NOAA Technical Memorandum NMFS

SEPTEMBER 1999

ICHTHYOPLANKTON AND STATION DATA FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 1991

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NOAA-TM-NMFS-SWFSC-272

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

This report provides ichthyoplankton data and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises conducted in the Southern California Bight region in 1991. It is the 31st report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 244 stations was occupied during quarterly cruises over the survey area which extended from Avila Beach to San Diego, California. Transects extended seaward in a southwesterly direction to a maximum of approximately 330 n. mi. The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. The data are listed in a series of four 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 table. Another table lists, by station and month, standardized counts of each of the 149 larval fish categories identified from survey samples. This series of reports makes the CalCOFI ichthyoplankton and station data available to all investigators and serves as a guide to the computer data base.

INTRODUCTION

This report, the 31st 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 1991. This program was initiated in 1949, under the sponsorship of the Marine Research Committee of the State of California, to study the population fluctuations of the Pacific sardine (*Sardinops sagax*) and the environmental factors that may play a role in these fluctuations. CalCOFI is a partnership among the Southwest Fisheries Science Center of the National Marine Fisheries Service (NMFS), the Scripps Institution of Oceanography (SIO), and the California Department of Fish and Game (CDFG). NMFS and SIO supply ships and personnel to conduct the sea surveys, NMFS processes the plankton samples and analyzes the ichthyoplankton from them. SIO processes and analyzes hydrographic and biological samples and analyzes invertebrate groups from the plankton samples.

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

Hydrographic and biological data from the 1991 CalCOFI survey have been published by the Scripps Institution of Oceanography (Univ. of Calif., SIO 1991, 1992). All available records for the 1991 CalCOFI surveys were verified and edited to produce this ichthyoplankton data report. These reports make the CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the computer data base. They are the basic documents against which changes in the data base can be compared as it is modified to correct errors and update earlier identifications. Citations for previous reports in this series are:

Survey	Report	Survey	Report
1951	Ambrose et al. 1987a	1966	Sumida et al. 1988b
1952	Sandknop et al. 1987a	1967	Ambrose et al. 1988b
1953	Stevens et al. 1987a	1968	Sandknop et al. 1988c
1954	Sumida et al. 1987a	1969	Stevens et al. 1988b
1955	Ambrose et al. 1987b	1972	Sumida et al. 1988c
1956	Stevens et al. 1987b	1975	Ambrose et al. 1988c
1957	Sumida et al. 1987b	1978	Sandknop et al. 1988d
1958	Sandknop et al. 1987b	1981	Ambrose et al. 188d
1959	Stevens et al. 1987c	1984	Stevens et al. 1990
1960	Ambrose et al. 1987c	1985	Ambrose et al. 1999a
1961	Sandknop et al. 1988a	1986	Charter et al. 1999a
1962	Sumida et al. 1988a	1987	Sandknop et al. 1999
1963	Ambrose et al. 1988a	1988	Watson et al. 1999
1964	Sandknop et al. 1988b	1989	Ambrose et al. 1999b
1965	Stevens et al. 1988a	1990	Charter et al. 1999b

SAMPLING AREA AND PATTERN

A total of 244 standard CalCOFI survey stations was occupied on four cruises in 1991, employing two research vessels:

9101, RV *David Starr Jordan*, 61 stations, January 8–23;

9103, RV *David Starr Jordan*, 54 stations, February 26–March 11;

9108, RV *New Horizon*, 66 stations, July 24–August 9;

9110, RV *New Horizon*, 63 stations, September 28–October 14.

The survey area extended from Avila Beach to San Diego, California and seaward on six survey lines to approximately 120–330 n. mi. (Figures 1 and 2).[1] The most seaward station, 90.0 120.0, was approximately 400 n. mi. west of Punta Baja, Baja California, Mexico. Stations on CalCOFI line 76.7 and 80.0 extended seaward to station 100.0 on 9101, 9108, and 9110. Line 76.7 was not occupied on 9103. On cruise 9103 line

[1] Beginning in 1981 we changed our designation of ordinal survey lines (those ending in "3" and "7") to an exact decimal notation. Thus, lines 77, 83, 87, 93, etc. were changed to 76.7, 83.3, 86.7, 93.3, etc. to indicate the spacing between cardinal lines (those ending in "0"). Scripps Institution of Oceanography continues to use the original designation for ordinal lines (Figures 1 and 2 and see Univ. of Calif., SIO 1991, 1992).

80.0 was occupied seaward to station 70.0. Stations on lines 83.3 and 86.7 extended to 90.0 on 9101 and to 110.0 on all other cruises. Stations on lines 90.0 and 93.3 extended seaward to station 120.0 on all cruises (Figures 1and 2).

SAMPLING GEAR AND METHODS

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

The standard tow in 1991 was a double oblique haul to 210 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 34kg weight suspended below the surface. The net was lowered to ~ 210 m depth by paying out 300 m of wire at 50 m/minute (35 m of depth/minute). After fishing at depth for 30 seconds, the net was retrieved at 20 m/minute (14 m of depth/minute). The angle of stray was recorded every 30 seconds and maintained at 45° (± 3°) by adjusting ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. At the beginning and end of each tow readings were made from a flow meter suspended in the mouth of the starboard net. Detailed descriptions of gear and methods are given by Kramer et al. (1972) and Smith and Richardson (1977); Ohman and Smith (1995) provided summaries of historical CalCOFI zooplankton methods and calibration factors for the various gear types.

LABORATORY PROCEDURES

We determined a zooplankton displacement volume for each sample (methods described in Staff, SPFI 1953 and Kramer et al. 1972). Samples containing > 25 ml of plankton were fractioned to ~ 50% of their original volume. Aliquot percentages for fractioned samples are listed in Table 1 under the "Percent Sorted" column. Sorting involved the removal of ichthyoplankton from the samples and identification and separation of: eggs and larvae of Pacific sardine, northern anchovy, and Pacific saury and larvae of Pacific hake. Body lengths of sardine, anchovy, and hake larvae were measured to the nearest 0.5 mm.

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

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

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

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

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

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

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

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

Tow depth, volume of water strained, and standard haul factor are listed in Table 1 for each tow taken during 1991. 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 1991 surveys could be identified to species. A total of 149 larval fish categories (including unidentified and disintegrated) was identified for 1991: 121 to species, 19 to genus, 8 to family, and 2 to order or suborder. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Coastal Fisheries Resources Division by William Isham and Ernesto Calix of MEC Analytical Systems, working closely with larval fish identification experts in the laboratory who checked each sample.

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

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

Cyclothone acclinidens, C. pseudopallida – Larger larvae (primarily postflexion stage) having diagnostic pigmentation characters.

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

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

Glyptocephalus zachirus – see comment for Pleuronectidae.

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

Lampanyctus spp. – primarily small (< 5.0 mm) larvae of *L. ritteri* and *L. regalis*; Zahuranec (In Press) has placed 17 species of *Lampanyctus* with small or absent pectoral fins in the genus *Nannobrachium*; four of these species occur in the current CalCOFI survey area (*L. regalis*, *L. ritteri*, and two undescribed species designated here by the descriptive names *Lampanyctus* "no pectorals" and *Lampanyctus* "niger").

Lepidopsetta bilineata – see comment for Pleuronectidae.

Lyopsetta exilis – see comment for Pleuronectidae.

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

Neoclinus – *Neoclinus blanchardi*, *N. stephensae* and *N. uninotatus* occur in the area, but only the first two species have been identified in samples; larvae < 6 mm have not been identified to species.

Paralepididae – small or damaged larvae, probably *Lestidiops ringens* lacking diagnostic characters.

Parophrys vetulus – see comment for Pleuronectidae.

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

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

SPECIES SUMMARY

Of the five most abundant larvae in 1991, the northern anchovy (*Engraulis mordax*) ranked first in abundance with 33.9% of the total larvae and ranked third in occurrence with 41.5% positive stations (Tables 2 and 3). The Pacific hake (*Merluccius productus*) ranked second in abundance with 12.7% of the total larvae and was ninth in occurrence (28.2% of the samples). The California smoothtongue *Leuroglossus stilbius* ranked third with 9.8% of the larvae and ranked fourth in occurrence (34.0% of the stations). The Panama lightfish (*Vinciguerria lucetia*) was the fourth most abundant taxon with 8.4% of the total larvae and ranked 12th in frequency of occurrence (24.5% of the samples). The rockfish genus *Sebastes* ranked fifth in abundance (6.8% of total larvae) and second in occurrence (43.2% of the samples). The next five most

abundant taxa were the Pacific sardine *Sardinops sagax* (3.7% of the total larvae), the northern lampfish *Stenobrachius leucopsarus* (3.6%), the shortbelly rockfish *Sebastes jordani* (3.5%), the popeye blacksmelt *Bathylagus ochotensis* (2.2%), and the Pacific sanddab (1.2%). These species ranked 14th, 6th, 22nd, 7th, and 8th in frequency of occurrence, respectively. The 10 most abundant taxa comprised 85.7% of all the larvae collected on CalCOFI cruises in 1991. The remaining 14.3% was distributed among 139other taxa (including the "disintegrated" and "unidentified" categories). Of the ten most abundant taxa, three are coastal demersal taxa, four are midwater species, and two are coastal pelagic species.

EXPLANATION OF TABLES

Table 1. This table lists for each 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. CalCOFI 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 1 and 2). 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 fraction. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. 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. The values for total fish eggs and larvae are raw counts (unadjusted for percent of sample sorted or standard haul factor). Ship codes are as follows: JD, *David Starr Jordan*; NH, *New Horizon*. 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 1and 2 for the beginning and end of each cruise are based on Pacific Standard time at the first and last 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 2. Pooled occurrences of all larval fish taxa taken on CalCOFI survey cruises in 1991 listed in rank order.

Table 3. Pooled counts of all larval fish taxa taken on CalCOFI survey cruises in 1991 listed in rank order. Numbers are adjusted for percent sorted and standard haul factors.

Table 4. Numbers of fish larvae for each taxon, listed by station and calendar month of the tow. Counts are adjusted for percentage of sample sorted and standard haul factor. The orders are listed in phylogenetic sequence (Eschmeyer 1998).

ACKNOWLEDGMENTS

The following NMFS personnel were responsible for making the collections at sea: Dimitry Abramenkoff (9108, 9110), Sharon Charter (9108), Ronald Dotson (9101, 9108), David Griffith (9101, 9103), and Susan Manion (all cruises). The samples were sorted by Lucy Dunn, Frances Pocinich, and Jean Haddox. William Isham and Ernesto Calix identified the samples in conjunction with the senior author and other personnel of the ichthyoplankton group (David Ambrose, Sharon Charter, William Watson). Amy Hays and Susan Manion entered the data and Susan Jacobson provided programming assistance. The cooperation and assistance provided by the crews of the CalCOFI research vessels were instrumental in making the collections and observations at sea.

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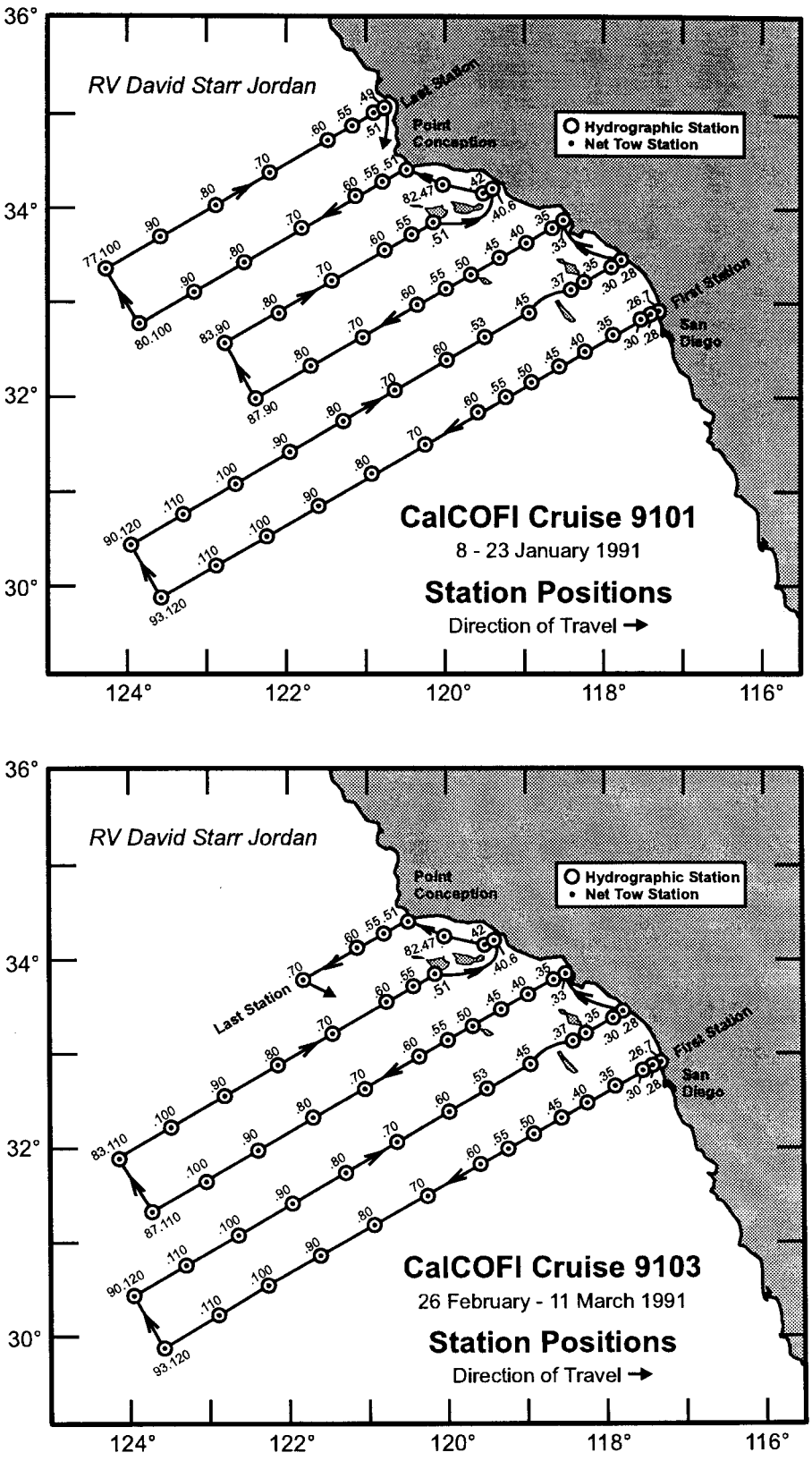

Figure 1. Stations and cruise tracks for CalCOFI cruises 9101 (above) and 9103 (below). Circles indicate hydrographic stations; dots indicate net tow stations.

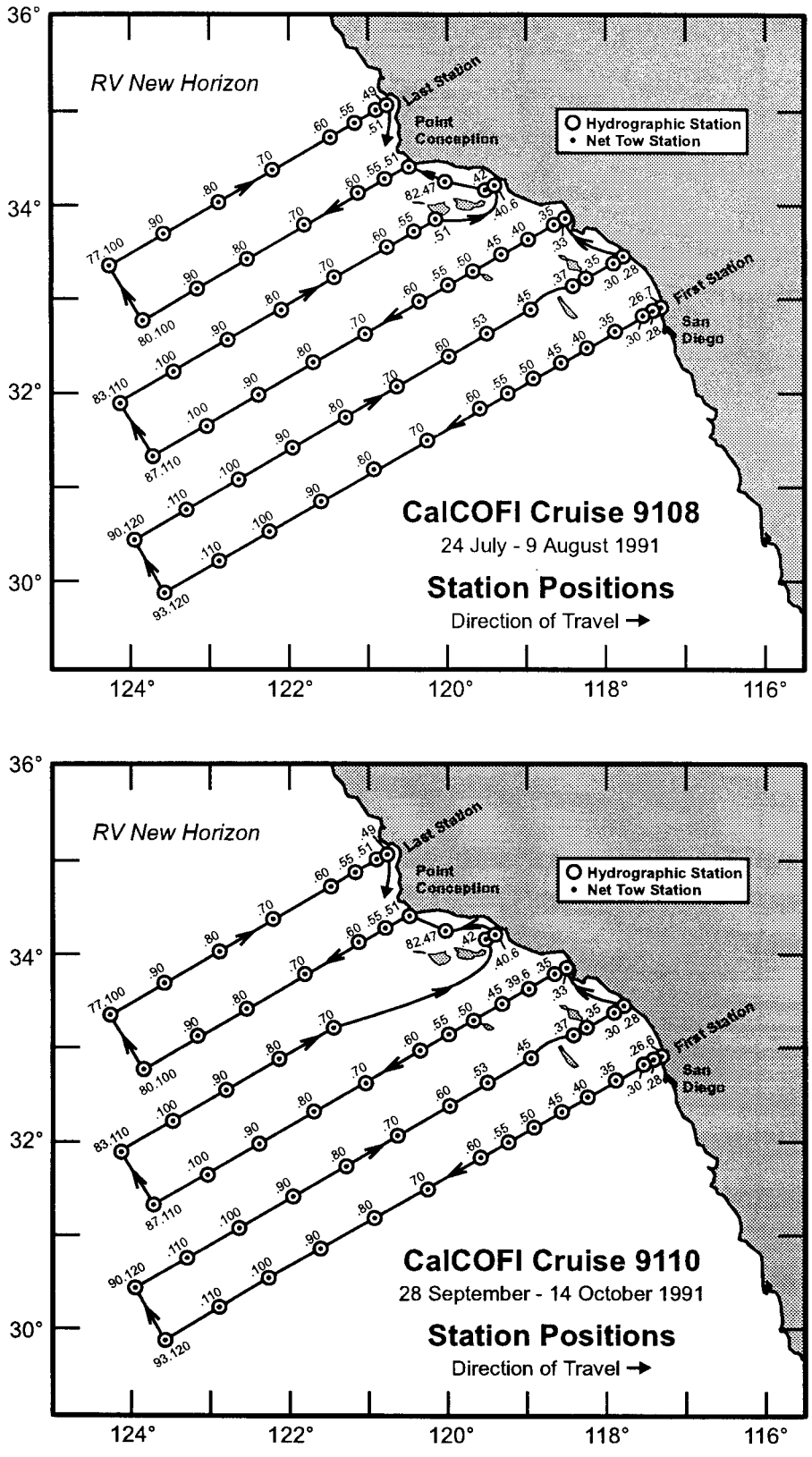

Figure 2. Stations and cruise tracks for CalCOFI cruises 9108 (above) and 9110 (below). Symbols as in figure 1.

