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ICHTHYOPLANKTON AND STATION DATA FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 1997

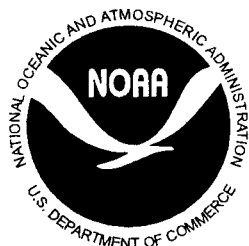
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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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Southwest Fisheries Science Center

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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 1997. It is the 37th report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 257 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 139 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 37th 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 1997. 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 CalCOFI surveys in 1997 have been published by the Scripps Institution of Oceanography (Univ. of Calif., SIO 1997, 1999). All available records for all four 1997 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 | 1969 | Stevens et al. 1988b |
| 1952 | Sandknop et al. 1987a | 1972 | Sumida et al. 1988c |
| 1953 | Stevens et al. 1987a | 1975 | Ambrose et al. 1988c |
| 1954 | Sumida et al. 1987a | 1978 | Sandknop et al. 1988d |
| 1955 | Ambrose et al. 1987b | 1981 | Ambrose et al. 1988d |
| 1956 | Stevens et al. 1987b | 1984 | Stevens et al. 1990 |
| 1957 | Sumida et al. 1987b | 1985 | Ambrose et al. 1999a |
| 1958 | Sandknop et al. 1987b | 1986 | Charter et al. 1999a |
| 1959 | Stevens et al. 1987c | 1987 | Sandknop et al. 1999a |
| 1960 | Ambrose et al. 1987c | 1988 | Watson et al. 1999a |
| 1961 | Sandknop et al. 1988a | 1989 | Ambrose et al. 1999b |
| 1962 | Sumida et al. 1988a | 1990 | Charter et al. 1999b |
| 1963 | Ambrose et al. 1988a | 1991 | Sandknop et al. 1999b |
| 1964 | Sandknop et al. 1988b | 1992 | Watson et al. 1999b |
| 1965 | Stevens et al. 1988a | 1993 | Ambrose et al. 1999c |
| 1966 | Sumida et al. 1988b | 1994 | Charter et al. 1999c |
| 1967 | Ambrose et al. 1988b | 1995 | Sandknop et al. 1999c |
| 1968 | Sandknop et al. 1988c | 1996 | Watson et al. 1999c |

SAMPLING AREA AND PATTERN

A total of 257 standard CalCOFI survey stations was occupied on four cruises in 1997, employing two research vessels:

9702, RV *David Starr Jordan*, 71 stations, January 29–February 14;

9704, RV *New Horizon*, 62 stations, April 1–19;

9707, RV *David Starr Jordan*, 66 stations, July 1–16;

9709, RV *New Horizon*, 58 stations, September 20–October 4

The survey area extended from Avila Beach to San Diego, California and seaward on six survey lines to approximately 120–330 n. mi; on Cruise 9702, a seventh survey line (75.0) off Morro Bay, California,

extended seaward to station 65.0 (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 lines 76.7 and 80.0 extended seaward to station 100.0, stations on lines 83.3 and 86.7 extended seaward to station 110.0, and stations on lines 90.0 and 93.3 extended seaward to station 120.0 on all cruises (Figures 1 and 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 1997 was a double oblique haul to 210 m depth (to 15m from the bottom in shallow areas) designed to filter a constant amount of water per depth interval (~2 m³/m of depth) over the vertical range of most ichthyoplankters. Hauls were made at a ship speed of 1.5–2.0 knots and initiated by clamping the net to the towing cable above a 34 kg weight suspended below the surface. The net was lowered to ~210 m depth by paying out 300 m of wire at 50 m/minute (35 m of depth/minute). After fishing at depth for 30 seconds, the net was retrieved at 20 m/minute (14 m of depth/minute). The angle of stray was recorded every 30 seconds and maintained at 45° (±3°) by adjusting ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. At the beginning and end of each tow, readings were made from a flow meter suspended in the mouth of the starboard net. Detailed descriptions of gear and methods are given by Kramer et al. (1972) and Smith and Richardson (1977); Ohman and Smith (1995) provided summaries of historical CalCOFI zooplankton methods and calibration factors for the various gear types.

LABORATORY PROCEDURES

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 fractionated to ~50% of their original volume. Aliquot percentages for fractionated 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:

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

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 1997, 1999).

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 1996. 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 1997 surveys could be identified to species. A total of 139 larval fish categories (including unidentified and disintegrated) was identified for 1997: 121 to species, 13 to genus, and 3 to family. Identifications were done in the Ichthyoplankton Ecology Laboratory of the Coastal Fisheries Resources Division.

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 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 is 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 *Nannobranchium*; 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").

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

Parophrys vetulus – see comment for Pleuronectidae.

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

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 1997, the Pacific hake (*Merluccius productus*) ranked first in abundance with 32.4% of the total larvae and ranked for eighth in occurrence with 26.1% positive stations (Tables 2 and 3). The Pacific sardine (*Sardinops sagax*) ranked second in abundance with 18.8% of the total larvae and ranked fifteenth in occurrence (19.8% of the samples). The Panama lightfish (*Vinciguerria lucetia*) ranked third with 13.9% of the larvae and ranked fifth in occurrence (28.8% of the stations). The northern anchovy (*Engraulis mordax*) was the fourth most abundant taxon with 6.6% of the total larvae and ranked ninth in frequency of occurrence (25.7% of the stations). The California smoothtongue (*Leuroglossus stilbius*) ranked fifth in abundance (5.0% of total larvae) and ranked third in occurrence (32.7% of the samples). The next five most abundant taxa were the northern lampfish *Stenobranchius leucopsarus* (3.0% of the total larvae), the rockfish genus *Sebastes* (3.0%), the jack mackerel *Trachurus symmetricus* (2.4%), the snubnose blacksmelt *Bathylagus wesethi* (2.2%), and the Mexican lampfish *Triphoturus mexicanus* (1.6%). These species ranked 7th, 2nd, 23rd, 6th, and 4th in frequency of occurrence, respectively. The ten most abundant taxa comprised 88.9% of all the larvae collected on CalCOFI cruises in 1997. The remaining 11.1% was distributed among 130 other taxa (including the "disintegrated" and "unidentified" categories). Of the ten most abundant taxa, two are coastal demersal taxa, five are midwater species, and three 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 decimal fraction. Plankton displacement volumes were determined after removal of large organisms (those with individual displacement volumes >5 ml) and expressed as ml per 1000 m³ of water filtered. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for percent of sample sorted or standard haul factor). 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 1 and 2 for the beginning and end of each cruise are based on Pacific Standard time at the first and last 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 1997 listed in rank order.

Table 3. Pooled counts of all larval fish taxa taken on CalCOFI survey cruises in 1997 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).

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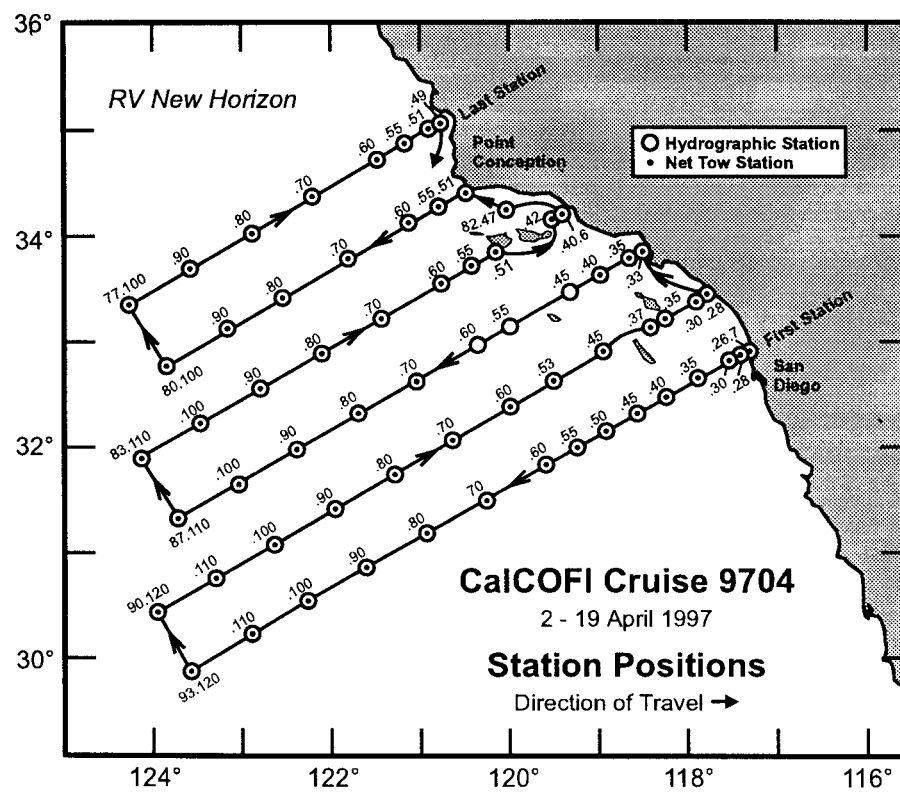
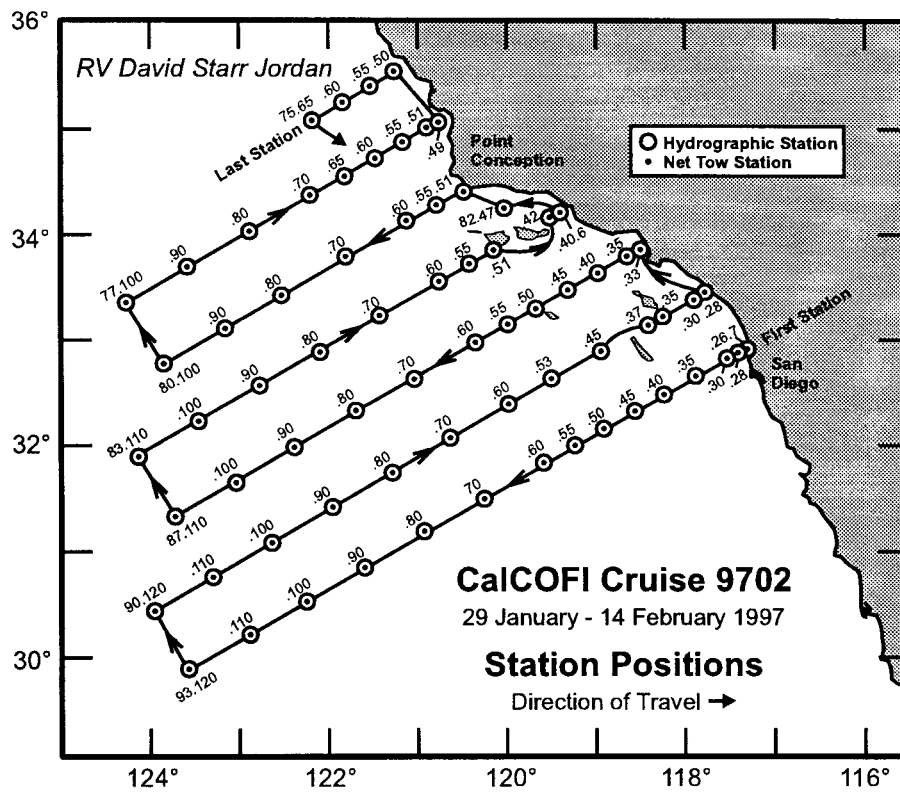


Figure 1. Stations and cruise tracks for CalCOFI cruises 9702 (above) and 9704 (below). Circles indicate hydrographic stations; dots indicate net tow stations.

