-	0.0	-	0.0	-	-	0.0	-	-	1.7	-	-
93.3 35.0	-	0.0	-	0.0	-	-	4.4	-	-	0.0	-	-

Rhinogobiops nicholsii

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

Typhlogobius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	0.8	-	-	-	-	-	-	-	-

Sphyraena argentea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	2.6	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	1.2	-	-	-	0.0	-
93.3 28.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-

Table 7. (cont.)

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	-	0.0	-	0.0	-	-	0.7	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.0	-	-	0.9	-	-	-	0.0	-
86.7 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.8	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	3.6	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	0.7	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	3.3	-	-	0.0	-	-
95.0 45.0	-	-	-	0.9	-	-	-	-	-	-	-	-

Tetragonurus cuvieri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	1.0	-
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	1.5	-	-
86.7 100.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	1.5	-	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	0.8	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	1.5	-	-

Citharichthys sordidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.9	-	0.0	-	-	0.0	-	-	0.0	-	-

Citharichthys stigmaeus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 60.0	-	0.8	-	-	-	-	-	-	-	-	-	-
86.7 40.0	-	0.0	-	0.0	-	-	0.0	-	-	0.9	-	-
90.0 35.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.8	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 7. (cont.)

Paralichthys californicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 30.0	-	0.0	-	1.7	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	0.8	-	-	-	-	-	-	-	-

Pleuronichthys coenosus

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 40.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	0.0	-	-	0.6	-	-	0.0	-	-
93.3 30.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Pleuronichthys ritteri

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

Pleuronichthys verticalis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	0.0	-	-	0.6	-	-	-	0.0	-
90.0 30.0	-	0.0	-	0.9	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.6	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.7	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	1.6	-	-	-	-	-	-	-	-

Symphurus atricaudus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 35.0	-	0.0	-	0.0	-	-	0.0	-	-	0.5	-	-

Disintegrated fish larvae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 60.0	-	0.7	-	-	-	-	-	-	-	-	-	-
81.8 46.9	-	-	-	1.3	-	-	0.0	-	-	-	0.0	-
90.0 70.0	-	0.0	-	0.8	-	-	0.0	-	-	0.0	-	-

Table 8. Station and Bongo net tow data for CalCOFI cruises and the CCES cruise in 2006. 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 0602

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
60.0	53.0	37	50.8	123	06.0	JD	06	02	25	0347	68	160	4.25	63	100.0	33	66
60.0	60.0	37	36.9	123	36.5	JD	06	02	25	0822	211	449	4.69	36	100.0	48	28
60.0	70.0	37	16.8	124	19.8	JD	06	02	25	1415	209	438	4.77	41	100.0	5	24
63.3	52.0	37	18.6	122	37.0	JD	06	02	24	2238	69	150	4.64	53	100.0	12	78
63.3	55.0	37	12.6	122	50.2	JD	06	02	24	1948	210	430	4.89	70	46.6	47	21
63.3	60.0	37	02.6	123	11.8	JD	06	02	24	1608	216	425	5.07	49	100.0	62	6
63.3	70.0	36	42.6	123	54.8	JD	06	02	24	0910	213	445	4.79	45	100.0	47	18
63.3	80.0	36	22.6	124	37.6	JD	06	02	24	0251	212	443	4.77	56	100.0	10	7
66.7	50.0	36	46.6	122	04.9	JD	06	02	22	2049	210	440	4.77	177	52.5	86	6
66.7	55.0	36	37.3	122	24.9	JD	06	02	23	0105	211	432	4.88	127	52.7	41	9
66.7	60.0	36	27.2	122	46.3	JD	06	02	23	0513	204	459	4.43	115	50.9	23	27
66.7	70.0	36	07.3	123	29.0	JD	06	02	23	1305	214	421	5.07	81	52.9	12	10
66.7	80.0	35	47.7	124	11.7	JD	06	02	23	2008	209	447	4.67	152	48.5	17	5
70.0	55.0	36	02.7	122	00.3	JD	06	02	22	1054	213	413	5.16	32	100.0	300	19
70.0	60.0	35	53.1	122	21.8	JD	06	02	22	0653	209	435	4.81	147	53.1	29	46
70.0	70.0	35	33.1	123	04.5	JD	06	02	22	0100	213	430	4.94	88	47.3	15	9
70.0	80.0	35	12.8	123	46.6	JD	06	02	21	1856	216	426	5.07	89	52.6	54	11
73.3	50.0	35	38.6	121	15.3	JD	06	02	20	1557	27	64	4.17	404	53.8	9	16
73.3	55.0	35	28.7	121	36.6	JD	06	02	20	1942	211	403	5.23	263	52.8	12	31
73.3	60.0	35	18.5	121	57.6	JD	06	02	20	2351	205	465	4.40	71	51.5	25	214
73.3	70.0	34	58.6	122	39.8	JD	06	02	21	0611	205	468	4.38	53	100.0	26	14
73.3	80.0	34	38.6	123	21.6	JD	06	02	21	1208	211	421	5.01	28	100.0	17	26
76.7	49.0	35	05.3	120	46.7	JD	06	02	20	1013	41	106	3.85	38	100.0	1	40
76.7	51.0	35	01.3	120	55.5	JD	06	02	20	0823	171	370	4.62	38	100.0	47	61
76.7	55.0	34	53.5	121	11.7	JD	06	02	20	0455	211	440	4.80	150	51.5	26	23
76.7	60.0	34	43.3	121	32.9	JD	06	02	18	2056	213	437	4.86	103	48.8	16	27
76.7	70.0	34	23.2	122	14.8	JD	06	02	18	1457	214	434	4.92	60	50.0	10	3
76.7	80.0	34	03.4	122	56.5	JD	06	02	18	0649	205	452	4.54	38	100.0	11	30

Table 8. (cont.)

CalCOFI Cruise 0602 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	90.0	33	43.4	123	38.0	JD	06	02	18	0156	210	458	4.58	17	100.0	7	6
76.7	100.0	33	23.2	124	19.3	JD	06	02	17	1951	214	448	4.77	36	100.0	8	16
80.0	50.5	34	28.1	120	29.3	JD	06	02	16	0203	13	45	2.86	44	100.0	9	9
80.0	51.0	34	27.0	120	31.4	JD	06	02	16	0349	51	122	4.15	33	100.0	23	95
80.0	55.0	34	19.1	120	48.2	JD	06	02	16	0735	214	483	4.42	68	51.5	16	74
80.0	60.0	34	08.9	121	09.1	JD	06	02	16	1213	215	460	4.67	35	100.0	23	63
80.0	70.0	33	49.1	121	50.5	JD	06	02	16	1834	210	442	4.75	77	50.0	42	40
80.0	80.0	33	29.1	122	32.0	JD	06	02	17	0029	211	469	4.49	45	100.0	14	16
80.0	90.0	33	09.1	123	13.2	JD	06	02	17	0629	214	450	4.74	56	100.0	6	9
80.0	100.0	32	48.9	123	54.3	JD	06	02	17	1306	213	458	4.64	44	100.0	25	12
83.3	39.4	34	16.0	119	19.9	JD	06	02	15	0821	14	45	3.03	88	100.0	0	84
83.3	40.6	34	13.6	119	24.9	JD	06	02	15	0959	29	127	2.32	16	100.0	0	20
83.3	42.0	34	10.7	119	30.6	JD	06	02	15	0622	138	304	4.53	26	100.0	59	479
83.3	55.0	33	44.7	120	24.6	JD	06	02	14	2137	215	474	4.53	101	52.0	5	39
83.3	60.0	33	34.8	120	45.2	JD	06	02	14	1707	211	463	4.54	117	51.8	24	25
83.3	70.0	33	14.6	121	26.7	JD	06	02	14	0846	206	559	3.67	64	52.7	11	3
83.3	80.0	32	54.7	122	07.8	JD	06	02	14	0114	212	494	4.28	47	100.0	23	5
83.3	90.0	32	34.6	122	48.7	JD	06	02	13	1904	213	472	4.52	44	100.0	10	6
83.3	100.0	32	14.6	123	29.7	JD	06	02	13	1250	211	453	4.65	152	52.1	2	9
83.3	110.0	31	54.7	124	10.2	JD	06	02	13	0628	214	481	4.45	25	100.0	8	12
86.7	33.0	33	53.3	118	29.5	JD	06	02	10	1928	40	102	3.89	39	100.0	4	39
86.7	35.0	33	49.3	118	37.8	JD	06	02	10	2208	212	456	4.64	55	100.0	100	120
86.7	40.0	33	39.4	118	58.6	JD	06	02	11	0211	211	441	4.78	131	53.4	69	286
86.7	45.0	33	29.5	119	19.2	JD	06	02	11	0634	215	432	4.97	93	50.0	62	233
86.7	50.0	33	19.4	119	39.8	JD	06	02	11	1027	55	141	3.92	85	100.0	242	310
86.7	55.0	33	09.4	120	00.4	JD	06	02	11	1417	213	438	4.85	98	48.8	36	130
86.7	60.0	32	59.4	120	20.9	JD	06	02	11	1820	208	449	4.64	96	51.1	12	83
86.7	70.0	32	39.1	121	02.1	JD	06	02	12	0027	209	484	4.32	74	47.2	13	12
86.7	80.0	32	19.4	121	42.9	JD	06	02	12	0617	216	516	4.19	70	52.7	7	3
86.7	90.0	31	59.4	122	23.6	JD	06	02	12	1212	212	420	5.04	24	100.0	2	8

Table 8. (cont.)

CalCOFI Cruise 0602 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	100.0	31	39.4	123	04.2	JD	06	02	12	1743	213	475	4.47	55	100.0	13	9
86.7	110.0	31	19.4	123	44.5	JD	06	02	12	2329	200	497	4.02	40	100.0	5	27
86.8	32.5	33	53.5	118	26.7	JD	06	02	10	1737	9	63	1.47	79	100.0	2	0
88.5	30.1	33	40.5	118	05.1	JD	06	02	10	1351	13	48	2.74	104	100.0	1	46
90.0	27.7	33	29.7	117	44.9	JD	06	02	10	0349	12	46	2.72	88	100.0	0	43
90.0	28.0	33	29.1	117	46.0	JD	06	02	10	0300	47	121	3.86	58	100.0	0	102
90.0	30.0	33	24.9	117	54.4	JD	06	02	10	0031	210	461	4.55	50	100.0	30	175
90.0	35.0	33	15.0	118	14.9	JD	06	02	09	2023	209	474	4.40	46	100.0	50	515
90.0	37.0	33	11.1	118	23.3	JD	06	02	09	1721	212	458	4.63	41	100.0	10	75
90.0	45.0	32	55.2	118	56.4	JD	06	02	09	1141	209	456	4.58	79	52.7	156	415
90.0	53.0	32	39.2	119	28.9	JD	06	02	09	0607	207	446	4.64	81	47.2	15	38
90.0	60.0	32	25.1	119	57.7	JD	06	02	09	0109	209	459	4.56	98	48.8	14	33
90.0	70.0	32	05.1	120	38.3	JD	06	02	08	1820	211	447	4.71	105	53.1	5	11
90.0	80.0	31	45.0	121	18.8	JD	06	02	08	1206	212	454	4.67	59	100.0	3	3
90.0	90.0	31	25.2	121	59.3	JD	06	02	08	0530	216	461	4.68	80	100.0	14	3
90.0	100.0	31	04.9	122	39.9	JD	06	02	07	2258	210	447	4.70	92	100.0	21	5
90.0	110.0	30	45.0	123	20.0	JD	06	02	07	1640	217	443	4.88	16	100.0	15	77
90.0	120.0	30	24.7	124	00.4	JD	06	02	07	0810	209	464	4.50	19	100.0	9	51
91.7	26.4	33	14.6	117	27.8	JD	06	02	03	2253	13	38	3.50	52	100.0	1	21
93.3	26.7	32	57.4	117	18.3	JD	06	02	03	1742	110	247	4.46	36	100.0	7	28
93.3	28.0	32	54.8	117	23.7	JD	06	02	04	0254	189	389	4.85	64	100.0	10	37
93.3	30.0	32	50.8	117	31.9	JD	06	02	04	0828	208	433	4.81	21	100.0	14	16
93.3	35.0	32	40.8	117	52.5	JD	06	02	04	1257	211	443	4.75	52	100.0	28	174
93.3	40.0	32	30.8	118	12.9	JD	06	02	04	1712	213	450	4.74	53	100.0	5	115
93.3	45.0	32	20.9	118	33.3	JD	06	02	04	2116	226	464	4.86	127	52.5	44	232
93.3	50.0	32	10.8	118	53.6	JD	06	02	05	0126	207	450	4.59	107	47.9	74	249
93.3	55.0	32	00.8	119	13.9	JD	06	02	05	0525	205	472	4.33	76	52.7	10	38
93.3	60.0	31	49.6	119	34.6	JD	06	02	05	0829	211	473	4.45	65	51.6	4	19
93.3	70.0	31	31.0	120	14.5	JD	06	02	05	1629	216	451	4.78	35	100.0	30	36
93.3	80.0	31	10.8	120	55.1	JD	06	02	05	2250	210	460	4.55	33	100.0	24	13

Table 8. (cont.)

CalCOFI Cruise 0602 (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
93.3	90.0	30	51.0	121	35.2	JD	06	02	06	0507	207	459	4.49	39	100.0	17	42
93.3	100.0	30	31.1	122	15.3	JD	06	02	06	1244	211	463	4.56	71	100.0	10	72
93.3	110.0	30	10.8	122	55.4	JD	06	02	06	1851	201	471	4.27	51	100.0	25	60
93.3	120.0	29	51.0	123	35.2	JD	06	02	07	0038	211	479	4.40	21	100.0	53	18
93.4	26.4	32	56.9	117	17.0	JD	06	02	03	2013	15	43	3.37	47	100.0	0	23

CalCOFI Cruise 0604 and CCES Cruise

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
56.7	51.0	38	29.1	123	21.9	JD	06	04	25	1707	76	172	4.42	110	100.0	19	10
56.7	55.0	38	21.2	123	39.5	JD	06	04	25	2027	212	415	5.12	128	49.0	19	12
61.7	52.0	37	35.2	122	49.0	JD	06	04	25	0054	63	130	4.87	192	100.0	25	116
61.7	55.0	37	29.1	123	02.1	JD	06	04	24	2210	215	422	5.10	92	46.1	18	2
61.7	60.0	37	19.1	123	23.8	JD	06	04	24	1820	209	410	5.11	124	52.9	34	14
61.7	70.0	36	59.2	124	07.0	JD	06	04	24	1246	212	416	5.09	34	100.0	9	2
61.7	80.0	36	39.1	124	50.1	JD	06	04	24	0501	213	493	4.32	118	51.7	7	16
61.7	90.0	36	19.1	125	33.0	JD	06	04	23	2337	206	455	4.53	55	100.0	18	20
66.7	52.0	36	43.2	122	12.0	JD	06	04	22	0138	216	429	5.02	142	47.5	11	218
66.7	55.0	36	37.3	122	24.8	JD	06	04	22	0522	207	471	4.39	68	53.1	29	4
66.7	60.0	36	27.2	122	46.3	JD	06	04	22	0911	211	428	4.93	79	50.0	22	11
66.7	70.0	36	07.3	123	29.0	JD	06	04	22	1721	213	435	4.90	60	50.0	7	2
66.7	80.0	35	47.2	124	11.7	JD	06	04	23	0113	216	447	4.83	139	51.6	9	2
66.7	90.0	35	27.1	124	54.1	JD	06	04	23	0811	213	436	4.87	39	100.0	6	16
71.7	80.0	34	55.2	123	33.8	JD	06	04	20	0951	213	428	4.97	26	100.0	8	8
71.7	90.0	34	35.1	124	15.5	JD	06	04	20	0445	214	419	5.10	60	100.0	7	14
95.0	28.0	32	36.7	117	12.2	JD	06	04	06	0130	19	46	4.21	549	100.0	66	2323
95.0	30.0	32	33.1	117	20.3	JD	06	04	06	0335	93	211	4.41	95	100.0	101	175
95.0	35.0	32	23.1	117	40.8	JD	06	04	06	1505	212	429	4.93	23	100.0	4	120

Table 8. (cont.)

CalCOFI Cruise 0604 and CCES Cruise (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
95.0	40.0	32	13.1	118	01.1	JD	06	04	06	2125	214	416	5.13	65	48.1	3	46
95.0	45.0	32	03.4	118	21.4	JD	06	04	07	0210	212	394	5.39	81	50.0	41	190
95.0	50.0	31	53.2	118	41.8	JD	06	04	07	0555	210	434	4.82	71	51.6	264	101
76.7	49.0	35	05.3	120	46.5	NH	06	04	16	2139	54	122	4.42	33	100.0	0	9
76.7	51.0	35	01.3	120	55.0	NH	06	04	16	2358	211	466	4.52	120	53.5	6	39
76.7	55.0	34	53.3	121	12.0	NH	06	04	16	1533	204	442	4.62	34	100.0	6	243
76.7	60.0	34	43.4	121	33.3	NH	06	04	16	1113	204	475	4.29	53	100.0	20	62
76.7	70.0	34	23.5	122	15.1	NH	06	04	16	0505	210	458	4.58	33	100.0	10	13
76.7	80.0	34	03.2	122	56.5	NH	06	04	15	2310	206	451	4.57	27	100.0	60	34
76.7	90.0	33	43.2	123	38.2	NH	06	04	15	1727	210	438	4.79	14	100.0	19	81
76.7	100.0	33	23.3	124	19.4	NH	06	04	15	1104	210	480	4.37	21	100.0	28	24
80.0	50.5	34	27.6	120	29.2	NH	06	04	13	1553	13	44	2.93	90	100.0	0	92
80.0	51.0	34	26.9	120	31.3	NH	06	04	13	1746	87	207	4.23	77	100.0	8	129
80.0	55.0	34	19.1	120	47.9	NH	06	04	13	2140	198	472	4.19	305	50.6	10	211
80.0	60.0	34	09.2	121	09.2	NH	06	04	14	0155	212	436	4.85	76	51.5	13	11
80.0	70.0	33	49.2	121	50.2	NH	06	04	14	0658	213	429	4.96	33	100.0	25	2
80.0	80.0	33	29.0	122	31.8	NH	06	04	14	1630	194	506	3.83	10	100.0	29	56
80.0	90.0	33	08.9	123	13.2	NH	06	04	14	2252	208	467	4.45	26	100.0	31	75
80.0	100.0	32	49.0	123	54.3	NH	06	04	15	0458	212	453	4.68	20	100.0	20	147
81.7	43.5	34	24.3	119	47.8	NH	06	04	13	0819	10	42	2.33	119	100.0	0	126
81.8	46.9	34	16.6	120	01.6	NH	06	04	13	1210	202	450	4.48	218	48.9	17	473
83.3	39.4	34	15.4	119	19.6	NH	06	04	13	0508	12	45	2.68	199	100.0	3	837
83.3	40.6	34	13.4	119	25.1	NH	06	04	13	0402	21	63	3.30	144	100.0	3	31
83.3	42.0	34	10.6	119	30.4	NH	06	04	13	0209	76	169	4.50	148	100.0	48	30
83.3	51.0	33	52.7	120	08.1	NH	06	04	12	2002	80	185	4.33	43	100.0	7	292
83.3	55.0	33	44.6	120	24.8	NH	06	04	12	1650	198	479	4.12	50	100.0	17	16
83.3	60.0	33	34.8	120	46.0	NH	06	04	12	1222	210	447	4.70	38	100.0	14	40
83.3	70.0	33	14.7	121	26.5	NH	06	04	12	0608	208	475	4.39	36	100.0	10	18
83.3	80.0	32	54.9	122	07.9	NH	06	04	11	2342	213	443	4.81	88	48.7	26	204
83.3	90.0	32	34.8	122	48.9	NH	06	04	11	1738	209	447	4.66	25	100.0	139	182

Table 8. (cont.)