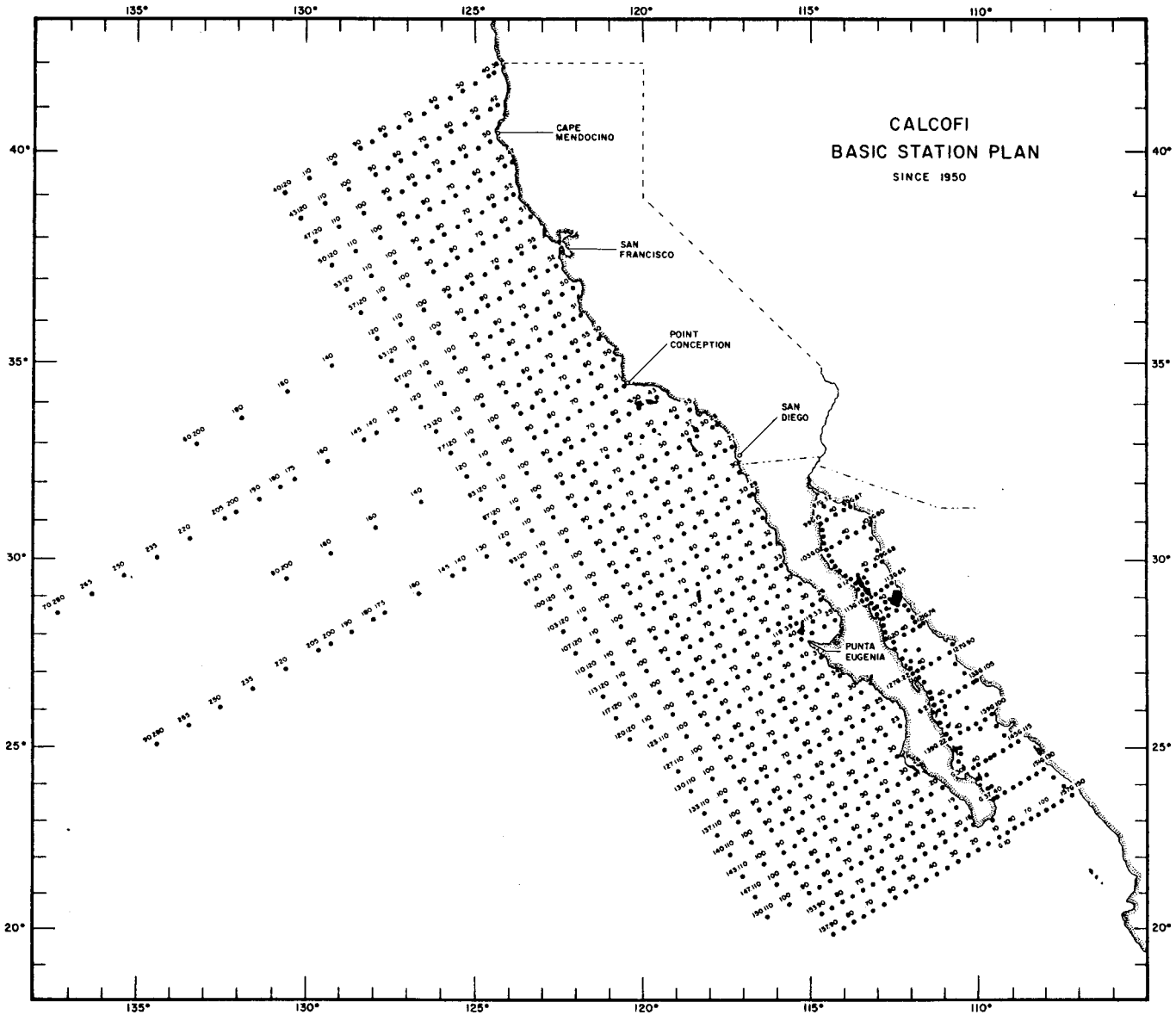

Figure 3. Basic station plan for CalCOFI Cruises.

TABLE 1. Station and plankton tow data for CalCOFI cruises in 1991. 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 9101

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.4	120	46.5	JD	91	01	22	1337	55	123	4.51	73	100.0	38	523
76.7	51.0	35	01.3	120	55.1	JD	91	01	22	1047	219	422	5.18	154	47.7	269	41
76.7	55.0	34	53.3	121	11.9	JD	91	01	22	0739	210	438	4.80	75	48.5	86	15
76.7	60.0	34	43.4	121	32.9	JD	91	01	22	0332	210	422	4.98	111	51.1	99	71
76.7	70.0	34	23.3	122	14.8	JD	91	01	21	2107	214	443	4.84	167	47.3	846	103
76.7	80.0	34	03.3	122	56.5	JD	91	01	21	1328	210	442	4.74	84	48.6	9	27
76.7	90.0	33	43.3	123	38.0	JD	91	01	21	0717	210	452	4.64	197	47.2	6	2
76.7	100.0	33	23.2	124	19.4	JD	91	01	21	0049	219	442	4.95	54	100.0	8	11
80.0	51.0	34	27.0	120	31.4	JD	91	01	19	1050	65	134	4.87	119	100.0	430	43
80.0	55.0	34	19.0	120	48.1	JD	91	01	19	1433	216	440	4.90	57	100.0	103	211
80.0	60.0	34	09.0	121	09.0	JD	91	01	19	1855	213	451	4.72	71	100.0	42	106
80.0	70.0	33	49.0	121	50.6	JD	91	01	20	0107	211	433	4.86	208	48.9	110	16
80.0	80.0	33	29.0	122	32.0	JD	91	01	20	0709	214	442	4.85	163	47.2	9	13
80.0	90.0	33	09.0	123	13.2	JD	91	01	20	1308	216	426	5.07	84	50.0	26	12
80.0	100.0	32	49.0	123	54.4	JD	91	01	20	1840	207	465	4.45	82	100.0	17	77
81.8	46.9	34	16.5	120	01.5	JD	91	01	19	0648	209	431	4.86	102	47.7	198	304
83.3	40.6	34	13.5	119	24.7	JD	91	01	19	0159	22	51	4.27	177	100.0	169	2096
83.3	42.0	34	10.7	119	30.5	JD	91	01	18	2326	97	206	4.72	97	100.0	509	670
83.3	51.0	33	52.7	120	07.9	JD	91	01	18	1722	80	200	4.01	70	100.0	133	456
83.3	55.0	33	43.7	120	26.7	JD	91	01	18	1332	208	444	4.68	97	51.2	342	148
83.3	60.0	33	34.7	120	45.4	JD	91	01	18	0920	215	443	4.85	287	52.0	337	2813
83.3	70.0	33	14.6	121	26.6	JD	91	01	18	0315	206	440	4.68	59	100.0	15	27
83.3	80.0	32	54.7	122	07.6	JD	91	01	17	2104	218	438	4.98	57	100.0	24	6
83.3	90.0	32	34.8	122	48.7	JD	91	01	17	1440	213	442	4.81	61	100.0	17	9
86.7	33.0	33	53.4	118	29.5	JD	91	01	15	0213	42	101	4.14	119	100.0	523	60
86.7	35.0	33	49.3	118	37.9	JD	91	01	15	0441	208	437	4.76	50	100.0	1197	175
86.7	40.0	33	39.4	118	58.6	JD	91	01	15	0843	218	421	5.17	26	100.0	121	671
86.7	45.0	33	29.4	119	19.0	JD	91	01	15	1320	196	479	4.09	50	100.0	497	1947
86.7	50.0	33	19.4	119	39.7	JD	91	01	15	1821	45	132	3.41	45	100.0	435	177

Table 1. (cont.)

CalCOFI Cruise 9101

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	55.0	33	09.4	120	00.4	JD	91	01	16	0827	211	462	4.56	54	100.0	480	1104
86.7	60.0	32	59.4	120	20.9	JD	91	01	16	1333	212	456	4.65	46	100.0	76	646
86.7	70.0	32	39.4	121	02.0	JD	91	01	16	1950	219	455	4.82	31	100.0	9	10
86.7	80.0	32	19.6	121	42.9	JD	91	01	17	0155	210	455	4.62	53	100.0	14	6
86.7	90.0	31	59.4	122	23.6	JD	91	01	17	0757	219	440	4.99	36	100.0	7	9
90.0	28.0	33	29.1	117	46.1	JD	91	01	14	1730	97	209	4.66	57	100.0	119	21
90.0	30.0	33	25.1	117	54.2	JD	91	01	14	1957	213	420	5.06	52	100.0	129	576
90.0	35.0	33	15.1	118	15.0	JD	91	01	14	1102	214	449	4.78	33	100.0	517	1702
90.0	37.0	33	11.0	118	23.3	JD	91	01	14	0814	210	451	4.66	29	100.0	134	509
90.0	45.0	32	55.1	118	56.0	JD	91	01	14	0246	218	432	5.04	150	50.8	18	170
90.0	53.0	32	39.3	119	28.8	JD	91	01	13	2105	219	436	5.02	51	100.0	33	678
90.0	60.0	32	25.1	119	57.6	JD	91	01	13	1511	203	479	4.24	38	100.0	36	109
90.0	80.0	31	45.1	121	18.8	JD	91	01	13	0248	202	475	4.26	36	100.0	13	12
90.0	90.0	31	25.0	121	59.1	JD	91	01	12	1855	204	508	4.02	39	100.0	18	30
90.0	100.0	31	05.0	122	39.7	JD	91	01	12	1210	207	469	4.41	13	100.0	32	9
90.0	110.0	30	45.1	123	19.9	JD	91	01	12	0552	214	441	4.85	20	100.0	20	3
90.0	120.0	30	25.2	123	59.9	JD	91	01	12	0020	212	434	4.90	30	100.0	26	16
93.3	26.7	32	57.4	117	18.3	JD	91	01	08	1615	56	132	4.27	45	100.0	26	1
93.3	28.0	32	54.8	117	23.6	JD	91	01	08	1849	220	403	5.46	62	100.0	43	22
93.3	30.0	32	50.9	117	32.0	JD	91	01	08	2159	212	454	4.68	53	100.0	0	6
93.3	35.0	32	40.8	117	52.3	JD	91	01	09	0234	221	430	5.14	516	50.5	17	14
93.3	40.0	32	30.8	118	12.7	JD	91	01	09	0638	216	451	4.79	251	48.7	4	16
93.3	45.0	32	20.8	118	33.2	JD	91	01	09	1056	213	460	4.63	252	50.0	2	7
93.3	50.0	32	10.9	118	53.6	JD	91	01	09	1704	216	448	4.82	60	100.0	104	194
93.3	55.0	32	00.7	119	13.9	JD	91	01	09	2130	217	436	4.97	66	100.0	93	132
93.3	60.0	31	50.9	119	34.2	JD	91	01	10	0145	209	452	4.62	77	100.0	31	49
93.3	70.0	31	30.7	120	14.8	JD	91	01	10	0843	213	465	4.57	34	100.0	6	15
93.3	80.0	31	10.9	120	55.2	JD	91	01	10	1757	211	467	4.51	56	100.0	14	20
93.3	90.0	30	50.5	121	35.4	JD	91	01	11	0004	212	451	4.71	60	100.0	16	30
93.3	100.0	30	30.8	122	15.4	JD	91	01	11	0602	211	447	4.73	47	100.0	9	2
93.3	110.0	30	10.9	122	55.3	JD	91	01	11	1210	219	425	5.16	14	100.0	13	40
93.3	120.0	29	50.8	123	35.2	JD	91	01	11	1822	216	428	5.05	28	100.0	24	3

Table 1. (cont.)

CalCOFI Cruise 9103

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
80.0	51.0	34	27.1	120	31.4	JD	91	03	09	2031	55	117	4.70	991	50.0	66	42
80.0	55.0	34	19.0	120	48.1	JD	91	03	09	2327	214	431	4.97	237	52.9	230	13
80.0	60.0	34	09.0	121	09.0	JD	91	03	10	0322	212	426	4.97	120	49.0	90	45
80.0	70.0	33	49.0	121	50.5	JD	91	03	10	0926	216	436	4.96	48	100.0	87	39
81.8	46.9	34	16.5	120	01.5	JD	91	03	09	1626	208	431	4.82	163	48.6	283	593
83.3	40.6	34	13.5	119	24.7	JD	91	03	09	1037	21	50	4.25	121	100.0	12	284
83.3	42.0	34	10.6	119	30.5	JD	91	03	09	0847	144	306	4.70	82	100.0	498	1326
83.3	51.0	33	52.7	120	08.0	JD	91	03	09	0243	67	145	4.63	117	100.0	1635	456
83.3	55.0	33	44.7	120	24.6	JD	91	03	08	2317	219	428	5.12	145	51.6	445	194
83.3	60.0	33	34.7	120	45.2	JD	91	03	08	1920	209	447	4.68	287	51.6	52	5
83.3	70.0	33	13.4	121	28.3	JD	91	03	08	1318	210	440	4.77	57	100.0	80	11
83.3	80.0	32	54.7	122	07.9	JD	91	03	08	0704	215	432	4.97	46	100.0	27	4
83.3	90.0	32	34.7	122	48.7	JD	91	03	08	0058	213	451	4.73	51	100.0	58	72
83.3	100.0	32	14.5	123	29.6	JD	91	03	07	1858	211	445	4.75	65	100.0	22	39
83.3	110.0	31	54.8	124	10.2	JD	91	03	07	1300	220	428	5.14	33	100.0	21	26
86.7	33.0	33	53.4	118	29.4	JD	91	03	04	2340	41	96	4.20	114	100.0	911	1677
86.7	35.0	33	49.4	118	37.7	JD	91	03	05	0154	208	434	4.79	51	100.0	671	100
86.7	40.0	33	39.4	118	58.5	JD	91	03	05	0608	215	444	4.85	34	100.0	402	650
86.7	45.0	33	29.4	119	19.1	JD	91	03	05	1018	222	440	5.03	36	100.0	634	571
86.7	50.0	33	19.5	119	39.8	JD	91	03	05	1450	45	132	3.38	61	100.0	482	457
86.7	55.0	33	09.4	120	00.4	JD	91	03	05	1849	206	486	4.24	51	100.0	177	334
86.7	60.0	32	59.4	120	21.0	JD	91	03	05	2246	218	448	4.86	80	50.0	85	10
86.7	80.0	32	19.4	121	43.0	JD	91	03	06	1042	219	448	4.88	25	100.0	18	11
86.7	90.0	31	59.3	122	23.6	JD	91	03	06	1722	218	492	4.42	18	100.0	20	25
86.7	100.0	31	39.3	123	04.2	JD	91	03	06	2321	220	453	4.85	46	100.0	22	159
86.7	110.0	31	19.4	123	44.7	JD	91	03	07	0619	206	476	4.34	23	100.0	30	39
90.0	28.0	33	29.1	117	46.1	JD	91	03	04	1728	166	371	4.49	67	100.0	866	169
90.0	30.0	33	25.1	117	54.3	JD	91	03	04	1457	206	448	4.59	51	100.0	203	404
90.0	35.0	33	15.1	118	15.0	JD	91	03	04	1100	218	418	5.22	24	100.0	417	1520
90.0	37.0	33	11.1	118	23.3	JD	91	03	04	0724	209	441	4.75	36	100.0	764	570
90.0	45.0	32	55.2	118	56.0	JD	91	03	04	0213	207	439	4.72	196	48.8	28	78
90.0	53.0	32	39.1	119	28.8	JD	91	03	03	2118	215	445	4.82	130	51.7	268	75

Table 1. (cont.)

CalCOFI Cruise 9103

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
90.0	60.0	32	25.2	119	57.5	JD	91	03	03	1637	214	470	4.54	272	53.1	39	28
90.0	70.0	32	05.1	120	38.3	JD	91	03	03	1003	217	448	4.84	45	100.0	88	9
90.0	80.0	31	45.1	121	18.9	JD	91	03	03	0403	213	466	4.57	39	100.0	95	4758
90.0	90.0	31	25.0	121	59.4	JD	91	03	02	2226	216	457	4.72	24	100.0	48	15
90.0	100.0	31	05.1	122	39.7	JD	91	03	02	1657	209	465	4.49	22	100.0	33	16
90.0	110.0	30	45.1	123	19.7	JD	91	03	02	0852	218	477	4.57	31	100.0	25	21
90.0	120.0	30	25.1	123	59.9	JD	91	03	02	0312	212	468	4.53	26	100.0	74	23
93.3	26.7	32	57.4	117	18.4	JD	91	02	26	1301	54	124	4.33	145	100.0	489	121
93.3	28.0	32	54.9	117	23.7	JD	91	02	26	1453	208	433	4.81	113	46.9	72	84
93.3	30.0	32	50.7	117	31.9	JD	91	02	26	1747	207	441	4.70	84	48.6	134	93
93.3	35.0	32	40.7	117	52.5	JD	91	02	26	2150	216	420	5.14	131	49.1	12	689
93.3	40.0	32	30.8	118	12.9	JD	91	02	27	0145	213	407	5.23	229	47.3	29	96
93.3	45.0	32	20.9	118	33.3	JD	91	02	27	0612	205	455	4.51	35	100.0	52	337
93.3	50.0	32	10.9	118	53.7	JD	91	02	27	1045	203	467	4.35	182	50.6	5	46
93.3	55.0	32	00.8	119	14.1	JD	91	02	27	1600	205	478	4.29	38	100.0	10	345
93.3	60.0	31	50.8	119	34.2	JD	91	02	27	2021	219	445	4.92	31	100.0	27	68
93.3	70.0	31	30.8	120	14.7	JD	91	02	28	0302	210	466	4.51	144	47.8	47	20
93.3	80.0	31	10.4	120	55.3	JD	91	02	28	1021	193	540	3.57	20	100.0	48	25
93.3	90.0	30	50.7	121	35.3	JD	91	02	28	1950	204	508	4.02	41	100.0	34	25
93.3	100.0	30	30.9	122	15.6	JD	91	03	01	0731	208	526	3.95	19	100.0	5	24
93.3	110.0	30	10.4	122	55.4	JD	91	03	01	1448	212	499	4.25	12	100.0	31	14
93.3	120.0	29	50.8	123	35.2	JD	91	03	01	2111	225	457	4.92	18	100.0	59	7

Table 1. (cont.)

CalCOFI Cruise 9108

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.5	JD	91	08	08	0042	49	101	4.84	3953	49.5	3	8
76.7	51.0	35	01.4	120	55.1	JD	91	08	07	2238	202	393	5.14	176	49.3	11	1
76.7	55.0	34	53.3	121	11.9	JD	91	08	07	1929	207	441	4.70	93	48.8	23	2
76.7	60.0	34	43.3	121	32.9	JD	91	08	07	1536	213	428	4.98	725	51.0	1	0
76.7	70.0	34	23.3	122	14.8	JD	91	08	07	0822	212	423	5.02	177	46.7	7	5
76.7	80.0	34	03.3	122	56.5	JD	91	08	07	0120	222	410	5.43	68	100.0	9	7
76.7	90.0	33	43.3	123	38.0	JD	91	08	06	1858	218	408	5.33	142	44.8	4	6
76.7	100.0	33	23.3	124	19.4	JD	91	08	06	1227	220	427	5.15	61	100.0	18	9
80.0	51.0	34	27.0	120	31.4	JD	91	08	04	2158	61	140	4.35	86	100.0	20	357
80.0	55.0	34	19.1	120	48.2	JD	91	08	05	0117	215	418	5.15	134	50.0	28	1
80.0	60.0	34	09.0	121	09.0	JD	91	08	05	0505	211	427	4.94	138	47.5	4	1
80.0	70.0	33	49.0	121	50.5	JD	91	08	05	1224	215	413	5.21	153	46.0	0	21
80.0	80.0	33	29.0	122	32.0	JD	91	08	05	1835	209	423	4.95	225	50.5	4	2
80.0	90.0	33	09.0	123	13.5	JD	91	08	06	0050	207	426	4.86	96	51.2	19	5
80.0	100.0	32	49.0	123	54.4	JD	91	08	06	0618	211	427	4.93	26	100.0	14	14
81.8	46.9	34	16.5	120	01.5	JD	91	08	04	1731	214	422	5.07	31	100.0	9	4
83.3	40.6	34	13.6	119	24.8	JD	91	08	04	1237	20	52	3.82	39	100.0	34	296
83.3	42.0	34	10.7	119	30.5	JD	91	08	04	0750	119	251	4.75	40	100.0	109	174
83.3	51.0	33	52.7	120	08.1	JD	91	08	04	0120	83	201	4.12	10	100.0	2	60
83.3	55.0	33	44.7	120	24.6	JD	91	08	03	2150	198	468	4.22	139	47.7	4	0
83.3	60.0	33	34.7	120	45.3	JD	91	08	03	1734	197	476	4.14	53	100.0	8	5
83.3	70.0	33	14.6	121	26.6	JD	91	08	03	1140	201	469	4.29	47	100.0	12	79
83.3	80.0	32	54.9	122	07.9	JD	91	08	03	0450	205	478	4.30	21	100.0	14	2
83.3	90.0	32	34.7	122	48.8	JD	91	08	02	2221	199	467	4.27	26	100.0	35	9
83.3	100.0	32	14.7	123	29.6	JD	91	08	02	1445	220	434	5.07	21	100.0	8	2
83.3	110.0	31	54.7	124	10.2	JD	91	08	02	0652	220	428	5.14	114	100.0	22	41
86.7	33.0	33	53.4	118	29.4	JD	91	07	30	1714	41	100	4.10	140	100.0	17	611
86.7	35.0	33	49.4	118	37.7	JD	91	07	30	1932	208	445	4.69	58	100.0	15	20
86.7	39.5	33	41.0	118	56.0	JD	91	07	31	0030	203	449	4.52	91	48.8	16	5
86.7	45.0	33	29.4	119	19.2	JD	91	07	31	0417	207	453	4.57	183	50.6	4	3
86.7	50.0	33	19.4	119	39.7	JD	91	07	31	0743	71	150	4.75	67	100.0	12	20
86.7	55.0	33	09.4	120	00.4	JD	91	07	31	1247	205	422	4.86	164	47.8	3	1
86.7	60.0	32	59.4	120	21.0	JD	91	07	31	1717	217	412	5.27	83	47.1	2	7

Table 1. (cont.)