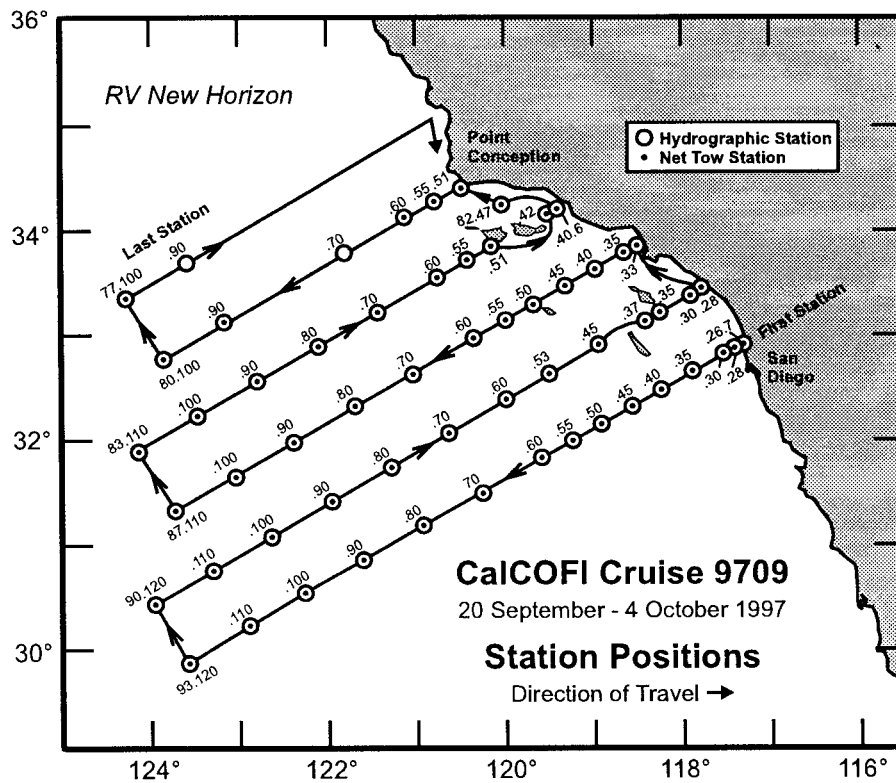
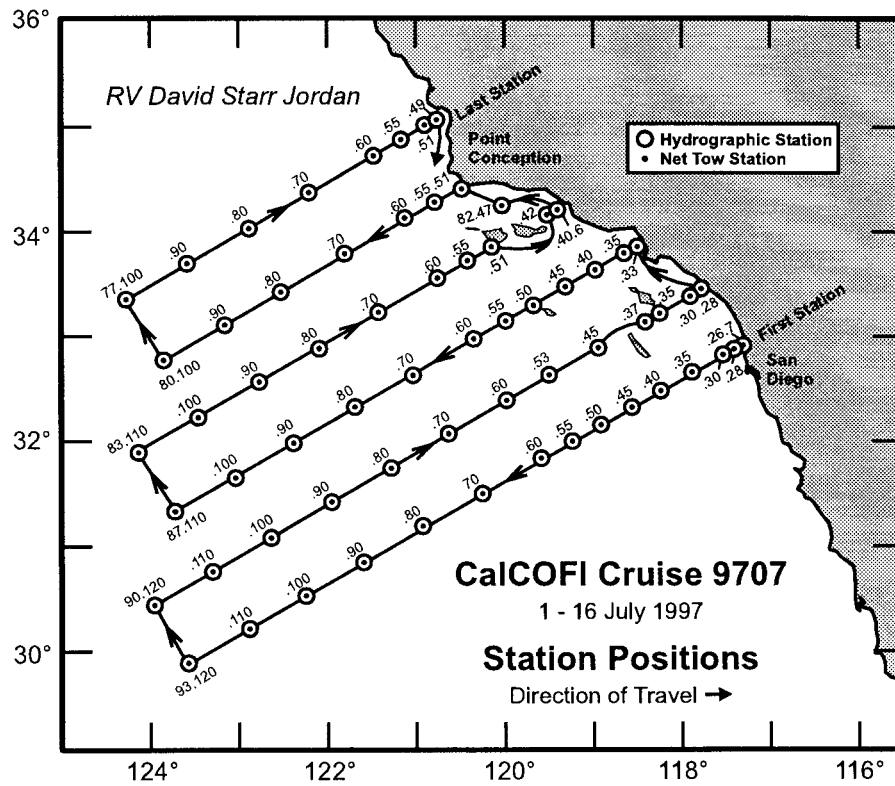


Figure 2. Stations and cruise tracks for CalCOFI cruises 9707 (above) and 9709 (below). Circles indicate hydrographic stations; dots indicate net tow stations.

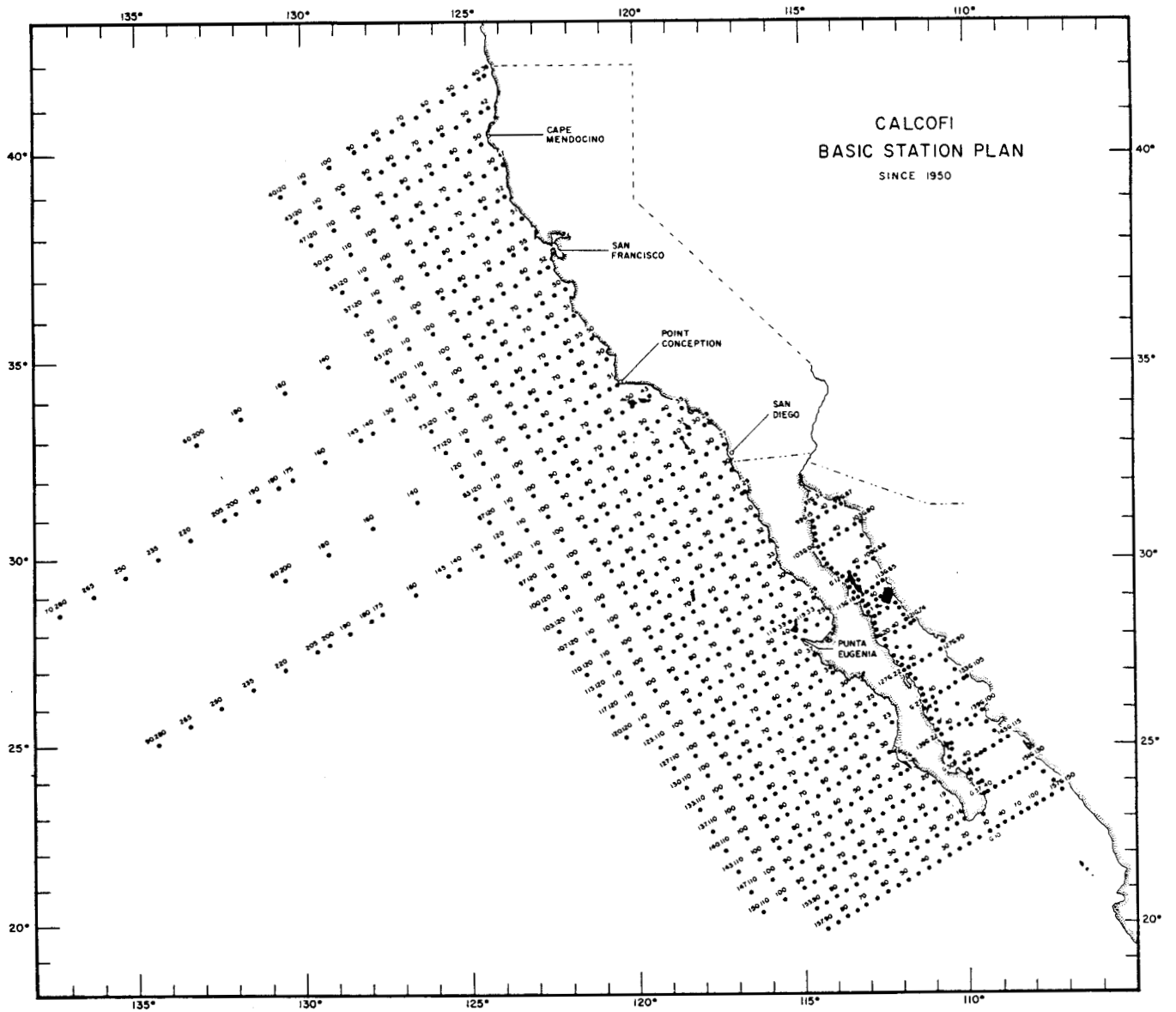


Figure 3. Basic station plan for CalCOFI Cruises.