CalCOFI Cruise 0604 and CCES Cruise (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
83.3	100.0	32	14.8	123	29.2	NH	06	04	11	0951	202	471	4.28	17	100.0	0	18
83.3	110.0	31	54.6	124	10.0	NH	06	04	11	0515	198	515	3.84	27	100.0	16	14
85.4	35.8	34	00.7	118	49.9	NH	06	04	17	1857	13	52	2.51	252	100.0	5	19
86.7	33.0	33	53.4	118	29.4	NH	06	04	08	1209	43	107	3.97	644	47.8	15	76
86.7	35.0	33	49.5	118	37.5	NH	06	04	08	1635	204	470	4.34	130	49.1	87	144
86.7	40.0	33	39.3	118	58.2	NH	06	04	08	2106	210	418	5.01	77	53.1	66	57
86.7	45.0	33	29.4	119	19.0	NH	06	04	09	0154	216	423	5.09	158	50.7	76	209
86.7	50.0	33	19.2	119	38.9	NH	06	04	09	0528	62	174	3.55	34	100.0	137	3807
86.7	55.0	33	09.4	120	00.4	NH	06	04	09	1109	197	448	4.40	27	100.0	36	235
86.7	60.0	32	59.5	120	20.7	NH	06	04	09	1532	216	387	5.59	39	100.0	14	61
86.7	70.0	32	39.5	121	01.7	NH	06	04	09	2209	220	410	5.36	49	100.0	40	156
86.7	80.0	32	19.6	121	42.8	NH	06	04	10	0436	212	432	4.89	51	100.0	48	818
86.7	90.0	31	59.4	122	23.8	NH	06	04	10	0919	210	437	4.80	43	100.0	30	943
86.7	100.0	31	39.4	123	03.9	NH	06	04	10	1647	209	463	4.51	32	100.0	56	284
86.7	110.0	31	19.4	123	44.4	NH	06	04	10	2232	211	437	4.83	37	100.0	12	28
86.8	32.5	33	53.3	118	26.5	NH	06	04	08	1305	14	41	3.39	617	100.0	58	323
88.5	30.1	33	40.1	118	05.4	NH	06	04	08	0726	13	43	3.07	212	100.0	411	367
90.0	27.7	33	29.5	117	44.9	NH	06	04	07	2346	12	45	2.58	333	100.0	289	7200
90.0	28.0	33	29.0	117	46.2	NH	06	04	08	0131	212	409	5.18	149	49.1	39	2243
90.0	30.0	33	25.3	117	54.4	NH	06	04	08	0444	211	408	5.18	145	50.8	48	1215
90.0	35.0	33	15.1	118	15.0	NH	06	04	07	1935	210	426	4.93	157	47.7	94	54
90.0	37.0	33	11.1	118	23.2	NH	06	04	07	1625	210	417	5.04	91	52.6	112	470
90.0	45.0	32	55.0	118	55.8	NH	06	04	07	0930	208	423	4.91	94	52.5	7	186
90.0	53.0	32	39.1	119	29.2	NH	06	04	07	0502	209	440	4.76	57	100.0	71	1681
90.0	60.0	32	25.1	119	57.6	NH	06	04	06	2342	212	436	4.85	57	100.0	302	986
90.0	70.0	32	05.0	120	38.5	NH	06	04	06	1650	208	461	4.50	24	100.0	40	130
90.0	80.0	31	45.2	121	19.3	NH	06	04	06	0838	202	460	4.38	39	100.0	10	62
90.0	90.0	31	25.0	121	59.6	NH	06	04	06	0258	214	474	4.50	44	100.0	11	30
90.0	100.0	31	05.0	122	38.9	NH	06	04	05	2035	211	464	4.54	50	100.0	37	58
90.0	110.0	30	45.1	123	20.2	NH	06	04	05	1308	213	481	4.43	12	100.0	20	8

Table 8. (cont.)

CalCOFI Cruise 0604 and CCES Cruise (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
91.7	26.4	33	14.8	117	27.8	NH	06	04	01	1655	14	37	3.94	109	100.0	18	2306
93.3	26.7	32	57.6	117	18.4	NH	06	04	01	1246	72	112	6.40	151	100.0	45	2193
93.3	28.0	32	54.8	117	23.7	NH	06	04	01	2135	213	398	5.34	166	53.0	43	212
93.3	30.0	32	50.8	117	31.8	NH	06	04	02	0043	215	394	5.45	56	100.0	37	35
93.3	35.0	32	40.8	117	52.4	NH	06	04	02	0449	206	405	5.08	106	51.1	22	56
93.3	40.0	32	30.9	118	12.5	NH	06	04	02	0823	209	417	5.01	48	100.0	37	1362
93.3	45.0	32	20.8	118	33.3	NH	06	04	02	1408	213	424	5.03	38	100.0	49	118
93.3	50.0	32	10.8	118	53.6	NH	06	04	02	1838	208	414	5.02	70	51.7	86	222
93.3	55.0	32	00.8	119	14.0	NH	06	04	02	2301	204	432	4.72	127	52.7	374	285
93.3	60.0	31	50.9	119	34.5	NH	06	04	03	0320	213	413	5.15	73	46.6	39	76
93.3	70.0	31	30.5	120	14.0	NH	06	04	03	0831	210	434	4.83	58	100.0	206	346
93.3	80.0	31	10.9	120	55.0	NH	06	04	03	1647	207	433	4.79	21	100.0	50	39
93.3	90.0	30	50.8	121	35.3	NH	06	04	03	2312	217	416	5.22	34	100.0	42	27
93.3	100.0	30	30.9	122	15.5	NH	06	04	04	0557	206	466	4.43	17	100.0	34	476
93.3	110.0	30	10.8	122	55.3	NH	06	04	04	1226	217	469	4.61	32	100.0	5	59
93.4	26.4	32	57.3	117	16.9	NH	06	04	01	1350	13	49	2.67	124	100.0	13	3834
-12.3	33.3	51	02.3	131	14.6	OD	06	04	12	1506	190	527	3.61	89	46.8	15	8
-11.1	46.2	50	23.4	132	15.2	OD	06	04	13	0716	193	518	3.71	156	51.8	27	13
-10.7	24.3	51	02.6	130	11.1	OD	06	04	12	0829	197	542	3.62	66	52.7	7	3
-9.4	37.4	50	23.3	131	11.1	OD	06	04	13	1305	217	489	4.43	143	51.4	4	6
-8.9	15.4	51	02.2	129	06.9	OD	06	04	12	0030	91	238	3.81	126	53.3	15	8
-7.7	28.5	50	23.4	130	07.8	OD	06	04	13	1812	208	499	4.17	74	48.6	2	11
-7.2	6.4	51	03.0	128	04.2	OD	06	04	11	1925	106	264	4.01	110	48.2	8	16
-4.7	33.2	49	43.0	130	08.0	OD	06	04	15	0541	197	493	3.98	195	52.0	3	2
-4.3	10.6	50	23.8	128	03.3	OD	06	04	14	0650	53	159	3.36	157	100.0	6	4
-3.0	24.3	49	43.3	129	06.5	OD	06	04	15	0131	213	535	3.97	168	53.3	7	6
.1	28.0	49	03.5	128	59.4	OD	06	04	15	1206	209	537	3.90	97	51.9	12	10
.4	6.4	49	43.8	127	02.9	OD	06	04	14	1249	36	79	4.56	316	100.0	9	0
1.8	19.1	49	03.5	127	59.2	OD	06	04	15	2130	207	421	4.92	283	49.5	15	35
8.2	25.0	47	45.3	127	37.0	OD	06	04	17	1645	211	511	4.12	137	48.5	5	16
9.9	16.0	47	45.6	126	37.4	OD	06	04	17	1222	207	450	4.60	145	52.3	41	17

Table 8. (cont.)

CalCOFI Cruise 0604 and CCES Cruise (cont.)

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
11.6	7.0	47	45.9	125	38.4	OD	06	04	17	0746	212	504	4.20	121	50.8	17	17
13.3	-2.0	47	46.5	124	38.9	OD	06	04	17	0105	27	99	2.73	101	100.0	4	58
14.9	29.8	46	25.9	127	07.4	OD	06	04	18	0017	215	516	4.16	242	48.0	52	2
16.6	20.9	46	26.0	126	09.2	OD	06	04	18	0701	211	609	3.45	107	46.1	20	6
18.3	12.0	46	26.3	125	11.2	OD	06	04	18	1219	206	485	4.24	169	51.2	9	4
20.0	3.0	46	25.8	124	13.4	OD	06	04	18	1638	31	67	4.60	75	100.0	2	66
21.6	39.7	44	56.2	127	01.4	OD	06	04	19	1931	197	469	4.20	181	47.0	38	6
23.3	30.8	44	56.5	126	05.2	OD	06	04	19	1459	210	425	4.93	127	51.8	35	0
25.0	21.9	44	56.7	125	08.7	OD	06	04	19	0952	211	461	4.56	145	52.2	31	4
26.7	13.0	44	56.9	124	12.2	OD	06	04	19	0305	75	81	9.26	491	52.5	14	36
28.3	55.4	43	15.5	127	23.9	OD	06	04	20	0624	214	469	4.56	139	50.7	45	2
29.9	46.6	43	14.8	126	29.3	OD	06	04	20	1133	210	472	4.45	76	52.7	24	12
31.6	37.8	43	15.8	125	33.7	OD	06	04	20	1738	219	470	4.65	79	51.3	30	44
33.3	29.0	43	16.4	124	39.4	OD	06	04	20	2218	97	292	3.32	418	49.1	37	9
35.0	61.3	41	54.0	126	57.1	OD	06	04	24	0902	205	496	4.13	62	51.6	51	14
36.7	52.6	41	54.3	126	03.4	OD	06	04	24	0308	208	485	4.28	76	48.6	51	10
38.3	43.8	41	54.6	125	09.8	OD	06	04	23	2034	209	477	4.39	113	48.1	8	8
40.0	35.0	41	54.7	124	27.9	OD	06	04	23	1655	66	164	4.00	37	100.0	3	7
41.7	75.1	40	16.2	127	06.8	OD	06	04	24	2101	212	487	4.34	82	47.5	36	17
43.4	66.5	40	16.4	126	13.4	OD	06	04	25	0557	212	493	4.30	75	54.0	29	10
45.0	57.7	40	16.8	125	21.4	OD	06	04	25	1035	210	421	4.98	48	100.0	24	24
46.7	49.0	40	17.2	124	28.9	OD	06	04	25	1515	208	510	4.06	196	53.0	0	4
53.3	50.0	39	06.4	123	46.4	OD	06	04	25	2204	51	136	3.71	176	100.0	4	9
53.3	80.0	38	06.5	125	55.8	OD	06	04	29	1726	209	536	3.90	41	100.0	6	6
53.3	90.0	37	46.5	126	39.6	OD	06	04	29	1120	213	563	3.78	20	100.0	7	9
60.0	50.0	37	56.8	122	53.4	OD	06	04	26	1323	27	121	2.25	41	100.0	2	215

Table 8. (cont.)

CalCOFI Cruise 0607

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	05.1	120	46.5	NH	06	07	23	2013	62	120	5.18	100	100.0	95	39
76.7	51.0	35	01.4	120	55.2	NH	06	07	23	1753	202	426	4.75	136	51.7	5	21
76.7	55.0	34	53.3	121	12.0	NH	06	07	23	1413	197	433	4.56	115	48.0	4	1
76.7	60.0	34	43.3	121	32.9	NH	06	07	23	0830	201	392	5.13	166	52.3	4	0
76.7	70.0	34	23.0	122	14.8	NH	06	07	23	0205	204	469	4.35	122	52.6	4	2
76.7	80.0	34	03.3	122	56.6	NH	06	07	22	1854	207	415	4.99	137	52.6	3	18
76.7	90.0	33	43.2	123	38.1	NH	06	07	22	1231	211	415	5.09	53	100.0	15	48
76.7	100.0	33	23.2	124	19.3	NH	06	07	22	0626	209	404	5.16	99	100.0	23	123
80.0	50.5	34	27.7	120	29.2	NH	06	07	20	1349	12	47	2.48	150	100.0	36	183
80.0	51.0	34	27.1	120	31.5	NH	06	07	20	1534	49	125	3.96	177	100.0	142	127
80.0	55.0	34	19.0	120	48.2	NH	06	07	20	2002	205	473	4.34	99	48.9	9	16
80.0	60.0	34	09.2	121	08.8	NH	06	07	24	0222	216	403	5.37	161	49.2	17	4
80.0	70.0	33	49.0	121	50.3	NH	06	07	24	0651	201	427	4.71	68	48.2	0	48
80.0	80.0	33	29.0	122	31.9	NH	06	07	21	1218	186	428	4.34	65	50.0	7	25
80.0	90.0	33	09.0	123	13.3	NH	06	07	21	1832	196	421	4.65	1003	49.5	18	20
80.0	100.0	32	49.1	123	54.5	NH	06	07	22	0042	207	430	4.81	44	100.0	230	50
81.7	43.5	34	24.2	119	48.1	NH	06	07	20	0454	13	46	2.92	108	100.0	7	274
81.8	46.9	34	16.5	120	01.5	NH	06	07	20	0848	204	405	5.03	131	52.8	194	36
83.3	39.4	34	15.4	119	19.7	NH	06	07	19	2310	11	46	2.29	130	100.0	2	81
83.3	40.6	34	13.4	119	24.7	NH	06	07	20	0101	19	74	2.55	188	100.0	12	508
83.3	42.0	34	10.7	119	30.7	NH	06	07	19	2116	143	325	4.40	286	50.5	111	20
83.3	51.0	33	52.7	120	08.0	NH	06	07	19	1519	92	209	4.41	258	51.8	18	292
83.3	55.0	33	44.6	120	24.5	NH	06	07	19	1147	205	451	4.55	49	100.0	30	12
83.3	60.0	33	34.6	120	45.6	NH	06	07	19	0651	204	410	4.98	78	50.0	7	664
83.3	70.0	33	14.8	121	26.7	NH	06	07	19	0025	211	444	4.75	374	51.2	6	5
83.3	80.0	32	54.6	122	07.7	NH	06	07	18	1742	201	457	4.39	112	52.9	4	68
83.3	90.0	32	34.5	122	48.7	NH	06	07	18	1130	196	474	4.13	40	100.0	14	21
83.3	100.0	32	14.5	123	29.4	NH	06	07	18	0507	211	462	4.56	32	100.0	149	127
83.3	110.0	31	54.6	124	10.1	NH	06	07	17	2255	211	454	4.65	33	100.0	129	129
86.7	33.0	33	53.4	118	29.4	NH	06	07	15	0312	49	118	4.14	186	100.0	3	282
86.7	35.0	33	49.4	118	37.5	NH	06	07	15	0610	211	431	4.88	42	100.0	4	4
86.7	40.0	33	39.4	118	58.4	NH	06	07	15	1053	207	429	4.83	89	52.6	1	20

Table 8. (cont.)

CalCOFI Cruise 0607 (cont.)

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	45.0	33	29.4	119	19.1	NH	06	07	15	1530	213	437	4.88	39	100.0	1	0
86.7	50.0	33	19.2	119	39.7	NH	06	07	15	2024	41	143	2.88	91	100.0	8	111
86.7	55.0	33	09.3	120	00.5	NH	06	07	16	0053	211	449	4.71	103	52.1	9	1
86.7	60.0	32	59.5	120	21.0	NH	06	07	16	0527	203	468	4.34	105	51.0	4	16
86.7	70.0	32	39.2	121	01.9	NH	06	07	16	1254	206	456	4.52	75	47.0	3	20
86.7	80.0	32	19.4	121	43.0	NH	06	07	16	1920	194	507	3.83	116	50.8	17	19
86.7	90.0	31	59.2	122	23.5	NH	06	07	17	0143	208	477	4.34	115	100.0	33	21
86.7	100.0	31	39.4	123	04.1	NH	06	07	17	0828	203	521	3.90	31	100.0	18	71
86.7	110.0	31	19.5	123	44.6	NH	06	07	17	1622	203	543	3.74	18	100.0	167	205
86.8	32.5	33	53.0	118	26.7	NH	06	07	15	0130	16	56	2.87	142	100.0	3	175
88.5	30.1	33	40.2	118	05.0	NH	06	07	14	2139	21	64	3.32	391	100.0	199	507
90.0	27.7	33	29.9	117	45.2	NH	06	07	14	1905	25	72	3.47	111	100.0	13	92
90.0	28.0	33	29.0	117	46.1	NH	06	07	14	1744	212	439	4.82	71	51.6	10	11
90.0	30.0	33	25.0	117	54.8	NH	06	07	14	1449	211	438	4.81	46	100.0	6	0
90.0	35.0	33	15.1	118	15.0	NH	06	07	14	0843	207	419	4.93	45	100.0	10	5
90.0	37.0	33	11.1	118	23.2	NH	06	07	14	0544	206	426	4.84	35	100.0	2	26
90.0	45.0	32	55.2	118	56.1	NH	06	07	13	2353	213	431	4.94	56	100.0	5	3
90.0	53.0	32	39.2	119	28.9	NH	06	07	13	1808	213	426	5.01	341	52.4	6	0
90.0	60.0	32	25.0	119	57.5	NH	06	07	13	1231	217	426	5.09	52	100.0	16	15
90.0	70.0	32	05.0	120	38.3	NH	06	07	13	0600	210	432	4.86	51	100.0	25	11
90.0	80.0	31	45.0	121	19.0	NH	06	07	12	2311	212	437	4.84	50	100.0	38	9
90.0	90.0	31	25.0	121	59.3	NH	06	07	12	1642	212	469	4.52	21	100.0	7	1
90.0	100.0	31	05.0	122	39.3	NH	06	07	12	0843	207	439	4.71	14	100.0	144	121
90.0	110.0	30	45.1	123	20.0	NH	06	07	12	0137	211	463	4.56	35	100.0	99	136
90.0	120.0	30	24.9	123	59.9	NH	06	07	11	1844	214	452	4.73	35	100.0	87	18
91.7	26.4	33	14.7	117	27.8	NH	06	07	08	1548	17	55	3.11	91	100.0	12	461
93.3	26.7	32	57.4	117	18.2	NH	06	07	08	1152	56	128	4.41	195	100.0	8	70
93.3	28.0	32	54.8	117	23.6	NH	06	07	08	1955	209	406	5.14	42	100.0	6	0
93.3	30.0	32	50.8	117	31.8	NH	06	07	08	2240	206	459	4.48	68	48.3	4	0
93.3	35.0	32	40.8	117	52.4	NH	06	07	09	0315	217	399	5.45	60	100.0	5	0
93.3	40.0	32	30.8	118	12.8	NH	06	07	09	0719	206	472	4.36	42	100.0	4	1

Table 8. (cont.)

CalCOFI Cruise 0607 (cont.)

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
93.3	45.0	32	20.8	118	33.2	NH	06	07	09	1148	216	429	5.02	77	48.4	1	1
93.3	50.0	32	10.9	118	53.0	NH	06	07	09	1558	201	465	4.32	52	100.0	1	0
93.3	55.0	32	00.8	119	14.1	NH	06	07	09	2003	202	465	4.33	92	51.1	13	5
93.3	60.0	31	50.7	119	34.2	NH	06	07	09	2353	212	458	4.62	94	48.8	4	52
93.3	70.0	31	30.8	120	14.8	NH	06	07	10	0609	199	517	3.85	37	100.0	25	18
93.3	80.0	31	10.7	120	55.1	NH	06	07	10	1210	215	454	4.73	53	100.0	9	15
93.3	90.0	30	50.9	121	35.4	NH	06	07	10	1811	206	532	3.87	38	100.0	25	11
93.3	100.0	30	30.8	122	15.6	NH	06	07	11	0003	214	455	4.69	44	100.0	150	538
93.3	110.0	30	10.8	122	55.3	NH	06	07	11	0554	214	487	4.39	27	100.0	121	82
93.3	120.0	29	50.7	123	35.1	NH	06	07	11	1206	215	444	4.84	27	100.0	149	73
93.4	26.4	32	57.1	117	17.0	NH	06	07	08	1257	19	56	3.44	320	100.0	83	395

CalCOFI Cruise 0610

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	05.2	120	46.8	RR	06	11	05	0338	54	124	4.37	8	100.0	2	60
76.7	51.0	35	01.3	120	55.1	RR	06	11	05	0118	177	350	5.06	49	100.0	1	11
76.7	55.0	34	53.3	121	12.1	RR	06	11	04	2034	245	450	5.45	36	100.0	7	0
76.7	60.0	34	43.4	121	32.6	RR	06	11	04	1624	224	465	4.80	11	100.0	3	0
76.7	70.0	34	23.6	122	14.8	RR	06	11	04	0900	219	442	4.96	14	100.0	0	1
76.7	80.0	34	03.2	122	56.5	RR	06	11	04	0404	206	414	4.97	77	53.1	1	0
76.7	90.0	33	43.2	123	38.2	RR	06	11	03	2150	233	397	5.85	73	48.2	1	1
76.7	100.0	33	23.1	124	19.2	RR	06	11	03	1549	219	399	5.47	38	100.0	6	13
80.0	50.5	34	27.9	120	29.2	RR	06	11	01	2053	14	89	1.58	11	100.0	1	19
80.0	51.0	34	27.0	120	31.3	RR	06	11	01	2243	70	158	4.43	6	100.0	0	8
80.0	55.0	34	19.0	120	48.0	RR	06	11	02	0246	217	420	5.16	86	52.7	0	0
80.0	60.0	34	09.0	121	08.7	RR	06	11	02	0657	211	424	4.98	38	100.0	7	1
80.0	70.0	33	49.7	121	49.3	RR	06	11	02	1246	192	448	4.29	27	100.0	14	19

Table 8. (cont.)