CalCOFI Cruise 9108

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	70.0	32	39.4	121	02.0	JD	91	07	31	2338	221	408	5.41	101	48.8	6	11
86.7	80.0	32	19.4	121	42.9	JD	91	08	01	0510	213	425	5.02	57	100.0	16	51
86.7	90.0	31	59.4	122	23.6	JD	91	08	01	1035	206	447	4.61	16	100.0	34	9
86.7	100.0	31	39.3	123	04.4	JD	91	08	01	1745	213	444	4.80	41	100.0	30	403
86.7	110.0	31	19.3	123	44.7	JD	91	08	02	0025	222	428	5.18	33	100.0	222	127
90.0	28.0	33	29.1	117	46.0	JD	91	07	30	0752	49	108	4.57	111	100.0	1	36
90.0	30.0	33	25.2	117	54.2	JD	91	07	30	0550	210	433	4.86	46	100.0	21	3
90.0	35.0	33	15.1	118	15.3	JD	91	07	30	0153	210	445	4.71	45	100.0	10	10
90.0	37.0	33	11.1	118	23.2	JD	91	07	29	2300	210	434	4.83	78	47.1	14	0
90.0	45.0	32	55.1	118	56.1	JD	91	07	29	1806	204	448	4.54	83	45.9	7	2
90.0	53.0	32	39.0	119	28.9	JD	91	07	29	1259	214	415	5.15	89	48.6	15	1
90.0	60.0	32	25.1	119	57.6	JD	91	07	29	0606	215	450	4.78	84	50.0	3	9
90.0	70.0	32	05.1	120	38.4	JD	91	07	29	0012	201	489	4.11	84	48.8	27	18
90.0	80.0	31	45.1	121	18.9	JD	91	07	28	1729	211	436	4.84	51	100.0	7	14
90.0	90.0	31	25.1	121	59.4	JD	91	07	28	1145	217	445	4.87	22	100.0	11	44
90.0	100.0	31	05.2	122	39.6	JD	91	07	28	0525	210	437	4.80	69	100.0	15	39
90.0	110.0	30	45.1	123	19.9	JD	91	07	27	2341	212	448	4.73	27	100.0	497	76
90.0	120.0	30	25.0	123	59.9	JD	91	07	27	1815	206	466	4.43	19	100.0	182	67
93.3	26.7	32	57.4	117	18.3	JD	91	07	24	1050	53	148	3.61	189	100.0	2	0
93.3	28.0	32	54.8	117	23.7	JD	91	07	24	1552	213	462	4.61	149	49.3	1	3
93.3	30.0	32	50.8	117	31.9	JD	91	07	24	1846	207	395	5.23	94	45.9	8	4
93.3	35.0	32	41.0	117	52.4	JD	91	07	24	2218	213	417	5.12	146	53.0	29	7
93.3	40.0	32	30.8	118	12.8	JD	91	07	25	0305	221	407	5.43	108	47.7	12	5
93.3	45.0	32	20.8	118	33.4	JD	91	07	25	0700	218	440	4.96	55	50.0	7	3
93.3	50.0	32	10.9	118	53.6	JD	91	07	25	1040	217	423	5.14	66	46.4	3	0
93.3	55.0	32	01.0	119	13.9	JD	91	07	25	1615	206	455	4.53	44	100.0	17	67
93.3	60.0	31	50.8	119	34.3	JD	91	07	25	2043	219	432	5.07	132	49.1	9	14
93.3	70.0	31	30.1	120	14.8	JD	91	07	26	0300	217	425	5.10	136	46.6	18	67
93.3	80.0	31	10.8	120	55.2	JD	91	07	26	0840	206	444	4.64	104	100.0	16	120
93.3	90.0	30	50.9	121	35.3	JD	91	07	26	1727	214	444	4.82	32	100.0	18	70
93.3	100.0	30	30.8	122	15.5	JD	91	07	26	2257	211	454	4.65	51	100.0	11	121
93.3	110.0	30	10.9	122	55.3	JD	91	07	27	0443	218	454	4.81	18	100.0	277	287
93.3	120.0	29	50.9	123	35.2	JD	91	07	27	1028	217	446	4.86	11	100.0	143	257

Table 1. (cont.)

CalCOFI Cruise 9110

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
76.7	49.0	35	05.3	120	46.6	NH	91	10	12	0439	61	151	4.02	113	100.0	119	404
76.7	51.0	35	01.3	120	55.2	NH	91	10	12	0206	213	454	4.69	203	46.7	38	26
76.7	55.0	34	53.3	121	11.9	NH	91	10	11	2215	200	440	4.54	191	47.6	20	5
76.7	60.0	34	43.4	121	32.8	NH	91	10	11	1820	210	457	4.59	79	50.0	10	4
76.7	70.0	34	23.3	122	14.8	NH	91	10	11	1230	220	427	5.16	56	100.0	5	0
76.7	80.0	34	03.3	122	56.2	NH	91	10	11	0613	208	438	4.74	16	100.0	8	5
76.7	90.0	33	43.3	123	37.9	NH	91	10	11	0027	219	435	5.04	37	100.0	99	13
76.7	100.0	33	23.3	124	19.4	NH	91	10	10	1845	198	454	4.37	44	100.0	368	15
80.0	51.0	34	27.0	120	31.4	NH	91	10	09	0305	63	149	4.20	40	100.0	48	481
80.0	55.0	34	19.0	120	48.4	NH	91	10	09	0625	225	461	4.88	82	47.4	42	53
80.0	60.0	34	09.1	121	09.0	NH	91	10	09	1136	190	465	4.09	26	100.0	13	4
80.0	70.0	33	49.0	121	50.7	NH	91	10	09	1753	212	440	4.82	89	46.2	2	0
80.0	80.0	33	29.0	122	32.0	NH	91	10	09	2350	220	428	5.14	61	100.0	11	1
80.0	90.0	33	09.1	123	13.5	NH	91	10	10	0559	211	408	5.18	42	100.0	5	0
80.0	100.0	32	49.0	123	54.4	NH	91	10	10	1240	204	458	4.46	20	100.0	38	12
81.8	46.9	34	16.5	120	01.5	NH	91	10	08	2248	186	430	4.32	44	100.0	32	126
83.3	40.6	34	13.5	119	24.9	NH	91	10	08	1745	22	71	3.08	14	100.0	5	262
83.3	42.0	34	10.7	119	30.6	NH	91	10	08	1550	91	202	4.51	40	100.0	81	56
83.3	70.0	33	14.7	121	26.6	NH	91	10	08	0252	215	447	4.81	47	100.0	6	1
83.3	80.0	32	54.7	122	07.8	NH	91	10	07	2042	212	473	4.49	51	100.0	5	0
83.3	90.0	32	34.7	122	48.7	NH	91	10	07	1425	226	430	5.25	30	100.0	3	0
83.3	100.0	32	14.8	123	29.6	NH	91	10	07	0706	231	449	5.14	13	100.0	24	11
83.3	110.0	31	54.7	124	10.2	NH	91	10	07	0058	217	425	5.11	45	100.0	31	4
86.7	33.0	33	53.4	118	29.4	NH	91	10	04	1350	47	90	5.21	45	100.0	27	145
86.7	35.0	33	49.4	118	37.7	NH	91	10	04	1600	205	432	4.75	56	100.0	65	54
86.7	39.5	33	40.9	118	56.1	NH	91	10	04	2037	191	459	4.15	105	45.8	12	69
86.7	45.0	33	29.4	119	19.1	NH	91	10	05	0024	212	448	4.73	71	100.0	10	2
86.7	50.0	33	19.4	119	39.7	NH	91	10	05	0341	70	148	4.72	74	100.0	139	136
86.7	55.0	33	09.5	120	00.2	NH	91	10	05	0728	221	464	4.76	32	100.0	7	1
86.7	60.0	32	59.4	120	21.0	NH	91	10	05	1339	211	457	4.61	24	100.0	15	1
86.7	70.0	32	39.1	121	02.1	NH	91	10	05	2000	213	416	5.12	60	100.0	8	11
86.7	80.0	32	19.4	121	42.9	NH	91	10	06	0202	215	434	4.95	46	100.0	3	1

Table 1. (cont.)

CalCOFI Cruise 9110

Line	Station	Latitude (N) deg.	min.	Longitude (W) deg.	min.	Ship Code	Tow Date yr.	mo.	day	Time (PST)	Tow Depth (m)	Volume Water Strained	Standard Haul Factor	Plankton Volume	Percent Sorted	Total Larvae	Total Eggs
86.7	90.0	31	59.4	122	23.7	NH	91	10	06	0727	214	437	4.89	27	100.0	19	15
86.7	100.0	31	39.4	123	04.2	NH	91	10	06	1355	219	439	4.99	16	100.0	54	13
86.7	110.0	31	19.5	123	44.8	NH	91	10	06	1933	221	446	4.95	27	100.0	145	23
90.0	28.0	33	29.0	117	46.3	NH	91	10	04	0704	207	427	4.84	42	100.0	7	2
90.0	30.0	33	25.1	117	54.3	NH	91	10	04	0455	203	443	4.57	129	50.9	17	4
90.0	35.0	33	15.0	118	15.0	NH	91	10	04	0102	216	422	5.12	81	100.0	62	44
90.0	37.0	33	11.2	118	23.1	NH	91	10	03	2232	200	462	4.33	54	100.0	33	1
90.0	45.0	32	55.1	118	56.2	NH	91	10	03	1720	215	431	4.99	35	100.0	39	3
90.0	53.0	32	39.2	119	28.9	NH	91	10	03	1139	209	440	4.76	50	100.0	7	0
90.0	60.0	32	25.2	119	57.5	NH	91	10	03	0605	213	445	4.78	135	45.0	5	0
90.0	70.0	32	05.1	120	38.3	NH	91	10	02	2340	211	466	4.52	54	100.0	6	2
90.0	80.0	31	45.1	121	18.9	NH	91	10	02	1643	219	451	4.84	27	100.0	4	2
90.0	90.0	31	25.0	121	59.4	NH	91	10	02	0916	198	434	4.56	30	100.0	13	17
90.0	100.0	31	05.1	122	39.7	NH	91	10	02	0332	225	472	4.78	17	100.0	220	34
90.0	110.0	30	45.1	123	20.0	NH	91	10	01	2135	201	467	4.30	28	100.0	37	20
90.0	120.0	30	25.0	123	59.9	NH	91	10	01	1455	217	415	5.23	19	100.0	18	32
93.3	26.7	32	57.4	117	18.3	NH	91	09	28	1250	44	93	4.70	204	100.0	18	43
93.3	28.0	32	54.9	117	23.6	NH	91	09	28	1535	219	434	5.05	9	100.0	9	0
93.3	30.0	32	50.9	117	31.8	NH	91	09	28	1857	222	445	4.99	49	100.0	12	35
93.3	35.0	32	40.8	117	52.4	NH	91	09	28	2337	209	442	4.72	63	53.6	9	10
93.3	40.0	32	30.8	118	12.8	NH	91	09	29	0322	219	419	5.22	64	100.0	26	3
93.3	45.0	32	20.9	118	33.5	NH	91	09	29	0740	215	451	4.76	51	100.0	2	2
93.3	50.0	32	10.9	118	53.8	NH	91	09	29	1222	233	449	5.18	40	100.0	6	0
93.3	55.0	32	00.8	119	14.0	NH	91	09	29	1624	216	439	4.92	27	100.0	1	1
93.3	60.0	31	50.9	119	34.4	NH	91	09	29	2056	223	501	4.45	100	48.0	2	2
93.3	70.0	31	30.8	120	14.8	NH	91	09	30	0221	216	430	5.02	65	100.0	9	2
93.3	80.0	31	10.7	120	55.3	NH	91	09	30	0805	225	485	4.64	41	100.0	13	16
93.3	90.0	30	50.8	121	35.4	NH	91	09	30	1503	227	435	5.22	12	100.0	126	23
93.3	100.0	30	30.8	122	15.4	NH	91	09	30	2045	215	442	4.85	18	100.0	326	10
93.3	110.0	30	10.8	122	55.4	NH	91	10	01	0223	222	446	4.99	18	100.0	412	38
93.3	120.0	29	50.8	123	35.1	NH	91	10	01	0813	201	467	4.30	17	100.0	93	40

TABLE 2. Pooled occurrences of fish larvae taken on CalCOFI cruises in 1991.

Rank	Taxon	Occurrences
1	*Protomyctophum crockeri*	127
2	*Sebastes* spp.	104
3	*Engraulis mordax*	100
4	*Leuroglossus stilbius*	82
5	*Citharichthys stigmaeus*	75
6	*Stenobrachius leucopsarus*	73
7	*Bathylagus ochotensis*	72
8	*Citharichthys sordidus*	71
9	*Merluccius productus*	69
10	*Triphoturus mexicanus*	62
11	*Diogenichthys atlanticus*	60
12	*Vinciguerria lucetia*	59
13	*Bathylagus wesethi*	54
14	*Cyclothone signata*	52
14	*Sardinops sagax*	52
16	*Lampanyctus* spp.	49
17	*Tarletonbeania crenularis*	48
18	*Argyropelecus sladeni*	47
19	*Symbolophorus californiensis*	45
19	*Ceratoscopelus townsendi*	45
21	*Lampanyctus ritteri*	42
22	*Sebastes jordani*	32
23	*Diaphus* spp.	31
24	*Citharichthys* spp.	28
25	*Chauliodus macouni*	27
26	*Argentina sialis*	24
27	*Lestidiops ringens*	23
27	*Idiacanthus antrostomus*	23
29	*Danaphos oculatus*	21
29	Myctophidae	21
29	*Sebastes paucispinis*	21
32	*Oxyjulis californica*	19
32	*Coryphopterus nicholsii*	19
34	*Melamphaes lugubris*	17
34	Disintegrated fish larvae	17
36	*Lampanyctus regalis*	16
36	*Sternoptyx* spp.	16
38	*Genyonemus lineatus*	15
39	*Microstoma* spp.	14
40	*Vinciguerria poweriae*	13
40	*Paralabrax* spp.	13
42	*Trachurus symmetricus*	12
43	*Bathylagus pacificus*	11
43	*Scomber japonicus*	11
43	*Argyropelecus affinis*	11
46	*Paralichthys californicus*	10
46	*Sebastes diploproa*	10
46	*Sebastes aurora*	10
46	*Stomias atriventer*	10
46	*Hygophum reinhardtii*	10

TABLE 2. (cont.)

Rank	Taxon	Occurrences
51	*Myctophum nitidulum*	9
51	*Scopelogadus bispinosus*	9
51	*Benthalbella dentata*	9
54	*Poromitra crassiceps*	8
54	Unidentified fish larvae	8
54	*Tetragonurus cuvieri*	8
54	*Argyropelecus hemigymnus*	8
58	*Electrona risso*	7
58	*Zaniolepis latipinnis*	7
58	*Lyopsetta exilis*	7
58	*Hippoglossina stomata*	7
58	*Pleuronichthys verticalis*	7
63	*Microstomus pacificus*	6
63	*Chromis punctipinnis*	6
63	*Parophrys vetulus*	6
66	*Argyropelecus* spp.	5
66	*Notoscopelus resplendens*	5
66	*Cyclothone* spp.	5
66	*Arctozenus risso*	5
66	*Synodus lucioceps*	5
66	*Sphyraena argentea*	5
66	*Chiasmodon niger*	5
73	*Aristostomias scintillans*	4
73	*Scopelosaurus harryi*	4
73	*Diogenichthys laternatus*	4
73	*Seriphus politus*	4
73	*Notolychnus valdiviae*	4
73	*Melamphaes* spp.	4
73	*Cyclothone acclinidens*	4
80	*Argyropelecus lychnus*	3
80	*Pleuronichthys decurrens*	3
80	*Hypsoblennius jenkinsi*	3
80	*Artedius creaseri*	3
80	*Loweina rara*	3
80	*Symphurus atricaudus*	3
80	*Rosenblattichthys volucris*	3
80	*Peprilus simillimus*	3
88	*Scopeloberyx robustus*	2
88	Sternoptychidae	2
88	*Lepidogobius lepidus*	2
88	*Ophidion scrippsae*	2
88	*Sebastolobus altivelis*	2
88	*Lythrypnus zebra*	2
88	*Tactostoma macropus*	2
88	*Rathbunella* spp.	2
88	*Plectobranchus evides*	2
88	*Cyclothone pseudopallida*	2
88	*Scorpaenichthys marmoratus*	2
88	*Bathylagus* spp.	2
88	*Cololabis saira*	2
88	*Howella* spp.	2

TABLE 2. (cont.)