TABLE 1. Station and plankton tow data for CalCOFI cruises in 1997. 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 9702 | | | | | | | | | | | | | | | | | |
|---------------------|---------|--------------|-----------|---------------|-----------|-----------|----------|-----|------------|---------------|-----------------------|----------------------|-----------------|----------------|--------------|------------|------|
| Line | Station | Latitude (N) | | Longitude (W) | | Ship Code | Tow Date | | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs | |
| | | deg. min. | deg. min. | deg. min. | deg. min. | | yr | mo. | | | | | | | | | day |
| 75.0 | 50.0 | 35 | 21.0 | 121 | 03.1 | JD | 97 | 02 | 14 | 0822 | 196 | 401 | 4.89 | 357 | 48.3 | 20 | 2 |
| 75.0 | 55.0 | 35 | 11.0 | 121 | 24.2 | JD | 97 | 02 | 14 | 1223 | 205 | 429 | 4.78 | 100 | 46.5 | 959 | 102 |
| 75.0 | 60.0 | 35 | 01.0 | 121 | 45.3 | JD | 97 | 02 | 14 | 1533 | 215 | 414 | 5.18 | 155 | 51.6 | 1952 | 489 |
| 75.0 | 65.0 | 34 | 51.0 | 122 | 06.3 | JD | 97 | 02 | 14 | 1844 | 216 | 427 | 5.05 | 305 | 49.2 | 60 | 57 |
| 76.7 | 49.0 | 35 | 05.3 | 120 | 46.6 | JD | 97 | 02 | 14 | 0532 | 50 | 117 | 4.31 | 60 | 100.0 | 39 | 61 |
| 76.7 | 51.0 | 35 | 01.3 | 120 | 55.1 | JD | 97 | 02 | 14 | 0310 | 209 | 435 | 4.81 | 276 | 50.0 | 208 | 31 |
| 76.7 | 55.0 | 34 | 53.3 | 121 | 11.9 | JD | 97 | 02 | 13 | 2351 | 210 | 466 | 4.50 | 133 | 48.4 | 122 | 6454 |
| 76.7 | 60.0 | 34 | 43.3 | 121 | 32.9 | JD | 97 | 02 | 13 | 1945 | 213 | 458 | 4.66 | 131 | 50.0 | 60 | 230 |
| 76.7 | 65.0 | 34 | 33.3 | 121 | 53.9 | JD | 97 | 02 | 13 | 1542 | 214 | 458 | 4.67 | 129 | 52.5 | 95 | 760 |
| 76.7 | 70.0 | 34 | 23.3 | 122 | 14.8 | JD | 97 | 02 | 13 | 1134 | 207 | 467 | 4.42 | 90 | 52.4 | 39 | 20 |
| 76.7 | 80.0 | 34 | 03.3 | 122 | 56.5 | JD | 97 | 02 | 12 | 1239 | 199 | 479 | 4.16 | 182 | 49.4 | 14 | 12 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | JD | 97 | 02 | 12 | 0538 | 214 | 417 | 5.13 | 72 | 100.0 | 22 | 18 |
| 76.7 | 100.0 | 33 | 23.3 | 124 | 19.4 | JD | 97 | 02 | 11 | 2340 | 214 | 445 | 4.80 | 52 | 100.0 | 16 | 23 |
| 80.0 | 51.0 | 34 | 27.0 | 120 | 31.4 | JD | 97 | 02 | 10 | 0719 | 54 | 122 | 4.39 | 74 | 100.0 | 173 | 322 |
| 80.0 | 55.0 | 34 | 19.0 | 120 | 48.1 | JD | 97 | 02 | 10 | 0934 | 208 | 424 | 4.91 | 109 | 47.8 | 611 | 543 |
| 80.0 | 60.0 | 34 | 09.0 | 121 | 09.1 | JD | 97 | 02 | 10 | 1524 | 211 | 442 | 4.78 | 93 | 51.2 | 12 | 44 |
| 80.0 | 70.0 | 33 | 49.0 | 121 | 50.6 | JD | 97 | 02 | 10 | 2133 | 213 | 420 | 5.07 | 286 | 49.2 | 14 | 5 |
| 80.0 | 80.0 | 33 | 29.0 | 122 | 32.0 | JD | 97 | 02 | 11 | 0320 | 211 | 435 | 4.84 | 267 | 50.0 | 36 | 11 |
| 80.0 | 90.0 | 33 | 09.0 | 123 | 13.3 | JD | 97 | 02 | 11 | 0830 | 213 | 422 | 5.05 | 28 | 100.0 | 3 | 17 |
| 80.0 | 100.0 | 32 | 49.0 | 123 | 54.4 | JD | 97 | 02 | 11 | 1700 | 218 | 447 | 4.87 | 11 | 100.0 | 6 | 42 |
| 81.8 | 46.9 | 34 | 16.5 | 120 | 01.5 | JD | 97 | 02 | 10 | 0312 | 211 | 414 | 5.10 | 133 | 47.3 | 159 | 959 |
| 83.3 | 40.6 | 34 | 13.5 | 119 | 24.7 | JD | 97 | 02 | 09 | 2237 | 20 | 55 | 3.63 | 54 | 100.0 | 3 | 66 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | JD | 97 | 02 | 09 | 2044 | 183 | 384 | 4.76 | 65 | 100.0 | 262 | 750 |
| 83.3 | 51.0 | 33 | 52.8 | 120 | 08.0 | JD | 97 | 02 | 09 | 1459 | 76 | 163 | 4.67 | 74 | 100.0 | 136 | 787 |
| 83.3 | 55.0 | 33 | 44.7 | 120 | 24.6 | JD | 97 | 02 | 09 | 1131 | 205 | 417 | 4.92 | 137 | 47.4 | 117 | 549 |
| 83.3 | 60.0 | 33 | 34.7 | 120 | 45.3 | JD | 97 | 02 | 09 | 0649 | 220 | 429 | 5.13 | 152 | 50.8 | 2 | 3 |
| 83.3 | 70.0 | 33 | 14.7 | 121 | 26.6 | JD | 97 | 02 | 09 | 0040 | 216 | 455 | 4.75 | 145 | 53.0 | 5 | 4 |
| 83.3 | 80.0 | 32 | 54.7 | 122 | 07.7 | JD | 97 | 02 | 08 | 1812 | 210 | 487 | 4.31 | 45 | 100.0 | 1 | 2 |
| 83.3 | 90.0 | 32 | 34.7 | 122 | 48.7 | JD | 97 | 02 | 08 | 0847 | 210 | 464 | 4.52 | 17 | 100.0 | 1 | 65 |

Table 1. (cont.)

CalCOFI Cruise 9702

| Line | Station | Latitude (N) deg. min. | Longitude (W) deg. min. | Ship Code | Tow Date yr mo. day | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs |
|------|---------|---------------------------|----------------------------|--------------|------------------------|---------------|---------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|---------------|
| 83.3 | 100.0 | 32 14.7 | 123 29.5 | JD | 97 02 08 | 0040 | 214 | 439 | 4.86 | 82 | 100.0 | 8 | 2 |
| 83.3 | 110.0 | 31 54.7 | 124 10.2 | JD | 97 02 07 | 1834 | 214 | 460 | 4.65 | 144 | 100.0 | 4 | 4 |
| 86.7 | 33.0 | 33 53.4 | 118 29.4 | JD | 97 02 05 | 0330 | 42 | 98 | 4.24 | 41 | 100.0 | 18 | 235 |
| 86.7 | 35.0 | 33 49.4 | 118 37.7 | JD | 97 02 05 | 0555 | 212 | 415 | 5.11 | 60 | 100.0 | 358 | 102 |
| 86.7 | 40.0 | 33 39.4 | 118 58.5 | JD | 97 02 05 | 0907 | 213 | 425 | 5.02 | 1130 | 50.0 | 42 | 438 |
| 86.7 | 45.0 | 33 29.4 | 119 19.1 | JD | 97 02 05 | 1525 | 217 | 419 | 5.17 | 136 | 47.4 | 155 | 338 |
| 86.7 | 50.0 | 33 19.4 | 119 39.8 | JD | 97 02 05 | 1930 | 41 | 104 | 3.93 | 58 | 100.0 | 96 | 110 |
| 86.7 | 55.0 | 33 09.5 | 120 00.4 | JD | 97 02 05 | 2346 | 197 | 491 | 4.03 | 100 | 49.0 | 28 | 44 |
| 86.7 | 60.0 | 32 59.4 | 120 21.0 | JD | 97 02 06 | 0348 | 208 | 464 | 4.48 | 99 | 47.8 | 5 | 7 |
| 86.7 | 70.0 | 32 39.3 | 121 02.0 | JD | 97 02 06 | 0905 | 217 | 422 | 5.14 | 85 | 100.0 | 5 | 17 |
| 86.7 | 80.0 | 32 19.4 | 121 42.9 | JD | 97 02 06 | 1720 | 215 | 449 | 4.80 | 18 | 100.0 | 2 | 5 |
| 86.7 | 90.0 | 31 59.4 | 122 23.6 | JD | 97 02 06 | 2310 | 213 | 451 | 4.72 | 22 | 100.0 | 19 | 7 |
| 86.7 | 100.0 | 31 39.4 | 123 04.2 | JD | 97 02 07 | 0504 | 215 | 441 | 4.87 | 25 | 100.0 | 6 | 63 |
| 86.7 | 110.0 | 31 19.4 | 123 44.5 | JD | 97 02 07 | 1152 | 208 | 427 | 4.87 | 75 | 100.0 | 8 | 23 |
| 90.0 | 28.0 | 33 29.0 | 117 46.1 | JD | 97 02 04 | 2056 | 70 | 152 | 4.61 | 66 | 100.0 | 8 | 408 |
| 90.0 | 30.0 | 33 25.1 | 117 54.3 | JD | 97 02 04 | 1827 | 216 | 422 | 5.11 | 62 | 100.0 | 50 | 163 |
| 90.0 | 35.0 | 33 15.1 | 118 15.0 | JD | 97 02 04 | 1242 | 216 | 431 | 5.01 | 30 | 100.0 | 33 | 163 |
| 90.0 | 37.0 | 33 11.1 | 118 23.3 | JD | 97 02 04 | 0858 | 213 | 427 | 4.98 | 35 | 100.0 | 22 | 398 |
| 90.0 | 45.0 | 32 55.1 | 118 56.1 | JD | 97 02 04 | 0418 | 218 | 441 | 4.93 | 45 | 100.0 | 44 | 472 |
| 90.0 | 53.0 | 32 39.1 | 119 28.9 | JD | 97 02 03 | 2232 | 209 | 471 | 4.45 | 348 | 49.4 | 8 | 185 |
| 90.0 | 60.0 | 32 25.1 | 119 57.6 | JD | 97 02 03 | 1718 | 205 | 472 | 4.35 | 64 | 100.0 | 0 | 7 |
| 90.0 | 70.0 | 32 05.1 | 120 38.3 | JD | 97 02 03 | 0857 | 215 | 427 | 5.03 | 94 | 47.5 | 0 | 5 |
| 90.0 | 80.0 | 31 45.1 | 121 18.9 | JD | 97 02 03 | 0033 | 212 | 467 | 4.55 | 137 | 100.0 | 4 | 4 |
| 90.0 | 90.0 | 31 25.1 | 121 59.4 | JD | 97 02 02 | 1739 | 217 | 451 | 4.82 | 24 | 100.0 | 3 | 0 |
| 90.0 | 100.0 | 31 05.1 | 122 39.7 | JD | 97 02 02 | 0846 | 215 | 431 | 5.00 | 42 | 100.0 | 0 | 12 |
| 90.0 | 110.0 | 30 45.1 | 123 19.9 | JD | 97 02 02 | 0048 | 209 | 459 | 4.55 | 148 | 100.0 | 3 | 17 |
| 90.0 | 120.0 | 30 25.1 | 123 59.9 | JD | 97 02 01 | 1850 | 217 | 435 | 4.99 | 18 | 100.0 | 15 | 17 |
| 93.3 | 26.7 | 32 57.2 | 117 18.2 | JD | 97 01 29 | 1210 | 140 | 260 | 5.39 | 19 | 100.0 | 5 | 34 |
| 93.3 | 28.0 | 32 54.8 | 117 23.8 | JD | 97 01 29 | 1418 | 221 | 424 | 5.21 | 19 | 100.0 | 4 | 2 |
| 93.3 | 30.0 | 32 50.8 | 117 31.9 | JD | 97 01 29 | 1708 | 215 | 435 | 4.93 | 30 | 100.0 | 6 | 11 |
| 93.3 | 35.0 | 32 40.8 | 117 52.4 | JD | 97 01 29 | 2100 | 213 | 436 | 4.89 | 73 | 100.0 | 18 | 29 |
| 93.3 | 40.0 | 32 30.8 | 118 13.0 | JD | 97 01 30 | 0048 | 214 | 438 | 4.88 | 75 | 48.5 | 27 | 24 |

Table 1. (cont.)

CalCOFI Cruise 9702

| Line | Station | Latitude (N) deg. min. | Longitude (W) deg. min. | Ship Code | Tow Date yr mo. day | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs |
|------|---------|---------------------------|----------------------------|--------------|------------------------|---------------|---------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|---------------|
| 93.3 | 45.0 | 32 20.8 | 118 33.3 | JD | 97 01 30 | 0453 | 215 | 428 | 5.03 | 44 | 100.0 | 30 | 214 |
| 93.3 | 50.0 | 32 10.7 | 118 53.6 | JD | 97 01 30 | 0858 | 212 | 443 | 4.77 | 54 | 100.0 | 46 | 696 |
| 93.3 | 55.0 | 32 00.9 | 119 14.0 | JD | 97 01 30 | 1500 | 225 | 441 | 5.10 | 57 | 100.0 | 3 | 5 |
| 93.3 | 60.0 | 31 50.8 | 119 34.3 | JD | 97 01 30 | 1902 | 222 | 426 | 5.20 | 204 | 52.9 | 0 | 3 |
| 93.3 | 70.0 | 31 30.8 | 120 14.8 | JD | 97 01 31 | 0133 | 215 | 433 | 4.98 | 148 | 53.1 | 2 | 1 |
| 93.3 | 80.0 | 31 10.8 | 120 55.3 | JD | 97 01 31 | 0850 | 216 | 423 | 5.11 | 97 | 100.0 | 5 | 6 |
| 93.3 | 90.0 | 30 50.8 | 121 35.4 | JD | 97 01 31 | 1716 | 222 | 400 | 5.54 | 58 | 100.0 | 1 | 1 |
| 93.3 | 100.0 | 30 30.8 | 122 15.5 | JD | 97 01 31 | 2327 | 214 | 424 | 5.05 | 64 | 100.0 | 5 | 3 |
| 93.3 | 110.0 | 30 10.8 | 122 55.4 | JD | 97 02 01 | 0521 | 215 | 425 | 5.06 | 115 | 100.0 | 5 | 43 |
| 93.3 | 120.0 | 29 50.8 | 123 35.3 | JD | 97 02 01 | 1157 | 214 | 400 | 5.35 | 23 | 100.0 | 4 | 28 |

Table 1. (cont.)