CalCOFI Cruise 0610 (cont.)

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
80.0	80.0	33	29.2	122	31.6	RR	06	11	02	1845	212	410	5.18	61	100.0	1	1
80.0	90.0	33	09.0	123	13.2	RR	06	11	03	0107	205	417	4.93	19	100.0	13	8
80.0	100.0	32	49.1	123	54.1	RR	06	11	03	0842	206	430	4.78	53	100.0	8	15
81.7	43.5	34	24.2	119	47.8	RR	06	11	01	1406	14	40	3.54	25	100.0	0	16
81.8	46.9	34	16.6	120	01.4	RR	06	11	01	1721	206	457	4.51	18	100.0	3	15
83.3	39.4	34	15.8	119	19.9	RR	06	11	01	1109	15	36	4.07	28	100.0	2	15
83.3	40.6	34	13.5	119	24.7	RR	06	11	01	0913	22	56	3.90	71	100.0	1	107
83.3	42.0	34	10.6	119	30.3	RR	06	11	01	0730	100	234	4.25	26	100.0	7	5
83.3	51.0	33	52.7	120	08.0	RR	06	10	31	1955	77	160	4.79	100	100.0	7	13
83.3	55.0	33	44.6	120	24.9	RR	06	10	31	1608	214	438	4.88	59	53.8	1	1
83.3	60.0	33	34.7	120	45.4	RR	06	10	31	1214	212	440	4.81	100	52.2	10	2
83.3	70.0	33	14.7	121	26.7	RR	06	10	31	0531	219	400	5.47	30	100.0	1	6
83.3	80.0	32	54.7	122	07.7	RR	06	10	30	2252	219	431	5.07	32	100.0	2	4
83.3	90.0	32	34.6	122	48.9	RR	06	10	30	1708	219	412	5.32	15	100.0	2	1
83.3	100.0	32	14.7	123	29.6	RR	06	10	30	1041	208	446	4.66	27	100.0	3	6
83.3	110.0	31	54.6	124	10.1	RR	06	10	30	0459	208	419	4.96	41	100.0	8	10
85.4	35.8	34	01.2	118	50.6	RR	06	11	01	0236	15	53	2.80	19	100.0	9	125
86.7	33.0	33	53.4	118	29.4	RR	06	10	27	1719	43	91	4.73	33	100.0	15	71
86.7	35.0	33	49.4	118	37.7	RR	06	10	27	2007	206	426	4.84	73	51.6	0	0
86.7	40.0	33	39.4	118	58.4	RR	06	10	28	0042	205	408	5.03	71	48.2	1	5
86.7	45.0	33	29.4	119	19.1	RR	06	10	28	0511	203	426	4.76	52	100.0	6	9
86.7	50.0	33	19.5	119	40.0	RR	06	10	28	0812	53	130	4.12	116	100.0	3	0
86.7	55.0	33	09.5	120	00.3	RR	06	10	28	1253	209	415	5.03	34	100.0	0	0
86.7	60.0	32	59.5	120	20.8	RR	06	10	28	1649	220	411	5.34	51	100.0	2	0
86.7	70.0	32	39.4	121	01.9	RR	06	10	28	2258	201	473	4.25	53	100.0	7	1
86.7	80.0	32	19.5	121	42.6	RR	06	10	29	0431	197	474	4.15	51	100.0	0	0
86.7	90.0	31	59.4	122	23.6	RR	06	10	29	0847	203	458	4.43	37	100.0	0	1
86.7	100.0	31	39.4	123	04.0	RR	06	10	29	1647	214	414	5.17	24	100.0	4	2
86.7	110.0	31	19.4	123	44.6	RR	06	10	29	2219	218	417	5.21	43	100.0	4	2
86.8	32.5	33	53.0	118	26.8	RR	06	10	27	1549	16	56	2.83	53	100.0	5	127
88.5	30.1	33	40.4	118	04.9	RR	06	10	27	1247	12	42	2.91	48	100.0	11	104

Table 8. (cont.)

CalCOFI Cruise 0610 (cont.)

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
90.0	27.7	33	29.7	117	44.8	RR	06	10	27	0749	13	49	2.65	40	100.0	24	130
90.0	28.0	33	29.1	117	46.2	RR	06	10	27	0917	214	414	5.17	31	100.0	0	30
90.0	30.0	33	25.2	117	54.3	RR	06	10	27	0557	193	423	4.55	73	51.6	5	0
90.0	35.0	33	15.1	118	15.1	RR	06	10	27	0124	207	416	4.96	60	52.0	1	10
90.0	37.0	33	11.1	118	23.2	RR	06	10	26	2208	222	397	5.59	70	50.0	4	1
90.0	45.0	32	55.0	118	56.1	RR	06	10	26	1641	208	429	4.85	28	100.0	5	0
90.0	53.0	32	39.2	119	29.0	RR	06	10	26	0918	214	418	5.12	53	100.0	2	1
90.0	60.0	32	25.1	119	57.7	RR	06	10	26	0514	207	429	4.82	61	50.0	11	0
90.0	70.0	32	05.1	120	38.3	RR	06	10	25	2309	214	425	5.03	31	100.0	8	0
90.0	80.0	31	45.1	121	18.8	RR	06	10	25	1708	210	435	4.84	9	100.0	10	17
90.0	90.0	31	25.1	121	59.4	RR	06	10	25	1119	216	455	4.73	11	100.0	5	0
90.0	100.0	31	05.1	122	39.6	RR	06	10	25	0507	214	421	5.07	38	100.0	7	6
90.0	110.0	30	45.1	123	19.9	RR	06	10	24	2304	211	449	4.70	27	100.0	59	21
90.0	120.0	30	25.0	123	59.8	RR	06	10	24	1700	193	479	4.03	19	100.0	36	15
91.7	26.4	33	14.4	117	27.8	RR	06	10	21	1545	12	50	2.45	80	100.0	0	95
93.3	26.7	32	57.3	117	18.3	RR	06	10	21	1145	40	73	5.45	55	100.0	2	12
93.3	28.0	32	54.8	117	23.7	RR	06	10	21	1950	229	414	5.54	58	45.8	6	0
93.3	30.0	32	51.7	117	31.9	RR	06	10	21	2325	222	414	5.36	53	100.0	4	0
93.3	35.0	32	40.8	117	52.3	RR	06	10	22	0450	205	453	4.52	49	100.0	12	0
93.3	40.0	32	30.9	118	12.8	RR	06	10	22	0733	229	397	5.75	58	100.0	9	4
93.3	45.0	32	20.8	118	33.3	RR	06	10	22	1316	207	428	4.84	40	100.0	1	0
93.3	50.0	32	10.8	118	53.6	RR	06	10	22	1711	206	414	4.97	41	100.0	7	2
93.3	55.0	32	00.8	119	14.0	RR	06	10	22	2137	216	438	4.94	55	100.0	10	1
93.3	60.0	31	50.8	119	34.4	RR	06	10	23	0142	208	441	4.72	57	100.0	11	1
93.3	70.0	31	30.6	120	14.5	RR	06	10	23	0605	215	413	5.19	44	100.0	2	3
93.3	80.0	31	11.5	120	53.9	RR	06	10	23	1233	201	431	4.66	42	100.0	32	19
93.3	90.0	30	50.8	121	35.4	RR	06	10	23	1802	216	432	5.01	28	100.0	27	49
93.3	100.0	30	30.8	122	15.5	RR	06	10	23	2345	194	451	4.30	33	100.0	53	6
93.3	110.0	30	10.8	122	55.4	RR	06	10	24	0523	208	445	4.67	18	100.0	34	20
93.3	120.0	29	50.8	123	35.2	RR	06	10	24	1102	222	419	5.29	17	100.0	16	33
93.4	26.4	32	57.0	117	16.8	RR	06	10	21	1314	16	40	4.11	101	100.0	6	25

Table 9. Pooled occurrences of fish larvae taken north of line 60.0 in Bongo net tows on CalCOFI cruises and the CCES cruise in 2006.

Rank	Taxon	Occurrences
1	*Stenobrachius leucopsarus*	33
2	*Sebastes* spp.	22
3	*Lipolagus ochotensis*	18
4	*Merluccius productus*	13
5	*Tarletonbeania crenularis*	10
6	*Liparis fucensis*	9
7	*Protomyctophum thompsoni*	7
7	*Sardinops sagax*	7
9	*Protomyctophum crockeri*	6
9	*Hemilepidotus spinosus*	6
11	*Bathylagus pacificus*	4
11	*Chauliodus macouni*	4
11	*Artedius harringtoni*	4
14	*Anoplopoma fimbria*	3
14	*Sebastes paucispinis*	3
14	*Lyopsetta exilis*	3
17	*Citharichthys stigmaeus*	2
17	*Nansenia candida*	2
17	*Parophrys vetulus*	2
17	*Nannobrachium ritteri*	2
17	*Glyptocephalus zachirus*	2
17	*Icichthys lockingtoni*	2
17	*Melamphaes parvus*	2
17	*Ophiodon elongatus*	2
17	*Ruscarius meanyi*	2
17	*Ronquilus jordani*	2
17	*Ammodytes hexapturus*	2
28	*Engraulis mordax*	1
28	*Argentina sialis*	1
28	*Microstomus pacificus*	1
28	*Bathylagus stilbius*	1
28	Osmeridae	1
28	*Atheresthes stomias*	1
28	*Hexagrammos decagrammus*	1
28	*Isopsetta isolepis*	1
28	*Sebastolobus* spp.	1
28	Disintegrated fish larvae	1
28	*Radulinus asprellus*	1
28	Stichaeidae	1
28	*Melamphaes* spp.	1
28	*Cryptacanthodes aleutensis*	1
28	*Nannobrachium* spp.	1
	Total	189

Table 10. Pooled occurrences of fish larvae taken south of and including line 60.0 in Bongo net tows on CalCOFI cruises and the CCES cruise in 2006.

Rank	Taxon	Occurrences
1	*Stenobrachius leucopsarus*	110
2	*Protomyctophum crockeri*	105
3	*Sebastes* spp.	100
4	*Bathylagus stilbius*	99
5	*Engraulis mordax*	82
6	*Lipolagus ochotensis*	75
7	*Triphoturus mexicanus*	63
8	*Symbolophorus californiensis*	61
9	*Merluccius productus*	53
10	*Diogenichthys atlanticus*	52
10	*Vinciguerria lucetia*	52
12	*Nannobrachium ritteri*	47
13	*Bathylagus wesethi*	45
14	*Cyclothone signata*	43
15	*Nannobrachium* spp.	42
16	*Ceratoscopelus townsendi*	40
17	*Citharichthys stigmaeus*	39
18	*Sardinops sagax*	38
19	*Trachurus symmetricus*	34
20	*Sebastes jordani*	32
21	*Bathylagus pacificus*	22
22	*Argyropelecus sladeni*	21
22	*Lyopsetta exilis*	21
24	*Diaphus* spp.	20
24	*Danaphos oculatus*	20
24	*Genyonemus lineatus*	20
24	*Paralichthys californicus*	20
28	*Idiacanthus antrostomus*	19
28	*Rhinogobiops nicholsii*	19
30	*Melamphaes parvus*	18
30	*Lestidiops ringens*	18
30	*Citharichthys sordidus*	18
33	*Sebastes paucispinis*	15
33	*Parophrys vetulus*	15
35	*Chauliodus macouni*	12
36	Disintegrated fish larvae	11
36	*Stomias atriventer*	11
38	*Argentina sialis*	10
39	*Hypsoblennius jenkinsi*	9
39	*Sternoptyx* spp.	9
39	*Argyropelecus affinis*	9
39	*Cyclothone* spp.	9
39	*Microstoma* spp.	9
44	*Melamphaes* spp.	8
44	*Myctophum nitidulum*	8
46	*Sebastes levis*	7
46	*Poromitra crassiceps*	7

Table 10. (cont.)

Rank	Taxon	Occurrences
46	*Pseudobathylagus milleri*	7
46	Myctophidae	7
46	*Nansenia candida*	7
46	*Tetragonurus cuvieri*	7
52	*Sebastes goodei*	6
52	*Melamphaes lugubris*	6
52	*Atherinopsis californiensis*	6
52	*Paralabrax* spp.	6
52	*Vinciguerria poweriae*	6
52	*Sebastes diploproa*	6
52	*Tarletonbeania crenularis*	6
52	*Scomber japonicus*	6
60	*Scopelosaurus* spp.	5
60	*Oxyjulis californica*	5
60	*Ichthyococcus irregularis*	5
60	*Pleuronichthys ritteri*	5
60	*Hygophum reinhardtii*	5
60	*Citharichthys* spp.	5
66	*Zaniolepis frenata*	4
66	*Benthalbella dentata*	4
66	Paralepididae	4
66	*Cololabis saira*	4
66	*Lampadena urophaos*	4
66	*Zaniolepis latipinnis*	4
66	*Icelinus quadriseriatus*	4
66	*Ruscarius creaseri*	4
66	*Pleuronichthys verticalis*	4
75	*Trachipterus altivelis*	3
75	*Nannobrachium hawaiiensis*	3
75	*Hypsoblennius gilberti*	3
75	*Rathbunella* spp.	3
75	*Gigantactis* spp.	3
75	*Chiasmodon niger*	3
75	*Liparis mucosus*	3
75	*Scorpaenichthys marmoratus*	3
75	*Icichthys lockingtoni*	3
75	*Oxylebius pictus*	3
75	*Sebastes aurora*	3
75	*Scopelogadus bispinosus*	3
75	*Chromis punctipinnis*	3
75	*Lepidogobius lepidus*	3
89	*Argyropelecus lychnus*	2
89	*Hypsoblennius* spp.	2
89	*Tactostoma macropus*	2
89	*Typhlogobius californiensis*	2
89	*Hypsopsetta guttulata*	2
89	*Pleuronichthys coenosus*	2
89	*Parvilux ingens*	2

Table 10. (cont.)

Rank	Taxon	Occurrences
89	*Symphurus atricaudus*	2
89	*Argyropelecus* spp.	2
89	*Hermosilla azurea*	2
89	*Electrona risso*	2
89	*Ophiodon elongatus*	2
89	*Brama japonica*	2
89	*Howella* spp.	2
89	*Xenistius californiensis*	2
89	*Notoscopelus resplendens*	2
105	*Sigmops ebelingi*	1
105	*Argyropelecus hemigymnus*	1
105	Serranidae	1
105	*Macroramphosus gracilis*	1
105	*Lythrypnus zebra*	1
105	Unidentified fish larvae	1
105	*Eurypharynx pelecanoides*	1
105	Stomiidae	1
105	*Sphyraena argentea*	1
105	*Cyclothone pseudopallida*	1
105	*Bathophilus flemingi*	1
105	*Artedius lateralis*	1
105	*Chitonotus pugetensis*	1
105	*Xystreurys liolepis*	1
105	*Leptocottus armatus*	1
105	*Lepidopsetta bilineata*	1
105	*Microstomus pacificus*	1
105	*Pleuronichthys* spp.	1
105	*Paricelinus hopliticus*	1
105	*Ruscarius meanyi*	1
105	*Synchirus gilli*	1
105	*Odontopyxis trispinosa*	1
105	*Artedius harringtoni*	1
105	*Chilara taylori*	1
105	*Hypsypops rubicundus*	1
105	*Xeneretmus latifrons*	1
105	*Loweina rara*	1
105	*Medialuna californiensis*	1
105	*Notolychnus valdiviae*	1
105	*Menticirrhus undulatus*	1
105	Stichaeidae	1
105	*Lampanyctus steinbecki*	1
105	*Lampanyctus acanthurus*	1
105	*Nezumia* spp.	1
105	*Ilypnus gilberti*	1
105	*Neoclinus stephensae*	1
105	*Icosteus aenigmaticus*	1
105	*Lestidiops* spp.	1
105	*Arctozenus risso*	1

Table 10. (cont.)

Rank	Taxon	Occurrences
105	*Ophidion scrippsae*	1
105	*Synodus lucioceps*	1
105	*Brosmophycis marginata*	1
105	*Rosenblattichthys volucris*	1
105	*Cataetyx rubrirostris*	1
105	*Oneirodes* spp.	1
105	*Aristostomias scintillans*	1
105	*Anisotremus davidsoni*	1
105	*Diogenichthys laternatus*	1
105	*Plectobranchus evides*	1
	Total	1862

Table 11. Pooled counts of fish larvae taken north of line 60.0 in Bongo net tows on CalCOFI cruises and the CCES cruise in 2006. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Stenobrachius leucopsarus*	3301
2	*Sebastes* spp.	862
3	*Merluccius productus*	693
4	*Lipolagus ochotensis*	500
5	*Sardinops sagax*	252
6	*Tarletonbeania crenularis*	87
7	*Protomyctophum thompsoni*	65
8	*Liparis fucensis*	60
9	*Protomyctophum crockeri*	57
10	*Hemilepidotus spinosus*	46
10	*Ammodytes hexapturus*	46
12	*Bathylagus pacificus*	39
12	*Lyopsetta exilis*	39
14	*Cryptacanthodes aleutensis*	36
15	*Chauliodus macouni*	35
16	*Artedius harringtoni*	33
17	*Ophiodon elongatus*	30
18	*Sebastes paucispinis*	26
18	*Parophrys vetulus*	26
20	*Glyptocephalus zachirus*	24
20	*Anoplopoma fimbria*	24
22	*Nannobrachium ritteri*	19
23	*Icichthys lockingtoni*	18
23	*Nansenia candida*	18
25	*Ronquilus jordani*	17
26	*Melamphaes parvus*	13
27	*Ruscarius meanyi*	12
28	*Bathylagus stilbius*	10
28	*Atheresthes stomias*	10
30	*Isopsetta isolepis*	9
30	*Citharichthys stigmaeus*	9
30	*Radulinus asprellus*	9
30	Disintegrated fish larvae	9
30	*Argentina sialis*	9
35	*Nannobrachium* spp.	8
36	*Melamphaes* spp.	7
36	*Hexagrammos decagrammus*	7
38	*Microstomus pacificus*	5
39	*Engraulis mordax*	4
39	Stichaeidae	4
39	*Sebastolobus* spp.	4
42	Osmeridae	3
	Total	6485

Table 12. Pooled counts of fish larvae taken south of and including line 60.0 in Bongo net tows on CalCOFI cruises and the CCES cruise in 2006. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Engraulis mordax*	10814
2	*Sardinops sagax*	10226
3	*Stenobrachius leucopsarus*	6657
4	*Vinciguerria lucetia*	5636
5	*Bathylagus stilbius*	4800
6	*Sebastes* spp.	4726
7	*Merluccius productus*	2345
8	*Lipolagus ochotensis*	1594
9	*Triphoturus mexicanus*	1481
10	*Sebastes jordani*	1454
11	*Genyonemus lineatus*	1078
12	*Protomyctophum crockeri*	1044
13	*Trachurus symmetricus*	892
14	*Bathylagus wesethi*	752
15	*Symbolophorus californiensis*	749
16	*Ceratoscopelus townsendi*	678
17	*Diogenichthys atlanticus*	534
18	*Cyclothone signata*	523
19	*Nannobrachium ritteri*	450
20	*Citharichthys stigmaeus*	430
21	*Nannobrachium* spp.	393
22	*Lyopsetta exilis*	320
23	*Hypsoblennius jenkinsi*	251
24	*Bathylagus pacificus*	241
25	*Parophrys vetulus*	214
26	*Paralichthys californicus*	206
27	*Diaphus* spp.	195
28	*Citharichthys sordidus*	156
28	*Idiacanthus antrostomus*	156
30	*Lestidiops ringens*	146
31	*Sebastes paucispinis*	137
32	*Rhinogobiops nicholsii*	136
33	*Sebastes goodei*	130
34	*Danaphos oculatus*	128
35	*Melamphaes parvus*	118
36	*Argyropelecus sladeni*	117
37	*Stomias atriventer*	89
38	*Sebastes levis*	83
39	*Argentina sialis*	77
40	Disintegrated fish larvae	73
41	*Paralabrax* spp.	72
42	*Chauliodus macouni*	70
43	*Tetragonurus cuvieri*	64
44	*Argyropelecus affinis*	62
45	Myctophidae	61
46	*Microstoma* spp.	55

Table 12. (cont.)