Rank	Taxon	Occurrences
88	*Atherinopsis californiensis*	2
88	Melamphaidae	2
88	Bathylagidae	2
88	*Oxylebius pictus*	2
88	*Chilara taylori*	2
107	Scopelarchidae	1
107	*Bathylagus milleri*	1
107	*Cyema atrum*	1
107	*Etrumeus teres*	1
107	*Bathophilus flemingi*	1
107	Stomiiformes	1
107	*Psenes pellucidus*	1
107	*Artedius fenestralis*	1
107	*Brama japonica*	1
107	*Umbrina roncador*	1
107	*Medialuna californiensis*	1
107	*Halichoeres semicinctus*	1
107	*Neoclinus stephensae*	1
107	*Brosmophycis marginata*	1
107	*Icichthys lockingtoni*	1
107	*Sebastolobus* spp.	1
107	*Citharichthys xanthostigma*	1
107	Pleuronectidae	1
107	*Embassichthys bathybius*	1
107	*Glyptocephalus zachirus*	1
107	*Lepidopsetta bilineata*	1
107	*Pleuronichthys coenosus*	1
107	*Pleuronichthys ritteri*	1
107	*Diplospinus multistriatus*	1
107	Cyematidae	1
107	*Scopelarchus guentheri*	1
107	*Lestidiops* spp.	1
107	*Stemonosudis macrura*	1
107	*Lampadena urophaos*	1
107	*Lampanyctus* "niger"	1
107	*Diogenichthys* spp.	1
107	*Hygophum* spp.	1
107	Cottidae	1
107	*Trachipterus altivelis*	1
107	*Sebastolobus alascanus*	1
107	*Cataetyx rubrirostris*	1
107	*Gigantactis* spp.	1
107	*Gobiesox maeandricus*	1
107	*Atherinops affinis*	1
107	*Melamphaes parvus*	1
107	*Sebastes levis*	1
107	*Scopelarchus analis*	1
107	*Desmodema lorum*	1
	Total	2173

TABLE 3. Pooled counts of fish larvae taken on CalCOFI cruises in 1991. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	*Engraulis mordax*	47492
2	*Merluccius productus*	17790
3	*Leuroglossus stilbius*	13723
4	*Vinciguerria lucetia*	11744
5	*Sebastes* spp.	9581
6	*Sardinops sagax*	5176
7	*Stenobrachius leucopsarus*	5017
8	*Sebastes jordani*	4850
9	*Bathylagus ochotensis*	3043
10	*Citharichthys sordidus*	1628
11	*Citharichthys stigmaeus*	1587
12	*Vinciguerria poweriae*	1396
13	*Protomyctophum crockeri*	1372
14	*Triphoturus mexicanus*	1251
15	*Ceratoscopelus townsendi*	1087
15	*Bathylagus wesethi*	1087
17	*Cyclothone signata*	1056
18	*Diogenichthys atlanticus*	848
19	*Argentina sialis*	781
20	*Lampanyctus ritteri*	589
21	*Tarletonbeania crenularis*	527
22	*Citharichthys* spp.	508
23	*Diaphus* spp.	472
24	*Lampanyctus* spp.	471
25	*Symbolophorus californiensis*	417
26	*Idiacanthus antrostomus*	399
27	*Genyonemus lineatus*	388
28	*Argyropelecus sladeni*	357
29	*Oxyjulis californica*	354
30	*Sebastes paucispinis*	353
31	*Scomber japonicus*	330
32	*Coryphopterus nicholsii*	238
33	Disintegrated fish larvae	219
34	*Chauliodus macouni*	175
35	*Lampanyctus regalis*	170
36	*Trachurus symmetricus*	162
37	*Lestidiops ringens*	161
38	Myctophidae	157
39	*Danaphos oculatus*	126
40	*Bathylagus pacificus*	107
41	*Sternoptyx* spp.	104
41	*Melamphaes lugubris*	104
43	*Paralichthys californicus*	101
44	*Microstoma* spp.	91
45	*Paralabrax* spp.	87
46	*Lyopsetta exilis*	81
47	*Hygophum reinhardtii*	79
48	*Sebastes aurora*	77

TABLE 3. (cont.)

Rank	Taxon	Count
48	*Tetragonurus cuvieri*	77
50	*Benthalbella dentata*	76
51	*Sebastes diploproa*	72
52	*Chromis punctipinnis*	71
52	*Sphyraena argentea*	71
54	*Parophrys vetulus*	70
55	*Argyropelecus affinis*	67
56	*Electrona risso*	64
57	Unidentified fish larvae	63
58	*Stomias atriventer*	62
59	*Pleuronichthys verticalis*	54
60	*Argyropelecus hemigymnus*	50
61	*Synodus lucioceps*	49
62	*Microstomus pacificus*	46
63	*Scopelogadus bispinosus*	45
64	*Notoscopelus resplendens*	44
65	*Poromitra crassiceps*	43
65	*Zaniolepis latipinnis*	43
65	*Lythrypnus zebra*	43
65	*Myctophum nitidulum*	43
69	*Hippoglossina stomata*	37
70	*Notolychnus valdiviae*	36
71	*Peprilus simillimus*	30
71	Bathylagidae	30
73	*Argyropelecus* spp.	29
73	*Melamphaes* spp.	29
73	*Diogenichthys laternatus*	29
76	*Symphurus atricaudus*	28
77	*Scopelosaurus harryi*	25
78	*Arctozenus risso*	24
78	*Chiasmodon niger*	24
78	*Cyclothone* spp.	24
81	*Rosenblattichthys volucris*	23
82	*Seriphus politus*	22
83	*Pleuronichthys decurrens*	20
83	*Cyclothone acclinidens*	20
83	*Sebastes levis*	20
86	*Cyclothone pseudopallida*	19
86	*Aristostomias scintillans*	19
88	*Artedius creaseri*	17
88	*Sebastolobus altivelis*	17
90	*Ophidion scrippsae*	15
90	*Hypsoblennius jenkinsi*	15
90	*Scorpaenichthys marmoratus*	15
90	*Argyropelecus lychnus*	15
90	*Bathylagus* spp.	15
95	*Loweina rara*	14
96	*Gigantactis* spp.	13
96	*Cololabis saira*	13
96	*Lepidogobius lepidus*	13
99	*Atherinopsis californiensis*	12

TABLE 3. (cont.)

Rank	Taxon	Count
100	*Brosmophycis marginata*	10
100	*Embassichthys bathybius*	10
100	*Tactostoma macropus*	10
100	Sternoptychidae	10
100	*Citharichthys xanthostigma*	10
100	*Chilara taylori*	10
100	Melamphaidae	10
100	*Lampadena urophaos*	10
100	*Cataetyx rubrirostris*	10
100	*Sebastolobus* spp.	10
100	*Lestidiops* spp.	10
100	*Howella* spp.	10
112	*Plectobranchus evides*	9
112	*Atherinops affinis*	9
112	*Oxylebius pictus*	9
112	*Halichoeres semicinctus*	9
112	*Rathbunella* spp.	9
117	*Scopeloberyx robustus*	8
117	Cottidae	8
117	*Pleuronichthys ritteri*	8
120	*Bathylagus milleri*	5
120	*Desmodema lorum*	5
120	*Brama japonica*	5
120	*Lepidopsetta bilineata*	5
120	*Glyptocephalus zachirus*	5
120	Pleuronectidae	5
120	*Gobiesox maeandricus*	5
120	*Artedius fenestralis*	5
120	*Sebastolobus alascanus*	5
120	*Umbrina roncador*	5
120	Cyematidae	5
120	*Diplospinus multistriatus*	5
120	Stomiiformes	5
120	*Psenes pellucidus*	5
120	*Stemonosudis macrura*	5
120	*Bathophilus flemingi*	5
120	*Diogenichthys* spp.	5
120	*Hygophum* spp.	5
120	*Lampanyctus* "niger"	5
120	*Melamphaes parvus*	5
120	Scopelarchidae	5
120	*Scopelarchus analis*	5
120	*Cyema atrum*	5
120	*Trachipterus altivelis*	5
144	*Medialuna californiensis*	4
144	*Icichthys lockingtoni*	4
144	*Scopelarchus guentheri*	4
144	*Etrumeus teres*	4
144	*Pleuronichthys coenosus*	4
144	*Neoclinus stephensae*	4
	Total	140061

TABLE 4. Number of fish larvae taken at stations occupied on CalCOFI cruises in 1991. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

Cyematidae

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

Cyema atrum

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	5.2	-	-

Etrumeus teres

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

Sardinops sagax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	13.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	21.7	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	55.0	0.0	-	-	-	-	-	-	19.3	-	0.0	-	-
80.0	51.0	0.0	-	47.0	-	-	-	-	34.8	-	0.0	-	-
80.0	55.0	0.0	-	122.1	-	-	-	-	103.0	-	0.0	-	-
80.0	60.0	0.0	-	20.3	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	0.0	-	168.6	-	-	-	-	0.0	-	0.0	-	-
83.3	40.6	17.1	-	8.5	-	-	-	-	91.7	-	0.0	-	-
83.3	42.0	4.7	-	32.9	-	-	-	-	270.8	-	0.0	-	-
83.3	51.0	0.0	-	152.8	-	-	-	-	0.0	-	-	-	-
83.3	55.0	109.7	-	496.1	-	-	-	-	0.0	-	-	-	-
83.3	90.0	0.0	-	18.9	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	14.3	-	-	-	-	0.0	-	0.0	-	-
86.7	33.0	24.8	-	621.6	-	-	-	12.3	-	-	0.0	-	-
86.7	35.0	71.4	-	47.9	-	-	-	0.0	-	-	4.8	-	-
86.7	40.0	5.2	-	77.6	-	-	-	-	-	-	-	-	-
86.7	45.0	28.6	-	447.7	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	6.8	-	1176.2	-	-	-	4.8	-	-	0.0	-	-

TABLE 4. (cont.)

Sardinops sagax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	94.3	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	14.6	-	-	0.0	-	-
90.0	35.0	4.8	-	47.0	-	-	-	9.4	-	-	25.6	-	-
90.0	37.0	0.0	-	218.5	-	-	-	0.0	-	-	17.3	-	-
90.0	45.0	0.0	-	0.0	-	-	-	39.6	-	-	0.0	-	-
90.0	53.0	0.0	-	46.6	-	-	-	21.2	-	-	0.0	-	-
90.0	80.0	0.0	-	64.0	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	203.5	-	-	-	-	0.0	-	9.4	-	-	-
93.3	40.0	0.0	11.1	-	-	-	-	22.8	-	0.0	-	-	-
93.3	55.0	9.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-

Engraulis mordax

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	40.6	-	-	-	-	-	-	19.6	-	333.7	-	-
76.7	51.0	152.0	-	-	-	-	-	-	31.3	-	20.1	-	-
76.7	55.0	0.0	-	-	-	-	-	-	28.9	-	47.7	-	-
76.7	60.0	0.0	-	-	-	-	-	-	0.0	-	9.2	-	-
76.7	70.0	30.7	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	1626.6	-	319.6	-	-	-	-	21.8	-	117.6	-	-
80.0	55.0	4.9	-	836.2	-	-	-	-	72.1	-	103.0	-	-
80.0	60.0	0.0	-	375.3	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	9.9	-	34.7	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	10.3	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	90.0	10.1	-	-	-	-	-	-	9.5	-	0.0	-	-
80.0	100.0	8.9	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	417.7	-	1616.6	-	-	-	-	5.1	-	69.1	-	-
83.3	40.6	661.8	-	38.3	-	-	-	-	7.6	-	12.3	-	-
83.3	42.0	967.6	-	1959.9	-	-	-	-	104.5	-	261.6	-	-
83.3	51.0	216.5	-	6079.2	-	-	-	-	0.0	-	-	-	-
83.3	55.0	228.5	-	1022.0	-	-	-	-	0.0	-	-	-	-

TABLE 4. (cont.)

Engraulis mordax (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	60.0	65.3	-	9.1	-	-	-	-	12.4	-	-	-	-
83.3	70.0	0.0	-	33.4	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	4.8	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7	33.0	1867.1	-	3137.4	-	-	-	41.0	-	-	135.5	-	-
86.7	35.0	3693.8	-	2270.5	-	-	-	0.0	-	-	190.0	-	-
86.7	39.5	-	-	-	-	-	-	9.3	-	-	36.2	-	-
86.7	40.0	87.9	-	785.7	-	-	-	-	-	-	-	-	-
86.7	45.0	359.9	-	1106.6	-	-	-	9.0	-	-	18.9	-	-
86.7	50.0	170.5	-	125.1	-	-	-	14.3	-	-	18.9	-	-
86.7	55.0	396.7	-	178.1	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	23.3	-	87.5	-	-	-	0.0	-	-	0.0	-	-
90.0	28.0	512.6	-	3479.8	-	-	-	4.6	-	-	4.8	-	-
90.0	30.0	425.0	-	234.1	-	-	-	0.0	-	-	80.8	-	-
90.0	35.0	1453.1	-	1278.9	-	-	-	0.0	-	-	179.2	-	-
90.0	37.0	181.7	-	2360.8	-	-	-	0.0	-	-	47.6	-	-
90.0	45.0	0.0	-	38.7	-	-	-	0.0	-	-	154.7	-	-
90.0	53.0	10.0	-	65.3	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	8.5	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	42.7	1719.0	-	-	-	-	7.2	-	23.5	-	-	-
93.3	28.0	147.4	389.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	30.0	0.0	1150.8	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	142.5	41.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	40.0	0.0	0.0	-	-	-	-	22.8	-	0.0	-	-	-
93.3	50.0	265.1	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	173.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-

Argentina sialis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	76.0	-	-	-	-	-	-	0.0	-	10.0	-	-
76.7	55.0	0.0	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7	60.0	48.7	-	-	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Argentina sialis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	30.7	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	4.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	4.9	-	9.4	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	0.0	-	5.0	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	112.1	-	49.6	-	-	-	-	0.0	-	25.9	-	-
83.3	42.0	18.9	-	47.0	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
83.3	55.0	0.0	-	19.8	-	-	-	-	0.0	-	-	-	-
86.7	35.0	171.4	-	57.5	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	5.2	-	4.8	-	-	-	-	-	-	-	-	-
90.0	28.0	0.0	-	49.4	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	5.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	4.8	-	5.2	-	-	-	0.0	-	-	0.0	-	-

Microstoma spp.

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	100.0	0.0	-	-	-	-	-	-	4.9	-	0.0	-	-
83.3	80.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	0.0	-	-	-	-	10.1	-	0.0	-	-
83.3	110.0	-	-	5.1	-	-	-	-	0.0	-	0.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	4.6	-	0.0	-	-
86.7	110.0	-	-	4.3	-	-	-	-	0.0	-	0.0	-	-
90.0	60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	13.5	-	-	-	0.0	-	-	0.0	-	-
90.0	110.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3	45.0	0.0	0.0	-	-	-	-	9.9	-	0.0	-	-	-
93.3	55.0	0.0	0.0	-	-	-	-	4.5	-	0.0	-	-	-
93.3	60.0	0.0	0.0	-	-	-	-	10.3	-	0.0	-	-	-

TABLE 4. (cont.)

Bathylagidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	20.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3	30.0	0.0	9.7	-	-	-	-	0.0	-	0.0	-	-	-

***Bathylagus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	0.0	-	10.1	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	0.0	-	5.0	-	-	-	-	0.0	-	0.0	-	-

Bathylagus milleri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	80.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-

Bathylagus ochotensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	65.2	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	55.0	207.8	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	60.0	204.7	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	102.3	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	80.0	29.3	-	-	-	-	-	-	5.4	-	0.0	-	-
76.7	100.0	5.0	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	4.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	102.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	60.0	51.9	-	81.1	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	99.4	-	133.9	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	20.6	-	-	-	-	-	-	9.8	-	0.0	-	-
80.0	90.0	91.3	-	-	-	-	-	-	0.0	-	5.2	-	-
80.0	100.0	53.4	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3	55.0	164.5	-	49.6	-	-	-	-	0.0	-	-	-	-
83.3	60.0	130.6	-	72.6	-	-	-	-	0.0	-	-	-	-
83.3	70.0	0.0	-	100.2	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	54.7	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	9.6	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3	110.0	-	-	15.4	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Bathylagus ochotensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	19.4	-	-	-	-	-	-	-	-	-
86.7	45.0	16.4	-	5.0	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	13.5	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	27.4	-	25.4	-	-	-	10.2	-	-	0.0	-	-
86.7	60.0	69.8	-	58.3	-	-	-	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	-	-	-	-	0.0	-	-	5.1	-	-
86.7	80.0	0.0	-	4.9	-	-	-	-	0.0	-	0.0	-	-
86.7	90.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7	100.0	-	-	19.4	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	0.0	-	22.5	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	41.3	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	31.3	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	9.3	-	33.3	-	-	-	0.0	-	-	0.0	-	-
90.0	45.0	19.8	-	29.0	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	10.0	-	139.8	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	38.2	-	76.9	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	82.3	-	-	-	16.8	-	-	4.5	-	-
93.3	28.0	0.0	51.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	0.0	20.9	-	-	-	-	9.7	-	0.0	-	-	-
93.3	40.0	0.0	33.2	-	-	-	-	0.0	-	0.0	-	-	-
93.3	45.0	0.0	27.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	38.6	17.2	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	19.9	0.0	-	-	-	-	4.5	-	0.0	-	-	-
93.3	60.0	13.9	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	4.6	56.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	4.5	7.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	8.0	-	-	-	-	0.0	-	0.0	-	-	-

Bathylagus pacificus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Bathylagus pacificus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	9.8	-	9.4	-	-	-	-	0.0	-	0.0	-	-
80.0	60.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	9.9	-	14.9	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	8.9	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	70.0	0.0	-	9.5	-	-	-	-	0.0	-	0.0	-	-
90.0	30.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	18.6	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Bathylagus wesethi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	-	-	-	-	0.0	-	15.1	-	-
76.7	100.0	0.0	-	-	-	-	-	-	5.2	-	8.7	-	-
80.0	80.0	0.0	-	-	-	-	-	-	9.8	-	5.1	-	-
80.0	90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
80.0	100.0	0.0	-	-	-	-	-	-	0.0	-	8.9	-	-
83.3	70.0	0.0	-	0.0	-	-	-	-	8.6	-	0.0	-	-
83.3	80.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	90.0	0.0	-	18.9	-	-	-	-	17.1	-	0.0	-	-
83.3	100.0	-	-	14.3	-	-	-	-	5.1	-	5.1	-	-
83.3	110.0	-	-	36.0	-	-	-	-	5.1	-	5.1	-	-
86.7	90.0	0.0	-	17.7	-	-	-	-	46.1	-	4.9	-	-
86.7	100.0	-	-	0.0	-	-	-	-	14.4	-	25.0	-	-
86.7	110.0	-	-	26.0	-	-	-	-	57.0	-	69.3	-	-
90.0	53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	22.9	-	-	-	0.0	-	-	0.0	-	-
90.0	90.0	8.0	-	28.3	-	-	-	14.6	-	-	4.6	-	-
90.0	100.0	8.8	-	13.5	-	-	-	28.8	-	-	43.0	-	-
90.0	110.0	0.0	-	13.7	-	-	-	14.2	-	-	68.8	-	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	15.7	-	-
93.3	40.0	0.0	11.1	-	-	-	-	0.0	-	5.2	-	-	-
93.3	50.0	0.0	8.6	-	-	-	-	0.0	-	0.0	-	-	-

TABLE 4. (cont.)