CalCOFI Cruise 9704

| Line | Station | Latitude (N) deg. min. | Longitude (W) deg. min. | Ship Code | Tow Date | | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs |
|------|---------|---------------------------|----------------------------|--------------|----------|---------|---------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|---------------|
| | | | | | yr | mo. day | | | | | | | |
| 76.7 | 49.0 | 35 05.2 | 120 46.5 | NH | 97 | 04 19 | 0624 | 119 | 4.35 | 176 | 100.0 | 6 | 29 |
| 76.7 | 51.0 | 35 01.3 | 120 55.1 | NH | 97 | 04 19 | 0407 | 363 | 4.65 | 198 | 51.4 | 55 | 28 |
| 76.7 | 55.0 | 34 53.3 | 121 11.9 | NH | 97 | 04 19 | 0035 | 437 | 4.52 | 316 | 49.3 | 83 | 4 |
| 76.7 | 60.0 | 34 43.4 | 121 33.0 | NH | 97 | 04 18 | 2049 | 420 | 4.61 | 114 | 52.1 | 236 | 41 |
| 76.7 | 70.0 | 34 23.3 | 122 14.8 | NH | 97 | 04 18 | 0532 | 470 | 4.56 | 94 | 50.0 | 113 | 184 |
| 76.7 | 80.0 | 34 03.3 | 122 56.7 | NH | 97 | 04 17 | 2253 | 406 | 5.24 | 116 | 51.1 | 43 | 158 |
| 76.7 | 90.0 | 33 43.6 | 123 38.0 | NH | 97 | 04 17 | 1657 | 457 | 4.34 | 136 | 46.8 | 87 | 266 |
| 76.7 | 100.0 | 33 23.3 | 124 19.3 | NH | 97 | 04 17 | 0714 | 415 | 5.04 | 77 | 100.0 | 270 | 802 |
| 80.0 | 51.0 | 34 27.0 | 120 31.4 | NH | 97 | 04 15 | 1001 | 122 | 4.26 | 197 | 100.0 | 15 | 18 |
| 80.0 | 55.0 | 34 19.0 | 120 48.0 | NH | 97 | 04 15 | 1454 | 471 | 3.99 | 62 | 100.0 | 67 | 88 |
| 80.0 | 60.0 | 34 09.0 | 121 08.9 | NH | 97 | 04 15 | 1910 | 390 | 5.47 | 79 | 100.0 | 199 | 31 |
| 80.0 | 70.0 | 33 49.0 | 121 50.5 | NH | 97 | 04 16 | 0107 | 407 | 5.04 | 29 | 100.0 | 93 | 672 |
| 80.0 | 80.0 | 33 29.0 | 122 31.9 | NH | 97 | 04 16 | 0720 | 399 | 5.08 | 23 | 100.0 | 5 | 48 |
| 80.0 | 90.0 | 33 09.0 | 123 13.3 | NH | 97 | 04 16 | 2039 | 379 | 5.69 | 90 | 52.9 | 550 | 254 |
| 80.0 | 100.0 | 32 48.9 | 123 54.4 | NH | 97 | 04 17 | 0220 | 448 | 4.21 | 65 | 100.0 | 649 | 53 |
| 81.8 | 46.9 | 34 16.6 | 120 01.6 | NH | 97 | 04 15 | 0616 | 408 | 5.00 | 177 | 47.2 | 7 | 39 |
| 83.3 | 40.6 | 34 13.4 | 119 24.6 | NH | 97 | 04 15 | 0103 | 58 | 3.35 | 242 | 100.0 | 125 | 15094 |
| 83.3 | 42.0 | 34 10.7 | 119 30.5 | NH | 97 | 04 14 | 2314 | 256 | 5.16 | 227 | 53.4 | 72 | 58 |
| 83.3 | 51.0 | 33 52.6 | 120 08.1 | NH | 97 | 04 14 | 1537 | 243 | 4.38 | 62 | 100.0 | 39 | 167 |
| 83.3 | 55.0 | 33 44.7 | 120 24.7 | NH | 97 | 04 14 | 1203 | 413 | 4.95 | 75 | 51.6 | 60 | 6 |
| 83.3 | 60.0 | 33 34.6 | 120 45.3 | NH | 97 | 04 14 | 0729 | 398 | 5.35 | 50 | 100.0 | 46 | 152 |
| 83.3 | 70.0 | 33 14.8 | 121 26.6 | NH | 97 | 04 14 | 0045 | 427 | 4.89 | 63 | 100.0 | 156 | 22 |
| 83.3 | 80.0 | 32 54.7 | 122 07.7 | NH | 97 | 04 13 | 1800 | 450 | 4.59 | 47 | 100.0 | 90 | 60 |
| 83.3 | 90.0 | 32 34.7 | 122 48.6 | NH | 97 | 04 13 | 0905 | 412 | 5.02 | 39 | 100.0 | 568 | 1185 |
| 83.3 | 100.0 | 32 14.5 | 123 29.4 | NH | 97 | 04 13 | 0257 | 423 | 4.76 | 69 | 100.0 | 326 | 2055 |
| 83.3 | 110.0 | 31 54.6 | 124 10.2 | NH | 97 | 04 12 | 2027 | 417 | 5.07 | 566 | 100.0 | 16 | 24 |
| 86.7 | 33.0 | 33 53.4 | 118 29.5 | NH | 97 | 04 09 | 0442 | 92 | 4.83 | 43 | 100.0 | 23 | 1070 |
| 86.7 | 35.0 | 33 49.5 | 118 37.6 | NH | 97 | 04 09 | 0712 | 436 | 4.71 | 46 | 100.0 | 54 | 285 |
| 86.7 | 40.0 | 33 39.4 | 118 58.4 | NH | 97 | 04 09 | 1228 | 507 | 3.53 | 14 | 100.0 | 28 | 9 |
| 86.7 | 70.0 | 32 38.8 | 121 01.4 | NH | 97 | 04 11 | 0611 | 485 | 4.20 | 74 | 100.0 | 84 | 64 |
| 86.7 | 80.0 | 32 19.4 | 121 42.7 | NH | 97 | 04 11 | 1407 | 432 | 4.76 | 32 | 100.0 | 190 | 797 |
| 86.7 | 90.0 | 31 59.8 | 122 23.6 | NH | 97 | 04 11 | 2101 | 479 | 4.31 | 48 | 100.0 | 85 | 243 |

Table 1. (cont.)

CalCOFI Cruise 9704

| Line | Station | Latitude (N) deg. min. | Longitude (W) deg. min. | Ship Code | Tow Date yr mo. day | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs |
|------|---------|---------------------------|----------------------------|--------------|------------------------|---------------|---------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|---------------|
| 86.7 | 100.0 | 31 38.9 | 123 03.4 | NH | 97 04 12 | 0412 | 210 | 498 | 4.22 | 34 | 100.0 | 180 | 303 |
| 86.7 | 110.0 | 31 19.3 | 123 44.5 | NH | 97 04 12 | 1212 | 199 | 454 | 4.37 | 31 | 100.0 | 28 | 65 |
| 90.0 | 28.0 | 33 29.1 | 117 46.0 | NH | 97 04 08 | 2225 | 77 | 184 | 4.16 | 60 | 100.0 | 6 | 31 |
| 90.0 | 30.0 | 33 25.0 | 117 54.3 | NH | 97 04 08 | 1953 | 203 | 421 | 4.82 | 48 | 100.0 | 45 | 177 |
| 90.0 | 35.0 | 33 15.1 | 118 15.1 | NH | 97 04 08 | 1546 | 217 | 395 | 5.50 | 13 | 100.0 | 23 | 99 |
| 90.0 | 37.0 | 33 11.0 | 118 23.2 | NH | 97 04 08 | 0519 | 213 | 387 | 5.50 | 52 | 100.0 | 24 | 135 |
| 90.0 | 45.0 | 32 55.1 | 118 56.1 | NH | 97 04 08 | 0012 | 206 | 428 | 4.81 | 58 | 100.0 | 58 | 72 |
| 90.0 | 53.0 | 32 39.1 | 119 28.9 | NH | 97 04 07 | 1837 | 200 | 427 | 4.68 | 63 | 100.0 | 95 | 51 |
| 90.0 | 60.0 | 32 25.0 | 119 57.6 | NH | 97 04 07 | 1228 | 204 | 424 | 4.81 | 24 | 100.0 | 234 | 259 |
| 90.0 | 70.0 | 32 05.1 | 120 38.3 | NH | 97 04 07 | 0547 | 211 | 408 | 5.18 | 47 | 100.0 | 177 | 482 |
| 90.0 | 80.0 | 31 45.0 | 121 19.0 | NH | 97 04 06 | 2353 | 201 | 424 | 4.74 | 66 | 100.0 | 230 | 8 |
| 90.0 | 90.0 | 31 25.0 | 121 59.5 | NH | 97 04 06 | 1819 | 201 | 433 | 4.64 | 25 | 100.0 | 136 | 41 |
| 90.0 | 100.0 | 31 05.0 | 122 39.6 | NH | 97 04 06 | 0703 | 204 | 430 | 4.75 | 37 | 100.0 | 30 | 66 |
| 90.0 | 110.0 | 30 45.2 | 123 19.9 | NH | 97 04 06 | 0118 | 195 | 462 | 4.23 | 22 | 100.0 | 13 | 39 |
| 90.0 | 120.0 | 30 25.0 | 123 59.9 | NH | 97 04 05 | 1914 | 193 | 480 | 4.01 | 25 | 100.0 | 24 | 136 |
| 93.3 | 26.7 | 32 57.4 | 117 18.4 | NH | 97 04 02 | 1323 | 32 | 125 | 2.58 | 16 | 100.0 | 0 | 111 |
| 93.3 | 28.0 | 32 54.8 | 117 23.7 | NH | 97 04 02 | 1622 | 208 | 435 | 4.79 | 35 | 100.0 | 7 | 16 |
| 93.3 | 30.0 | 32 50.7 | 117 31.8 | NH | 97 04 02 | 1935 | 204 | 457 | 4.47 | 59 | 100.0 | 11 | 79 |
| 93.3 | 35.0 | 32 40.9 | 117 52.3 | NH | 97 04 02 | 2341 | 206 | 454 | 4.53 | 35 | 100.0 | 53 | 11 |
| 93.3 | 40.0 | 32 30.8 | 118 12.8 | NH | 97 04 03 | 0349 | 203 | 453 | 4.47 | 35 | 100.0 | 49 | 7 |
| 93.3 | 45.0 | 32 20.8 | 118 33.5 | NH | 97 04 03 | 0809 | 200 | 470 | 4.24 | 13 | 100.0 | 27 | 9 |
| 93.3 | 50.0 | 32 10.9 | 118 53.4 | NH | 97 04 03 | 1253 | 209 | 407 | 5.12 | 22 | 100.0 | 54 | 97 |
| 93.3 | 55.0 | 32 00.7 | 119 13.6 | NH | 97 04 03 | 1822 | 212 | 433 | 4.90 | 23 | 100.0 | 20 | 106 |
| 93.3 | 60.0 | 31 50.8 | 119 34.3 | NH | 97 04 03 | 2233 | 216 | 447 | 4.83 | 43 | 100.0 | 56 | 782 |
| 93.3 | 70.0 | 31 30.8 | 120 14.8 | NH | 97 04 04 | 0443 | 203 | 444 | 4.57 | 36 | 100.0 | 46 | 320 |
| 93.3 | 80.0 | 31 10.8 | 120 55.1 | NH | 97 04 04 | 1212 | 201 | 463 | 4.35 | 28 | 100.0 | 28 | 59 |
| 93.3 | 90.0 | 30 50.7 | 121 35.4 | NH | 97 04 04 | 1755 | 199 | 452 | 4.41 | 20 | 100.0 | 38 | 32 |
| 93.3 | 100.0 | 30 30.8 | 122 15.7 | NH | 97 04 04 | 2336 | 205 | 480 | 4.28 | 27 | 100.0 | 14 | 36 |
| 93.3 | 110.0 | 30 10.8 | 122 55.7 | NH | 97 04 05 | 0524 | 207 | 460 | 4.51 | 26 | 100.0 | 35 | 27 |
| 93.3 | 120.0 | 29 51.1 | 123 33.9 | NH | 97 04 05 | 1000 | 202 | 459 | 4.40 | 7 | 100.0 | 16 | 461 |

Table 1. (cont.)