Rank	Taxon	Count
47	*Myctophum nitidulum*	50
48	*Sternoptyx* spp.	49
49	*Nansenia candida*	48
50	*Cyclothone* spp.	41
51	*Pseudobathylagus milleri*	40
52	*Tarletonbeania crenularis*	39
53	*Scomber japonicus*	38
53	*Melamphaes* spp.	38
55	*Ruscarius creaseri*	37
56	*Sebastes diploproa*	36
56	*Poromitra crassiceps*	36
58	*Pleuronichthys verticalis*	34
58	*Ichthyococcus irregularis*	34
60	*Oxyjulis californica*	33
61	*Liparis mucosus*	32
62	*Lampadena urophaos*	30
62	*Tactostoma macropus*	30
64	*Vinciguerria poweriae*	29
65	*Citharichthys* spp.	28
65	*Hygophum reinhardtii*	28
65	*Melamphaes lugubris*	28
65	*Anisotremus davidsoni*	28
69	*Chromis punctipinnis*	27
69	*Scopelosaurus* spp.	27
69	*Cololabis saira*	27
69	*Rathbunella* spp.	27
73	*Pleuronichthys ritteri*	26
74	*Zaniolepis frenata*	25
75	*Zaniolepis latipinnis*	24
76	*Scorpaenichthys marmoratus*	21
76	*Symphurus atricaudus*	21
76	*Atherinopsis californiensis*	21
79	*Chiasmodon niger*	20
79	*Xenistius californiensis*	20
79	*Microstomus pacificus*	20
82	Paralepididae	19
82	*Benthalbella dentata*	19
84	*Sebastes aurora*	18
84	*Hypsoblennius* spp.	18
84	*Icichthys lockingtoni*	18
87	*Oxylebius pictus*	17
87	*Icelinus quadriseriatus*	17
89	*Hypsopsetta guttulata*	16
90	*Gigantactis* spp.	15
90	*Trachipterus altivelis*	15
92	*Hypsoblennius gilberti*	14
92	*Parvilux ingens*	14
94	*Notoscopelus resplendens*	13

Table 12. (cont.)

Rank	Taxon	Count
94	*Diogenichthys laternatus*	13
94	*Nannobrachium hawaiiensis*	13
94	*Ophiodon elongatus*	13
98	*Scopelogadus bispinosus*	12
99	*Argyropelecus* spp.	11
100	*Electrona risso*	10
100	*Sphyraena argentea*	10
100	*Cataetyx rubrirostris*	10
100	*Howella* spp.	10
100	*Typhlogobius californiensis*	10
105	*Pleuronichthys* spp.	9
105	*Paricelinus hopliticus*	9
105	*Lythrypnus zebra*	9
105	*Brama japonica*	9
105	*Lestidiops* spp.	9
105	*Argyropelecus lychnus*	9
105	*Lepidogobius lepidus*	9
112	*Pleuronichthys coenosus*	8
112	*Medialuna californiensis*	8
112	*Hermosilla azurea*	8
115	*Chitonotus pugetensis*	6
115	*Artedius lateralis*	6
117	*Aristostomias scintillans*	5
117	Unidentified fish larvae	5
117	*Cyclothone pseudopallida*	5
117	Stomiidae	5
117	*Arctozenus risso*	5
117	*Argyropelecus hemigymnus*	5
117	*Chilara taylori*	5
117	*Icosteus aenigmaticus*	5
117	*Ruscarius meanyi*	5
117	*Hypsypops rubicundus*	5
117	*Sigmops ebelingi*	5
117	*Nezumia* spp.	5
117	*Notolychnus valdiviae*	5
117	*Loweina rara*	5
117	*Lampanyctus steinbecki*	5
117	*Lepidopsetta bilineata*	5
117	*Bathophilus flemingi*	5
134	*Ophidion scrippsae*	4
134	*Xystreurys liolepis*	4
134	*Oneirodes* spp.	4
134	*Lampanyctus acanthurus*	4
134	*Synodus lucioceps*	4
134	*Plectobranchus evides*	4
134	*Eurypharynx pelecanoides*	4
134	*Rosenblattichthys volucris*	4
134	*Macroramphosus gracilis*	4

Table 12. (cont.)

Rank	Taxon	Count
134	*Xeneretmus latifrons*	4
134	*Brosmophycis marginata*	4
145	Serranidae	3
145	*Menticirrhus undulatus*	3
145	*Leptocottus armatus*	3
145	*Ilypnus gilberti*	3
145	*Neoclinus stephensae*	3
145	Stichaeidae	3
145	*Artedius harringtoni*	3
152	*Odontopyxis trispinosa*	2
152	*Synchirus gilli*	2
	Total	62283

Table 13. Numbers of fish larvae taken north of line 60.0 in Bongo net tows on CalCOFI cruises and the CCES cruise in 2006. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Sardinops sagax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
31.6 37.8	-	-	-	9.1	-	-	-	-	-	-	-	-
35.0 61.3	-	-	-	40.0	-	-	-	-	-	-	-	-
36.7 52.6	-	-	-	96.9	-	-	-	-	-	-	-	-
41.7 75.1	-	-	-	73.1	-	-	-	-	-	-	-	-
43.4 66.5	-	-	-	23.9	-	-	-	-	-	-	-	-
45.0 57.7	-	-	-	5.0	-	-	-	-	-	-	-	-
56.7 51.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Engraulis mordax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
56.7 51.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Argentina sialis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
25.0 21.9	-	-	-	8.7	-	-	-	-	-	-	-	-

Nansenia candida

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
28.3 55.4	-	-	-	9.0	-	-	-	-	-	-	-	-
36.7 52.6	-	-	-	8.8	-	-	-	-	-	-	-	-

Lipolagus ochotensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1.8 19.1	-	-	-	9.9	-	-	-	-	-	-	-	-
9.9 16.0	-	-	-	8.8	-	-	-	-	-	-	-	-
11.6 7.0	-	-	-	8.3	-	-	-	-	-	-	-	-
14.9 29.8	-	-	-	17.3	-	-	-	-	-	-	-	-
21.6 39.7	-	-	-	53.6	-	-	-	-	-	-	-	-
23.3 30.8	-	-	-	38.1	-	-	-	-	-	-	-	-
25.0 21.9	-	-	-	26.2	-	-	-	-	-	-	-	-
28.3 55.4	-	-	-	63.0	-	-	-	-	-	-	-	-
29.9 46.6	-	-	-	8.4	-	-	-	-	-	-	-	-
31.6 37.8	-	-	-	45.3	-	-	-	-	-	-	-	-
35.0 61.3	-	-	-	48.0	-	-	-	-	-	-	-	-

Table 13. (cont.)

Lipolagus ochotensis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
36.7 52.6	-	-	-	26.4	-	-	-	-	-	-	-	-
38.3 43.8	-	-	-	27.4	-	-	-	-	-	-	-	-
41.7 75.1	-	-	-	18.3	-	-	-	-	-	-	-	-
43.4 66.5	-	-	-	47.8	-	-	-	-	-	-	-	-
45.0 57.7	-	-	-	19.9	-	-	-	-	-	-	-	-
56.7 51.0	-	-	-	4.4	-	-	-	-	-	-	-	-
56.7 55.0	-	-	-	31.3	-	-	-	-	-	-	-	-

Bathylagus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-11.1 46.2	-	-	-	14.3	-	-	-	-	-	-	-	-
.1 28.0	-	-	-	7.5	-	-	-	-	-	-	-	-
9.9 16.0	-	-	-	8.8	-	-	-	-	-	-	-	-
29.9 46.6	-	-	-	8.4	-	-	-	-	-	-	-	-

Bathylagus stilbius

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
56.7 55.0	-	-	-	10.4	-	-	-	-	-	-	-	-

Osmeridae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
13.3 -2.0	-	-	-	2.7	-	-	-	-	-	-	-	-

Chauliodus macouni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
14.9 29.8	-	-	-	8.7	-	-	-	-	-	-	-	-
18.3 12.0	-	-	-	8.3	-	-	-	-	-	-	-	-
21.6 39.7	-	-	-	8.9	-	-	-	-	-	-	-	-
36.7 52.6	-	-	-	8.8	-	-	-	-	-	-	-	-

***Nannobrachium* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
18.3 12.0	-	-	-	8.3	-	-	-	-	-	-	-	-

Nannobrachium ritteri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
21.6 39.7	-	-	-	8.9	-	-	-	-	-	-	-	-
56.7 55.0	-	-	-	10.4	-	-	-	-	-	-	-	-

Table 13. (cont.)

		Stenobrachius leucopsarus											
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-12.3	33.3	-	-	-	23.1	-	-	-	-	-	-	-	-
-11.1	46.2	-	-	-	85.9	-	-	-	-	-	-	-	-
-10.7	24.3	-	-	-	27.5	-	-	-	-	-	-	-	-
-9.4	37.4	-	-	-	17.2	-	-	-	-	-	-	-	-
-8.9	15.4	-	-	-	28.6	-	-	-	-	-	-	-	-
-4.7	33.2	-	-	-	7.7	-	-	-	-	-	-	-	-
-3.0	24.3	-	-	-	7.4	-	-	-	-	-	-	-	-
.1	28.0	-	-	-	67.6	-	-	-	-	-	-	-	-
1.8	19.1	-	-	-	99.4	-	-	-	-	-	-	-	-
8.2	25.0	-	-	-	25.5	-	-	-	-	-	-	-	-
9.9	16.0	-	-	-	307.8	-	-	-	-	-	-	-	-
11.6	7.0	-	-	-	90.9	-	-	-	-	-	-	-	-
14.9	29.8	-	-	-	173.3	-	-	-	-	-	-	-	-
16.6	20.9	-	-	-	97.3	-	-	-	-	-	-	-	-
18.3	12.0	-	-	-	33.1	-	-	-	-	-	-	-	-
21.6	39.7	-	-	-	151.9	-	-	-	-	-	-	-	-
23.3	30.8	-	-	-	161.8	-	-	-	-	-	-	-	-
25.0	21.9	-	-	-	200.9	-	-	-	-	-	-	-	-
28.3	55.4	-	-	-	251.8	-	-	-	-	-	-	-	-
29.9	46.6	-	-	-	135.1	-	-	-	-	-	-	-	-
31.6	37.8	-	-	-	145.0	-	-	-	-	-	-	-	-
33.3	29.0	-	-	-	216.4	-	-	-	-	-	-	-	-
35.0	61.3	-	-	-	264.1	-	-	-	-	-	-	-	-
36.7	52.6	-	-	-	193.7	-	-	-	-	-	-	-	-
38.3	43.8	-	-	-	36.5	-	-	-	-	-	-	-	-
41.7	75.1	-	-	-	109.6	-	-	-	-	-	-	-	-
43.4	66.5	-	-	-	79.6	-	-	-	-	-	-	-	-
45.0	57.7	-	-	-	89.6	-	-	-	-	-	-	-	-
53.3	50.0	-	-	-	3.7	-	-	-	-	-	-	-	-
53.3	80.0	-	-	-	11.7	-	-	-	-	-	-	-	-
53.3	90.0	-	-	-	22.7	-	-	-	-	-	-	-	-
56.7	51.0	-	-	-	17.7	-	-	-	-	-	-	-	-

Table 13. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
56.7 55.0	-	-	-	114.9	-	-	-	-	-	-	-	-

Protomyctophum crockeri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
21.6 39.7	-	-	-	8.9	-	-	-	-	-	-	-	-
31.6 37.8	-	-	-	9.1	-	-	-	-	-	-	-	-
33.3 29.0	-	-	-	6.8	-	-	-	-	-	-	-	-
36.7 52.6	-	-	-	17.6	-	-	-	-	-	-	-	-
41.7 75.1	-	-	-	9.1	-	-	-	-	-	-	-	-
45.0 57.7	-	-	-	5.0	-	-	-	-	-	-	-	-

Protomyctophum thompsoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-11.1 46.2	-	-	-	7.2	-	-	-	-	-	-	-	-
-4.7 33.2	-	-	-	7.7	-	-	-	-	-	-	-	-
-3.0 24.3	-	-	-	7.4	-	-	-	-	-	-	-	-
14.9 29.8	-	-	-	17.3	-	-	-	-	-	-	-	-
18.3 12.0	-	-	-	8.3	-	-	-	-	-	-	-	-
28.3 55.4	-	-	-	9.0	-	-	-	-	-	-	-	-
36.7 52.6	-	-	-	8.8	-	-	-	-	-	-	-	-

Tarletonbeania crenularis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1.8 19.1	-	-	-	9.9	-	-	-	-	-	-	-	-
14.9 29.8	-	-	-	8.7	-	-	-	-	-	-	-	-
21.6 39.7	-	-	-	8.9	-	-	-	-	-	-	-	-
23.3 30.8	-	-	-	19.0	-	-	-	-	-	-	-	-
29.9 46.6	-	-	-	8.4	-	-	-	-	-	-	-	-
31.6 37.8	-	-	-	9.1	-	-	-	-	-	-	-	-
33.3 29.0	-	-	-	6.8	-	-	-	-	-	-	-	-
43.4 66.5	-	-	-	8.0	-	-	-	-	-	-	-	-
53.3 80.0	-	-	-	3.9	-	-	-	-	-	-	-	-
53.3 90.0	-	-	-	3.8	-	-	-	-	-	-	-	-

Table 13. (cont.)

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
21.6	39.7	-	-	-	71.5	-	-	-	-	-	-	-	-
23.3	30.8	-	-	-	66.6	-	-	-	-	-	-	-	-
25.0	21.9	-	-	-	26.2	-	-	-	-	-	-	-	-
26.7	13.0	-	-	-	35.3	-	-	-	-	-	-	-	-
28.3	55.4	-	-	-	45.0	-	-	-	-	-	-	-	-
29.9	46.6	-	-	-	42.2	-	-	-	-	-	-	-	-
31.6	37.8	-	-	-	54.4	-	-	-	-	-	-	-	-
33.3	29.0	-	-	-	13.5	-	-	-	-	-	-	-	-
35.0	61.3	-	-	-	56.0	-	-	-	-	-	-	-	-
36.7	52.6	-	-	-	79.3	-	-	-	-	-	-	-	-
41.7	75.1	-	-	-	100.5	-	-	-	-	-	-	-	-
43.4	66.5	-	-	-	71.7	-	-	-	-	-	-	-	-
56.7	55.0	-	-	-	31.3	-	-	-	-	-	-	-	-

***Melamphaes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
16.6	20.9	-	-	-	7.5	-	-	-	-	-	-	-	-

Melamphaes parvus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
28.3	55.4	-	-	-	9.0	-	-	-	-	-	-	-	-
53.3	80.0	-	-	-	3.9	-	-	-	-	-	-	-	-

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-12.3	33.3	-	-	-	69.4	-	-	-	-	-	-	-	-
-11.1	46.2	-	-	-	64.5	-	-	-	-	-	-	-	-
-10.7	24.3	-	-	-	13.7	-	-	-	-	-	-	-	-
-7.7	28.5	-	-	-	8.6	-	-	-	-	-	-	-	-
-7.2	6.4	-	-	-	8.3	-	-	-	-	-	-	-	-
-4.3	10.6	-	-	-	13.4	-	-	-	-	-	-	-	-
-3.0	24.3	-	-	-	29.8	-	-	-	-	-	-	-	-
.1	28.0	-	-	-	15.0	-	-	-	-	-	-	-	-
1.8	19.1	-	-	-	9.9	-	-	-	-	-	-	-	-
8.2	25.0	-	-	-	17.0	-	-	-	-	-	-	-	-

Table 13. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
9.9	16.0	-	-	-	26.4	-	-	-	-	-	-	-	-
11.6	7.0	-	-	-	16.5	-	-	-	-	-	-	-	-
14.9	29.8	-	-	-	225.3	-	-	-	-	-	-	-	-
16.6	20.9	-	-	-	29.9	-	-	-	-	-	-	-	-
18.3	12.0	-	-	-	16.6	-	-	-	-	-	-	-	-
21.6	39.7	-	-	-	17.9	-	-	-	-	-	-	-	-
23.3	30.8	-	-	-	47.6	-	-	-	-	-	-	-	-
25.0	21.9	-	-	-	8.7	-	-	-	-	-	-	-	-
26.7	13.0	-	-	-	194.0	-	-	-	-	-	-	-	-
28.3	55.4	-	-	-	18.0	-	-	-	-	-	-	-	-
33.3	29.0	-	-	-	6.8	-	-	-	-	-	-	-	-
56.7	51.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-11.1	46.2	-	-	-	7.2	-	-	-	-	-	-	-	-
-7.7	28.5	-	-	-	8.6	-	-	-	-	-	-	-	-
1.8	19.1	-	-	-	9.9	-	-	-	-	-	-	-	-

***Sebastolobus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
53.3	80.0	-	-	-	3.9	-	-	-	-	-	-	-	-

Anoplopoma fimbria

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-12.3	33.3	-	-	-	7.7	-	-	-	-	-	-	-	-
-11.1	46.2	-	-	-	7.2	-	-	-	-	-	-	-	-
21.6	39.7	-	-	-	8.9	-	-	-	-	-	-	-	-

Hexagrammos decagrammus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9	15.4	-	-	-	7.1	-	-	-	-	-	-	-	-

Ophiodon elongatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-7.2	6.4	-	-	-	25.0	-	-	-	-	-	-	-	-
.4	6.4	-	-	-	4.6	-	-	-	-	-	-	-	-

Table 13. (cont.)

Artedius harringtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-4.3	10.6	-	-	-	3.4	-	-	-	-	-	-	-	-
.4	6.4	-	-	-	9.1	-	-	-	-	-	-	-	-
40.0	35.0	-	-	-	8.0	-	-	-	-	-	-	-	-
56.7	51.0	-	-	-	13.3	-	-	-	-	-	-	-	-

Hemilepidotus spinosus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-12.3	33.3	-	-	-	7.7	-	-	-	-	-	-	-	-
-11.1	46.2	-	-	-	7.2	-	-	-	-	-	-	-	-
-9.4	37.4	-	-	-	8.6	-	-	-	-	-	-	-	-
-8.9	15.4	-	-	-	7.1	-	-	-	-	-	-	-	-
-4.7	33.2	-	-	-	7.7	-	-	-	-	-	-	-	-
-3.0	24.3	-	-	-	7.4	-	-	-	-	-	-	-	-

Radulinus asprellus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
56.7	51.0	-	-	-	8.8	-	-	-	-	-	-	-	-

Ruscarius meanyi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
.4	6.4	-	-	-	4.6	-	-	-	-	-	-	-	-
53.3	50.0	-	-	-	7.4	-	-	-	-	-	-	-	-

Liparis fucensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-12.3	33.3	-	-	-	7.7	-	-	-	-	-	-	-	-
-10.7	24.3	-	-	-	6.9	-	-	-	-	-	-	-	-
-9.4	37.4	-	-	-	8.6	-	-	-	-	-	-	-	-
-7.2	6.4	-	-	-	8.3	-	-	-	-	-	-	-	-
-4.3	10.6	-	-	-	3.4	-	-	-	-	-	-	-	-
.4	6.4	-	-	-	4.6	-	-	-	-	-	-	-	-
16.6	20.9	-	-	-	7.5	-	-	-	-	-	-	-	-
38.3	43.8	-	-	-	9.1	-	-	-	-	-	-	-	-
56.7	51.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Table 13. (cont.)