Bathylagus wesethi (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	55.0	0.0	0.0	-	-	-	-	13.6	-	0.0	-	-	-
93.3	70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	0.0	3.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	12.1	-	-	-	-	14.5	-	31.3	-	-	-
93.3	100.0	0.0	-	0.0	-	-	-	4.7	-	72.8	-	-	-
93.3	110.0	0.0	-	17.0	-	-	-	48.1	-	-	64.9	-	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	34.4	-	-

Leuroglossus stilbius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	781.9	-	-	-	-	-	-	0.0	-	10.0	-	-
76.7	55.0	69.3	-	-	-	-	-	-	0.0	-	9.5	-	-
76.7	60.0	194.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	347.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	80.0	9.8	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	82.8	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	117.6	-	319.4	-	-	-	-	0.0	-	20.6	-	-
80.0	60.0	33.0	-	131.9	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	9.9	-	34.7	-	-	-	-	0.0	-	0.0	-	-
80.0	90.0	40.6	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	35.6	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	356.6	-	357.0	-	-	-	-	0.0	-	4.3	-	-
83.3	42.0	108.6	-	117.5	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	68.2	-	18.5	-	-	-	-	0.0	-	-	-	-
83.3	55.0	1078.6	-	436.6	-	-	-	-	0.0	-	-	-	-
83.3	60.0	848.7	-	244.9	-	-	-	-	0.0	-	-	-	-
83.3	70.0	0.0	-	90.6	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	19.9	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
86.7	33.0	8.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	818.7	-	225.1	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Leuroglossus stilbius (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	40.0	237.8	-	659.6	-	-	-	-	-	-	-	-	-
86.7	45.0	175.9	-	1096.5	-	-	-	9.0	-	-	0.0	-	-
86.7	50.0	0.0	-	13.5	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	451.4	-	292.6	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	93.0	-	311.0	-	-	-	0.0	-	-	4.6	-	-
86.7	80.0	0.0	-	14.6	-	-	-	-	0.0	-	0.0	-	-
86.7	110.0	-	-	4.3	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	0.0	-	112.3	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	141.7	-	289.2	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	310.7	-	360.2	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	312.2	-	451.3	-	-	-	0.0	-	-	0.0	-	-
90.0	45.0	9.9	-	87.0	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	20.1	-	382.2	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	46.6	-	94.0	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	121.0	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	4.3	-	4.6	-	-	-	0.0	-	-	0.0	-	-
93.3	28.0	0.0	123.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	30.0	0.0	58.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	0.0	52.3	-	-	-	-	9.7	-	0.0	-	-	-
93.3	40.0	0.0	44.2	-	-	-	-	0.0	-	0.0	-	-	-
93.3	45.0	0.0	31.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	57.8	8.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	19.9	12.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	37.0	24.6	-	-	-	-	10.3	-	0.0	-	-	-
93.3	70.0	4.6	28.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	0.0	10.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	100.0	0.0	-	4.0	-	-	-	0.0	-	0.0	-	-	-

Stomiiformes

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

TABLE 4. (cont.)

Cyclothone spp.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	-	0.0	-	-	-	-	5.2	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-

Cyclothone acclinidens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	5.0	-	-
86.7 100.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
90.0 110.0	4.8	-	0.0	-	-	-	4.7	-	-	0.0	-	-

Cyclothone pseudopallida

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 110.0	0.0	-	0.0	-	-	-	9.5	-	-	0.0	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	9.7	-	-	-

Cyclothone signata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	-	-	-	-	5.4	-	0.0	-	-
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	35.3	-	-
76.7 100.0	0.0	-	-	-	-	-	-	5.2	-	83.0	-	-
80.0 100.0	0.0	-	-	-	-	-	-	0.0	-	8.9	-	-
83.3 70.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3 100.0	-	-	0.0	-	-	-	-	0.0	-	25.7	-	-
83.3 110.0	-	-	5.1	-	-	-	-	0.0	-	5.1	-	-
86.7 35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7 45.0	0.0	-	0.0	-	-	-	0.0	-	-	4.7	-	-
86.7 60.0	0.0	-	19.4	-	-	-	0.0	-	-	0.0	-	-
86.7 70.0	0.0	-	-	-	-	-	0.0	-	-	5.1	-	-
86.7 80.0	0.0	-	0.0	-	-	-	-	0.0	-	5.0	-	-
86.7 90.0	0.0	-	8.8	-	-	-	-	9.2	-	9.8	-	-
86.7 100.0	-	-	4.8	-	-	-	-	14.4	-	0.0	-	-
86.7 110.0	-	-	4.3	-	-	-	-	20.7	-	29.7	-	-

TABLE 4. (cont.)

Cyclothone signata (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 70.0	-	-	9.7	-	-	-	0.0	-	-	4.5	-	-
90.0 80.0	0.0	-	50.3	-	-	-	0.0	-	-	0.0	-	-
90.0 90.0	12.1	-	51.9	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	4.4	-	31.4	-	-	-	4.8	-	-	4.8	-	-
90.0 110.0	4.8	-	18.3	-	-	-	52.0	-	-	0.0	-	-
90.0 120.0	34.3	-	68.0	-	-	-	35.4	-	-	0.0	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-
93.3 80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	4.7	12.1	-	-	-	-	0.0	-	20.9	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	29.1	-	-	-
93.3 110.0	5.2	-	21.3	-	-	-	24.0	-	-	64.9	-	-
93.3 120.0	25.3	-	73.8	-	-	-	29.2	-	-	21.5	-	-

Sternoptychidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	0.0	-	5.2	-	-	-	0.0	-	-	0.0	-	-
90.0 37.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-

***Argyropelecus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 60.0	0.0	-	9.7	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-
93.3 120.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-

Argyropelecus affinis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
86.7 90.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7 100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
90.0 30.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-
90.0 53.0	0.0	-	18.6	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Argyropelecus affinis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-
93.3 55.0	5.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	4.7	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 100.0	4.7	-	0.0	-	-	-	0.0	-	0.0	-	-	-

Argyropelecus hemigymnus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	-	-	-	-	0.0	-	9.5	-	-
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	5.0	-	-
76.7 100.0	0.0	-	-	-	-	-	-	10.3	-	4.4	-	-
90.0 60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	0.0	-	-	-	8.9	-	-	0.0	-	-
93.3 90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 120.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Argyropelecus lychnus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 60.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3 70.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-

Argyropelecus sladeni

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	0.0	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7 80.0	0.0	-	-	-	-	-	-	5.4	-	0.0	-	-
76.7 100.0	0.0	-	-	-	-	-	-	5.2	-	4.4	-	-
80.0 55.0	9.8	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0 60.0	0.0	-	20.3	-	-	-	-	0.0	-	0.0	-	-
80.0 70.0	0.0	-	5.0	-	-	-	-	0.0	-	0.0	-	-
80.0 90.0	10.1	-	-	-	-	-	-	0.0	-	5.2	-	-
80.0 100.0	4.5	-	-	-	-	-	-	9.9	-	4.5	-	-
83.3 42.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
83.3 60.0	0.0	-	9.1	-	-	-	-	0.0	-	-	-	-

TABLE 4. (cont.)

Argyropelecus sladeni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	70.0	0.0	-	4.8	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	90.0	4.8	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3	110.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
86.7	40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
86.7	55.0	4.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	100.0	-	-	0.0	-	-	-	-	4.8	-	0.0	-	-
86.7	110.0	-	-	8.7	-	-	-	-	0.0	-	14.9	-	-
90.0	30.0	5.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	4.8	-	0.0	-	-	-	0.0	-	-	5.1	-	-
90.0	37.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	8.5	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	23.9	-	-
90.0	110.0	0.0	-	4.6	-	-	-	0.0	-	-	12.9	-	-
93.3	35.0	0.0	0.0	-	-	-	-	9.7	-	0.0	-	-	-
93.3	40.0	9.8	11.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	45.0	9.3	4.5	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	9.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	0.0	-	-	-	-	0.0	-	5.2	-	-	-
93.3	110.0	0.0	-	0.0	-	-	-	14.4	-	-	5.0	-	-
93.3	120.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Danaphos oculatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	9.8	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	100.0	0.0	-	-	-	-	-	-	15.5	-	0.0	-	-
80.0	100.0	0.0	-	-	-	-	-	-	4.9	-	0.0	-	-

TABLE 4. (cont.)

Danaphos oculatus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
86.7 35.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
86.7 80.0	4.6	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7 90.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7 100.0	-	-	4.8	-	-	-	-	0.0	-	5.0	-	-
86.7 110.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
90.0 30.0	0.0	-	0.0	-	-	-	9.7	-	-	0.0	-	-
90.0 70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
90.0 80.0	4.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 90.0	0.0	-	4.7	-	-	-	4.9	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
90.0 110.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
93.3 60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	4.8	-	-	5.0	-	-

***Sternoptyx* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-
83.3 70.0	0.0	-	4.8	-	-	-	-	0.0	-	0.0	-	-
86.7 35.0	0.0	-	0.0	-	-	-	9.4	-	-	0.0	-	-
86.7 110.0	-	-	4.3	-	-	-	-	5.2	-	0.0	-	-
90.0 35.0	0.0	-	5.2	-	-	-	0.0	-	-	0.0	-	-
90.0 53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.0	-	0.0	-	-	-	9.5	-	-	0.0	-	-
90.0 120.0	4.9	-	0.0	-	-	-	4.4	-	-	0.0	-	-
93.3 35.0	0.0	0.0	-	-	-	-	9.7	-	0.0	-	-	-
93.3 90.0	4.7	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-
93.3 110.0	0.0	-	4.3	-	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	14.8	-	-	-	4.9	-	-	0.0	-	-

TABLE 4. (cont.)

Station		*Vinciguerria lucetia*											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	-	-	-	-	0.0	-	4.7	-	-
76.7	90.0	0.0	-	-	-	-	-	-	0.0	-	347.8	-	-
76.7	100.0	0.0	-	-	-	-	-	-	25.8	-	1324.1	-	-
80.0	80.0	0.0	-	-	-	-	-	-	0.0	-	5.1	-	-
80.0	90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
80.0	100.0	0.0	-	-	-	-	-	-	0.0	-	53.5	-	-
83.3	70.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	80.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	90.0	0.0	-	0.0	-	-	-	-	47.0	-	0.0	-	-
83.3	100.0	-	-	0.0	-	-	-	-	0.0	-	15.4	-	-
83.3	110.0	-	-	0.0	-	-	-	-	0.0	-	71.5	-	-
86.7	70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	4.6	-	0.0	-	-	-	-	15.1	-	5.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	0.0	-	4.9	-	-
86.7	100.0	-	-	0.0	-	-	-	-	67.2	-	199.6	-	-
86.7	110.0	-	-	0.0	-	-	-	-	486.9	-	534.6	-	-
90.0	37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-
90.0	45.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-
90.0	70.0	-	-	0.0	-	-	-	0.0	-	-	18.1	-	-
90.0	80.0	0.0	-	18.3	-	-	-	0.0	-	-	4.8	-	-
90.0	90.0	4.0	-	9.4	-	-	-	0.0	-	-	9.1	-	-
90.0	100.0	4.4	-	0.0	-	-	-	4.8	-	-	798.3	-	-
90.0	110.0	14.5	-	0.0	-	-	-	1892.0	-	-	21.5	-	-
90.0	120.0	4.9	-	108.7	-	-	-	305.7	-	-	36.6	-	-
93.3	30.0	0.0	0.0	-	-	-	-	0.0	-	10.0	-	-	-
93.3	35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-
93.3	40.0	0.0	0.0	-	-	-	-	0.0	-	52.2	-	-	-
93.3	60.0	0.0	9.8	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3	80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-

TABLE 4. (cont.)

Vinciguerria lucetia (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	90.0	14.1	0.0	-	-	-	-	24.1	-	490.7	-	-	-
93.3	100.0	4.7	-	0.0	-	-	-	14.0	-	1164.0	-	-	-
93.3	110.0	10.3	-	25.5	-	-	-	870.6	-	-	1706.6	-	-
93.3	120.0	25.3	-	54.1	-	-	-	461.7	-	-	283.8	-	-

Vinciguerria poweriae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
83.3	90.0	0.0	-	0.0	-	-	-	-	8.5	-	0.0	-	-
86.7	110.0	-	-	0.0	-	-	-	-	373.0	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	28.7	-	-
90.0	110.0	4.8	-	0.0	-	-	-	108.8	-	-	0.0	-	-
90.0	120.0	19.6	-	0.0	-	-	-	367.7	-	-	0.0	-	-
93.3	100.0	4.7	-	0.0	-	-	-	0.0	-	150.3	-	-	-
93.3	110.0	10.3	-	0.0	-	-	-	182.8	-	-	0.0	-	-
93.3	120.0	0.0	-	0.0	-	-	-	126.4	-	-	0.0	-	-

Chauliodus macouni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	10.2	-	-	-	-	-	-	10.7	-	0.0	-	-
76.7	100.0	0.0	-	-	-	-	-	-	5.2	-	0.0	-	-
80.0	90.0	0.0	-	-	-	-	-	-	0.0	-	5.2	-	-
80.0	100.0	0.0	-	-	-	-	-	-	4.9	-	0.0	-	-
83.3	70.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	80.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	9.6	-	9.5	-	-	-	-	0.0	-	0.0	-	-
86.7	60.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
86.7	80.0	4.6	-	0.0	-	-	-	-	5.0	-	0.0	-	-
90.0	35.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0	37.0	0.0	-	0.0	-	-	-	10.3	-	-	0.0	-	-
90.0	45.0	0.0	-	0.0	-	-	-	9.9	-	-	0.0	-	-
90.0	53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Chauliodus macouni (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	-	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
90.0	100.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	4.3	-	-
93.3	55.0	9.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	0.0	4.9	-	-	-	-	0.0	-	9.3	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3	110.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-

Stomias atriventer

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	4.6	-	0.0	-	-
90.0	30.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	9.1	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	11.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	4.7	4.0	-	-	-	-	0.0	-	0.0	-	-	-

Bathophilus flemingi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-

Tactostoma macropus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	110.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-

Aristostomias scintillans

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

TABLE 4. (cont.)

Aristostomias scintillans (cont.)

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

Idiacanthus antrostomus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	15.1	-	-
76.7 100.0	5.0	-	-	-	-	-	-	0.0	-	52.4	-	-
80.0 100.0	0.0	-	-	-	-	-	-	0.0	-	53.5	-	-
83.3 80.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3 90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3 100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
86.7 70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7 100.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
86.7 110.0	-	-	0.0	-	-	-	-	41.4	-	0.0	-	-
90.0 80.0	12.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 90.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	14.3	-	-
90.0 110.0	0.0	-	0.0	-	-	-	23.7	-	-	0.0	-	-
90.0 120.0	0.0	-	0.0	-	-	-	8.9	-	-	10.5	-	-
93.3 30.0	0.0	0.0	-	-	-	-	11.4	-	0.0	-	-	-
93.3 80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	24.3	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	43.3	-	-	34.9	-	-
93.3 120.0	0.0	-	0.0	-	-	-	9.7	-	-	4.3	-	-

Scopelarchidae

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

Benthalbella dentata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 70.0	9.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0 100.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
86.7 60.0	0.0	-	19.4	-	-	-	0.0	-	-	0.0	-	-
86.7 80.0	4.6	-	0.0	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Benthalbella dentata (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 90.0	0.0	-	8.8	-	-	-	-	0.0	-	0.0	-	-
90.0 70.0	-	-	9.7	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
93.3 70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-

Rosenblattichthys volucris

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	4.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3 110.0	0.0	-	0.0	-	-	-	14.4	-	-	0.0	-	-
93.3 120.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Scopelarchus analis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	-	0.0	-	-	-	-	5.2	-	0.0	-	-

Scopelarchus guentheri

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

Scopelosaurus harryi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
86.7 90.0	0.0	-	0.0	-	-	-	-	4.6	-	0.0	-	-
86.7 100.0	-	-	0.0	-	-	-	-	4.8	-	0.0	-	-
93.3 120.0	0.0	-	9.8	-	-	-	0.0	-	-	0.0	-	-

Synodus lucioceps

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.0	-	-	-	-	-	-	0.0	-	16.1	-	-
76.7 51.0	0.0	-	-	-	-	-	-	0.0	-	10.0	-	-
76.7 55.0	0.0	-	-	-	-	-	-	0.0	-	9.5	-	-
80.0 51.0	0.0	-	0.0	-	-	-	-	0.0	-	4.2	-	-
86.7 39.5	-	-	-	-	-	-	0.0	-	-	9.1	-	-

Arctozenus risso

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

TABLE 4. (cont.)

Arctozenus risso (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
90.0 110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0 120.0	4.9	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3 90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-

***Lestidiops* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 55.0	0.0	-	9.9	-	-	-	-	0.0	-	-	-	-

Lestidiops ringens

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	9.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7 80.0	0.0	-	-	-	-	-	-	0.0	-	4.7	-	-
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	10.1	-	-
76.7 100.0	5.0	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3 90.0	0.0	-	0.0	-	-	-	-	12.8	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
90.0 35.0	0.0	-	0.0	-	-	-	0.0	-	-	5.1	-	-
90.0 53.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
90.0 60.0	0.0	-	0.0	-	-	-	0.0	-	-	10.6	-	-
90.0 70.0	-	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0 80.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0 90.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-
90.0 100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 110.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-
90.0 120.0	0.0	-	0.0	-	-	-	0.0	-	-	5.2	-	-
93.3 30.0	0.0	0.0	-	-	-	-	0.0	-	10.0	-	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	0.0	0.0	-	-	-	-	4.8	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	4.7	-	14.5	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	9.6	-	-	0.0	-	-

TABLE 4. (cont.)

Lestidiops ringens (cont.)

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

Stemonosudis macrura

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

Myctophidae

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
80.0 100.0	0.0	-	-	-	-	-	-	4.9	-	0.0	-	-
83.3 70.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
86.7 80.0	4.6	-	9.8	-	-	-	-	0.0	-	0.0	-	-
86.7 90.0	0.0	-	4.4	-	-	-	-	0.0	-	0.0	-	-
86.7 100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
86.7 110.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
90.0 45.0	9.9	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 53.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 80.0	0.0	-	9.1	-	-	-	0.0	-	-	4.8	-	-
90.0 100.0	13.2	-	18.0	-	-	-	0.0	-	-	9.6	-	-
90.0 110.0	0.0	-	0.0	-	-	-	0.0	-	-	17.2	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-
93.3 110.0	0.0	-	4.3	-	-	-	0.0	-	-	5.0	-	-
93.3 120.0	0.0	-	4.9	-	-	-	0.0	-	-	4.3	-	-

Ceratoscopelus townsendi

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	15.1	-	-
76.7 100.0	0.0	-	-	-	-	-	-	0.0	-	30.6	-	-
80.0 51.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
80.0 90.0	0.0	-	-	-	-	-	-	57.0	-	0.0	-	-
83.3 70.0	0.0	-	4.8	-	-	-	-	0.0	-	0.0	-	-
83.3 80.0	5.0	-	0.0	-	-	-	-	17.2	-	0.0	-	-
83.3 90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3 100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-

TABLE 4. (cont.)

Ceratoscopelus townsendi (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7 90.0	5.0	-	0.0	-	-	-	-	0.0	-	9.8	-	-
86.7 100.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
86.7 110.0	-	-	8.7	-	-	-	-	119.1	-	14.9	-	-
90.0 80.0	0.0	-	41.1	-	-	-	0.0	-	-	0.0	-	-
90.0 90.0	4.0	-	33.0	-	-	-	0.0	-	-	4.6	-	-
90.0 100.0	4.4	-	0.0	-	-	-	4.8	-	-	47.8	-	-
90.0 110.0	19.4	-	9.1	-	-	-	146.6	-	-	8.6	-	-
90.0 120.0	14.7	-	77.0	-	-	-	17.7	-	-	0.0	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 70.0	0.0	28.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3 80.0	0.0	3.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	0.0	8.0	-	-	-	-	0.0	-	26.1	-	-	-
93.3 100.0	4.7	-	0.0	-	-	-	0.0	-	38.8	-	-	-
93.3 110.0	15.5	-	12.8	-	-	-	24.0	-	-	49.9	-	-
93.3 120.0	25.3	-	39.4	-	-	-	29.2	-	-	25.8	-	-

***Diaphus* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	-	-	-	-	10.9	-	0.0	-	-
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	10.1	-	-
76.7 100.0	0.0	-	-	-	-	-	-	5.2	-	0.0	-	-
80.0 90.0	0.0	-	-	-	-	-	-	19.0	-	0.0	-	-
80.0 100.0	0.0	-	-	-	-	-	-	9.9	-	0.0	-	-
83.3 70.0	0.0	-	0.0	-	-	-	-	12.9	-	0.0	-	-
83.3 90.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	30.8	-	15.3	-	-
86.7 70.0	0.0	-	-	-	-	-	11.1	-	-	5.1	-	-
86.7 80.0	0.0	-	0.0	-	-	-	-	20.1	-	5.0	-	-
86.7 100.0	-	-	0.0	-	-	-	-	9.6	-	5.0	-	-
90.0 53.0	0.0	-	0.0	-	-	-	10.6	-	-	0.0	-	-
90.0 60.0	0.0	-	0.0	-	-	-	9.6	-	-	0.0	-	-

TABLE 4. (cont.)