CalCOFI Cruise 9707

| 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 | JD | 97 07 16 | 0939 | 61 | 129 | 4.70 | 70 | 100.0 | 7 | 97 |
| 76.7 | 51.0 | 35 01.3 | 120 55.1 | JD | 97 07 16 | 0742 | 212 | 389 | 5.43 | 108 | 45.2 | 3 | 8 |
| 76.7 | 55.0 | 34 53.3 | 121 11.9 | JD | 97 07 16 | 0358 | 213 | 394 | 5.41 | 208 | 48.8 | 2 | 0 |
| 76.7 | 60.0 | 34 43.3 | 121 32.9 | JD | 97 07 15 | 2357 | 209 | 391 | 5.35 | 174 | 52.9 | 10 | 3 |
| 76.7 | 70.0 | 34 23.3 | 122 14.8 | JD | 97 07 15 | 1805 | 207 | 402 | 5.16 | 122 | 49.0 | 18 | 3 |
| 76.7 | 80.0 | 34 03.3 | 122 56.5 | JD | 97 07 15 | 1133 | 214 | 364 | 5.88 | 203 | 47.3 | 6 | 8 |
| 76.7 | 90.0 | 33 43.3 | 123 38.0 | JD | 97 07 15 | 0500 | 214 | 382 | 5.60 | 31 | 100.0 | 163 | 153 |
| 76.7 | 100.0 | 33 23.3 | 124 19.4 | JD | 97 07 14 | 2322 | 210 | 386 | 5.45 | 36 | 100.0 | 55 | 558 |
| 80.0 | 51.0 | 34 27.0 | 120 31.4 | JD | 97 07 13 | 0655 | 77 | 154 | 5.04 | 46 | 100.0 | 6 | 139 |
| 80.0 | 55.0 | 34 19.0 | 120 48.1 | JD | 97 07 13 | 0902 | 208 | 387 | 5.37 | 57 | 100.0 | 0 | 7 |
| 80.0 | 60.0 | 34 09.0 | 121 09.0 | JD | 97 07 13 | 1545 | 208 | 373 | 5.58 | 91 | 47.1 | 4 | 0 |
| 80.0 | 70.0 | 33 49.0 | 121 50.7 | JD | 97 07 13 | 2155 | 212 | 383 | 5.52 | 120 | 47.8 | 10 | 1 |
| 80.0 | 80.0 | 33 29.0 | 122 32.0 | JD | 97 07 14 | 0350 | 211 | 397 | 5.31 | 156 | 51.6 | 2 | 5 |
| 80.0 | 90.0 | 33 09.0 | 123 13.4 | JD | 97 07 14 | 0828 | 210 | 397 | 5.29 | 116 | 50.0 | 43 | 23 |
| 80.0 | 100.0 | 32 49.0 | 123 54.4 | JD | 97 07 14 | 1710 | 208 | 400 | 5.21 | 23 | 100.0 | 122 | 292 |
| 81.8 | 46.9 | 34 16.5 | 120 01.5 | JD | 97 07 13 | 0307 | 211 | 399 | 5.29 | 191 | 50.0 | 7 | 66 |
| 83.3 | 40.6 | 34 13.5 | 119 24.7 | JD | 97 07 12 | 2232 | 22 | 64 | 3.42 | 78 | 100.0 | 27 | 824 |
| 83.3 | 42.0 | 34 10.7 | 119 30.5 | JD | 97 07 12 | 2046 | 175 | 334 | 5.25 | 36 | 100.0 | 9 | 12 |
| 83.3 | 51.0 | 33 52.7 | 120 08.1 | JD | 97 07 12 | 1445 | 135 | 243 | 5.54 | 37 | 100.0 | 1 | 72 |
| 83.3 | 55.0 | 33 44.7 | 120 24.6 | JD | 97 07 12 | 1111 | 211 | 395 | 5.35 | 20 | 100.0 | 1 | 0 |
| 83.3 | 60.0 | 33 34.7 | 120 45.3 | JD | 97 07 12 | 0617 | 212 | 392 | 5.41 | 77 | 46.7 | 5 | 2 |
| 83.3 | 70.0 | 33 14.7 | 121 26.6 | JD | 97 07 11 | 2359 | 213 | 425 | 5.01 | 170 | 47.2 | 4 | 3 |
| 83.3 | 80.0 | 32 54.7 | 122 07.9 | JD | 97 07 11 | 1752 | 208 | 402 | 5.17 | 45 | 100.0 | 13 | 54 |
| 83.3 | 90.0 | 32 34.7 | 122 48.7 | JD | 97 07 11 | 0819 | 211 | 407 | 5.17 | 37 | 100.0 | 7 | 67 |
| 83.3 | 100.0 | 32 14.7 | 123 29.5 | JD | 97 07 11 | 0016 | 205 | 421 | 4.88 | 29 | 100.0 | 22 | 572 |
| 83.3 | 110.0 | 31 54.7 | 124 10.2 | JD | 97 07 10 | 1800 | 212 | 415 | 5.11 | 17 | 100.0 | 38 | 264 |
| 86.7 | 33.0 | 33 53.2 | 118 29.5 | JD | 97 07 08 | 0150 | 49 | 97 | 5.04 | 247 | 100.0 | 164 | 455 |
| 86.7 | 35.0 | 33 49.5 | 118 37.7 | JD | 97 07 08 | 0411 | 212 | 394 | 5.37 | 38 | 100.0 | 13 | 6 |
| 86.7 | 40.0 | 33 39.4 | 118 58.5 | JD | 97 07 08 | 0803 | 210 | 401 | 5.24 | 27 | 100.0 | 3 | 0 |
| 86.7 | 45.0 | 33 29.4 | 119 19.1 | JD | 97 07 08 | 1242 | 212 | 406 | 5.23 | 62 | 100.0 | 3 | 0 |
| 86.7 | 50.0 | 33 19.5 | 119 39.8 | JD | 97 07 08 | 1637 | 68 | 141 | 4.82 | 120 | 100.0 | 5 | 32 |
| 86.7 | 55.0 | 33 09.4 | 120 00.4 | JD | 97 07 08 | 2021 | 213 | 411 | 5.19 | 71 | 51.7 | 0 | 0 |
| 86.7 | 60.0 | 32 59.4 | 120 21.0 | JD | 97 07 09 | 0014 | 207 | 426 | 4.85 | 127 | 48.1 | 1 | 0 |

Table 1. (cont.)

CalCOFI Cruise 9707

| Line | Station | Latitude (N) | | Longitude (W) | | Ship Code | Tow Date | | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs | |
|------|---------|--------------|-----------|---------------|-----------|-----------|-------------|-------------|------------|---------------|-----------------------|----------------------|-----------------|----------------|--------------|------------|-----|
| | | deg. min. | deg. min. | deg. min. | deg. min. | | yr. mo. day | yr. mo. day | | | | | | | | | |
| 86.7 | 70.0 | 32 | 39.3 | 121 | 02.1 | JD | 97 | 07 | 09 | 0552 | 173 | 454 | 3.81 | 473 | 49.3 | 8 | 3 |
| 86.7 | 80.0 | 32 | 19.4 | 121 | 42.9 | JD | 97 | 07 | 09 | 1231 | 215 | 370 | 5.82 | 119 | 52.3 | 1 | 10 |
| 86.7 | 90.0 | 31 | 59.4 | 122 | 23.6 | JD | 97 | 07 | 09 | 1921 | 206 | 413 | 5.00 | 24 | 100.0 | 207 | 749 |
| 86.7 | 100.0 | 31 | 39.4 | 123 | 04.2 | JD | 97 | 07 | 10 | 0118 | 202 | 418 | 4.83 | 29 | 100.0 | 103 | 124 |
| 86.7 | 110.0 | 31 | 19.4 | 123 | 44.7 | JD | 97 | 07 | 10 | 0835 | 211 | 416 | 5.06 | 14 | 100.0 | 66 | 781 |
| 90.0 | 28.0 | 33 | 29.0 | 117 | 46.1 | JD | 97 | 07 | 07 | 1933 | 61 | 135 | 4.54 | 170 | 100.0 | 27 | 30 |
| 90.0 | 30.0 | 33 | 24.9 | 117 | 54.2 | JD | 97 | 07 | 07 | 1603 | 214 | 386 | 5.55 | 36 | 100.0 | 11 | 0 |
| 90.0 | 35.0 | 33 | 15.2 | 118 | 14.9 | JD | 97 | 07 | 07 | 1200 | 214 | 398 | 5.38 | 35 | 100.0 | 9 | 0 |
| 90.0 | 37.0 | 33 | 11.2 | 118 | 23.5 | JD | 97 | 07 | 07 | 0834 | 210 | 405 | 5.19 | 47 | 100.0 | 9 | 3 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.1 | JD | 97 | 07 | 07 | 0303 | 200 | 439 | 4.55 | 75 | 48.5 | 2 | 0 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.9 | JD | 97 | 07 | 06 | 2139 | 201 | 444 | 4.52 | 106 | 48.9 | 2 | 0 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 97 | 07 | 06 | 1650 | 213 | 403 | 5.29 | 25 | 100.0 | 3 | 0 |
| 90.0 | 70.0 | 32 | 05.1 | 120 | 38.2 | JD | 97 | 07 | 06 | 0824 | 212 | 394 | 5.37 | 91 | 47.2 | 0 | 13 |
| 90.0 | 80.0 | 31 | 45.1 | 121 | 18.9 | JD | 97 | 07 | 06 | 0034 | 213 | 395 | 5.39 | 81 | 100.0 | 17 | 30 |
| 90.0 | 90.0 | 31 | 25.1 | 121 | 59.3 | JD | 97 | 07 | 05 | 1817 | 216 | 399 | 5.40 | 33 | 100.0 | 10 | 141 |
| 90.0 | 100.0 | 31 | 05.2 | 122 | 39.7 | JD | 97 | 07 | 05 | 0823 | 213 | 410 | 5.19 | 17 | 100.0 | 5 | 883 |
| 90.0 | 110.0 | 30 | 45.1 | 123 | 19.9 | JD | 97 | 07 | 05 | 0200 | 211 | 417 | 5.06 | 46 | 100.0 | 126 | 311 |
| 90.0 | 120.0 | 30 | 25.1 | 123 | 59.7 | JD | 97 | 07 | 04 | 1942 | 212 | 421 | 5.03 | 26 | 100.0 | 148 | 112 |
| 93.3 | 26.7 | 32 | 57.3 | 117 | 18.2 | JD | 97 | 07 | 01 | 1137 | 57 | 117 | 4.84 | 179 | 100.0 | 1 | 3 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.7 | JD | 97 | 07 | 01 | 1415 | 213 | 403 | 5.27 | 27 | 100.0 | 0 | 2 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 97 | 07 | 01 | 1802 | 212 | 405 | 5.22 | 25 | 100.0 | 7 | 2 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 97 | 07 | 01 | 2200 | 208 | 386 | 5.40 | 130 | 48.0 | 2 | 0 |
| 93.3 | 40.0 | 32 | 30.8 | 118 | 12.8 | JD | 97 | 07 | 02 | 0200 | 211 | 405 | 5.22 | 72 | 51.7 | 6 | 2 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.3 | JD | 97 | 07 | 02 | 0548 | 207 | 459 | 4.51 | 31 | 100.0 | 1 | 0 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 97 | 07 | 02 | 0838 | 214 | 415 | 5.15 | 31 | 100.0 | 3 | 1 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 13.9 | JD | 97 | 07 | 02 | 1552 | 217 | 421 | 5.16 | 24 | 100.0 | 3 | 0 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 97 | 07 | 02 | 2007 | 220 | 398 | 5.54 | 101 | 52.5 | 1 | 0 |
| 93.3 | 70.0 | 31 | 30.8 | 120 | 14.8 | JD | 97 | 07 | 03 | 0226 | 214 | 412 | 5.19 | 114 | 48.9 | 6 | 68 |
| 93.3 | 80.0 | 31 | 10.8 | 120 | 55.2 | JD | 97 | 07 | 03 | 0828 | 211 | 414 | 5.10 | 48 | 100.0 | 11 | 324 |
| 93.3 | 90.0 | 30 | 50.8 | 121 | 35.4 | JD | 97 | 07 | 03 | 1800 | 215 | 400 | 5.38 | 83 | 100.0 | 12 | 342 |
| 93.3 | 100.0 | 30 | 30.8 | 122 | 15.5 | JD | 97 | 07 | 04 | 0013 | 208 | 415 | 5.02 | 43 | 100.0 | 62 | 314 |
| 93.3 | 110.0 | 30 | 10.9 | 122 | 55.3 | JD | 97 | 07 | 04 | 0610 | 217 | 406 | 5.35 | 10 | 100.0 | 242 | 101 |
| 93.3 | 120.0 | 29 | 50.9 | 123 | 35.2 | JD | 97 | 07 | 04 | 1310 | 217 | 416 | 5.21 | 22 | 100.0 | 254 | 143 |