Ronquilus jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-7.2	6.4	-	-	-	8.3	-	-	-	-	-	-	-	-
.4	6.4	-	-	-	9.1	-	-	-	-	-	-	-	-

Stichaeidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
40.0	35.0	-	-	-	4.0	-	-	-	-	-	-	-	-

Cryptacanthodes aleutensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9	15.4	-	-	-	35.7	-	-	-	-	-	-	-	-

Ammodytes hexapturus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
-8.9	15.4	-	-	-	28.6	-	-	-	-	-	-	-	-
-7.2	6.4	-	-	-	16.6	-	-	-	-	-	-	-	-

Icichthys lockingtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
36.7	52.6	-	-	-	8.8	-	-	-	-	-	-	-	-
41.7	75.1	-	-	-	9.1	-	-	-	-	-	-	-	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
20.0	3.0	-	-	-	4.6	-	-	-	-	-	-	-	-
53.3	50.0	-	-	-	3.7	-	-	-	-	-	-	-	-

Atheresthes stomias

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1.8	19.1	-	-	-	9.9	-	-	-	-	-	-	-	-

Glyptocephalus zachirus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
11.6	7.0	-	-	-	16.5	-	-	-	-	-	-	-	-
16.6	20.9	-	-	-	7.5	-	-	-	-	-	-	-	-

Isopsetta isolepis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
.4	6.4	-	-	-	9.1	-	-	-	-	-	-	-	-

Table 13. (cont.)

Lyopsetta exilis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
9.9 16.0	-	-	-	8.8	-	-	-	-	-	-	-	-
11.6 7.0	-	-	-	8.3	-	-	-	-	-	-	-	-
56.7 51.0	-	-	-	22.1	-	-	-	-	-	-	-	-

Microstomus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
20.0 3.0	-	-	-	4.6	-	-	-	-	-	-	-	-

Parophrys vetulus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
13.3 -2.0	-	-	-	8.2	-	-	-	-	-	-	-	-
26.7 13.0	-	-	-	17.6	-	-	-	-	-	-	-	-

Disintegrated fish larvae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
41.7 75.1	-	-	-	9.1	-	-	-	-	-	-	-	-

Table 14. Numbers of fish larvae taken south of and including line 60.0 in Bongo net tows at stations occupied on CalCOFI cruises and the CCES cruise in 2006. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Eurypharynx pelecanoides

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-

Sardinops sagax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 90.0	-	-	-	22.7	-	-	-	-	-	-	-	-
66.7 52.0	-	-	-	10.6	-	-	-	-	-	-	-	-
76.7 70.0	-	0.0	-	9.2	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	13.7	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	4.8	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	17.5	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	0.0	-	69.4	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	57.5	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	32.8	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	8.2	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	0.0	-	13.2	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	0.0	-	197.5	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	559.2	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	11.5	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	11.2	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	107.2	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	0.0	-	171.2	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	67.2	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	207.5	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	24.2	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	9.6	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	9.9	-	-	0.0	-	-
90.0 60.0	-	0.0	-	1362.9	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	117.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Sardinops sagax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	-	0.0	-	72.6	-	-	0.0	-	-	0.0	-	-
91.7 26.4	-	0.0	-	0.0	-	-	3.1	-	-	0.0	-	-
93.3 40.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	0.0	-	25.2	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	504.9	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	3116.8	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	364.7	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	830.8	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	9.4	-	-	0.0	-	-
95.0 45.0	-	-	-	194.0	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	1971.0	-	-	-	-	-	-	-	-

Engraulis mordax

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	68.2	-	-	-	-	-	-	-	-
61.7 55.0	-	-	-	11.1	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	38.6	-	-	-	-	-	-	-	-
76.7 49.0	-	0.0	-	0.0	-	-	450.7	-	-	-	0.0	-
76.7 51.0	-	0.0	-	0.0	-	-	18.4	-	-	-	0.0	-
76.7 55.0	-	0.0	-	0.0	-	-	9.5	-	-	-	0.0	-
76.7 60.0	-	0.0	-	0.0	-	-	19.6	-	-	-	0.0	-
76.7 70.0	-	0.0	-	0.0	-	-	8.3	-	-	-	0.0	-
80.0 50.5	-	0.0	-	0.0	-	-	84.3	-	-	-	0.0	-
80.0 51.0	-	0.0	-	0.0	-	-	542.5	-	-	-	0.0	-
80.0 55.0	-	0.0	-	0.0	-	-	35.5	-	-	-	0.0	-
80.0 60.0	-	0.0	-	37.7	-	-	174.6	-	-	-	0.0	-
81.7 43.5	-	-	-	0.0	-	-	5.8	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	1762.4	-	-	-	0.0	-
83.3 39.4	-	0.0	-	2.7	-	-	4.6	-	-	-	0.0	-
83.3 40.6	-	0.0	-	6.6	-	-	25.5	-	-	-	0.0	-
83.3 42.0	-	0.0	-	18.0	-	-	862.6	-	-	-	8.5	-
83.3 51.0	-	-	-	4.3	-	-	119.2	-	-	0.0	-	-
83.3 55.0	-	0.0	-	0.0	-	-	100.1	-	-	0.0	-	-
83.3 60.0	-	0.0	-	0.0	-	-	69.7	-	-	0.0	-	-

Table 14. (cont.)

Engraulis mordax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	-	0.0	-	0.0	-	-	18.6	-	-	0.0	-	-
85.4 35.8	-	-	-	5.0	-	-	-	-	-	-	0.0	-
86.7 33.0	-	0.0	-	41.5	-	-	8.3	-	-	9.5	-	-
86.7 35.0	-	0.0	-	415.4	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	273.6	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.0	-	50.2	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	14.2	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	9.9	-	22.0	-	-	36.2	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	30.2	-	-	0.0	-	-
86.7 90.0	-	0.0	-	4.8	-	-	4.3	-	-	0.0	-	-
86.7 110.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	0.0	-	78.0	-	-	2.9	-	-	0.0	-	-
88.5 30.1	-	0.0	-	721.5	-	-	650.7	-	-	11.6	-	-
90.0 27.7	-	0.0	-	374.1	-	-	13.9	-	-	47.7	-	-
90.0 28.0	-	0.0	-	189.9	-	-	18.7	-	-	0.0	-	-
90.0 30.0	-	0.0	-	234.5	-	-	9.6	-	-	0.0	-	-
90.0 35.0	-	0.0	-	630.5	-	-	14.8	-	-	0.0	-	-
90.0 37.0	-	0.0	-	929.4	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	9.4	-	-	4.9	-	-	0.0	-	-
90.0 53.0	-	0.0	-	42.8	-	-	9.6	-	-	0.0	-	-
90.0 60.0	-	0.0	-	19.4	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
91.7 26.4	-	0.0	-	27.6	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	160.0	-	-	17.6	-	-	5.5	-	-
93.3 28.0	-	0.0	-	171.3	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	147.2	-	-	0.0	-	-	10.7	-	-
93.3 35.0	-	0.0	-	79.5	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	26.9	-	-	33.9	-	-	0.0	-	-
93.3 60.0	-	0.0	-	22.1	-	-	18.9	-	-	0.0	-	-
93.3 70.0	-	0.0	-	33.8	-	-	0.0	-	-	0.0	-	-
93.4 26.4	-	0.0	-	32.0	-	-	24.1	-	-	0.0	-	-
95.0 28.0	-	-	-	252.6	-	-	-	-	-	-	-	-

Table 14. (cont.)

Engraulis mordax (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
95.0 30.0	-	-	-	189.6	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	84.1	-	-	-	-	-	-	-	-

Argentina sialis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	-	0.0	-	0.0	-	-	9.5	-	-	-	0.0	-
76.7 60.0	-	0.0	-	4.3	-	-	0.0	-	-	-	0.0	-
86.7 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	8.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	9.7	-	20.2	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-

***Microstoma* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
71.7 80.0	-	-	-	5.0	-	-	-	-	-	-	-	-
80.0 80.0	-	0.0	-	3.8	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
83.3 100.0	-	8.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	5.4	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	10.1	-	-
93.3 35.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	0.0	-	-	8.5	-	-	0.0	-	-

Nansenia candida

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	9.1	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	0.0	-	-	5.1	-	-	-	0.0	-
76.7 100.0	-	0.0	-	4.4	-	-	0.0	-	-	-	0.0	-
83.3 80.0	-	0.0	-	9.9	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	9.3	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	5.6	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	5.4	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Pseudobathylagus milleri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	60.0	-	4.7	-	-	-	-	-	-	-	-	-	-
60.0	70.0	-	4.8	-	-	-	-	-	-	-	-	-	-
63.3	70.0	-	4.8	-	-	-	-	-	-	-	-	-	-
71.7	90.0	-	-	-	5.1	-	-	-	-	-	-	-	-
76.7	60.0	-	10.0	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	70.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
90.0	90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-

Lipolagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	12.8	-	-	-	-	-	-	-	-	-	-
60.0	60.0	-	37.5	-	-	-	-	-	-	-	-	-	-
60.0	70.0	-	4.8	-	-	-	-	-	-	-	-	-	-
61.7	60.0	-	-	-	38.6	-	-	-	-	-	-	-	-
61.7	70.0	-	-	-	25.5	-	-	-	-	-	-	-	-
61.7	80.0	-	-	-	16.7	-	-	-	-	-	-	-	-
63.3	60.0	-	40.6	-	-	-	-	-	-	-	-	-	-
63.3	70.0	-	24.0	-	-	-	-	-	-	-	-	-	-
66.7	52.0	-	-	-	10.6	-	-	-	-	-	-	-	-
66.7	55.0	-	9.3	-	8.3	-	-	-	-	-	-	-	-
66.7	60.0	-	34.8	-	49.3	-	-	-	-	-	-	-	-
66.7	70.0	-	47.9	-	9.8	-	-	-	-	-	-	-	-
66.7	80.0	-	38.5	-	18.7	-	-	-	-	-	-	-	-
66.7	90.0	-	-	-	4.9	-	-	-	-	-	-	-	-
70.0	55.0	-	72.2	-	-	-	-	-	-	-	-	-	-
70.0	60.0	-	45.3	-	-	-	-	-	-	-	-	-	-
70.0	70.0	-	20.9	-	-	-	-	-	-	-	-	-	-
70.0	80.0	-	28.9	-	-	-	-	-	-	-	-	-	-
71.7	80.0	-	-	-	5.0	-	-	-	-	-	-	-	-
71.7	90.0	-	-	-	15.3	-	-	-	-	-	-	-	-
73.3	60.0	-	76.9	-	-	-	-	-	-	-	-	-	-
73.3	70.0	-	13.1	-	-	-	-	-	-	-	-	-	-
76.7	49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
76.7	51.0	-	41.6	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

Lipolagus ochotensis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	-	9.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	19.9	-	12.9	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	19.7	-	4.6	-	-	8.3	-	-	-	0.0	-
76.7 80.0	-	0.0	-	0.0	-	-	9.5	-	-	-	0.0	-
80.0 60.0	-	18.7	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	76.0	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	4.5	-	3.8	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	31.7	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 60.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	7.0	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	0.0	-	9.9	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	18.6	-	-	0.0	-	-	0.0	-	-
86.7 33.0	-	0.0	-	16.6	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	27.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	17.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	9.9	-	60.2	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	58.8	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	27.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	9.2	-	10.7	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	4.4	-	10.3	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	52.1	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	9.7	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	18.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	24.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	27.8	-	30.2	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	9.6	-	38.8	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Lipolagus ochotensis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 55.0	-	0.0	-	17.9	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	9.7	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 45.0	-	-	-	10.8	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	28.0	-	-	-	-	-	-	-	-

Bathylagus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	37.5	-	-	-	-	-	-	-	-	-	-
60.0 70.0	-	4.8	-	-	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	9.7	-	-	-	-	-	-	-	-
63.3 60.0	-	5.1	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	14.4	-	-	-	-	-	-	-	-	-	-
66.7 55.0	-	0.0	-	8.3	-	-	-	-	-	-	-	-
66.7 60.0	-	17.4	-	9.9	-	-	-	-	-	-	-	-
66.7 70.0	-	9.6	-	19.6	-	-	-	-	-	-	-	-
66.7 90.0	-	-	-	4.9	-	-	-	-	-	-	-	-
70.0 55.0	-	10.3	-	-	-	-	-	-	-	-	-	-
70.0 70.0	-	10.4	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	19.3	-	-	-	-	-	-	-	-	-	-
73.3 55.0	-	9.9	-	-	-	-	-	-	-	-	-	-
73.3 60.0	-	8.5	-	-	-	-	-	-	-	-	-	-
76.7 70.0	-	9.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
80.0 60.0	-	0.0	-	9.4	-	-	0.0	-	-	-	0.0	-
83.3 70.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	0.0	-	5.4	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	0.0	-	-	0.0	-	-

Bathylagus wesethi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 70.0	-	10.4	-	-	-	-	-	-	-	-	-	-
73.3 60.0	-	8.5	-	-	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	36.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	43.1	-	-	10.2	-	-	-	0.0	-

Table 14. (cont.)

Bathylagus wesethi (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	13.1	-	-	5.2	-	-	-	5.5	-
80.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.0	-
80.0 70.0	-	0.0	-	9.9	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	4.5	-	7.7	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	13.4	-	-	18.8	-	-	-	0.0	-
80.0 100.0	-	0.0	-	9.4	-	-	4.8	-	-	-	0.0	-
83.3 55.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
83.3 70.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
83.3 80.0	-	0.0	-	9.9	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	0.0	-	-	4.1	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	65.1	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	44.9	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	10.2	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	19.4	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	29.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	9.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	59.3	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	37.8	-	-	12.1	-	-
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	5.8	-	-
93.3 45.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
93.3 70.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	24.0	-	-	9.5	-	-	9.3	-	-
93.3 90.0	-	4.5	-	5.2	-	-	0.0	-	-	15.0	-	-
93.3 100.0	-	0.0	-	8.9	-	-	0.0	-	-	4.3	-	-
93.3 110.0	-	17.1	-	0.0	-	-	35.1	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	77.4	-	-	0.0	-	-

Bathylagus stilbius

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.3	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	10.5	-	-	-	-	-	-	-	-	-	-
63.3 60.0	-	10.1	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	4.8	-	-	-	-	-	-	-	-	-	-

Table 14. (cont.)

Bathylagus stilbius (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7	50.0	-	18.2	-	-	-	-	-	-	-	-	-	-
66.7	52.0	-	-	-	21.1	-	-	-	-	-	-	-	-
66.7	55.0	-	0.0	-	16.5	-	-	-	-	-	-	-	-
66.7	60.0	-	0.0	-	29.6	-	-	-	-	-	-	-	-
66.7	70.0	-	9.6	-	19.6	-	-	-	-	-	-	-	-
66.7	80.0	-	19.3	-	18.7	-	-	-	-	-	-	-	-
70.0	55.0	-	25.8	-	-	-	-	-	-	-	-	-	-
70.0	60.0	-	9.1	-	-	-	-	-	-	-	-	-	-
70.0	70.0	-	10.4	-	-	-	-	-	-	-	-	-	-
70.0	80.0	-	9.6	-	-	-	-	-	-	-	-	-	-
71.7	80.0	-	-	-	5.0	-	-	-	-	-	-	-	-
73.3	55.0	-	39.6	-	-	-	-	-	-	-	-	-	-
73.3	70.0	-	8.8	-	-	-	-	-	-	-	-	-	-
76.7	51.0	-	18.5	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	55.0	-	28.0	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7	60.0	-	0.0	-	17.2	-	-	9.8	-	-	-	0.0	-
76.7	70.0	-	9.8	-	0.0	-	-	8.3	-	-	-	0.0	-
76.7	80.0	-	0.0	-	0.0	-	-	9.5	-	-	-	0.0	-
80.0	51.0	-	8.3	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	51.5	-	41.4	-	-	0.0	-	-	-	0.0	-
80.0	60.0	-	14.0	-	47.1	-	-	0.0	-	-	-	0.0	-
80.0	70.0	-	38.0	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	-	-	45.8	-	-	0.0	-	-	-	0.0	-
83.3	42.0	-	108.7	-	58.5	-	-	0.0	-	-	-	0.0	-
83.3	55.0	-	17.4	-	16.5	-	-	4.6	-	-	0.0	-	-
83.3	60.0	-	26.3	-	9.4	-	-	0.0	-	-	0.0	-	-
83.3	70.0	-	20.9	-	4.4	-	-	0.0	-	-	0.0	-	-
83.3	90.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
86.7	35.0	-	171.7	-	53.0	-	-	14.6	-	-	0.0	-	-
86.7	40.0	-	152.2	-	160.4	-	-	0.0	-	-	0.0	-	-
86.7	45.0	-	457.2	-	502.0	-	-	4.9	-	-	0.0	-	-
86.7	50.0	-	39.2	-	7.1	-	-	0.0	-	-	0.0	-	-
86.7	55.0	-	49.7	-	13.2	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Bathylagus stilbius (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 60.0	-	0.0	-	16.8	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	9.2	-	42.9	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	8.0	-	9.8	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	52.8	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	31.6	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	42.2	-	-	46.7	-	-	0.0	-	-
90.0 30.0	-	31.9	-	81.6	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	8.8	-	31.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	27.8	-	47.9	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	399.8	-	18.7	-	-	9.9	-	-	0.0	-	-
90.0 53.0	-	9.8	-	14.3	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	37.4	-	34.0	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	17.7	-	45.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	17.5	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	4.9	-	50.4	-	-	5.1	-	-	0.0	-	-
93.3 30.0	-	9.6	-	5.5	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	0.0	-	19.9	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	75.2	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	259.2	-	130.8	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	9.6	-	135.9	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	125.4	-	-	8.5	-	-	0.0	-	-
93.3 70.0	-	0.0	-	86.9	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	13.8	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-
95.0 35.0	-	-	-	9.9	-	-	-	-	-	-	-	-
95.0 45.0	-	-	-	86.2	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	130.8	-	-	-	-	-	-	-	-

***Cyclothone* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	0.0	-	3.8	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	3.7	-	-	0.0	-	-

Table 14. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 90.0	-	0.0	-	5.2	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.4	-	-	-	-	0.0	-	-	0.0	-	-

Cyclothone pseudopallida

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

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	13.7	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	8.7	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	17.8	-	-	9.4	-	-	-	4.9	-
80.0 100.0	-	4.6	-	4.7	-	-	4.8	-	-	-	0.0	-
83.3 100.0	-	0.0	-	0.0	-	-	13.7	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	14.0	-	-	9.9	-	-
86.7 80.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
86.7 110.0	-	0.0	-	4.8	-	-	18.7	-	-	0.0	-	-
90.0 60.0	-	0.0	-	4.9	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
90.0 90.0	-	4.7	-	0.0	-	-	4.5	-	-	4.7	-	-
90.0 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
90.0 110.0	-	0.0	-	13.3	-	-	18.2	-	-	32.9	-	-
90.0 120.0	-	0.0	-	-	-	-	0.0	-	-	4.0	-	-
93.3 70.0	-	19.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	9.1	-	14.4	-	-	0.0	-	-	4.7	-	-
93.3 90.0	-	13.5	-	15.7	-	-	0.0	-	-	5.0	-	-
93.3 100.0	-	0.0	-	13.3	-	-	9.4	-	-	12.9	-	-
93.3 110.0	-	17.1	-	0.0	-	-	8.8	-	-	37.4	-	-
93.3 120.0	-	52.8	-	-	-	-	19.4	-	-	21.2	-	-

Table 14. (cont.)