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

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	-	-	0.0	-	-	-	109.5	-	-	0.0	-	-
90.0	80.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0	90.0	0.0	-	0.0	-	-	-	9.7	-	-	4.6	-	-
90.0	120.0	0.0	-	4.5	-	-	-	4.4	-	-	0.0	-	-
93.3	45.0	0.0	0.0	-	-	-	-	19.8	-	0.0	-	-	-
93.3	50.0	0.0	0.0	-	-	-	-	0.0	-	10.4	-	-	-
93.3	55.0	0.0	0.0	-	-	-	-	18.1	-	0.0	-	-	-
93.3	60.0	0.0	0.0	-	-	-	-	10.3	-	9.3	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	43.8	-	0.0	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	23.2	-	0.0	-	-	-
93.3	100.0	0.0	-	0.0	-	-	-	4.7	-	0.0	-	-	-

Lampadena urophaos

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	120.0	0.0	-	0.0	-	-	-	9.7	-	-	0.0	-	-

***Lampanyctus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	9.9	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7	70.0	0.0	-	-	-	-	-	-	10.7	-	0.0	-	-
76.7	80.0	0.0	-	-	-	-	-	-	5.4	-	0.0	-	-
76.7	90.0	9.8	-	-	-	-	-	-	11.9	-	0.0	-	-
76.7	100.0	0.0	-	-	-	-	-	-	0.0	-	13.1	-	-
80.0	55.0	4.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	60.0	9.4	-	0.0	-	-	-	-	0.0	-	4.1	-	-
80.0	70.0	9.9	-	5.0	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	10.3	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	4.5	-	-	-	-	-	-	14.8	-	4.5	-	-
83.3	60.0	0.0	-	9.1	-	-	-	-	0.0	-	-	-	-
83.3	80.0	10.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	4.8	-	23.7	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	4.8	-	-	-	-	0.0	-	15.4	-	-
83.3	110.0	-	-	5.1	-	-	-	-	0.0	-	5.1	-	-

TABLE 4. (cont.)

***Lampanyctus* spp.** (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
86.7 45.0	0.0	-	5.0	-	-	-	0.0	-	-	0.0	-	-
86.7 55.0	9.1	-	4.2	-	-	-	0.0	-	-	0.0	-	-
86.7 80.0	0.0	-	0.0	-	-	-	-	10.0	-	0.0	-	-
86.7 90.0	0.0	-	8.8	-	-	-	-	0.0	-	0.0	-	-
86.7 100.0	-	-	14.5	-	-	-	-	4.8	-	0.0	-	-
86.7 110.0	-	-	21.7	-	-	-	-	0.0	-	0.0	-	-
90.0 35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 37.0	9.3	-	0.0	-	-	-	20.5	-	-	0.0	-	-
90.0 53.0	0.0	-	28.0	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	4.4	-	13.5	-	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	22.7	-	-	-	0.0	-	-	0.0	-	-
93.3 28.0	10.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-
93.3 40.0	0.0	0.0	-	-	-	-	11.4	-	0.0	-	-	-
93.3 55.0	0.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3 60.0	0.0	9.8	-	-	-	-	0.0	-	0.0	-	-	-
93.3 80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	4.7	-	0.0	-	-	-
93.3 110.0	0.0	-	4.3	-	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	9.8	-	-	-	0.0	-	-	0.0	-	-

***Lampanyctus* "niger"**

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

Lampanyctus regalis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-
83.3 70.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 90.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
86.7 80.0	0.0	-	0.0	-	-	-	-	10.0	-	0.0	-	-

TABLE 4. (cont.)

Lampanyctus regalis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	100.0	-	-	0.0	-	-	-	-	4.8	-	0.0	-	-
86.7	110.0	-	-	0.0	-	-	-	-	5.2	-	0.0	-	-
90.0	70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0	120.0	0.0	-	0.0	-	-	-	4.4	-	-	0.0	-	-
93.3	45.0	0.0	0.0	-	-	-	-	29.8	-	0.0	-	-	-
93.3	60.0	0.0	0.0	-	-	-	-	20.7	-	0.0	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	43.8	-	0.0	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	4.6	-	0.0	-	-	-
93.3	100.0	0.0	-	0.0	-	-	-	4.7	-	0.0	-	-	-
93.3	120.0	0.0	-	0.0	-	-	-	9.7	-	-	0.0	-	-

Lampanyctus ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	-	-	-	-	11.9	-	0.0	-	-
80.0	90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
80.0	100.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	55.0	0.0	-	9.9	-	-	-	-	0.0	-	-	-	-
83.3	60.0	0.0	-	9.1	-	-	-	-	0.0	-	-	-	-
83.3	70.0	14.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3	90.0	4.8	-	42.6	-	-	-	-	12.8	-	0.0	-	-
83.3	100.0	-	-	9.5	-	-	-	-	0.0	-	0.0	-	-
83.3	110.0	-	-	15.4	-	-	-	-	0.0	-	0.0	-	-
86.7	39.5	-	-	-	-	-	-	9.3	-	-	0.0	-	-
86.7	60.0	0.0	-	9.7	-	-	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	4.4	-	-	-	-	0.0	-	0.0	-	-
86.7	100.0	-	-	4.8	-	-	-	-	4.8	-	0.0	-	-
86.7	110.0	-	-	26.0	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	10.1	-	13.8	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Lampanyctus ritteri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	0.0	-	37.3	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	34.2	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	29.0	-	-	-	33.7	-	-	0.0	-	-
90.0	80.0	4.3	-	22.9	-	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	37.8	-	-	-	4.9	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	23.7	-	-	0.0	-	-
93.3	28.0	5.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	30.0	0.0	9.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	10.2	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	40.0	0.0	11.1	-	-	-	-	0.0	-	5.2	-	-	-
93.3	60.0	0.0	19.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	28.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	16.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	110.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
93.3	120.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Notolychnus valdiviae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	120.0	0.0	-	4.5	-	-	-	22.1	-	-	0.0	-	-
93.3	100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-

Notoscopelus resplendens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	13.6	-	-	-	0.0	-	-	0.0	-	-
93.3	90.0	0.0	0.0	-	-	-	-	0.0	-	10.4	-	-	-
93.3	110.0	5.2	-	0.0	-	-	-	4.8	-	-	10.0	-	-

Stenobrachius leucopsarus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	13.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	293.2	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	55.0	257.3	-	-	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Stenobrachius leucopsarus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	60.0	19.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	133.0	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	80.0	29.3	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	9.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	68.6	-	140.9	-	-	-	-	0.0	-	0.0	-	-
80.0	60.0	9.4	-	71.0	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	775.2	-	114.1	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	10.3	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	90.0	40.6	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	80.1	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	71.3	-	178.5	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	42.5	-	14.1	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	8.0	-	444.5	-	-	-	-	0.0	-	-	-	-
83.3	55.0	155.4	-	208.4	-	-	-	-	0.0	-	-	-	-
83.3	60.0	139.9	-	54.4	-	-	-	-	0.0	-	-	-	-
83.3	70.0	4.7	-	90.6	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	19.9	-	34.8	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	28.9	-	28.4	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
83.3	110.0	-	-	20.6	-	-	-	-	0.0	-	0.0	-	-
86.7	33.0	4.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	76.2	-	28.7	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	116.4	-	-	-	-	-	-	-	-	-
86.7	45.0	4.1	-	206.2	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	13.6	-	16.9	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	27.4	-	38.2	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	136.1	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	4.6	-	0.0	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	4.7	-	9.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	30.4	-	59.7	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Stenobrachius leucopsarus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	35.0	19.1	-	52.2	-	-	-	0.0	-	-	5.1	-	-
90.0	37.0	23.3	-	118.8	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	55.9	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	4.2	-	8.5	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	29.0	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
90.0	110.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	86.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	28.0	10.9	71.8	-	-	-	-	0.0	-	0.0	-	-	-
93.3	30.0	0.0	38.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	40.0	0.0	22.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	0.0	8.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	9.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	9.2	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	20.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	100.0	14.2	-	4.0	-	-	-	0.0	-	0.0	-	-	-
93.3	110.0	0.0	-	4.3	-	-	-	0.0	-	-	0.0	-	-

Triphoturus mexicanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	-	-	-	-	10.4	-	0.0	-	-
76.7	55.0	0.0	-	-	-	-	-	-	48.2	-	0.0	-	-
76.7	70.0	0.0	-	-	-	-	-	-	10.7	-	0.0	-	-
76.7	80.0	0.0	-	-	-	-	-	-	0.0	-	4.7	-	-
80.0	60.0	0.0	-	0.0	-	-	-	-	31.2	-	0.0	-	-
81.8	46.9	0.0	-	0.0	-	-	-	-	0.0	-	4.3	-	-
83.3	40.6	0.0	-	0.0	-	-	-	-	7.6	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	9.5	-	22.5	-	-
83.3	51.0	0.0	-	0.0	-	-	-	-	8.2	-	-	-	-
83.3	55.0	0.0	-	0.0	-	-	-	-	35.4	-	-	-	-
83.3	60.0	0.0	-	0.0	-	-	-	-	4.1	-	-	-	-
83.3	70.0	0.0	-	0.0	-	-	-	-	8.6	-	0.0	-	-

TABLE 4. (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	-	-	-	-	21.3	-	0.0	-	-
83.3	100.0	-	-	0.0	-	-	-	-	0.0	-	20.6	-	-
83.3	110.0	-	-	0.0	-	-	-	-	0.0	-	20.4	-	-
86.7	35.0	0.0	-	0.0	-	-	-	42.2	-	-	0.0	-	-
86.7	39.5	-	-	-	-	-	-	111.1	-	-	18.1	-	-
86.7	50.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
86.7	55.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
86.7	60.0	0.0	-	0.0	-	-	-	11.2	-	-	0.0	-	-
86.7	70.0	0.0	-	-	-	-	-	22.2	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	-	-	-	-	5.0	-	0.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	50.7	-	0.0	-	-
86.7	100.0	-	-	0.0	-	-	-	-	4.8	-	10.0	-	-
86.7	110.0	-	-	0.0	-	-	-	-	0.0	-	9.9	-	-
90.0	30.0	0.0	-	0.0	-	-	-	38.9	-	-	18.0	-	-
90.0	35.0	0.0	-	0.0	-	-	-	33.0	-	-	51.2	-	-
90.0	37.0	0.0	-	0.0	-	-	-	102.5	-	-	8.7	-	-
90.0	45.0	0.0	-	0.0	-	-	-	9.9	-	-	10.0	-	-
90.0	53.0	0.0	-	0.0	-	-	-	0.0	-	-	9.5	-	-
90.0	90.0	0.0	-	0.0	-	-	-	4.9	-	-	4.6	-	-
90.0	100.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	14.2	-	-	12.9	-	-
90.0	120.0	0.0	-	0.0	-	-	-	8.9	-	-	10.5	-	-
93.3	26.7	0.0	0.0	-	-	-	-	0.0	-	4.7	-	-	-
93.3	28.0	0.0	0.0	-	-	-	-	9.4	-	15.1	-	-	-
93.3	30.0	0.0	0.0	-	-	-	-	68.4	-	10.0	-	-	-
93.3	40.0	0.0	0.0	-	-	-	-	68.3	-	26.1	-	-	-
93.3	45.0	0.0	0.0	-	-	-	-	9.9	-	0.0	-	-	-
93.3	50.0	0.0	0.0	-	-	-	-	11.1	-	0.0	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	0.0	-	15.1	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	0.0	-	41.8	-	-	-

TABLE 4. (cont.)

Triphoturus mexicanus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	90.0	0.0	0.0	-	-	-	-	4.8	-	26.1	-	-	-
93.3	100.0	0.0	-	0.0	-	-	-	4.7	-	4.8	-	-	-
93.3	110.0	0.0	-	0.0	-	-	-	9.6	-	-	10.0	-	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-

***Diogenichthys* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	110.0	5.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Diogenichthys atlanticus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	-	-	-	-	0.0	-	5.0	-	-
76.7	100.0	0.0	-	-	-	-	-	-	0.0	-	17.5	-	-
80.0	60.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	0.0	-	-	-	-	-	-	0.0	-	8.9	-	-
83.3	55.0	9.1	-	0.0	-	-	-	-	0.0	-	-	-	-
83.3	70.0	14.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	24.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	0.0	-	23.7	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	9.5	-	-	-	-	0.0	-	5.1	-	-
83.3	110.0	-	-	5.1	-	-	-	-	5.1	-	5.1	-	-
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	70.0	9.6	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	13.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7	90.0	0.0	-	22.1	-	-	-	-	0.0	-	9.8	-	-
86.7	100.0	-	-	14.5	-	-	-	-	0.0	-	0.0	-	-
86.7	110.0	-	-	8.7	-	-	-	-	0.0	-	14.9	-	-
90.0	45.0	0.0	-	19.3	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	4.2	-	8.5	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0	90.0	28.1	-	23.6	-	-	-	0.0	-	-	4.6	-	-

TABLE 4. (cont.)

Diogenichthys atlanticus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 100.0	35.3	-	26.9	-	-	-	0.0	-	-	14.3	-	-
90.0 110.0	33.9	-	27.4	-	-	-	0.0	-	-	8.6	-	-
90.0 120.0	29.4	-	9.1	-	-	-	0.0	-	-	0.0	-	-
93.3 28.0	5.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 40.0	0.0	22.1	-	-	-	-	0.0	-	5.2	-	-	-
93.3 45.0	0.0	4.5	-	-	-	-	0.0	-	0.0	-	-	-
93.3 60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 70.0	9.1	28.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3 80.0	4.5	3.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3 90.0	28.3	20.1	-	-	-	-	4.8	-	5.2	-	-	-
93.3 100.0	4.7	-	0.0	-	-	-	0.0	-	24.3	-	-	-
93.3 110.0	10.3	-	8.5	-	-	-	9.6	-	-	54.9	-	-
93.3 120.0	5.0	-	54.1	-	-	-	0.0	-	-	4.3	-	-

Diogenichthys laternatus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 28.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3 35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-
93.3 40.0	0.0	0.0	-	-	-	-	0.0	-	10.4	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-

Electrona risso

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	0.0	-	-	-	-	-	-	0.0	-	21.9	-	-
80.0 80.0	0.0	-	-	-	-	-	-	9.8	-	0.0	-	-
80.0 100.0	0.0	-	-	-	-	-	-	0.0	-	13.4	-	-
86.7 100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
90.0 100.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-
93.3 80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-

***Hygophum* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-

TABLE 4. (cont.)

Hygophum reinhardtii

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
86.7 110.0	-	-	0.0	-	-	-	-	5.2	-	0.0	-	-
90.0 100.0	4.4	-	13.5	-	-	-	0.0	-	-	0.0	-	-
90.0 120.0	14.7	-	13.6	-	-	-	4.4	-	-	0.0	-	-
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	10.0	-	-
93.3 120.0	5.0	-	4.9	-	-	-	0.0	-	-	0.0	-	-

Loweina rara

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 80.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	4.9	-	-	-	0.0	-	-	0.0	-	-

Myctophum nitidulum

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	-	0.0	-	-	-	-	0.0	-	5.0	-	-
90.0 80.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0 90.0	0.0	-	4.7	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	4.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 110.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 120.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-
93.3 110.0	5.2	-	4.3	-	-	-	0.0	-	-	0.0	-	-
93.3 120.0	0.0	-	4.9	-	-	-	0.0	-	-	0.0	-	-

Protomyctophum crockeri

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 49.0	0.0	-	-	-	-	-	-	0.0	-	4.0	-	-
76.7 55.0	9.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7 60.0	39.0	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7 80.0	9.8	-	-	-	-	-	-	0.0	-	4.7	-	-
76.7 90.0	29.5	-	-	-	-	-	-	11.9	-	10.1	-	-
76.7 100.0	9.9	-	-	-	-	-	-	10.3	-	4.4	-	-
80.0 55.0	0.0	-	0.0	-	-	-	-	10.3	-	0.0	-	-
80.0 60.0	9.4	-	20.3	-	-	-	-	0.0	-	4.1	-	-

TABLE 4. (cont.)

Protomyctophum crockeri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	0.0	-	0.0	-	-	-	-	0.0	-	10.4	-	-
80.0	80.0	0.0	-	-	-	-	-	-	0.0	-	10.3	-	-
80.0	90.0	10.1	-	-	-	-	-	-	19.0	-	0.0	-	-
80.0	100.0	13.4	-	-	-	-	-	-	14.8	-	0.0	-	-
83.3	42.0	4.7	-	0.0	-	-	-	-	4.8	-	0.0	-	-
83.3	55.0	9.1	-	9.9	-	-	-	-	0.0	-	-	-	-
83.3	60.0	0.0	-	27.2	-	-	-	-	0.0	-	-	-	-
83.3	70.0	4.7	-	4.8	-	-	-	-	0.0	-	14.4	-	-
83.3	80.0	29.9	-	0.0	-	-	-	-	12.9	-	0.0	-	-
83.3	90.0	9.6	-	4.7	-	-	-	-	8.5	-	10.5	-	-
83.3	100.0	-	-	19.0	-	-	-	-	5.1	-	5.1	-	-
83.3	110.0	-	-	0.0	-	-	-	-	5.1	-	10.2	-	-
86.7	35.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
86.7	40.0	5.2	-	4.8	-	-	-	-	-	-	-	-	-
86.7	45.0	4.1	-	0.0	-	-	-	0.0	-	-	4.7	-	-
86.7	50.0	0.0	-	0.0	-	-	-	0.0	-	-	4.7	-	-
86.7	55.0	0.0	-	4.2	-	-	-	10.2	-	-	0.0	-	-
86.7	60.0	14.0	-	19.4	-	-	-	0.0	-	-	13.8	-	-
86.7	70.0	4.8	-	-	-	-	-	11.1	-	-	15.4	-	-
86.7	80.0	13.9	-	0.0	-	-	-	-	15.1	-	0.0	-	-
86.7	90.0	5.0	-	0.0	-	-	-	-	13.8	-	9.8	-	-
86.7	100.0	-	-	14.5	-	-	-	-	4.8	-	5.0	-	-
86.7	110.0	-	-	4.3	-	-	-	-	0.0	-	5.0	-	-
90.0	30.0	5.1	-	9.2	-	-	-	14.6	-	-	9.0	-	-
90.0	37.0	4.7	-	4.8	-	-	-	10.3	-	-	21.6	-	-
90.0	45.0	49.6	-	0.0	-	-	-	0.0	-	-	5.0	-	-
90.0	53.0	5.0	-	28.0	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	8.5	-	8.5	-	-	-	9.6	-	-	10.6	-	-
90.0	80.0	12.8	-	22.9	-	-	-	9.7	-	-	0.0	-	-
90.0	90.0	4.0	-	9.4	-	-	-	4.9	-	-	9.1	-	-
90.0	100.0	22.1	-	4.5	-	-	-	4.8	-	-	9.6	-	-

TABLE 4. (cont.)