Table 1. (cont.)

CalCOFI Cruise 9709

| 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 | 100.0 | 33 23.1 | 124 19.2 | NH | 97 10 04 | 0821 | 217 | 415 | 5.24 | 6 | 100.0 | 20 | 10 |
| 80.0 | 51.0 | 34 26.9 | 120 31.6 | NH | 97 10 02 | 0520 | 65 | 132 | 4.94 | 6 | 100.0 | 59 | 12 |
| 80.0 | 55.0 | 34 18.3 | 120 47.6 | NH | 97 10 02 | 0831 | 209 | 437 | 4.79 | 12 | 100.0 | 13 | 6 |
| 80.0 | 60.0 | 34 09.1 | 121 08.9 | NH | 97 10 02 | 1553 | 211 | 428 | 4.95 | 15 | 100.0 | 4 | 7 |
| 80.0 | 80.0 | 33 28.3 | 122 30.5 | NH | 97 10 03 | 0837 | 216 | 434 | 4.97 | 5 | 100.0 | 15 | 14 |
| 80.0 | 90.0 | 33 08.9 | 123 13.3 | NH | 97 10 03 | 1827 | 207 | 451 | 4.59 | 9 | 100.0 | 44 | 55 |
| 80.0 | 100.0 | 32 48.8 | 123 54.5 | NH | 97 10 04 | 0136 | 186 | 487 | 3.82 | 42 | 100.0 | 48 | 27 |
| 81.8 | 46.9 | 34 16.5 | 120 01.8 | NH | 97 10 02 | 0129 | 185 | 463 | 3.99 | 19 | 100.0 | 6 | 96 |
| 83.3 | 40.6 | 34 13.6 | 119 24.9 | NH | 97 10 01 | 2040 | 29 | 80 | 3.59 | 7 | 100.0 | 158 | 942 |
| 83.3 | 42.0 | 34 10.6 | 119 30.5 | NH | 97 10 01 | 1633 | 184 | 353 | 5.21 | 12 | 100.0 | 10 | 117 |
| 83.3 | 51.0 | 33 52.7 | 120 08.0 | NH | 97 10 01 | 0843 | 74 | 198 | 3.73 | 5 | 100.0 | 9 | 58 |
| 83.3 | 55.0 | 33 44.7 | 120 24.8 | NH | 97 10 01 | 0434 | 205 | 425 | 4.81 | 40 | 50.0 | 6 | 2 |
| 83.3 | 60.0 | 33 34.7 | 120 45.2 | NH | 97 10 01 | 0017 | 199 | 438 | 4.55 | 64 | 46.9 | 9 | 4 |
| 83.3 | 70.0 | 33 14.7 | 121 26.7 | NH | 97 09 30 | 1705 | 210 | 427 | 4.90 | 19 | 100.0 | 5 | 12 |
| 83.3 | 80.0 | 32 54.7 | 122 07.7 | NH | 97 09 30 | 0904 | 201 | 445 | 4.51 | 11 | 100.0 | 22 | 55 |
| 83.3 | 90.0 | 32 34.7 | 122 48.4 | NH | 97 09 30 | 0407 | 205 | 419 | 4.90 | 26 | 100.0 | 34 | 83 |
| 83.3 | 100.0 | 32 14.7 | 123 29.5 | NH | 97 09 29 | 2211 | 202 | 441 | 4.57 | 25 | 100.0 | 29 | 212 |
| 83.3 | 110.0 | 31 54.7 | 124 10.2 | NH | 97 09 29 | 1617 | 206 | 435 | 4.74 | 9 | 100.0 | 34 | 48 |
| 86.7 | 33.0 | 33 53.4 | 118 29.5 | NH | 97 09 26 | 2132 | 50 | 107 | 4.67 | 7 | 100.0 | 38 | 239 |
| 86.7 | 35.0 | 33 49.3 | 118 37.7 | NH | 97 09 26 | 2357 | 197 | 430 | 4.58 | 21 | 100.0 | 10 | 4 |
| 86.7 | 40.0 | 33 39.4 | 118 58.4 | NH | 97 09 27 | 0340 | 194 | 446 | 4.36 | 45 | 48.9 | 3 | 8 |
| 86.7 | 45.0 | 33 29.4 | 119 18.9 | NH | 97 09 27 | 0746 | 205 | 436 | 4.71 | 20 | 100.0 | 9 | 0 |
| 86.7 | 50.0 | 33 19.4 | 119 39.8 | NH | 97 09 27 | 1130 | 68 | 152 | 4.49 | 10 | 100.0 | 0 | 51 |
| 86.7 | 55.0 | 33 09.4 | 120 00.3 | NH | 97 09 27 | 1642 | 211 | 435 | 4.85 | 22 | 100.0 | 12 | 2 |
| 86.7 | 60.0 | 32 59.5 | 120 21.1 | NH | 97 09 27 | 2047 | 208 | 461 | 4.50 | 40 | 52.5 | 12 | 4 |
| 86.7 | 70.0 | 32 39.4 | 121 02.0 | NH | 97 09 28 | 0315 | 188 | 484 | 3.88 | 56 | 53.6 | 19 | 10 |
| 86.7 | 80.0 | 32 19.0 | 121 41.8 | NH | 97 09 28 | 0904 | 185 | 500 | 3.69 | 67 | 47.8 | 3 | 1 |
| 86.7 | 90.0 | 31 59.3 | 122 23.6 | NH | 97 09 28 | 1812 | 206 | 444 | 4.65 | 18 | 100.0 | 54 | 58 |
| 86.7 | 100.0 | 31 39.5 | 123 04.1 | NH | 97 09 29 | 0148 | 187 | 469 | 3.99 | 17 | 100.0 | 101 | 56 |
| 86.7 | 110.0 | 31 18.7 | 123 43.9 | NH | 97 09 29 | 0820 | 198 | 462 | 4.28 | 9 | 100.0 | 42 | 151 |
| 90.0 | 28.0 | 33 28.8 | 117 46.1 | NH | 97 09 26 | 1508 | 49 | 140 | 3.48 | 4 | 100.0 | 9 | 75 |
| 90.0 | 30.0 | 33 25.1 | 117 54.3 | NH | 97 09 26 | 1227 | 190 | 446 | 4.26 | 15 | 100.0 | 5 | 0 |

Table 1. (cont.)