Sigmops ebelingi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	0.0	-	0.0	-	-	5.1	-	-	-	0.0	-

***Argyropelecus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	5.8	-	-
93.3 90.0	-	0.0	-	5.2	-	-	0.0	-	-	0.0	-	-

Argyropelecus affinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	-	0.0	-	5.0	-	-	0.0	-	-	-	0.0	-
86.7 35.0	-	0.0	-	8.8	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	0.0	-	-	8.1	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	15.7	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 120.0	-	4.4	-	-	-	-	0.0	-	-	5.3	-	-

Argyropelecus hemigymnus

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

Argyropelecus lychnus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
93.3 90.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-

Argyropelecus sladeni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 80.0	-	-	-	8.4	-	-	-	-	-	-	-	-
61.7 90.0	-	-	-	4.5	-	-	-	-	-	-	-	-
71.7 90.0	-	-	-	5.1	-	-	-	-	-	-	-	-
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.5	-
80.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	4.6	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
86.7 110.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Argyropelecus sladeni (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	-	4.7	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0 100.0	-	4.7	-	0.0	-	-	4.7	-	-	0.0	-	-
90.0 110.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	0.0	-	-	8.5	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 110.0	-	8.5	-	0.0	-	-	4.4	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	9.7	-	-	0.0	-	-

Danaphos oculatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	0.0	-	-	9.5	-	-	-	0.0	-
80.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.0	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	4.8	-	-	-	0.0	-
83.3 60.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	0.0	-	-	5.2	-	-
90.0 35.0	-	4.4	-	0.0	-	-	9.9	-	-	0.0	-	-
90.0 53.0	-	9.8	-	9.5	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	9.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	5.8	-	-
93.3 45.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-

***Sternoptyx* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 70.0	-	4.4	-	-	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

***Sternoptyx* spp.** (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	8.8	-	-	0.0	-	-

Ichthyococcus irregularis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	0.0	-	0.0	-	-	3.7	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	9.7	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	5.5	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	10.4	-	-	0.0	-	-	0.0	-	-

Vinciguerria lucetia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	0.0	-	-	5.1	-	-	-	0.0	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0 90.0	-	0.0	-	8.9	-	-	9.4	-	-	-	14.8	-
80.0 100.0	-	0.0	-	0.0	-	-	913.9	-	-	-	0.0	-
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-
83.3 100.0	-	0.0	-	0.0	-	-	529.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	3.8	-	-	358.1	-	-	5.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	17.4	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
86.7 110.0	-	4.0	-	0.0	-	-	362.8	-	-	5.2	-	-
90.0 60.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	14.5	-	-	14.5	-	-
90.0 90.0	-	9.4	-	0.0	-	-	4.5	-	-	4.7	-	-
90.0 100.0	-	0.0	-	0.0	-	-	536.9	-	-	0.0	-	-
90.0 110.0	-	14.6	-	8.9	-	-	241.7	-	-	145.7	-	-
90.0 120.0	-	18.0	-	-	-	-	217.6	-	-	100.8	-	-

Table 14. (cont.)

Vinciguerria lucetia (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	5.8	-	-
93.3 60.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 70.0	-	28.7	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	-	50.1	-	47.9	-	-	0.0	-	-	107.2	-	-
93.3 90.0	-	4.5	-	62.6	-	-	46.4	-	-	70.1	-	-
93.3 100.0	-	4.6	-	22.2	-	-	478.4	-	-	146.2	-	-
93.3 110.0	-	21.4	-	0.0	-	-	324.9	-	-	46.7	-	-
93.3 120.0	-	44.0	-	-	-	-	484.0	-	-	37.0	-	-

Vinciguerria poweriae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	4.8	-	-	0.0	-	-	-	0.0	-
83.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	5.3	-	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-

Stomiidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.5	-

Chauliodus macouni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	4.7	-	-	-	-	-	-	-	-	-	-
63.3 60.0	-	5.1	-	-	-	-	-	-	-	-	-	-
70.0 55.0	-	5.2	-	-	-	-	-	-	-	-	-	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
83.3 60.0	-	0.0	-	0.0	-	-	0.0	-	-	9.2	-	-
83.3 90.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	0.0	-	5.6	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	8.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	0.0	-	-	5.2	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	8.8	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.3	-	-

Table 14. (cont.)

Stomias atriventer

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	0.0	-	3.8	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	9.4	-	-	-	0.0	-
83.3 110.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
90.0 110.0	-	9.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3 70.0	-	28.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	8.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.4	-	-	-	-	0.0	-	-	0.0	-	-

Bathophilus flemingi

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

Tactostoma macropus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	0.0	-	-	20.6	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	9.4	-	-	-	0.0	-

Aristostomias scintillans

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

Idiacanthus antrostomus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	14.8	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.8	-
83.3 90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	18.6	-	-	9.9	-	-
86.7 100.0	-	0.0	-	0.0	-	-	3.9	-	-	5.2	-	-
86.7 110.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	5.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	9.7	-	-	0.0	-	-

Table 14. (cont.)

Idiacanthus antrostomus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	10.1	-	-
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	10.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	13.2	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	14.5	-	-	0.0	-	-

Benthalbella dentata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	4.6	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	4.8	-	0.0	-	-	0.0	-	-	-	0.0	-
90.0 110.0	-	0.0	-	4.4	-	-	0.0	-	-	4.7	-	-

Rosenblattichthys volucris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.3	-	-

***Scopelosaurus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	0.0	-	4.7	-	-	0.0	-	-	-	0.0	-
83.3 110.0	-	0.0	-	3.8	-	-	4.7	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-

Synodus lucioceps

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-

Paralepididae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	4.5	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 70.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	4.8	-	-	0.0	-	-

Arctozenus risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

Table 14. (cont.)

***Lestidiops* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 60.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-

Lestidiops ringens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	4.7	-	-	-	-	-	-	-	-	-	-
61.7 90.0	-	-	-	4.5	-	-	-	-	-	-	-	-
63.3 55.0	-	10.5	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	19.3	-	-	-	-	-	-	-	-	-	-
76.7 70.0	-	9.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	9.1	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	19.0	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	4.6	-	0.0	-	-	9.6	-	-	-	0.0	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.0	-	-	4.5	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
93.3 110.0	-	4.3	-	0.0	-	-	4.4	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	9.7	-	-	0.0	-	-

Myctophidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.5	-	-	7.8	-	-	0.0	-	-
90.0 100.0	-	0.0	-	18.2	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	10.4	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	9.7	-	-	0.0	-	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 90.0	-	-	-	9.7	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	18.3	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
80.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.0	-

Table 14. (cont.)

Ceratoscopelus townsendi (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 80.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
80.0 90.0	-	0.0	-	13.4	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	19.2	-	-	-	0.0	-
83.3 90.0	-	0.0	-	0.0	-	-	8.3	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	36.5	-	-	0.0	-	-
83.3 110.0	-	13.4	-	7.7	-	-	46.5	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	17.4	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	41.1	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	9.7	-	-	0.0	-	-
90.0 90.0	-	9.4	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	42.4	-	-	0.0	-	-
90.0 110.0	-	0.0	-	8.9	-	-	36.5	-	-	32.9	-	-
90.0 120.0	-	9.0	-	-	-	-	23.7	-	-	4.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	0.0	-	-	12.1	-	-
93.3 70.0	-	19.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	9.1	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 90.0	-	13.5	-	0.0	-	-	7.7	-	-	5.0	-	-
93.3 100.0	-	0.0	-	4.4	-	-	32.8	-	-	17.2	-	-
93.3 110.0	-	4.3	-	0.0	-	-	22.0	-	-	18.7	-	-
93.3 120.0	-	61.6	-	-	-	-	4.8	-	-	10.6	-	-

***Diaphus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	0.0	-	0.0	-	-	20.4	-	-	-	0.0	-
76.7 100.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	9.4	-	-	-	0.0	-
83.3 70.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	9.1	-	-	0.0	-	-
86.7 70.0	-	0.0	-	0.0	-	-	9.6	-	-	0.0	-	-
86.7 80.0	-	0.0	-	0.0	-	-	15.1	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	13.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	0.0	-	-	5.2	-	-
86.7 110.0	-	0.0	-	0.0	-	-	37.4	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-

Table 14. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 60.0	-	0.0	-	0.0	-	-	10.2	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
90.0 110.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.5	-	-
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 110.0	-	0.0	-	4.6	-	-	8.8	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	9.7	-	-	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	-	-	7.5	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
90.0 110.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	13.2	-	-	0.0	-	-

Lampanyctus acanthurus

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

Lampanyctus steinbecki

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

***Nannobrachium* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 90.0	-	-	-	13.6	-	-	-	-	-	-	-	-
66.7 60.0	-	0.0	-	9.9	-	-	-	-	-	-	-	-
70.0 55.0	-	15.5	-	-	-	-	-	-	-	-	-	-
73.3 80.0	-	10.0	-	-	-	-	-	-	-	-	-	-
76.7 70.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	4.5	-	27.4	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	14.3	-	4.4	-	-	0.0	-	-	-	5.5	-
80.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	9.5	-	9.9	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	4.7	-	40.1	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	37.1	-	4.7	-	-	0.0	-	-	-	0.0	-
83.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-
83.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	9.9	-	-
86.7 50.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
86.7 80.0	-	0.0	-	9.8	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	13.0	-	-	0.0	-	-
86.7 100.0	-	13.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	10.2	-	-	0.0	-	-
90.0 70.0	-	0.0	-	4.5	-	-	4.9	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.0	-	-	4.5	-	-	0.0	-	-
90.0 100.0	-	0.0	-	9.1	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.4	-	-	4.6	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	9.5	-	-	0.0	-	-
93.3 45.0	-	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	0.0	-	-	9.9	-	-
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	5.2	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	4.4	-	-	0.0	-	-

Nannobrachium hawaiiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
93.3 90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

Nannobrachium ritteri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 60.0	-	-	-	9.7	-	-	-	-	-	-	-	-
61.7 90.0	-	-	-	4.5	-	-	-	-	-	-	-	-
76.7 70.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	9.1	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	0.0	-	-	10.2	-	-	-	0.0	-

Table 14. (cont.)

Nannobrachium ritteri (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	0.0	-	17.5	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	19.0	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	13.5	-	7.7	-	-	8.7	-	-	-	0.0	-
80.0 90.0	-	4.7	-	31.2	-	-	9.4	-	-	-	4.9	-
80.0 100.0	-	23.2	-	0.0	-	-	28.9	-	-	-	0.0	-
83.3 80.0	-	8.6	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	7.7	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	9.4	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.0	-	0.0	-	-	0.0	-	-	14.3	-	-
86.7 90.0	-	0.0	-	0.0	-	-	13.0	-	-	0.0	-	-
86.7 100.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	10.2	-	-	0.0	-	-	8.8	-	-
90.0 37.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	5.1	-	-	19.3	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	9.7	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	4.7	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	4.9	-	0.0	-	-	4.6	-	-	9.4	-	-
90.0 120.0	-	0.0	-	-	-	-	4.7	-	-	0.0	-	-
93.3 30.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 70.0	-	4.8	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	9.0	-	10.4	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 110.0	-	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 45.0	-	-	-	21.6	-	-	-	-	-	-	-	-

Notolychnus valdiviae

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

Table 14. (cont.)

Notoscopelus resplendens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
93.3 120.0	-	4.4	-	-	-	-	0.0	-	-	0.0	-	-

Parvilux ingens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 80.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	8.8	-	-	-	-	0.0	-	-	0.0	-	-

Stenobrachius leucopsarus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	8.5	-	-	-	-	-	-	-	-	-	-
60.0 60.0	-	121.9	-	-	-	-	-	-	-	-	-	-
60.0 70.0	-	4.8	-	-	-	-	-	-	-	-	-	-
61.7 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-
61.7 55.0	-	-	-	11.1	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	144.9	-	-	-	-	-	-	-	-
61.7 70.0	-	-	-	15.3	-	-	-	-	-	-	-	-
61.7 80.0	-	-	-	25.1	-	-	-	-	-	-	-	-
61.7 90.0	-	-	-	18.1	-	-	-	-	-	-	-	-
63.3 52.0	-	9.3	-	-	-	-	-	-	-	-	-	-
63.3 55.0	-	293.8	-	-	-	-	-	-	-	-	-	-
63.3 60.0	-	253.5	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	148.5	-	-	-	-	-	-	-	-	-	-
63.3 80.0	-	33.4	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	54.5	-	-	-	-	-	-	-	-	-	-
66.7 52.0	-	-	-	31.7	-	-	-	-	-	-	-	-
66.7 55.0	-	361.1	-	132.3	-	-	-	-	-	-	-	-
66.7 60.0	-	148.0	-	69.0	-	-	-	-	-	-	-	-
66.7 70.0	-	38.3	-	19.6	-	-	-	-	-	-	-	-
66.7 80.0	-	96.3	-	46.8	-	-	-	-	-	-	-	-
70.0 55.0	-	1388.0	-	-	-	-	-	-	-	-	-	-
70.0 60.0	-	199.3	-	-	-	-	-	-	-	-	-	-
70.0 70.0	-	83.6	-	-	-	-	-	-	-	-	-	-
70.0 80.0	-	443.4	-	-	-	-	-	-	-	-	-	-
71.7 80.0	-	-	-	14.9	-	-	-	-	-	-	-	-

Table 14. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
71.7 90.0	-	-	-	5.1	-	-	-	-	-	-	-	-
73.3 50.0	-	38.8	-	-	-	-	-	-	-	-	-	-
73.3 55.0	-	49.5	-	-	-	-	-	-	-	-	-	-
73.3 60.0	-	119.6	-	-	-	-	-	-	-	-	-	-
73.3 70.0	-	74.5	-	-	-	-	-	-	-	-	-	-
73.3 80.0	-	45.1	-	-	-	-	-	-	-	-	-	-
76.7 49.0	-	3.9	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 51.0	-	27.7	-	33.8	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	195.7	-	9.2	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	109.5	-	4.3	-	-	0.0	-	-	-	0.0	-
76.7 70.0	-	29.5	-	13.7	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	31.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	9.5	-	13.1	-	-	0.0	-	-	-	0.0	-
80.0 50.5	-	5.7	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	0.0	-	4.2	-	-	0.0	-	-	-	0.0	-
80.0 60.0	-	51.4	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	218.5	-	24.8	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	9.2	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	22.7	-	13.5	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	0.0	-	24.7	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	35.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	34.8	-	8.8	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	72.8	-	19.8	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	18.1	-	41.9	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	13.9	-	26.5	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	26.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	19.9	-	40.2	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	15.7	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	69.6	-	8.8	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	45.4	-	33.5	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	54.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 80.0	-	8.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Stenobrachius leucopsarus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 100.0	-	22.4	-	0.0	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	0.0	-	3.4	-	-	0.0	-	-	0.0	-	-
88.5 30.1	-	0.0	-	9.2	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	10.5	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	50.1	-	61.2	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	17.6	-	20.7	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	4.6	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	78.2	-	18.7	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	39.3	-	4.8	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	56.1	-	14.6	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	8.9	-	4.5	-	-	0.0	-	-	5.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	14.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	12.8	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	4.9	-	20.2	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	0.0	-	19.9	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	38.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	24.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	8.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
95.0 30.0	-	-	-	8.8	-	-	-	-	-	-	-	-
95.0 40.0	-	-	-	21.3	-	-	-	-	-	-	-	-

Triphoturus mexicanus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
76.7 90.0	-	0.0	-	4.8	-	-	0.0	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	28.2	-	-	-	0.0	-
80.0 100.0	-	0.0	-	4.7	-	-	38.5	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	2.6	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-

Table 14. (cont.)

Triphoturus mexicanus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	-	0.0	-	0.0	-	-	4.1	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	27.4	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	37.2	-	-	0.0	-	-
86.7 45.0	-	0.0	-	0.0	-	-	0.0	-	-	14.3	-	-
86.7 70.0	-	0.0	-	0.0	-	-	0.0	-	-	17.0	-	-
86.7 80.0	-	0.0	-	24.5	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	15.6	-	-	5.2	-	-
86.7 110.0	-	0.0	-	4.8	-	-	18.7	-	-	0.0	-	-
86.8 32.5	-	0.0	-	0.0	-	-	0.0	-	-	2.8	-	-
90.0 35.0	-	0.0	-	10.3	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	0.0	-	-	0.0	-	-	9.7	-	-
90.0 53.0	-	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-
90.0 60.0	-	0.0	-	0.0	-	-	15.3	-	-	77.1	-	-
90.0 70.0	-	0.0	-	0.0	-	-	48.6	-	-	15.1	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
90.0 100.0	-	0.0	-	9.1	-	-	47.1	-	-	0.0	-	-
90.0 110.0	-	0.0	-	17.7	-	-	45.6	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	94.6	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	5.1	-	-	36.3	-	-
93.3 30.0	-	0.0	-	0.0	-	-	9.3	-	-	5.4	-	-
93.3 35.0	-	0.0	-	0.0	-	-	5.5	-	-	40.7	-	-
93.3 40.0	-	0.0	-	15.0	-	-	13.1	-	-	11.5	-	-
93.3 45.0	-	0.0	-	20.1	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	9.7	-	-	0.0	-	-	24.9	-	-
93.3 55.0	-	0.0	-	9.0	-	-	8.5	-	-	4.9	-	-
93.3 60.0	-	0.0	-	0.0	-	-	9.5	-	-	33.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	11.6	-	-	5.2	-	-
93.3 80.0	-	0.0	-	57.5	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	31.3	-	-	19.4	-	-	0.0	-	-
93.3 100.0	-	0.0	-	62.0	-	-	126.6	-	-	0.0	-	-
93.3 110.0	-	0.0	-	4.6	-	-	74.6	-	-	0.0	-	-

Table 14. (cont.)

Triphoturus mexicanus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 120.0	-	0.0	-	-	-	-	58.1	-	-	0.0	-	-
95.0 40.0	-	-	-	10.7	-	-	-	-	-	-	-	-
95.0 45.0	-	-	-	43.1	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	37.4	-	-	-	-	-	-	-	-

Diogenichthys atlanticus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 70.0	-	9.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	36.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	18.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	4.8	-	8.7	-	-	5.2	-	-	-	0.0	-
80.0 70.0	-	0.0	-	5.0	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	9.0	-	0.0	-	-	0.0	-	-	-	5.2	-
80.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 100.0	-	9.3	-	4.7	-	-	0.0	-	-	-	14.3	-
83.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	9.1	-	-
83.3 100.0	-	8.9	-	0.0	-	-	9.1	-	-	0.0	-	-
83.3 110.0	-	13.4	-	0.0	-	-	0.0	-	-	5.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	8.7	-	-	0.0	-	-
86.7 100.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 110.0	-	12.1	-	9.7	-	-	7.5	-	-	0.0	-	-
90.0 35.0	-	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	9.7	-	-	9.7	-	-
90.0 90.0	-	9.4	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-
90.0 110.0	-	14.6	-	8.9	-	-	0.0	-	-	28.2	-	-
90.0 120.0	-	0.0	-	-	-	-	0.0	-	-	8.1	-	-
93.3 28.0	-	0.0	-	0.0	-	-	0.0	-	-	12.1	-	-
93.3 30.0	-	0.0	-	5.5	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	9.3	-	0.0	-	-	10.4	-	-	0.0	-	-
93.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	4.9	-	-
93.3 70.0	-	19.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	13.7	-	4.8	-	-	0.0	-	-	4.7	-	-
93.3 90.0	-	9.0	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Diogenichthys atlanticus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	-	9.1	-	4.4	-	-	0.0	-	-	25.8	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	18.7	-	-
93.3 120.0	-	26.4	-	-	-	-	4.8	-	-	10.6	-	-
95.0 45.0	-	-	-	10.8	-	-	-	-	-	-	-	-

Diogenichthys laternatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 100.0	-	0.0	-	13.3	-	-	0.0	-	-	0.0	-	-

Electrona risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.8	-

Hygophum reinhardtii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 110.0	-	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	5.2	-	-	0.0	-	-	0.0	-	-
93.3 120.0	-	4.4	-	-	-	-	0.0	-	-	0.0	-	-

Loweina rara

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

Myctophum nitidulum

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	-	0.0	-	0.0	-	-	5.1	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	4.8	-	-	-	0.0	-
90.0 120.0	-	4.5	-	-	-	-	0.0	-	-	8.1	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
93.3 110.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 120.0	-	13.2	-	-	-	-	0.0	-	-	0.0	-	-

Protomyctophum crockeri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 70.0	-	4.8	-	-	-	-	-	-	-	-	-	-

Table 14. (cont.)