Protomyctophum crockeri (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	5.2	-	-
93.3	28.0	5.5	10.3	-	-	-	-	0.0	-	5.0	-	-	-
93.3	30.0	0.0	0.0	-	-	-	-	11.4	-	20.0	-	-	-
93.3	35.0	10.2	0.0	-	-	-	-	29.0	-	0.0	-	-	-
93.3	40.0	9.8	22.1	-	-	-	-	11.4	-	26.1	-	-	-
93.3	45.0	0.0	9.0	-	-	-	-	0.0	-	4.8	-	-	-
93.3	50.0	4.8	0.0	-	-	-	-	11.1	-	10.4	-	-	-
93.3	55.0	5.0	8.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	4.6	19.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	4.6	9.4	-	-	-	-	0.0	-	10.0	-	-	-
93.3	80.0	27.1	0.0	-	-	-	-	18.6	-	0.0	-	-	-
93.3	90.0	4.7	4.0	-	-	-	-	9.6	-	5.2	-	-	-
93.3	100.0	4.7	-	0.0	-	-	-	4.7	-	0.0	-	-	-
93.3	110.0	0.0	-	12.8	-	-	-	4.8	-	-	0.0	-	-
93.3	120.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-

Symbolophorus californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	0.0	-	-	-	-	-	-	0.0	-	10.1	-	-
76.7	100.0	0.0	-	-	-	-	-	-	0.0	-	13.1	-	-
80.0	100.0	0.0	-	-	-	-	-	-	0.0	-	8.9	-	-
83.3	70.0	14.0	-	0.0	-	-	-	-	0.0	-	4.8	-	-
83.3	80.0	5.0	-	0.0	-	-	-	-	12.9	-	0.0	-	-
83.3	100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
83.3	110.0	-	-	0.0	-	-	-	-	5.1	-	5.1	-	-
86.7	35.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
86.7	60.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
86.7	70.0	0.0	-	-	-	-	-	11.1	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	4.6	-	4.9	-	-
86.7	110.0	-	-	8.7	-	-	-	-	20.7	-	0.0	-	-
90.0	60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Symbolophorus californiensis (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	-	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	12.8	-	27.4	-	-	-	4.8	-	-	0.0	-	-
90.0	90.0	4.0	-	14.2	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	8.8	-	9.0	-	-	-	4.8	-	-	0.0	-	-
90.0	110.0	0.0	-	18.3	-	-	-	14.2	-	-	0.0	-	-
90.0	120.0	0.0	-	0.0	-	-	-	0.0	-	-	5.2	-	-
93.3	30.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3	45.0	0.0	4.5	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	0.0	0.0	-	-	-	-	0.0	-	4.9	-	-	-
93.3	60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	18.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	4.5	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	9.4	8.0	-	-	-	-	19.3	-	0.0	-	-	-
93.3	100.0	0.0	-	7.9	-	-	-	0.0	-	9.7	-	-	-
93.3	110.0	0.0	-	8.5	-	-	-	24.0	-	-	0.0	-	-
93.3	120.0	0.0	-	0.0	-	-	-	4.9	-	-	4.3	-	-

Tarletonbeania crenularis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	10.0	-	-
76.7	60.0	19.5	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	0.0	-	-	-	-	-	-	0.0	-	10.3	-	-
76.7	80.0	9.8	-	-	-	-	-	-	5.4	-	4.7	-	-
76.7	90.0	0.0	-	-	-	-	-	-	11.9	-	0.0	-	-
80.0	55.0	4.9	-	9.4	-	-	-	-	10.3	-	0.0	-	-
80.0	60.0	0.0	-	20.3	-	-	-	-	10.4	-	0.0	-	-
80.0	70.0	0.0	-	5.0	-	-	-	-	0.0	-	10.4	-	-
80.0	80.0	0.0	-	-	-	-	-	-	9.8	-	5.1	-	-
80.0	90.0	10.1	-	-	-	-	-	-	19.0	-	0.0	-	-
80.0	100.0	17.8	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	0.0	-	0.0	-	-	-	-	5.1	-	0.0	-	-

TABLE 4. (cont.)

Tarletonbeania crenularis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 42.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3 55.0	36.6	-	0.0	-	-	-	-	0.0	-	-	-	-
83.3 60.0	28.0	-	0.0	-	-	-	-	0.0	-	-	-	-
83.3 70.0	0.0	-	0.0	-	-	-	-	0.0	-	4.8	-	-
83.3 90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	10.3	-	0.0	-	-
86.7 35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7 55.0	0.0	-	8.5	-	-	-	0.0	-	-	0.0	-	-
86.7 60.0	0.0	-	9.7	-	-	-	11.2	-	-	0.0	-	-
86.7 80.0	4.6	-	0.0	-	-	-	-	0.0	-	0.0	-	-
90.0 35.0	0.0	-	0.0	-	-	-	0.0	-	-	5.1	-	-
90.0 45.0	9.9	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 60.0	0.0	-	8.5	-	-	-	0.0	-	-	0.0	-	-
90.0 70.0	-	-	0.0	-	-	-	16.8	-	-	0.0	-	-
90.0 80.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
90.0 90.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	9.6	-	-
93.3 28.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3 55.0	0.0	0.0	-	-	-	-	18.1	-	0.0	-	-	-
93.3 60.0	0.0	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3 70.0	0.0	0.0	-	-	-	-	54.7	-	0.0	-	-	-
93.3 80.0	0.0	0.0	-	-	-	-	4.6	-	4.6	-	-	-
93.3 90.0	0.0	0.0	-	-	-	-	0.0	-	15.7	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-

Desmodema lorum

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

Trachipterus altivelis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 28.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Merluccius productus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	9.0	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	336.6	-	-	-	-	-	-	0.0	-	40.2	-	-
76.7	55.0	247.4	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	60.0	350.8	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	7776.7	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	100.0	9.9	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	82.8	-	9.4	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	142.1	-	319.4	-	-	-	-	0.0	-	10.3	-	-
80.0	60.0	61.4	-	101.4	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	109.3	-	39.7	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	91.7	-	158.7	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	61.4	-	42.3	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	164.4	-	46.3	-	-	-	-	0.0	-	-	-	-
83.3	55.0	895.8	-	138.9	-	-	-	-	0.0	-	-	-	-
83.3	60.0	1315.1	-	27.2	-	-	-	-	0.0	-	-	-	-
83.3	70.0	0.0	-	9.5	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	9.9	-	-	-	-	0.0	-	0.0	-	-
83.3	90.0	0.0	-	66.2	-	-	-	-	0.0	-	0.0	-	-
83.3	100.0	-	-	9.5	-	-	-	-	0.0	-	0.0	-	-
86.7	35.0	57.1	-	19.2	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	108.6	-	87.3	-	-	-	-	-	-	-	-	-
86.7	45.0	879.4	-	176.1	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	228.5	-	37.2	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	934.8	-	67.8	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	83.7	-	68.0	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	4.6	-	34.2	-	-	-	-	0.0	-	0.0	-	-
86.7	100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	9.3	-	35.9	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	19.1	-	214.0	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	32.6	-	318.3	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Merluccius productus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	45.0	19.8	-	9.7	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	10.0	-	885.7	-	-	-	0.0	-	-	0.0	-	-
90.0	60.0	12.7	-	68.4	-	-	-	0.0	-	-	0.0	-	-
90.0	70.0	-	-	121.0	-	-	-	0.0	-	-	0.0	-	-
90.0	110.0	0.0	-	9.1	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	13.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	45.0	0.0	45.1	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	57.8	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	94.4	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	179.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	0.0	139.2	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	100.0	0.0	-	4.0	-	-	-	0.0	-	0.0	-	-	-
93.3	120.0	10.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Chilara taylori

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	0.0	-	-	-	4.8	-	-	4.7	-	-

Ophidion scrippsae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	10.2	-	0.0	-	-	-	-	0.0	-	0.0	-	-
93.3	26.7	0.0	0.0	-	-	-	-	0.0	-	4.7	-	-	-

Brosmophycis marginata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	9.9	-	-	-	-	0.0	-	-	-	-

Cataetyx rubrirostris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	-	-	-	-	9.6	-	0.0	-	-

Gigantactis spp.

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	100.0	0.0	-	-	-	-	-	-	0.0	-	13.1	-	-

TABLE 4. (cont.)

Gobiesox maeandricus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-

Atherinops affinis

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

Atherinopsis californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	4.3	-	0.0	-	-	-	-	0.0	-	0.0	-	-
86.7	33.0	0.0	-	8.4	-	-	-	0.0	-	-	0.0	-	-

Cololabis saira

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	90.0	0.0	-	-	-	-	-	-	9.5	-	0.0	-	-
93.3	90.0	0.0	4.0	-	-	-	-	0.0	-	0.0	-	-	-

Melamphaidae

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

***Melamphaes* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	-	-	14.3	-	-	-	-	0.0	-	0.0	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	4.6	-	0.0	-	-
90.0	90.0	0.0	-	4.7	-	-	-	0.0	-	-	0.0	-	-
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-

Melamphaes lugubris

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	80.0	0.0	-	-	-	-	-	-	0.0	-	4.7	-	-
76.7	90.0	0.0	-	-	-	-	-	-	0.0	-	10.1	-	-
76.7	100.0	0.0	-	-	-	-	-	-	5.2	-	4.4	-	-
80.0	90.0	0.0	-	-	-	-	-	-	0.0	-	5.2	-	-
83.3	55.0	9.1	-	0.0	-	-	-	-	0.0	-	-	-	-
83.3	70.0	9.4	-	4.8	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Melamphaes lugubris (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
86.7 90.0	5.0	-	0.0	-	-	-	-	9.2	-	0.0	-	-
90.0 70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
90.0 110.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
93.3 50.0	0.0	0.0	-	-	-	-	0.0	-	5.2	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-
93.3 120.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-

Melamphaes parvus

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	-	-

Poromitra crassiceps

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 90.0	0.0	-	-	-	-	-	-	0.0	-	5.0	-	-
80.0 80.0	0.0	-	-	-	-	-	-	0.0	-	5.1	-	-
83.3 55.0	0.0	-	9.9	-	-	-	-	0.0	-	-	-	-
83.3 100.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
86.7 90.0	0.0	-	4.4	-	-	-	-	4.6	-	0.0	-	-
86.7 100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-

Scopeloberyx robustus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	0.0	-	-	-	-	-	-	0.0	-	4.4	-	-
80.0 100.0	0.0	-	-	-	-	-	-	0.0	-	4.5	-	-

Scopelogadus bispinosus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 100.0	0.0	-	-	-	-	-	-	0.0	-	4.4	-	-
83.3 70.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
86.7 90.0	0.0	-	4.4	-	-	-	-	0.0	-	0.0	-	-
90.0 90.0	4.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-

TABLE 4. (cont.)

Scopelogadus bispinosus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	120.0	0.0	-	0.0	-	-	-	4.4	-	-	0.0	-	-
93.3	110.0	0.0	-	0.0	-	-	-	9.6	-	-	5.0	-	-

Sebastes spp.

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	13.5	-	-	-	-	-	-	0.0	-	12.1	-	-
76.7	51.0	488.7	-	-	-	-	-	-	62.6	-	20.1	-	-
76.7	55.0	9.9	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7	60.0	39.0	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	30.7	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	39.0	-	188.0	-	-	-	-	0.0	-	4.2	-	-
80.0	55.0	9.8	-	140.9	-	-	-	-	20.6	-	0.0	-	-
80.0	60.0	0.0	-	20.3	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	29.8	-	9.9	-	-	-	-	0.0	-	0.0	-	-
80.0	90.0	10.1	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	8.9	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	61.1	-	99.2	-	-	-	-	20.3	-	4.3	-	-
83.3	40.6	8.5	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	118.0	-	18.8	-	-	-	-	9.5	-	18.0	-	-
83.3	51.0	32.1	-	551.0	-	-	-	-	0.0	-	-	-	-
83.3	55.0	237.7	-	1597.5	-	-	-	-	0.0	-	-	-	-
83.3	60.0	457.0	-	0.0	-	-	-	-	4.1	-	-	-	-
83.3	70.0	0.0	-	14.3	-	-	-	-	0.0	-	0.0	-	-
83.3	110.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
86.7	33.0	82.8	-	37.8	-	-	-	0.0	-	-	5.2	-	-
86.7	35.0	204.7	-	397.6	-	-	-	0.0	-	-	33.3	-	-
86.7	39.5	-	-	-	-	-	-	18.5	-	-	9.1	-	-
86.7	40.0	82.7	-	82.4	-	-	-	-	-	-	-	-	-
86.7	45.0	458.1	-	135.8	-	-	-	18.1	-	-	9.5	-	-
86.7	50.0	1019.6	-	216.3	-	-	-	4.8	-	-	42.5	-	-
86.7	55.0	237.1	-	89.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sebastes spp. (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	46.5	-	38.9	-	-	-	11.2	-	-	0.0	-	-
86.7	70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	14.6	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	18.6	-	18.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	5.1	-	55.1	-	-	-	0.0	-	-	26.9	-	-
90.0	35.0	43.0	-	47.0	-	-	-	0.0	-	-	5.1	-	-
90.0	37.0	0.0	-	23.8	-	-	-	0.0	-	-	0.0	-	-
90.0	45.0	29.8	-	58.0	-	-	-	9.9	-	-	5.0	-	-
90.0	53.0	35.1	-	652.6	-	-	-	31.8	-	-	0.0	-	-
90.0	60.0	12.7	-	8.5	-	-	-	9.6	-	-	0.0	-	-
93.3	26.7	64.0	39.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	28.0	27.3	82.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	30.0	0.0	29.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	10.2	10.5	-	-	-	-	19.3	-	0.0	-	-	-
93.3	40.0	19.7	110.6	-	-	-	-	0.0	-	0.0	-	-	-
93.3	45.0	9.3	99.2	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	19.3	0.0	-	-	-	-	11.1	-	0.0	-	-	-
93.3	55.0	79.5	8.6	-	-	-	-	13.6	-	0.0	-	-	-
93.3	60.0	9.2	0.0	-	-	-	-	31.0	-	0.0	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	43.8	-	0.0	-	-	-
93.3	80.0	0.0	3.6	-	-	-	-	9.3	-	4.6	-	-	-

Sebastes aurora

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	9.9	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	10.3	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	55.0	9.1	-	9.9	-	-	-	-	0.0	-	-	-	-
83.3	60.0	9.3	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7	40.0	10.3	-	4.8	-	-	-	-	-	-	-	-	-
86.7	55.0	4.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sebastes diploproa

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	-	-	-	-	9.8	-	0.0	-	-
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	60.0	9.7	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	60.0	0.0	-	0.0	-	-	-	-	8.3	-	-	-	-
86.7	39.5	-	-	-	-	-	-	0.0	-	-	9.1	-	-
86.7	40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
86.7	50.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
93.3	28.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3	55.0	5.0	0.0	-	-	-	-	0.0	-	0.0	-	-	-

Sebastes jordani

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	445.2	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	155.8	-	28.2	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	0.0	-	94.0	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	825.3	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	40.6	25.6	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	991.2	-	32.9	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	8.0	-	175.9	-	-	-	-	0.0	-	-	-	-
83.3	55.0	27.4	-	158.8	-	-	-	-	0.0	-	-	-	-
83.3	60.0	65.3	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7	33.0	29.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	428.4	-	119.8	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	67.2	-	53.3	-	-	-	-	-	-	-	-	-
86.7	45.0	57.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	20.5	-	13.5	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	4.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	211.1	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	592.7	-	94.0	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	14.0	-	52.3	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Sebastes jordani (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	53.0	0.0	-	28.0	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	13.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	28.0	0.0	10.3	-	-	-	-	0.0	-	5.0	-	-	-

Sebastes levis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	20.4	-	0.0	-	-	-	-	0.0	-	0.0	-	-

Sebastes paucispinis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	54.3	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	10.2	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	0.0	-	18.8	-	-	-	-	0.0	-	0.0	-	-
80.0	70.0	9.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	20.4	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	9.4	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
83.3	55.0	18.3	-	39.7	-	-	-	-	0.0	-	-	-	-
83.3	60.0	56.0	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7	40.0	5.2	-	4.8	-	-	-	-	-	-	-	-	-
86.7	45.0	4.1	-	5.0	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	27.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	5.2	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	5.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3	28.0	21.8	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	19.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	4.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-

***Sebastolobus* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	60.0	0.0	-	10.1	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Sebastolobus alascanus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	100.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-

Sebastolobus altivelis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
93.3	35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-

Oxylebius pictus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	4.0	-	0.0	-	-	-	-	0.0	-	-	-	-

Zaniolepis latipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	0.0	-	-	-	-	-	-	0.0	-	10.0	-	-
83.3	42.0	4.7	-	0.0	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	4.0	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
86.7	50.0	0.0	-	0.0	-	-	-	0.0	-	-	9.4	-	-
90.0	35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Cottidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	51.0	8.0	-	0.0	-	-	-	-	0.0	-	-	-	-

Artedius creaseri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
86.7	50.0	0.0	-	6.8	-	-	-	0.0	-	-	0.0	-	-

Artedius fenestralis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-

Scorpaenichthys marmoratus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Scorpaenichthys marmoratus (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 60.0	9.7	-	-	-	-	-	-	0.0	-	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	-	4.0	-	-
76.7 55.0	0.0	-	-	-	-	-	-	9.6	-	9.5	-	-
80.0 51.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
80.0 55.0	0.0	-	0.0	-	-	-	-	10.3	-	0.0	-	-
81.8 46.9	0.0	-	0.0	-	-	-	-	5.1	-	8.6	-	-
83.3 40.6	0.0	-	0.0	-	-	-	-	7.6	-	3.1	-	-
83.3 42.0	0.0	-	0.0	-	-	-	-	0.0	-	4.5	-	-
86.7 33.0	0.0	-	0.0	-	-	-	4.1	-	-	0.0	-	-
86.7 35.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
90.0 28.0	0.0	-	0.0	-	-	-	0.0	-	-	9.7	-	-

***Howella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 110.0	-	-	0.0	-	-	-	-	5.2	-	0.0	-	-
93.3 100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-

Trachurus symmetricus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 90.0	0.0	-	0.0	-	-	-	-	4.3	-	0.0	-	-
83.3 110.0	-	-	0.0	-	-	-	-	30.8	-	0.0	-	-
86.7 100.0	-	-	0.0	-	-	-	-	4.8	-	0.0	-	-
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-
90.0 70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
90.0 80.0	0.0	-	27.4	-	-	-	0.0	-	-	0.0	-	-
90.0 100.0	0.0	-	0.0	-	-	-	4.8	-	-	0.0	-	-
93.3 35.0	0.0	0.0	-	-	-	-	48.3	-	0.0	-	-	-
93.3 70.0	0.0	0.0	-	-	-	-	0.0	-	10.0	-	-	-
93.3 90.0	0.0	0.0	-	-	-	-	4.8	-	0.0	-	-	-
93.3 100.0	0.0	-	0.0	-	-	-	4.7	-	0.0	-	-	-
93.3 110.0	0.0	-	0.0	-	-	-	9.6	-	-	0.0	-	-

TABLE 4. (cont.)

Brama japonica

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

Genyonemus lineatus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	31.6	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	70.0	10.2	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	19.5	-	0.0	-	-	-	-	0.0	-	4.2	-	-
80.0	55.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	0.0	-	69.4	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	0.0	-	9.0	-	-
83.3	51.0	4.0	-	4.6	-	-	-	-	0.0	-	-	-	-
86.7	33.0	91.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	61.9	-	4.8	-	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	35.9	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	21.6	-	-	-	-	0.0	-	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	-	-	-	-	4.3	-	0.0	-	-
81.8	46.9	0.0	-	0.0	-	-	-	-	5.1	-	0.0	-	-
83.3	40.6	0.0	-	0.0	-	-	-	-	7.6	-	0.0	-	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-

Umbrina roncador

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-

Medialuna californiensis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-

Chromis punctipinnis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	0.0	-	0.0	-	-	-	-	3.8	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	23.8	-	0.0	-	-

TABLE 4. (cont.)