CalCOFI Cruise 9709

| Line | Station | Latitude (N) deg. min. | Longitude (W) deg. min. | Ship Code | Tow Date yr mo. day | Time (PST) | Tow Depth (m) | Volume Water Strained | Standard Haul Factor | Plankton Volume | Percent Sorted | Total Larvae | Total Eggs |
|------|---------|---------------------------|----------------------------|--------------|------------------------|---------------|---------------------|-----------------------------|----------------------------|--------------------|-------------------|-----------------|---------------|
| 90.0 | 35.0 | 33 15.0 | 118 15.0 | NH | 97 09 26 | 0754 | 208 | 397 | 5.24 | 15 | 100.0 | 15 | 2 |
| 90.0 | 37.0 | 33 11.1 | 118 23.5 | NH | 97 09 26 | 0502 | 206 | 420 | 4.90 | 28 | 100.0 | 14 | 14 |
| 90.0 | 45.0 | 32 55.1 | 118 56.2 | NH | 97 09 25 | 2326 | 196 | 446 | 4.39 | 13 | 100.0 | 80 | 1 |
| 90.0 | 53.0 | 32 39.0 | 119 28.9 | NH | 97 09 25 | 1756 | 208 | 419 | 4.97 | 30 | 100.0 | 22 | 0 |
| 90.0 | 60.0 | 32 25.1 | 119 57.6 | NH | 97 09 25 | 1115 | 198 | 459 | 4.30 | 11 | 100.0 | 29 | 2 |
| 90.0 | 70.0 | 32 04.9 | 120 38.4 | NH | 97 09 25 | 0457 | 201 | 456 | 4.42 | 24 | 100.0 | 28 | 3 |
| 90.0 | 80.0 | 31 45.0 | 121 18.9 | NH | 97 09 24 | 2247 | 202 | 438 | 4.62 | 19 | 100.0 | 36 | 13 |
| 90.0 | 90.0 | 31 24.9 | 121 59.5 | NH | 97 09 24 | 1639 | 212 | 410 | 5.17 | 12 | 100.0 | 110 | 87 |
| 90.0 | 100.0 | 31 04.6 | 122 39.8 | NH | 97 09 24 | 0821 | 198 | 443 | 4.46 | 6 | 100.0 | 129 | 39 |
| 90.0 | 110.0 | 30 45.1 | 123 20.2 | NH | 97 09 24 | 0130 | 202 | 434 | 4.65 | 12 | 100.0 | 219 | 9 |
| 90.0 | 120.0 | 30 24.8 | 123 59.7 | NH | 97 09 23 | 1913 | 207 | 434 | 4.78 | 13 | 100.0 | 220 | 130 |
| 93.3 | 26.7 | 32 57.4 | 117 18.3 | NH | 97 09 20 | 1203 | 197 | 453 | 4.35 | 10 | 100.0 | 3 | 6 |
| 93.3 | 28.0 | 32 54.8 | 117 23.3 | NH | 97 09 20 | 1531 | 205 | 441 | 4.65 | 11 | 100.0 | 5 | 0 |
| 93.3 | 30.0 | 32 50.9 | 117 31.6 | NH | 97 09 20 | 1825 | 203 | 438 | 4.64 | 19 | 100.0 | 2 | 0 |
| 93.3 | 35.0 | 32 40.8 | 117 52.4 | NH | 97 09 20 | 2227 | 189 | 434 | 4.37 | 42 | 54.8 | 33 | 4 |
| 93.3 | 40.0 | 32 30.9 | 118 12.4 | NH | 97 09 21 | 0210 | 197 | 434 | 4.54 | 26 | 100.0 | 79 | 1 |
| 93.3 | 45.0 | 32 20.8 | 118 33.1 | NH | 97 09 21 | 0621 | 207 | 424 | 4.88 | 30 | 100.0 | 194 | 4 |
| 93.3 | 50.0 | 32 10.8 | 118 53.6 | NH | 97 09 21 | 1109 | 198 | 422 | 4.70 | 10 | 100.0 | 70 | 1 |
| 93.3 | 55.0 | 33 01.1 | 119 13.9 | NH | 97 09 21 | 1523 | 209 | 407 | 5.14 | 18 | 100.0 | 34 | 2 |
| 93.3 | 60.0 | 31 50.8 | 119 34.1 | NH | 97 09 21 | 1938 | 202 | 392 | 5.16 | 41 | 51.2 | 17 | 0 |
| 93.3 | 70.0 | 31 30.8 | 120 14.6 | NH | 97 09 22 | 0132 | 199 | 432 | 4.60 | 17 | 100.0 | 282 | 9 |
| 93.3 | 80.0 | 31 10.6 | 120 55.2 | NH | 97 09 22 | 0823 | 211 | 409 | 5.17 | 8 | 100.0 | 137 | 10 |
| 93.3 | 90.0 | 30 50.4 | 121 35.3 | NH | 97 09 22 | 1716 | 205 | 439 | 4.67 | 10 | 100.0 | 257 | 28 |
| 93.3 | 100.0 | 30 30.8 | 122 15.5 | NH | 97 09 22 | 2316 | 202 | 430 | 4.69 | 20 | 100.0 | 324 | 19 |
| 93.3 | 110.0 | 30 10.6 | 122 55.2 | NH | 97 09 23 | 0519 | 206 | 440 | 4.69 | 12 | 100.0 | 191 | 283 |
| 93.3 | 120.0 | 29 50.6 | 123 35.3 | NH | 97 09 23 | 1156 | 206 | 444 | 4.64 | 9 | 100.0 | 168 | 35 |

TABLE 2. Pooled occurrences of fish larvae taken on CalCOFI cruises in 1997.

| Rank | Taxon | Occurrences |
|------|-------------------------------------|-------------|
| 1 | <i>Protomyctophum crockeri</i> | 117 |
| 2 | <i>Sebastes</i> spp. | 88 |
| 3 | <i>Leuroglossus stilbius</i> | 84 |
| 4 | <i>Triphoturus mexicanus</i> | 75 |
| 5 | <i>Vinciguerria lucetia</i> | 74 |
| 6 | <i>Bathylagus wesethi</i> | 73 |
| 7 | <i>Stenobranchius leucopsarus</i> | 71 |
| 8 | <i>Merluccius productus</i> | 67 |
| 9 | <i>Engraulis mordax</i> | 66 |
| 10 | <i>Cyclothone signata</i> | 64 |
| 11 | <i>Lampanyctus ritteri</i> | 63 |
| 12 | <i>Ceratoscopelus townsendi</i> | 56 |
| 13 | <i>Diogenichthys atlanticus</i> | 55 |
| 14 | <i>Symbolophorus californiensis</i> | 54 |
| 15 | <i>Sardinops sagax</i> | 51 |
| 16 | <i>Bathylagus ochotensis</i> | 47 |
| 17 | <i>Citharichthys sordidus</i> | 44 |
| 18 | <i>Citharichthys stigmaeus</i> | 42 |
| 19 | <i>Melamphaes lugubris</i> | 37 |
| 20 | <i>Lestidiops ringens</i> | 33 |
| 20 | <i>Lampanyctus</i> spp. | 33 |
| 22 | <i>Idiacanthus antrostomus</i> | 32 |
| 23 | <i>Sebastes jordani</i> | 19 |
| 23 | <i>Trachurus symmetricus</i> | 19 |
| 23 | <i>Coryphopterus nicholsii</i> | 19 |
| 26 | <i>Scomber japonicus</i> | 15 |
| 26 | <i>Tarletonbeania crenularis</i> | 15 |
| 28 | <i>Chauliodus macouni</i> | 14 |
| 28 | <i>Tetragonurus cuvieri</i> | 14 |
| 28 | <i>Stomias atriventer</i> | 14 |
| 31 | <i>Diaphus</i> spp. | 13 |
| 31 | <i>Argentina sialis</i> | 13 |
| 33 | <i>Sternoptyx</i> spp. | 12 |
| 34 | <i>Paralabrax</i> spp. | 10 |
| 35 | <i>Hygophum reinhardtii</i> | 9 |
| 35 | <i>Arctozenus risso</i> | 9 |
| 35 | <i>Lyopsetta exilis</i> | 9 |
| 35 | <i>Sebastes paucispinis</i> | 9 |
| 35 | <i>Chromis punctipinnis</i> | 9 |
| 40 | Myctophidae | 8 |
| 40 | <i>Argyrolepecus sladeni</i> | 8 |
| 40 | <i>Melamphaes parvus</i> | 8 |
| 40 | <i>Cyclothone acclinidens</i> | 8 |
| 40 | <i>Lampadena urophaos</i> | 8 |
| 45 | <i>Icichthys lockingtoni</i> | 7 |
| 45 | Disintegrated fish larvae | 7 |
| 45 | <i>Myctophum nitidulum</i> | 7 |
| 45 | <i>Electrona risso</i> | 7 |
| 45 | <i>Danaphos oculatus</i> | 7 |
| 50 | <i>Brama japonica</i> | 6 |

TABLE 2. (cont.)

| Rank | Taxon | Occurrences |
|------|------------------------------------|-------------|
| 50 | <i>Scopelogadus bispinosus</i> | 6 |
| 50 | <i>Diogenichthys laternatus</i> | 6 |
| 50 | <i>Hypsoblennius jenkinsi</i> | 6 |
| 50 | <i>Argyrolepecus lychnus</i> | 6 |
| 55 | <i>Poromitra crassiceps</i> | 5 |
| 55 | <i>Howella</i> spp. | 5 |
| 55 | <i>Cololabis saira</i> | 5 |
| 55 | <i>Scopelosaurus harryi</i> | 5 |
| 55 | <i>Notoscopelus resplendens</i> | 5 |
| 55 | <i>Tactostoma macropus</i> | 5 |
| 55 | <i>Icelinus quadriseriatus</i> | 5 |
| 55 | <i>Pleuronichthys verticalis</i> | 5 |
| 55 | <i>Microstoma</i> spp. | 5 |
| 64 | <i>Citharichthys</i> spp. | 4 |
| 64 | <i>Sphyraena argentea</i> | 4 |
| 64 | <i>Microstomus pacificus</i> | 4 |
| 64 | <i>Chiasmodon niger</i> | 4 |
| 64 | <i>Cyclothone</i> spp. | 4 |
| 64 | <i>Nansenia candida</i> | 4 |
| 64 | <i>Symphurus atricaudus</i> | 4 |
| 64 | <i>Ophidion scrippsae</i> | 4 |
| 64 | <i>Benthalbella dentata</i> | 4 |
| 64 | <i>Sebastes aurora</i> | 4 |
| 64 | <i>Sebastes diploproa</i> | 4 |
| 75 | Unidentified fish larvae | 3 |
| 75 | <i>Melamphaes</i> spp. | 3 |
| 75 | <i>Argyrolepecus hemigymnus</i> | 3 |
| 75 | <i>Vinciguerria poweriae</i> | 3 |
| 75 | <i>Argyrolepecus affinis</i> | 3 |
| 75 | <i>Genyonemus lineatus</i> | 3 |
| 75 | <i>Lampanyctus regalis</i> | 3 |
| 75 | <i>Oxylebius pictus</i> | 3 |
| 75 | <i>Sebastolobus</i> spp. | 3 |
| 84 | <i>Parophrys vetulus</i> | 2 |
| 84 | <i>Neoclinus stephensae</i> | 2 |
| 84 | <i>Hypsoblennius gentilis</i> | 2 |
| 84 | <i>Hypsoblennius gilberti</i> | 2 |
| 84 | <i>Dolichopteryx longipes</i> | 2 |
| 84 | <i>Argyrolepecus</i> spp. | 2 |
| 84 | <i>Zaniolepis latipinnis</i> | 2 |
| 84 | <i>Hippoglossina stomata</i> | 2 |
| 84 | <i>Paralichthys californicus</i> | 2 |
| 84 | <i>Xystreureys liolepis</i> | 2 |
| 84 | <i>Ophiodon elongatus</i> | 2 |
| 84 | <i>Artedius lateralis</i> | 2 |
| 84 | <i>Atherinopsis californiensis</i> | 2 |
| 84 | <i>Dolopichthys</i> spp. | 2 |
| 84 | Stichaeidae | 2 |
| 84 | <i>Etrumeus teres</i> | 2 |
| 84 | <i>Scopeloberyx robustus</i> | 2 |
| 84 | <i>Oxyjulis californica</i> | 2 |

TABLE 2. (cont.)

| Rank | Taxon | Occurrences |
|------|------------------------------------|-------------|
| 84 | <i>Odontopyxis trispinosa</i> | 2 |
| 84 | <i>Bathylagus pacificus</i> | 2 |
| 84 | <i>Trachipterus altivelis</i> | 2 |
| 84 | <i>Desmodema lorum</i> | 2 |
| 84 | <i>Halichoeres semicinctus</i> | 2 |
| 107 | <i>Cyclothone pseudopallida</i> | 1 |
| 107 | <i>Liparis fucensis</i> | 1 |
| 107 | <i>Xeneretmus latifrons</i> | 1 |
| 107 | <i>Psettichthys melanostictus</i> | 1 |
| 107 | <i>Pleuronichthys ritteri</i> | 1 |
| 107 | <i>Hypsopsetta guttulata</i> | 1 |
| 107 | <i>Paricelinus hopliticus</i> | 1 |
| 107 | Agonidae | 1 |
| 107 | <i>Bathylagus milleri</i> | 1 |
| 107 | <i>Scorpaenichthys marmoratus</i> | 1 |
| 107 | <i>Artedius creaseri</i> | 1 |
| 107 | <i>Diplophos taenia</i> | 1 |
| 107 | <i>Lepidogobius lepidus</i> | 1 |
| 107 | <i>Cataetyx rubrirostris</i> | 1 |
| 107 | <i>Caristius maderensis</i> | 1 |
| 107 | <i>Girella nigricans</i> | 1 |
| 107 | <i>Loweina rara</i> | 1 |
| 107 | <i>Coryphaena equiselis</i> | 1 |
| 107 | <i>Rathbunella alleni</i> | 1 |
| 107 | <i>Liparis mucosus</i> | 1 |
| 107 | <i>Lampanyctus steinbecki</i> | 1 |
| 107 | <i>Scopelarchus analis</i> | 1 |
| 107 | <i>Lampanyctus</i> "no pectorals" | 1 |
| 107 | <i>Glyptocephalus zachirus</i> | 1 |
| 107 | <i>Seriola lalandi</i> | 1 |
| 107 | <i>Cheilopogon pinnatibarbatus</i> | 1 |
| 107 | <i>Sebastolobus altivelis</i> | 1 |
| 107 | <i>Parvilux ingens</i> | 1 |
| 107 | <i>Zaniolepis frenata</i> | 1 |
| 107 | <i>Aristostomias scintillans</i> | 1 |
| 107 | <i>Citharichthys fragilis</i> | 1 |
| 107 | <i>Ichthyococcus irregularis</i> | 1 |
| 107 | <i>Cryptotrema corallinum</i> | 1 |
| | Total | 1848 |