Protomyctophum crockeri (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 70.0	-	-	-	5.1	-	-	-	-	-	-	-	-
63.3 80.0	-	4.8	-	-	-	-	-	-	-	-	-	-
66.7 60.0	-	0.0	-	9.9	-	-	-	-	-	-	-	-
71.7 80.0	-	-	-	9.9	-	-	-	-	-	-	-	-
71.7 90.0	-	-	-	5.1	-	-	-	-	-	-	-	-
73.3 70.0	-	8.8	-	-	-	-	-	-	-	-	-	-
76.7 60.0	-	10.0	-	0.0	-	-	0.0	-	-	-	4.8	-
76.7 70.0	-	0.0	-	0.0	-	-	8.3	-	-	-	0.0	-
76.7 80.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.4	-
76.7 90.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 100.0	-	0.0	-	4.4	-	-	5.2	-	-	-	5.5	-
80.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	-	14.9	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
80.0 80.0	-	9.0	-	7.7	-	-	8.7	-	-	-	0.0	-
80.0 90.0	-	14.2	-	0.0	-	-	0.0	-	-	-	4.9	-
80.0 100.0	-	0.0	-	0.0	-	-	4.8	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	9.5	-	-	-	4.5	-
83.3 60.0	-	35.1	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3 70.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
83.3 80.0	-	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	13.6	-	0.0	-	-	8.3	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	4.7	-	-
83.3 110.0	-	0.0	-	3.8	-	-	4.7	-	-	0.0	-	-
86.7 35.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	9.0	-	0.0	-	-	0.0	-	-	10.4	-	-
86.7 55.0	-	0.0	-	0.0	-	-	9.0	-	-	0.0	-	-
86.7 60.0	-	18.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	27.5	-	26.8	-	-	0.0	-	-	4.3	-	-
86.7 80.0	-	0.0	-	14.7	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	14.4	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	13.4	-	4.5	-	-	0.0	-	-	5.2	-	-
86.7 110.0	-	0.0	-	0.0	-	-	7.5	-	-	5.2	-	-
90.0 30.0	-	9.1	-	10.2	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Protomyctophum crockeri (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	-	0.0	-	10.3	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
90.0 70.0	-	17.7	-	0.0	-	-	4.9	-	-	10.1	-	-
90.0 80.0	-	4.7	-	0.0	-	-	9.7	-	-	4.8	-	-
90.0 90.0	-	4.7	-	9.0	-	-	0.0	-	-	4.7	-	-
90.0 100.0	-	32.9	-	9.1	-	-	0.0	-	-	10.1	-	-
90.0 110.0	-	4.9	-	0.0	-	-	4.6	-	-	4.7	-	-
90.0 120.0	-	4.5	-	-	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	0.0	-	-	18.6	-	-	0.0	-	-
93.3 35.0	-	4.8	-	9.9	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	9.5	-	10.0	-	-	4.4	-	-	0.0	-	-
93.3 45.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	38.8	-	-	0.0	-	-	5.0	-	-
93.3 55.0	-	8.2	-	9.0	-	-	25.4	-	-	14.8	-	-
93.3 60.0	-	8.6	-	0.0	-	-	0.0	-	-	4.7	-	-
93.3 70.0	-	9.6	-	4.8	-	-	11.6	-	-	5.2	-	-
93.3 80.0	-	0.0	-	33.5	-	-	0.0	-	-	9.3	-	-
93.3 90.0	-	13.5	-	15.7	-	-	3.9	-	-	5.0	-	-
93.3 100.0	-	13.7	-	0.0	-	-	9.4	-	-	8.6	-	-
93.3 110.0	-	8.5	-	0.0	-	-	0.0	-	-	14.0	-	-
93.3 120.0	-	0.0	-	-	-	-	4.8	-	-	0.0	-	-
95.0 35.0	-	-	-	9.9	-	-	-	-	-	-	-	-
95.0 45.0	-	-	-	32.3	-	-	-	-	-	-	-	-

Symbolophorus californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 90.0	-	-	-	9.1	-	-	-	-	-	-	-	-
73.3 80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.8	-
76.7 70.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	0.0	-	77.7	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	24.0	-	-	10.2	-	-	-	0.0	-
76.7 100.0	-	0.0	-	26.2	-	-	10.3	-	-	-	0.0	-

Table 14. (cont.)

Symbolophorus californiensis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.0	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	8.6	-
80.0 80.0	-	4.5	-	11.5	-	-	8.7	-	-	-	0.0	-
80.0 90.0	-	0.0	-	13.4	-	-	37.6	-	-	-	0.0	-
80.0 100.0	-	27.8	-	18.7	-	-	0.0	-	-	-	0.0	-
83.3 80.0	-	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	4.5	-	0.0	-	-	12.4	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	27.4	-	-	0.0	-	-
83.3 110.0	-	0.0	-	15.4	-	-	9.3	-	-	0.0	-	-
86.7 70.0	-	0.0	-	0.0	-	-	9.6	-	-	4.3	-	-
86.7 90.0	-	0.0	-	0.0	-	-	21.7	-	-	0.0	-	-
86.7 100.0	-	0.0	-	4.5	-	-	23.4	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	37.4	-	-	0.0	-	-
90.0 60.0	-	0.0	-	0.0	-	-	10.2	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	19.4	-	-	5.0	-	-
90.0 80.0	-	0.0	-	4.4	-	-	4.8	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	4.5	-	-	0.0	-	-
90.0 100.0	-	4.7	-	9.1	-	-	28.3	-	-	0.0	-	-
90.0 110.0	-	9.8	-	13.3	-	-	13.7	-	-	0.0	-	-
90.0 120.0	-	4.5	-	-	-	-	9.5	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	0.0	-	-	4.5	-	-
93.3 40.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	8.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	7.7	-	-	0.0	-	-
93.3 80.0	-	4.6	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	4.5	-	10.4	-	-	11.6	-	-	0.0	-	-
93.3 100.0	-	4.6	-	8.9	-	-	14.1	-	-	0.0	-	-
93.3 110.0	-	8.5	-	0.0	-	-	8.8	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	4.8	-	-	0.0	-	-

Tarletonbeania crenularis

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

Table 14. (cont.)

Tarletonbeania crenularis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 60.0	-	0.0	-	9.9	-	-	-	-	-	-	-	-
76.7 60.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.8	-
90.0 45.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-

Trachipterus altivelis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.8	-
83.3 90.0	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	5.0	-	-

***Nezumia* spp.**

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

Merluccius productus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 60.0	-	0.0	-	9.9	-	-	-	-	-	-	-	-
73.3 55.0	-	19.8	-	-	-	-	-	-	-	-	-	-
76.7 51.0	-	83.2	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 55.0	-	9.3	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 60.0	-	10.0	-	34.3	-	-	0.0	-	-	-	0.0	-
80.0 50.5	-	5.7	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	29.1	-	12.7	-	-	0.0	-	-	-	0.0	-
80.0 55.0	-	51.5	-	24.8	-	-	0.0	-	-	-	0.0	-
80.0 60.0	-	4.7	-	18.8	-	-	0.0	-	-	-	0.0	-
80.0 70.0	-	19.0	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	45.8	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	0.0	-	54.0	-	-	0.0	-	-	-	0.0	-
83.3 51.0	-	-	-	8.7	-	-	0.0	-	-	0.0	-	-
83.3 55.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 60.0	-	43.8	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3 90.0	-	0.0	-	9.3	-	-	0.0	-	-	0.0	-	-
86.7 33.0	-	0.0	-	16.6	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	41.8	-	97.2	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Merluccius productus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 40.0	-	205.9	-	9.4	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	119.3	-	40.2	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	258.7	-	3.6	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	69.6	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	9.2	-	5.4	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	7.7	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	42.2	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	22.0	-	31.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	4.6	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	591.0	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	9.8	-	9.5	-	-	0.0	-	-	0.0	-	-
90.0 60.0	-	0.0	-	4.9	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	4.9	-	110.8	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	5.5	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	4.8	-	9.9	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	55.5	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	11.1	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	13.2	-	-	-	-	-	-	-	-

Chilara taylori

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-

Ophidion scrippsae

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

Brosmophycis marginata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	-	0.0	-	0.0	-	-	4.0	-	-	-	0.0	-

Cataetyx rubrirostris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 45.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-

***Oneirodes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-

Table 14. (cont.)

***Gigantactis* spp.**

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

Atherinopsis californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 39.4	-	0.0	-	0.0	-	-	0.0	-	-	-	4.1	-
83.3 40.6	-	0.0	-	3.3	-	-	0.0	-	-	-	0.0	-
86.7 33.0	-	3.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	2.9	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
91.7 26.4	-	0.0	-	3.9	-	-	0.0	-	-	0.0	-	-

Cololabis saira

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	0.0	-	-	0.0	-	-	-	12.1	-
80.0 100.0	-	0.0	-	0.0	-	-	4.8	-	-	-	0.0	-
93.3 80.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-

***Melamphaes* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
80.0 80.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	4.6	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 60.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
83.3 100.0	-	0.0	-	0.0	-	-	4.6	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	3.7	-	-	0.0	-	-
90.0 80.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	4.7	-	-	0.0	-	-

Melamphaes lugubris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	-	0.0	-	0.0	-	-	0.0	-	-	5.3	-	-
83.3 110.0	-	0.0	-	3.8	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	4.3	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-

Table 14. (cont.)

Melamphaes lugubris (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 80.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
93.3 120.0	-	0.0	-	-	-	-	4.8	-	-	0.0	-	-

Melamphaes parvus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 60.0	-	4.7	-	-	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	19.3	-	-	-	-	-	-	-	-
61.7 80.0	-	-	-	8.4	-	-	-	-	-	-	-	-
61.7 90.0	-	-	-	4.5	-	-	-	-	-	-	-	-
63.3 80.0	-	4.8	-	-	-	-	-	-	-	-	-	-
66.7 90.0	-	-	-	9.7	-	-	-	-	-	-	-	-
76.7 70.0	-	9.8	-	0.0	-	-	0.0	-	-	-	0.0	-
76.7 80.0	-	4.5	-	4.6	-	-	0.0	-	-	-	0.0	-
76.7 90.0	-	0.0	-	4.8	-	-	0.0	-	-	-	0.0	-
83.3 70.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-
83.3 80.0	-	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
86.7 90.0	-	5.0	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.0	-	-	9.5	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	0.0	-	-	4.3	-	-

Poromitra crassiceps

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	3.8	-	-	0.0	-	-	0.0	-	-
86.7 60.0	-	9.1	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	4.7	-	-	0.0	-	-
90.0 110.0	-	0.0	-	4.4	-	-	0.0	-	-	0.0	-	-

Scopelogadus m. bispinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	4.0	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-

Table 14. (cont.)

Scopelogadus m. bispinosus (cont.)

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

Macroramphosus gracilis

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

***Sebastes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0	53.0	-	76.5	-	-	-	-	-	-	-	-	-	-
60.0	60.0	-	4.7	-	-	-	-	-	-	-	-	-	-
61.7	55.0	-	-	-	33.2	-	-	-	-	-	-	-	-
61.7	60.0	-	-	-	29.0	-	-	-	-	-	-	-	-
63.3	52.0	-	32.5	-	-	-	-	-	-	-	-	-	-
63.3	55.0	-	73.5	-	-	-	-	-	-	-	-	-	-
66.7	50.0	-	190.8	-	-	-	-	-	-	-	-	-	-
66.7	52.0	-	-	-	31.7	-	-	-	-	-	-	-	-
66.7	55.0	-	0.0	-	57.9	-	-	-	-	-	-	-	-
70.0	55.0	-	10.3	-	-	-	-	-	-	-	-	-	-
70.0	70.0	-	10.4	-	-	-	-	-	-	-	-	-	-
73.3	50.0	-	7.8	-	-	-	-	-	-	-	-	-	-
73.3	80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
76.7	49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	8.7	-
76.7	51.0	-	37.0	-	16.9	-	-	27.6	-	-	-	0.0	-
76.7	55.0	-	0.0	-	4.6	-	-	9.5	-	-	-	27.3	-
80.0	51.0	-	54.0	-	4.2	-	-	0.0	-	-	-	0.0	-
80.0	55.0	-	25.7	-	16.6	-	-	26.6	-	-	-	0.0	-
80.0	60.0	-	0.0	-	9.4	-	-	0.0	-	-	-	0.0	-
81.8	46.9	-	-	-	18.3	-	-	9.5	-	-	-	0.0	-
83.3	42.0	-	72.5	-	36.0	-	-	17.4	-	-	-	0.0	-
83.3	51.0	-	-	-	13.0	-	-	8.5	-	-	14.4	-	-
83.3	55.0	-	8.7	-	20.6	-	-	22.8	-	-	0.0	-	-
83.3	60.0	-	70.1	-	23.5	-	-	0.0	-	-	27.6	-	-
83.3	70.0	-	0.0	-	4.4	-	-	0.0	-	-	5.5	-	-
83.3	80.0	-	0.0	-	0.0	-	-	8.3	-	-	0.0	-	-

Table 14. (cont.)

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

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 33.0	-	11.7	-	0.0	-	-	0.0	-	-	9.5	-	-
86.7 35.0	-	143.8	-	26.5	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	116.4	-	94.4	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	9.9	-	20.1	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	450.8	-	422.5	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	159.0	-	70.4	-	-	18.1	-	-	0.0	-	-
86.7 60.0	-	9.1	-	0.0	-	-	25.5	-	-	0.0	-	-
86.7 80.0	-	31.8	-	0.0	-	-	0.0	-	-	0.0	-	-
88.5 30.1	-	0.0	-	3.1	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	18.2	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	154.0	-	155.0	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	28.7	-	-	0.0	-	-	11.2	-	-
90.0 45.0	-	199.9	-	9.4	-	-	0.0	-	-	14.6	-	-
90.0 53.0	-	68.8	-	209.4	-	-	19.1	-	-	0.0	-	-
90.0 60.0	-	28.0	-	9.7	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	8.9	-	12.8	-	-	8.8	-	-	0.0	-	-
93.3 28.0	-	4.9	-	20.2	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	9.6	-	16.4	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	71.3	-	19.9	-	-	5.5	-	-	4.5	-	-
93.3 40.0	-	9.5	-	50.1	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	27.8	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	488.7	-	0.0	-	-	4.3	-	-	0.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	4.8	-	-	3.9	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	0.0	-	-	12.3	-	-
95.0 28.0	-	-	-	8.4	-	-	-	-	-	-	-	-
95.0 30.0	-	-	-	136.7	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	9.3	-	-	-	-	-	-	-	-

Table 14. (cont.)

Sebastes aurora

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
86.7 40.0	-	0.0	-	9.4	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Sebastes diploproa

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	9.5	-	-	-	0.0	-
86.7 33.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-
86.7 60.0	-	0.0	-	5.6	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-

Sebastes goodei

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	12.8	-	-	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	9.7	-	-	-	-	-	-	-	-
63.3 55.0	-	42.0	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	54.5	-	-	-	-	-	-	-	-	-	-
80.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-
93.3 40.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-

Sebastes jordani

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	8.5	-	-	-	-	-	-	-	-	-	-
61.7 55.0	-	-	-	132.8	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	19.3	-	-	-	-	-	-	-	-
63.3 55.0	-	52.5	-	-	-	-	-	-	-	-	-	-
63.3 70.0	-	28.7	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	454.3	-	-	-	-	-	-	-	-	-	-
66.7 55.0	-	9.3	-	0.0	-	-	-	-	-	-	-	-
66.7 80.0	-	9.6	-	0.0	-	-	-	-	-	-	-	-
70.0 70.0	-	10.4	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	15.5	-	-	-	-	-	-	-	-	-	-
76.7 51.0	-	9.2	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	27.2	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

Sebastes jordani (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 60.0	-	0.0	-	4.7	-	-	0.0	-	-	0.0	-	-
86.7 33.0	-	0.0	-	8.3	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	55.7	-	26.5	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	71.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	117.6	-	32.0	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	13.2	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	4.6	-	20.4	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	14.6	-	30.2	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	16.4	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	28.5	-	49.7	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	105.4	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	57.3	-	-	-	-	-	-	-	-

Sebastes levis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 50.0	-	9.1	-	-	-	-	-	-	-	-	-	-
80.0 51.0	-	0.0	-	4.2	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	9.5	-	-	-	0.0	-
83.3 42.0	-	0.0	-	18.0	-	-	0.0	-	-	-	0.0	-
90.0 45.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	28.7	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Sebastes paucispinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	8.5	-	-	-	-	-	-	-	-	-	-
61.7 60.0	-	-	-	9.7	-	-	-	-	-	-	-	-
66.7 55.0	-	0.0	-	16.5	-	-	-	-	-	-	-	-
66.7 70.0	-	9.6	-	0.0	-	-	-	-	-	-	-	-
70.0 55.0	-	10.3	-	-	-	-	-	-	-	-	-	-
76.7 60.0	-	0.0	-	4.3	-	-	0.0	-	-	-	0.0	-
80.0 60.0	-	4.7	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

Sebastes paucispinis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 70.0	-	7.0	-	4.4	-	-	0.0	-	-	0.0	-	-
86.7 40.0	-	0.0	-	9.4	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	8.8	-	-	0.0	-	-	0.0	-	-
86.7 70.0	-	9.2	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	19.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	9.6	-	0.0	-	-	0.0	-	-	0.0	-	-

Oxylebius pictus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0 50.5	-	2.9	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 55.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-

Zaniolepis frenata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 50.0	-	-	-	2.3	-	-	-	-	-	-	-	-
61.7 52.0	-	-	-	14.6	-	-	-	-	-	-	-	-
80.0 51.0	-	0.0	-	0.0	-	-	4.0	-	-	-	0.0	-
91.7 26.4	-	3.5	-	0.0	-	-	0.0	-	-	0.0	-	-

Zaniolepis latipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	4.5	-	0.0	-	-	0.0	-	-	-	0.0	-
83.3 51.0	-	-	-	0.0	-	-	0.0	-	-	4.8	-	-
93.3 26.7	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 35.0	-	0.0	-	9.9	-	-	0.0	-	-	0.0	-	-

Ophiodon elongatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.3	-	-	-	-	-	-	-	-	-	-
81.8 46.9	-	-	-	9.2	-	-	0.0	-	-	-	0.0	-

Artedius harringtoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 50.5	-	2.9	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

Artedius lateralis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	5.8	-	-	0.0	-	-

Chitonotus pugetensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	-	0.0	-	6.4	-	-	0.0	-	-	0.0	-	-

Icelinus quadriseriatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	-	-	4.3	-	-	0.0	-	-	4.8	-	-
85.4 35.8	-	-	-	5.0	-	-	-	-	-	-	0.0	-
86.8 32.5	-	0.0	-	3.4	-	-	0.0	-	-	0.0	-	-

Leptocottus armatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 50.5	-	2.9	-	0.0	-	-	0.0	-	-	-	0.0	-

Paricelinus hopliticus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
95.0 50.0	-	-	-	9.3	-	-	-	-	-	-	-	-

Ruscarius creaseri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	-	-	0.0	-	-	8.5	-	-	0.0	-	-
86.7 50.0	-	0.0	-	0.0	-	-	11.5	-	-	0.0	-	-
90.0 27.7	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	12.8	-	-	0.0	-	-	0.0	-	-

Ruscarius meanyi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-

Synchirus gilli

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 50.5	-	0.0	-	0.0	-	-	2.5	-	-	-	0.0	-

Scorpaenichthys marmoratus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 55.0	-	10.5	-	-	-	-	-	-	-	-	-	-
80.0 50.5	-	0.0	-	0.0	-	-	0.0	-	-	-	1.6	-
80.0 55.0	-	8.6	-	0.0	-	-	0.0	-	-	-	0.0	-

Table 14. (cont.)

Odontopyxis trispinosa

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 50.0	-	-	-	2.3	-	-	-	-	-	-	-	-

Xeneretmus latifrons

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

Liparis mucosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	0.0	-	9.4	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	19.2	-	-	0.0	-	-	0.0	-	-

***Howella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
90.0 120.0	-	0.0	-	-	-	-	4.7	-	-	0.0	-	-

Serranidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 50.0	-	0.0	-	0.0	-	-	2.9	-	-	0.0	-	-

***Paralabrax* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	38.1	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	2.6	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	17.4	-	-	-	0.0	-
90.0 27.7	-	0.0	-	0.0	-	-	3.5	-	-	0.0	-	-
91.7 26.4	-	0.0	-	0.0	-	-	6.2	-	-	0.0	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 80.0	-	5.0	-	-	-	-	-	-	-	-	-	-
76.7 90.0	-	0.0	-	4.8	-	-	5.1	-	-	-	0.0	-
76.7 100.0	-	0.0	-	4.4	-	-	56.8	-	-	-	0.0	-
80.0 51.0	-	0.0	-	0.0	-	-	4.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.0	-	-	17.4	-	-	-	0.0	-
80.0 90.0	-	0.0	-	0.0	-	-	28.2	-	-	-	0.0	-
80.0 100.0	-	0.0	-	9.4	-	-	62.5	-	-	-	0.0	-

Table 14. (cont.)