Chromis punctipinnis (cont.)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0 35.0	0.0	-	0.0	-	-	-	0.0	-	-	15.4	-	-
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-
90.0 45.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-
93.3 26.7	0.0	0.0	-	-	-	-	0.0	-	18.8	-	-	-

Halichoeres semicinctus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3 26.7	0.0	0.0	-	-	-	-	0.0	-	9.4	-	-	-

Oxyjulis californica

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 55.0	0.0	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7 70.0	0.0	-	-	-	-	-	-	10.7	-	0.0	-	-
80.0 51.0	0.0	-	0.0	-	-	-	-	0.0	-	8.4	-	-
80.0 55.0	0.0	-	0.0	-	-	-	-	10.3	-	20.6	-	-
83.3 42.0	0.0	-	4.7	-	-	-	-	14.3	-	0.0	-	-
83.3 60.0	0.0	-	0.0	-	-	-	-	4.1	-	-	-	-
86.7 39.5	-	-	-	-	-	-	0.0	-	-	9.1	-	-
86.7 50.0	0.0	-	0.0	-	-	-	0.0	-	-	136.9	-	-
86.7 55.0	0.0	-	0.0	-	-	-	10.2	-	-	9.5	-	-
86.7 70.0	0.0	-	-	-	-	-	0.0	-	-	5.1	-	-
90.0 37.0	0.0	-	0.0	-	-	-	0.0	-	-	17.3	-	-
90.0 45.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-
90.0 53.0	0.0	-	0.0	-	-	-	42.4	-	-	0.0	-	-
90.0 60.0	0.0	-	0.0	-	-	-	0.0	-	-	21.2	-	-
93.3 45.0	0.0	0.0	-	-	-	-	0.0	-	4.8	-	-	-
93.3 60.0	0.0	0.0	-	-	-	-	10.3	-	0.0	-	-	-

***Rathbunella* spp.**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	4.0	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7 50.0	0.0	-	0.0	-	-	-	0.0	-	-	4.7	-	-

Plectobranchus evides

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7 35.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Plectobranchus evides (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	28.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-

Chiasmodon niger

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	90.0	4.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
90.0	110.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
93.3	90.0	0.0	0.0	-	-	-	-	0.0	-	5.2	-	-	-
93.3	100.0	0.0	-	0.0	-	-	-	0.0	-	4.8	-	-	-

Neoclinus stephensae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	40.6	4.3	-	0.0	-	-	-	-	0.0	-	0.0	-	-

Hypsoblennius jenkinsi

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
81.8	46.9	0.0	-	0.0	-	-	-	-	5.1	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-
93.3	28.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-

Coryphopterus nicholsii

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	-	-	-	-	9.6	-	0.0	-	-
76.7	60.0	0.0	-	-	-	-	-	-	9.8	-	0.0	-	-
80.0	55.0	0.0	-	18.8	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	4.8	-	4.5	-	-
83.3	51.0	0.0	-	9.3	-	-	-	-	0.0	-	-	-	-
83.3	55.0	18.3	-	49.6	-	-	-	-	0.0	-	-	-	-
86.7	35.0	28.6	-	4.8	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	3.4	-	6.8	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	13.7	-	17.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	0.0	-	-	9.0	-	-
90.0	45.0	0.0	-	9.7	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	4.3	8.7	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	0.0	-	4.6	-	-	-

TABLE 4. (cont.)

Lepidogobius lepidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	51.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
90.0	28.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-

Lythrypnus zebra

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	50.0	0.0	-	0.0	-	-	-	0.0	-	-	37.8	-	-
90.0	28.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-

Sphyraena argentea

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	55.0	0.0	-	-	-	-	-	-	19.3	-	0.0	-	-
80.0	55.0	0.0	-	0.0	-	-	-	-	10.3	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	28.5	-	0.0	-	-
86.7	33.0	0.0	-	0.0	-	-	-	8.2	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-

Diplospinus multistriatus

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

Scomber japonicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	0.0	-	-	-	-	10.3	-	0.0	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	14.3	-	0.0	-	-
86.7	33.0	0.0	-	4.2	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-
90.0	35.0	0.0	-	20.9	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	0.0	-	33.3	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	0.0	-	-	-	10.6	-	-	0.0	-	-
90.0	80.0	0.0	-	77.7	-	-	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	0.0	0.0	-	-	-	-	144.9	-	0.0	-	-	-

Icichthys lockingtoni

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	55.0	0.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-

TABLE 4. (cont.)

Psenes pellucidus

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

Tetragonurus cuvieri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	100.0	0.0	-	-	-	-	-	-	0.0	-	4.4	-	-
83.3	100.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
83.3	110.0	-	-	0.0	-	-	-	-	0.0	-	5.1	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	0.0	-	34.2	-	-
90.0	100.0	0.0	-	0.0	-	-	-	0.0	-	-	4.8	-	-
93.3	70.0	0.0	9.4	-	-	-	-	0.0	-	0.0	-	-	-
93.3	90.0	0.0	0.0	-	-	-	-	0.0	-	10.4	-	-	-
93.3	110.0	0.0	-	0.0	-	-	-	0.0	-	-	5.0	-	-

Peprilus simillimus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	55.0	0.0	-	0.0	-	-	-	-	20.6	-	0.0	-	-
83.3	51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
93.3	26.7	0.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-

***Citharichthys* spp.**

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	18.0	-	-	-	-	-	-	0.0	-	52.3	-	-
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	0.0	-	-
76.7	55.0	0.0	-	-	-	-	-	-	0.0	-	9.5	-	-
76.7	70.0	10.2	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	0.0	-	0.0	-	-	-	-	0.0	-	37.8	-	-
81.8	46.9	0.0	-	19.8	-	-	-	-	0.0	-	8.6	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-
83.3	51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
86.7	33.0	0.0	-	4.2	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	4.8	-	-	-	0.0	-	-	0.0	-	-
86.7	45.0	32.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	50.0	10.2	-	0.0	-	-	-	0.0	-	-	165.2	-	-
86.7	55.0	22.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

***Citharichthys* spp.** (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	60.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	30.0	5.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	5.2	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	0.0	-	0.0	-	-	-	0.0	-	-	4.3	-	-
90.0	45.0	0.0	-	9.7	-	-	-	0.0	-	-	5.0	-	-
90.0	53.0	5.0	-	9.3	-	-	-	0.0	-	-	19.0	-	-
93.3	26.7	0.0	4.3	-	-	-	-	0.0	-	0.0	-	-	-
93.3	35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-
93.3	50.0	9.6	0.0	-	-	-	-	0.0	-	0.0	-	-	-

Citharichthys sordidus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	-	-	-	-	0.0	-	8.0	-	-
76.7	51.0	86.9	-	-	-	-	-	-	0.0	-	140.6	-	-
76.7	55.0	9.9	-	-	-	-	-	-	19.3	-	28.6	-	-
76.7	60.0	9.7	-	-	-	-	-	-	0.0	-	64.3	-	-
76.7	70.0	61.4	-	-	-	-	-	-	10.7	-	10.3	-	-
80.0	51.0	29.2	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	55.0	14.7	-	18.8	-	-	-	-	10.3	-	82.4	-	-
80.0	60.0	4.7	-	0.0	-	-	-	-	0.0	-	20.4	-	-
80.0	70.0	0.0	-	14.9	-	-	-	-	0.0	-	0.0	-	-
80.0	80.0	20.6	-	-	-	-	-	-	0.0	-	10.3	-	-
80.0	90.0	20.3	-	-	-	-	-	-	0.0	-	5.2	-	-
80.0	100.0	75.7	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	30.6	-	9.9	-	-	-	-	0.0	-	4.3	-	-
83.3	42.0	51.9	-	0.0	-	-	-	-	0.0	-	9.0	-	-
83.3	51.0	12.0	-	23.1	-	-	-	-	0.0	-	-	-	-
83.3	55.0	109.7	-	69.5	-	-	-	-	0.0	-	-	-	-
83.3	60.0	9.3	-	9.1	-	-	-	-	0.0	-	-	-	-
83.3	70.0	0.0	-	4.8	-	-	-	-	0.0	-	0.0	-	-
83.3	80.0	0.0	-	5.0	-	-	-	-	0.0	-	13.5	-	-
83.3	90.0	4.8	-	0.0	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Citharichthys sordidus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	16.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	28.6	-	4.8	-	-	-	0.0	-	-	0.0	-	-
86.7	39.5	-	-	-	-	-	-	0.0	-	-	9.1	-	-
86.7	40.0	10.3	-	19.4	-	-	-	-	-	-	-	-	-
86.7	45.0	4.1	-	5.0	-	-	-	0.0	-	-	4.7	-	-
86.7	50.0	6.8	-	0.0	-	-	-	9.5	-	-	70.8	-	-
86.7	55.0	27.4	-	17.0	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	29.2	-	-	-	0.0	-	-	23.1	-	-
86.7	80.0	0.0	-	4.9	-	-	-	-	0.0	-	0.0	-	-
90.0	35.0	0.0	-	0.0	-	-	-	0.0	-	-	15.4	-	-
90.0	37.0	14.0	-	4.8	-	-	-	0.0	-	-	4.3	-	-
90.0	45.0	19.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	15.1	-	28.0	-	-	-	21.2	-	-	0.0	-	-
90.0	60.0	4.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
93.3	50.0	19.3	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	55.0	9.9	0.0	-	-	-	-	0.0	-	0.0	-	-	-
93.3	60.0	23.1	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	0.0	-	4.6	-	-	-

Citharichthys stigmaeus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	-	-	-	-	0.0	-	44.2	-	-
76.7	51.0	54.3	-	-	-	-	-	-	10.4	-	110.5	-	-
76.7	55.0	9.9	-	-	-	-	-	-	9.6	-	76.3	-	-
76.7	60.0	19.5	-	-	-	-	-	-	0.0	-	18.4	-	-
76.7	70.0	0.0	-	-	-	-	-	-	21.5	-	5.2	-	-
76.7	100.0	5.0	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	29.2	-	0.0	-	-	-	-	0.0	-	16.8	-	-
80.0	55.0	9.8	-	37.6	-	-	-	-	0.0	-	185.3	-	-
80.0	60.0	4.7	-	0.0	-	-	-	-	0.0	-	24.5	-	-
80.0	70.0	9.9	-	9.9	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	80.0	10.3	-	-	-	-	-	-	0.0	-	15.4	-	-
80.0	90.0	20.3	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	100.0	26.7	-	-	-	-	-	-	0.0	-	0.0	-	-
81.8	46.9	0.0	-	29.8	-	-	-	-	0.0	-	4.3	-	-
83.3	42.0	4.7	-	0.0	-	-	-	-	4.8	-	31.6	-	-
83.3	51.0	0.0	-	23.1	-	-	-	-	0.0	-	-	-	-
83.3	55.0	0.0	-	59.5	-	-	-	-	0.0	-	-	-	-
83.3	60.0	18.7	-	0.0	-	-	-	-	0.0	-	-	-	-
83.3	70.0	0.0	-	4.8	-	-	-	-	0.0	-	4.8	-	-
83.3	80.0	0.0	-	9.9	-	-	-	-	0.0	-	9.0	-	-
83.3	90.0	0.0	-	0.0	-	-	-	-	0.0	-	5.3	-	-
86.7	33.0	16.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	35.0	28.6	-	4.8	-	-	-	0.0	-	-	66.5	-	-
86.7	39.5	-	-	-	-	-	-	0.0	-	-	9.1	-	-
86.7	45.0	4.1	-	0.0	-	-	-	0.0	-	-	4.7	-	-
86.7	50.0	0.0	-	3.4	-	-	-	4.8	-	-	160.5	-	-
86.7	55.0	0.0	-	0.0	-	-	-	0.0	-	-	19.0	-	-
86.7	60.0	0.0	-	9.7	-	-	-	0.0	-	-	18.4	-	-
86.7	70.0	0.0	-	-	-	-	-	0.0	-	-	5.1	-	-
86.7	90.0	0.0	-	0.0	-	-	-	-	0.0	-	4.9	-	-
86.7	100.0	-	-	4.8	-	-	-	-	0.0	-	0.0	-	-
90.0	30.0	0.0	-	4.6	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	0.0	-	-	-	0.0	-	-	5.1	-	-
90.0	45.0	9.9	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	25.1	-	18.6	-	-	-	21.2	-	-	0.0	-	-
90.0	60.0	0.0	-	0.0	-	-	-	0.0	-	-	10.6	-	-
90.0	80.0	0.0	-	0.0	-	-	-	0.0	-	-	9.7	-	-
90.0	90.0	0.0	-	0.0	-	-	-	0.0	-	-	4.6	-	-
93.3	30.0	0.0	0.0	-	-	-	-	0.0	-	5.0	-	-	-
93.3	35.0	0.0	0.0	-	-	-	-	0.0	-	26.4	-	-	-

TABLE 4. (cont.)

Citharichthys stigmaeus (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
93.3	40.0	0.0	11.1	-	-	-	-	0.0	-	5.2	-	-	-
93.3	45.0	0.0	4.5	-	-	-	-	0.0	-	0.0	-	-	-
93.3	50.0	14.5	0.0	-	-	-	-	0.0	-	5.2	-	-	-
93.3	55.0	0.0	0.0	-	-	-	-	4.5	-	0.0	-	-	-
93.3	60.0	18.5	4.9	-	-	-	-	0.0	-	0.0	-	-	-
93.3	70.0	0.0	0.0	-	-	-	-	10.9	-	0.0	-	-	-
93.3	80.0	0.0	0.0	-	-	-	-	4.6	-	0.0	-	-	-

Citharichthys xanthostigma

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0	70.0	9.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-

Hippoglossina stomata

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	0.0	-	-	-	-	-	-	0.0	-	4.0	-	-
80.0	51.0	0.0	-	0.0	-	-	-	-	4.3	-	4.2	-	-
80.0	55.0	0.0	-	0.0	-	-	-	-	0.0	-	10.3	-	-
83.3	42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	4.8	-	-

Paralichthys californicus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	90.0	9.8	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	40.6	0.0	-	4.3	-	-	-	-	0.0	-	0.0	-	-
83.3	42.0	0.0	-	28.2	-	-	-	-	0.0	-	4.5	-	-
86.7	33.0	8.3	-	12.6	-	-	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
90.0	28.0	0.0	-	13.5	-	-	-	0.0	-	-	9.7	-	-
90.0	30.0	0.0	-	0.0	-	-	-	4.9	-	-	0.0	-	-

Pleuronectidae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Embassichthys bathybius

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	55.0	0.0	-	9.9	-	-	-	-	0.0	-	-	-	-

TABLE 4. (cont.)

Glyptocephalus zachirus

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

Lepidopsetta bilineata

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3 51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-

Lyopsetta exilis

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 55.0	0.0	-	28.2	-	-	-	-	0.0	-	0.0	-	-
80.0 60.0	0.0	-	20.3	-	-	-	-	0.0	-	0.0	-	-
83.3 42.0	0.0	-	9.4	-	-	-	-	0.0	-	0.0	-	-
86.7 35.0	0.0	-	9.6	-	-	-	0.0	-	-	0.0	-	-
86.7 40.0	0.0	-	4.8	-	-	-	-	-	-	-	-	-
90.0 28.0	0.0	-	4.5	-	-	-	0.0	-	-	0.0	-	-
93.3 45.0	0.0	4.5	-	-	-	-	0.0	-	0.0	-	-	-

Microstomus pacificus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7 80.0	0.0	-	-	-	-	-	-	5.4	-	0.0	-	-
81.8 46.9	0.0	-	9.9	-	-	-	-	0.0	-	0.0	-	-
83.3 100.0	-	-	0.0	-	-	-	-	5.1	-	0.0	-	-
90.0 70.0	-	-	0.0	-	-	-	8.4	-	-	0.0	-	-
93.3 35.0	0.0	0.0	-	-	-	-	0.0	-	8.8	-	-	-
93.3 80.0	0.0	0.0	-	-	-	-	9.3	-	0.0	-	-	-

Parophrys vetulus

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
80.0 51.0	4.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0 55.0	0.0	-	28.2	-	-	-	-	0.0	-	0.0	-	-
81.8 46.9	0.0	-	9.9	-	-	-	-	0.0	-	0.0	-	-
83.3 42.0	0.0	-	14.1	-	-	-	-	0.0	-	0.0	-	-
83.3 51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
86.7 33.0	8.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Pleuronichthys coenosus

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

Pleuronichthys decurrens

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	4.5	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	4.9	-	0.0	-	-	-	-	0.0	-	0.0	-	-
80.0	60.0	0.0	-	10.1	-	-	-	-	0.0	-	0.0	-	-

Pleuronichthys ritteri

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
86.7	33.0	8.3	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Pleuronichthys verticalis

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	49.0	9.0	-	-	-	-	-	-	0.0	-	0.0	-	-
80.0	51.0	0.0	-	0.0	-	-	-	-	17.4	-	4.2	-	-
81.8	46.9	0.0	-	9.9	-	-	-	-	0.0	-	0.0	-	-
83.3	40.6	0.0	-	0.0	-	-	-	-	3.8	-	0.0	-	-
83.3	42.0	0.0	-	4.7	-	-	-	-	0.0	-	0.0	-	-
90.0	30.0	5.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-

Symphurus atricaudus

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
83.3	42.0	0.0	-	0.0	-	-	-	-	4.8	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	-	-	0.0	-	-	9.0	-	-
93.3	26.7	0.0	0.0	-	-	-	-	0.0	-	14.1	-	-	-

Disintegrated fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	70.0	102.3	-	-	-	-	-	-	0.0	-	0.0	-	-
86.7	45.0	4.1	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	55.0	0.0	-	8.5	-	-	-	0.0	-	-	0.0	-	-
86.7	60.0	4.7	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	70.0	4.8	-	-	-	-	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	4.9	-	-	-	-	0.0	-	0.0	-	-
86.7	90.0	0.0	-	4.4	-	-	-	-	0.0	-	0.0	-	-

TABLE 4. (cont.)

Disintegrated fish larvae (cont.)

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
90.0	30.0	15.2	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	35.0	4.8	-	5.2	-	-	-	0.0	-	-	0.0	-	-
90.0	37.0	18.6	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	45.0	0.0	-	9.7	-	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	-	9.3	-	-	-	0.0	-	-	0.0	-	-
90.0	110.0	4.8	-	0.0	-	-	-	4.7	-	-	0.0	-	-
90.0	120.0	0.0	-	0.0	-	-	-	8.9	-	-	0.0	-	-
93.3	110.0	0.0	-	4.3	-	-	-	0.0	-	-	0.0	-	-

Unidentified fish larvae

Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
76.7	51.0	10.9	-	-	-	-	-	-	0.0	-	0.0	-	-
83.3	51.0	0.0	-	4.6	-	-	-	-	0.0	-	-	-	-
83.3	55.0	9.1	-	0.0	-	-	-	-	0.0	-	-	-	-
86.7	50.0	3.4	-	0.0	-	-	-	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	-	-	-	-	11.1	-	-	0.0	-	-
86.7	90.0	5.0	-	0.0	-	-	-	-	0.0	-	0.0	-	-
90.0	35.0	4.8	-	0.0	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	13.7	-	-	-	0.0	-	-	0.0	-	-

PHYLOGENETIC INDEX TO TABLE 4

ALPHABETICAL INDEX TO TABLE 4

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264 A report of the Oregon, California and Washington line-transect experiment (ORCAWALE) conducted in west coast waters during Summer/Fall 1996.
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