Trachurus symmetricus . (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 80.0	-	0.0	-	9.9	-	-	24.9	-	-	0.0	-	-
83.3 90.0	-	0.0	-	0.0	-	-	20.7	-	-	0.0	-	-
86.7 70.0	-	0.0	-	5.4	-	-	9.6	-	-	0.0	-	-
86.7 80.0	-	0.0	-	4.9	-	-	60.3	-	-	0.0	-	-
86.7 90.0	-	0.0	-	0.0	-	-	8.7	-	-	0.0	-	-
86.7 100.0	-	0.0	-	0.0	-	-	11.7	-	-	0.0	-	-
86.7 110.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-
90.0 60.0	-	0.0	-	4.9	-	-	5.1	-	-	0.0	-	-
90.0 70.0	-	0.0	-	0.0	-	-	9.7	-	-	0.0	-	-
90.0 80.0	-	0.0	-	0.0	-	-	62.9	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	0.0	-	97.1	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	35.8	-	-	0.0	-	-	0.0	-	-
93.3 60.0	-	0.0	-	33.2	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	30.8	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	9.5	-	-	0.0	-	-
93.3 90.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
95.0 45.0	-	-	-	32.3	-	-	-	-	-	-	-	-
95.0 50.0	-	-	-	196.2	-	-	-	-	-	-	-	-

Brama japonica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-
93.3 80.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

Anisotremus davidsoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4 26.4	-	0.0	-	0.0	-	-	27.5	-	-	0.0	-	-

Xenistius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.8 32.5	-	0.0	-	0.0	-	-	2.9	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	17.2	-	-	0.0	-	-

Table 14. (cont.)

Genyonemus lineatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 52.0	-	4.6	-	-	-	-	-	-	-	-	-	-
80.0 50.5	-	2.9	-	0.0	-	-	0.0	-	-	-	0.0	-
80.0 51.0	-	4.2	-	0.0	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	9.2	-	-	0.0	-	-	-	0.0	-
83.3 39.4	-	0.0	-	5.4	-	-	0.0	-	-	-	0.0	-
83.3 40.6	-	0.0	-	0.0	-	-	0.0	-	-	-	3.9	-
83.3 51.0	-	-	-	0.0	-	-	0.0	-	-	4.8	-	-
85.4 35.8	-	-	-	0.0	-	-	-	-	-	-	19.6	-
86.7 50.0	-	0.0	-	3.6	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	0.0	-	84.8	-	-	0.0	-	-	8.5	-	-
88.5 30.1	-	0.0	-	512.7	-	-	0.0	-	-	8.7	-	-
90.0 27.7	-	0.0	-	307.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	21.1	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	10.3	-	-	0.0	-	-	0.0	-	-
91.7 26.4	-	0.0	-	39.4	-	-	0.0	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
95.0 28.0	-	-	-	12.6	-	-	-	-	-	-	-	-

Menticirrhus undulatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.7 43.5	-	-	-	0.0	-	-	2.9	-	-	-	0.0	-

Hermosilla azurea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	3.4	-	-	0.0	-	-

Medialuna californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 80.0	-	0.0	-	0.0	-	-	7.5	-	-	0.0	-	-

Chromis punctipinnis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	0.0	-	-	0.0	-	-	-	17.0	-
93.3 26.7	-	0.0	-	0.0	-	-	0.0	-	-	5.5	-	-
93.3 55.0	-	0.0	-	0.0	-	-	0.0	-	-	4.9	-	-

Table 14. (cont.)

Hypsypops rubicundus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-

Oxyjulis californica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	-	-	-	0.0	-	-	8.5	-	-	0.0	-	-
86.7 50.0	-	0.0	-	0.0	-	-	2.9	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	0.0	-	-	11.2	-	-
93.3 35.0	-	0.0	-	0.0	-	-	5.5	-	-	0.0	-	-
93.3 60.0	-	0.0	-	0.0	-	-	0.0	-	-	4.7	-	-

***Rathbunella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
60.0 53.0	-	4.3	-	-	-	-	-	-	-	-	-	-
86.7 50.0	-	3.9	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	19.2	-	-	0.0	-	-	0.0	-	-

Stichaeidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 50.5	-	2.9	-	0.0	-	-	0.0	-	-	-	0.0	-

Plectobranchus evides

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	-	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-

Chiasmodon niger

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 110.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-

Neoclinus stephensae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4 26.4	-	0.0	-	2.7	-	-	0.0	-	-	0.0	-	-

***Hypsoblennius* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 27.7	-	0.0	-	0.0	-	-	13.9	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-

Table 14. (cont.)

Hypsoblennius gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 39.4	-	0.0	-	0.0	-	-	0.0	-	-	-	4.1	-
86.7 35.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-

Hypsoblennius jenkinsi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
86.7 33.0	-	0.0	-	0.0	-	-	4.1	-	-	0.0	-	-
88.5 30.1	-	0.0	-	0.0	-	-	6.6	-	-	0.0	-	-
90.0 27.7	-	0.0	-	0.0	-	-	0.0	-	-	2.7	-	-
90.0 28.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
91.7 26.4	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
93.3 28.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	199.5	-	-	0.0	-	-

Icosteus aenigmaticus

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

Ilypnus gilberti

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5 30.1	-	0.0	-	0.0	-	-	3.3	-	-	0.0	-	-

Lepidogobius lepidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
85.4 35.8	-	-	-	0.0	-	-	-	-	-	-	2.8	-
86.8 32.5	-	0.0	-	3.4	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	0.0	-	-	3.5	-	-	0.0	-	-

Lythrypnus zebra

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	-	0.0	-	0.0	-	-	8.9	-	-	-	0.0	-

Rhinogobiops nicholsii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 55.0	-	5.2	-	-	-	-	-	-	-	-	-	-
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
76.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.5	-

Table 14. (cont.)

Rhinogobiops nicholsii (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	-	0.0	-	4.3	-	-	0.0	-	-	-	0.0	-
81.8 46.9	-	-	-	0.0	-	-	9.5	-	-	-	0.0	-
86.7 40.0	-	0.0	-	9.4	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	3.9	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 55.0	-	0.0	-	8.8	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	10.2	-	-	0.0	-	-	8.8	-	-
90.0 53.0	-	0.0	-	9.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 40.0	-	0.0	-	5.0	-	-	0.0	-	-	0.0	-	-
93.3 50.0	-	9.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	8.5	-	-	0.0	-	-
93.3 70.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-

Typhlogobius californiensis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	-	0.0	-	0.0	-	-	5.2	-	-	-	0.0	-
93.3 28.0	-	0.0	-	0.0	-	-	5.1	-	-	0.0	-	-

Sphyraena argentea

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.4 26.4	-	0.0	-	0.0	-	-	10.3	-	-	0.0	-	-

Scomber japonicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	-	0.0	-	0.0	-	-	4.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
90.0 35.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
90.0 37.0	-	0.0	-	0.0	-	-	4.8	-	-	0.0	-	-
93.3 45.0	-	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
93.3 100.0	-	0.0	-	0.0	-	-	4.7	-	-	0.0	-	-

Icichthys lockingtoni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
63.3 80.0	-	4.8	-	-	-	-	-	-	-	-	-	-
83.3 80.0	-	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Icichthys lockingtoni (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-

Tetragonurus cuvieri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	-	4.8	-	0.0	-	-	0.0	-	-	-	5.5	-
80.0 70.0	-	0.0	-	0.0	-	-	0.0	-	-	-	21.5	-
80.0 100.0	-	0.0	-	0.0	-	-	0.0	-	-	-	9.6	-
86.7 40.0	-	0.0	-	0.0	-	-	9.2	-	-	0.0	-	-
90.0 90.0	-	0.0	-	0.0	-	-	0.0	-	-	9.5	-	-
93.3 70.0	-	4.8	-	0.0	-	-	0.0	-	-	0.0	-	-

***Citharichthys* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-
86.7 45.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	0.0	-	-	4.9	-	-	0.0	-	-
93.3 30.0	-	0.0	-	0.0	-	-	0.0	-	-	5.4	-	-

Citharichthys sordidus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
73.3 70.0	-	4.4	-	-	-	-	-	-	-	-	-	-
81.8 46.9	-	-	-	0.0	-	-	0.0	-	-	-	9.0	-
83.3 60.0	-	0.0	-	4.7	-	-	0.0	-	-	18.4	-	-
83.3 70.0	-	7.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 50.0	-	0.0	-	0.0	-	-	0.0	-	-	4.1	-	-
90.0 30.0	-	4.6	-	10.2	-	-	4.8	-	-	0.0	-	-
90.0 35.0	-	0.0	-	20.7	-	-	0.0	-	-	0.0	-	-
90.0 37.0	-	0.0	-	9.6	-	-	0.0	-	-	0.0	-	-
90.0 45.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 90.0	-	4.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 45.0	-	9.3	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 55.0	-	0.0	-	9.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	9.7	-	-	0.0	-	-	0.0	-	-
95.0 45.0	-	-	-	10.8	-	-	-	-	-	-	-	-

Table 14. (cont.)

Citharichthys stigmaeus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 51.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.1	-
76.7 55.0	-	0.0	-	0.0	-	-	0.0	-	-	-	5.5	-
80.0 55.0	-	0.0	-	0.0	-	-	8.9	-	-	-	0.0	-
80.0 60.0	-	0.0	-	0.0	-	-	10.9	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	34.9	-	-	-	0.0	-
83.3 51.0	-	-	-	0.0	-	-	8.5	-	-	4.8	-	-
83.3 60.0	-	0.0	-	0.0	-	-	0.0	-	-	36.9	-	-
83.3 70.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
85.4 35.8	-	-	-	0.0	-	-	-	-	-	-	2.8	-
86.7 33.0	-	0.0	-	0.0	-	-	0.0	-	-	33.1	-	-
86.7 55.0	-	0.0	-	4.4	-	-	18.1	-	-	0.0	-	-
86.7 60.0	-	0.0	-	0.0	-	-	8.5	-	-	10.7	-	-
86.7 70.0	-	0.0	-	0.0	-	-	0.0	-	-	4.3	-	-
90.0 28.0	-	0.0	-	10.5	-	-	9.3	-	-	0.0	-	-
90.0 30.0	-	0.0	-	0.0	-	-	0.0	-	-	8.8	-	-
90.0 35.0	-	0.0	-	0.0	-	-	0.0	-	-	9.5	-	-
90.0 37.0	-	0.0	-	9.6	-	-	0.0	-	-	22.4	-	-
90.0 45.0	-	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	9.8	-	4.8	-	-	28.7	-	-	0.0	-	-
90.0 90.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	0.0	-	-	9.3	-	-	0.0	-	-
93.3 35.0	-	0.0	-	0.0	-	-	5.5	-	-	0.0	-	-
93.3 40.0	-	0.0	-	0.0	-	-	0.0	-	-	17.3	-	-
93.3 50.0	-	9.6	-	9.7	-	-	0.0	-	-	5.0	-	-
93.3 55.0	-	8.2	-	0.0	-	-	8.5	-	-	0.0	-	-
93.3 60.0	-	8.6	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3 70.0	-	0.0	-	0.0	-	-	3.9	-	-	0.0	-	-
93.3 100.0	-	4.6	-	0.0	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-

Paralichthys californicus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-
80.0 50.5	-	0.0	-	0.0	-	-	2.5	-	-	-	0.0	-

Table 14. (cont.)

Paralichthys californicus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	-	0.0	-	0.0	-	-	4.0	-	-	-	0.0	-
81.7 43.5	-	-	-	0.0	-	-	2.9	-	-	-	0.0	-
83.3 42.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
86.7 33.0	-	0.0	-	0.0	-	-	0.0	-	-	14.2	-	-
86.7 40.0	-	0.0	-	37.7	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	0.0	-	3.4	-	-	2.9	-	-	0.0	-	-
88.5 30.1	-	2.7	-	6.1	-	-	0.0	-	-	5.8	-	-
90.0 27.7	-	0.0	-	25.8	-	-	10.4	-	-	10.6	-	-
90.0 28.0	-	0.0	-	21.1	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	10.2	-	-	0.0	-	-	0.0	-	-
91.7 26.4	-	0.0	-	0.0	-	-	18.7	-	-	0.0	-	-
93.4 26.4	-	0.0	-	0.0	-	-	3.4	-	-	0.0	-	-

Xystreurys liolepis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	0.0	-	-	0.0	-	-	-	4.3	-

Hypsopsetta guttulata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
88.5 30.1	-	0.0	-	0.0	-	-	0.0	-	-	5.8	-	-
90.0 27.7	-	0.0	-	10.3	-	-	0.0	-	-	0.0	-	-

Lepidopsetta bilineata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	4.9	-	-	-	-	-	-	-	-

Lyopsetta exilis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 55.0	-	-	-	11.1	-	-	-	-	-	-	-	-
66.7 52.0	-	-	-	10.6	-	-	-	-	-	-	-	-
76.7 55.0	-	0.0	-	4.6	-	-	9.5	-	-	-	0.0	-
76.7 60.0	-	0.0	-	4.3	-	-	9.8	-	-	-	0.0	-
80.0 51.0	-	0.0	-	8.5	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	0.0	-	9.0	-	-	0.0	-	-	-	0.0	-
86.7 33.0	-	0.0	-	8.3	-	-	0.0	-	-	0.0	-	-
86.7 35.0	-	0.0	-	106.1	-	-	0.0	-	-	0.0	-	-

Table 14. (cont.)

Lyopsetta exilis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 40.0	-	9.0	-	9.4	-	-	0.0	-	-	0.0	-	-
86.7 45.0	-	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	31.6	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	4.6	-	20.4	-	-	0.0	-	-	8.8	-	-
90.0 35.0	-	0.0	-	20.7	-	-	0.0	-	-	0.0	-	-
90.0 53.0	-	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
93.3 30.0	-	0.0	-	5.5	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	13.2	-	-	-	-	-	-	-	-

Microstomus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
66.7 60.0	-	0.0	-	19.7	-	-	-	-	-	-	-	-

Parophrys vetulus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
61.7 52.0	-	-	-	14.6	-	-	-	-	-	-	-	-
63.3 52.0	-	9.3	-	-	-	-	-	-	-	-	-	-
70.0 55.0	-	5.2	-	-	-	-	-	-	-	-	-	-
73.3 50.0	-	7.8	-	-	-	-	-	-	-	-	-	-
81.8 46.9	-	-	-	18.3	-	-	0.0	-	-	-	0.0	-
83.3 42.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
86.7 33.0	-	0.0	-	33.2	-	-	0.0	-	-	0.0	-	-
86.8 32.5	-	0.0	-	6.8	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	2.6	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	21.1	-	-	0.0	-	-	0.0	-	-
90.0 30.0	-	0.0	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0 35.0	-	0.0	-	20.7	-	-	0.0	-	-	0.0	-	-
93.3 26.7	-	0.0	-	44.8	-	-	0.0	-	-	0.0	-	-
93.3 28.0	-	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
95.0 30.0	-	-	-	4.4	-	-	-	-	-	-	-	-

***Pleuronichthys* spp.**

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

Table 14. (cont.)

Pleuronichthys coenosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	4.5	-	-	0.0	-	-	-	0.0	-
86.8 32.5	-	0.0	-	3.4	-	-	0.0	-	-	0.0	-	-

Pleuronichthys ritteri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
85.4 35.8	-	-	-	2.5	-	-	-	-	-	-	0.0	-
86.8 32.5	-	0.0	-	0.0	-	-	0.0	-	-	2.8	-	-
88.5 30.1	-	0.0	-	9.2	-	-	0.0	-	-	0.0	-	-
90.0 27.7	-	0.0	-	7.7	-	-	0.0	-	-	2.7	-	-

Pleuronichthys verticalis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.7 43.5	-	-	-	0.0	-	-	8.8	-	-	-	0.0	-
86.8 32.5	-	0.0	-	10.2	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	10.5	-	-	0.0	-	-	0.0	-	-
95.0 28.0	-	-	-	4.2	-	-	-	-	-	-	-	-

Symphurus atricaudus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	-	0.0	-	0.0	-	-	8.7	-	-	-	0.0	-
93.3 28.0	-	0.0	-	0.0	-	-	0.0	-	-	12.1	-	-

Disintegrated fish larvae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
70.0 60.0	-	9.1	-	-	-	-	-	-	-	-	-	-
76.7 80.0	-	0.0	-	4.6	-	-	0.0	-	-	-	0.0	-
80.0 80.0	-	0.0	-	3.8	-	-	0.0	-	-	-	0.0	-
80.0 100.0	-	0.0	-	0.0	-	-	4.8	-	-	-	0.0	-
86.7 40.0	-	9.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7 90.0	-	5.0	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0 28.0	-	0.0	-	10.5	-	-	0.0	-	-	0.0	-	-
90.0 100.0	-	0.0	-	4.5	-	-	0.0	-	-	0.0	-	-
93.3 80.0	-	0.0	-	4.8	-	-	4.7	-	-	0.0	-	-
93.3 90.0	-	0.0	-	10.4	-	-	0.0	-	-	0.0	-	-

Unidentified fish larvae

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

PHYLOGENETIC INDEX TO TABLES 6, 7, 13, AND 14

ALPHABETICAL INDEX TO TABLES 6, 7, 13 and 14

RECENT TECHNICAL MEMORANDUMS

SWFSC Technical Memorandums are accessible online at the SWFSC web site (http://swfsc.noaa.gov). Copies are also available form the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (http://www.ntis.gov). Recent issues of NOAA Technical Memorandums from the NMFS Southwest Fisheries Science Center are listed below:

NOAA-TM-NMFS-SWFSC-432 Framework for assessing viability of threatened Coho salmon in the southern Oregon/Northern California coast evolutionarily significant unit.
T.H. WILLIAMS, B.C. SPENCE, W. DUFFY, D. HILLEMEIER, G. KAUTSKY, T. LISLE, M. McAIN, T. NICKELSON, E. MORA, and T. PEARSON
(December 2008)

433 Stenella abundance research line transect and ecosystem (STAR-LITE) 2007 cruise report.
F.I. ARCHER, A.E. HENRY, and L.T. BALLANCE
(December 2008)

434 U.S. Pacific marine mammal stock assessments: 2008
J.V. CARRETTA, K.A. FORNEY, M.S. LOWRY, J. BARLOW, J. BAKER, D. JOHNSTON, B. HANSON, M.M. MUTO, D. LYNCH, and L. CARSWELL
(January 2009)

435 Preliminary estimates of harbor porpoise abundance in California waters from 2002 to 2007.
J.V. CARRETTA, K.A. FORNEY, and S.R. BENSON
(February 2009)

436 Creation of a captive broodstock program for southern Coho Salmon (*Oncorhynchus kisutch*): Results from the initial rearing and spawning of the first brood year.
E.A. STURM, E.A. GILBERT-HORVATH, J.C. GARZA, and R.B. MacFARLANE
(March 2009)

437 Developing a structure for quantitative listing criteria for the U.S. endangered species act using performance testing. Phase 1 report.
T. REGAN, B. TAYLOR, G. THOMPSON, J. COCHRANE, R. MERRICK, M. NAMMACK, S. RUMSEY, K. RALLS, and M. RUNGE
(March 2009)

438 Report on the NMFS California Current Ecosystem Survey (CCES) (April and July-August 2008)
Edited by S. McCLATCHIE
(March 2009)

439 Vaquita expedition 2008: Preliminary results from a towed hydrophone survey of the Vaquita from the *Vaquita Express* in the upper Gulf of California.
S. RANKIN, R. SWIFT, D. RISCH, B. TAYLOR, L. ROJAS-BRACHO, A. JARAMILLO-LEGORRETA, J. GORDON, T. AKAMATSU, and S. KIMURA
(April 2009)

440 Atlas of cetacean sightings for Southwest Fisheries Science Center cetacean and ecosystem surveys: 1986-2005.
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