TABLE 3. Pooled counts of fish larvae taken on CalCOFI cruises in 1997. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

| Rank | Taxon | Count |
|------|-------------------------------------|-------|
| 1 | <i>Merluccius productus</i> | 38563 |
| 2 | <i>Sardinops sagax</i> | 22432 |
| 3 | <i>Vinciguerria lucetia</i> | 16510 |
| 4 | <i>Engraulis mordax</i> | 7807 |
| 5 | <i>Leuroglossus stilbius</i> | 5959 |
| 6 | <i>Stenobranchius leucopsarus</i> | 3608 |
| 7 | <i>Sebastes</i> spp. | 3529 |
| 8 | <i>Trachurus symmetricus</i> | 2907 |
| 9 | <i>Bathylagus wesethi</i> | 2594 |
| 10 | <i>Triphoturus mexicanus</i> | 1905 |
| 11 | <i>Protomyctophum crockeri</i> | 1261 |
| 12 | <i>Cyclothone signata</i> | 855 |
| 13 | <i>Ceratoscopelus townsendi</i> | 834 |
| 14 | <i>Lampanyctus ritteri</i> | 783 |
| 15 | <i>Citharichthys sordidus</i> | 700 |
| 16 | <i>Bathylagus ochotensis</i> | 689 |
| 17 | <i>Scomber japonicus</i> | 622 |
| 18 | <i>Diogenichthys atlanticus</i> | 558 |
| 18 | <i>Citharichthys stigmaeus</i> | 558 |
| 20 | <i>Symbolophorus californiensis</i> | 527 |
| 21 | <i>Sebastes jordani</i> | 457 |
| 22 | <i>Sphyræna argentea</i> | 352 |
| 23 | <i>Idiacanthus antrostomus</i> | 331 |
| 24 | <i>Lampanyctus</i> spp. | 322 |
| 25 | <i>Melamphaes lugubris</i> | 280 |
| 26 | <i>Lestidiops ringens</i> | 256 |
| 27 | <i>Argentina sialis</i> | 228 |
| 28 | <i>Coryphopterus nicholsii</i> | 163 |
| 29 | <i>Tarletonbeania crenularis</i> | 136 |
| 30 | <i>Vinciguerria poweriae</i> | 130 |
| 31 | <i>Tetragonurus cuvieri</i> | 128 |
| 32 | <i>Chauliodus macouni</i> | 114 |
| 33 | <i>Diaphus</i> spp. | 109 |
| 34 | <i>Chromis punctipinnis</i> | 108 |
| 35 | <i>Icelinus quadriseriatus</i> | 99 |
| 36 | <i>Paralabrax</i> spp. | 90 |
| 37 | <i>Lyopsetta exilis</i> | 87 |
| 38 | <i>Stomias atriventer</i> | 81 |
| 38 | <i>Hypsoblennius jenkinsi</i> | 81 |
| 40 | <i>Cyclothone acclinidens</i> | 80 |
| 41 | <i>Genyonemus lineatus</i> | 75 |
| 42 | <i>Sternoptyx</i> spp. | 72 |
| 43 | <i>Hygophum reinhardtii</i> | 66 |
| 44 | <i>Arctozenus risso</i> | 65 |
| 45 | <i>Lampadena urophaos</i> | 63 |
| 46 | Myctophidae | 57 |
| 47 | <i>Sebastes paucispinis</i> | 56 |
| 47 | <i>Notoscopelus resplendens</i> | 56 |

TABLE 3. (cont.)

| Rank | Taxon | Count |
|------|----------------------------------|-------|
| 49 | <i>Sebastes diploproa</i> | 55 |
| 50 | <i>Diogenichthys laternatus</i> | 53 |
| 51 | <i>Icichthys lockingtoni</i> | 52 |
| 52 | <i>Argyrolepecus sladeni</i> | 50 |
| 52 | <i>Myctophum nitidulum</i> | 50 |
| 54 | <i>Danaphos oculatus</i> | 45 |
| 54 | <i>Melamphaes parvus</i> | 45 |
| 56 | Disintegrated fish larvae | 44 |
| 57 | <i>Scopelogadus bispinosus</i> | 43 |
| 57 | <i>Nansenia candida</i> | 43 |
| 59 | <i>Ophidion scrippsae</i> | 42 |
| 60 | <i>Xystreurys liolepis</i> | 39 |
| 60 | <i>Electrona risso</i> | 39 |
| 62 | <i>Scopelosaurus harryi</i> | 32 |
| 63 | <i>Symphurus atricaudus</i> | 31 |
| 64 | <i>Microstomus pacificus</i> | 30 |
| 64 | <i>Poromitra crassiceps</i> | 30 |
| 64 | <i>Howella</i> spp. | 30 |
| 64 | <i>Microstoma</i> spp. | 30 |
| 64 | <i>Pleuronichthys verticalis</i> | 30 |
| 69 | <i>Argyrolepecus lychnus</i> | 29 |
| 69 | <i>Brama japonica</i> | 29 |
| 71 | <i>Sebastes aurora</i> | 28 |
| 72 | <i>Artedius lateralis</i> | 27 |
| 72 | <i>Tactostoma macropus</i> | 27 |
| 74 | <i>Oxylebius pictus</i> | 26 |
| 75 | <i>Chiasmodon niger</i> | 25 |
| 75 | <i>Bathylagus pacificus</i> | 25 |
| 77 | <i>Neoclinus stephensae</i> | 24 |
| 78 | Stichaeidae | 23 |
| 78 | <i>Cololabis saira</i> | 23 |
| 80 | <i>Trachipterus altivelis</i> | 21 |
| 80 | <i>Cyclothone</i> spp. | 21 |
| 82 | <i>Benthalbella dentata</i> | 20 |
| 83 | <i>Argyrolepecus hemigymnus</i> | 19 |
| 84 | <i>Ophiodon elongatus</i> | 18 |
| 84 | <i>Paralichthys californicus</i> | 18 |
| 84 | <i>Melamphaes</i> spp. | 18 |
| 87 | <i>Citharichthys</i> spp. | 17 |
| 87 | <i>Argyrolepecus</i> spp. | 17 |
| 87 | <i>Sebastolobus</i> spp. | 17 |
| 90 | <i>Parophrys vetulus</i> | 15 |
| 90 | <i>Argyrolepecus affinis</i> | 15 |
| 90 | <i>Oxyjulis californica</i> | 15 |
| 93 | <i>Etrumeus teres</i> | 14 |
| 93 | Unidentified fish larvae | 14 |
| 93 | <i>Hypsoblennius gilberti</i> | 14 |
| 96 | <i>Dolopichthys</i> spp. | 13 |
| 96 | <i>Lampanyctus regalis</i> | 13 |
| 98 | <i>Halichoeres semicinctus</i> | 12 |
| 98 | <i>Citharichthys fragilis</i> | 12 |

TABLE 3. (cont.)

| Rank | Taxon | Count |
|------|------------------------------------|--------|
| 98 | <i>Odontopyxis trispinosa</i> | 12 |
| 98 | <i>Glyptocephalus zachirus</i> | 12 |
| 102 | <i>Zaniolepis latipinnis</i> | 11 |
| 103 | <i>Dolichopteryx longipes</i> | 10 |
| 103 | <i>Scopeloberyx robustus</i> | 10 |
| 103 | <i>Xeneretmus latifrons</i> | 10 |
| 103 | <i>Hippoglossina stomata</i> | 10 |
| 103 | <i>Desmodema lorum</i> | 10 |
| 103 | <i>Sebastolobus altivelis</i> | 10 |
| 109 | <i>Hypsoblennius gentilis</i> | 9 |
| 110 | <i>Atherinopsis californiensis</i> | 8 |
| 111 | <i>Parvilux ingens</i> | 5 |
| 111 | <i>Pleuronichthys ritteri</i> | 5 |
| 111 | <i>Loweina rara</i> | 5 |
| 111 | <i>Lampanyctus steinbecki</i> | 5 |
| 111 | <i>Bathylagus milleri</i> | 5 |
| 111 | <i>Seriola lalandi</i> | 5 |
| 111 | <i>Coryphaena equiselis</i> | 5 |
| 111 | <i>Caristius maderensis</i> | 5 |
| 111 | <i>Rathbunella alleni</i> | 5 |
| 111 | Agonidae | 5 |
| 111 | <i>Cyclothone pseudopallida</i> | 5 |
| 111 | <i>Cheilopogon pinnatibarbat</i> | 5 |
| 111 | <i>Scopelarchus analis</i> | 5 |
| 111 | <i>Girella nigricans</i> | 5 |
| 111 | <i>Zaniolepis frenata</i> | 5 |
| 111 | <i>Liparis fucensis</i> | 5 |
| 111 | <i>Ichthyococcus irregularis</i> | 5 |
| 111 | <i>Cryptotrema corallinum</i> | 5 |
| 129 | <i>Liparis mucosus</i> | 4 |
| 129 | <i>Cataetyx rubrirostris</i> | 4 |
| 129 | <i>Scorpaenichthys marmoratus</i> | 4 |
| 129 | <i>Diplophos taenia</i> | 4 |
| 129 | <i>Hypsopsetta guttulata</i> | 4 |
| 129 | <i>Paricelinus hopliticus</i> | 4 |
| 129 | <i>Artedius creaseri</i> | 4 |
| 129 | <i>Aristostomias scintillans</i> | 4 |
| 129 | <i>Psettichthys melanostictus</i> | 4 |
| 129 | <i>Lampanyctus "no pectorals"</i> | 4 |
| 139 | <i>Lepidogobius lepidus</i> | 3 |
| | Total | 119010 |

TABLE 4. Number of fish larvae taken at stations occupied on CalCOFI cruises in 1997. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Unoccupied stations are indicated by a dash.

| Station | Jan. | Feb. | Mar. | Apr. | May | <i>Etrumeus teres</i> | | | | Sep. | Oct. | Nov. | Dec. |
|---------|-------|-------|------|--------|-----|-----------------------|------|------|-------|------|------|------|------|
| | | | | | | June | July | Aug. | Sept. | | | | |
| 80.0 | 51.0 | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | 4.9 | - | - |
| 93.3 | 26.7 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 8.7 | - | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 51.0 | 0.0 | - | 27.1 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 55.0 | 0.0 | - | 55.0 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 60.0 | 18.6 | - | 1716.6 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 70.0 | 0.0 | - | 930.2 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 80.0 | 0.0 | - | 205.1 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 90.0 | 0.0 | - | 677.0 | - | - | 0.0 | - | - | - | - | - | - |
| 76.7 | 100.0 | 0.0 | - | 1038.2 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 80.0 | 55.0 | 10.3 | - | 31.9 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 80.0 | 60.0 | 0.0 | - | 880.7 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 80.0 | 70.0 | 0.0 | - | 327.6 | - | - | 0.0 | - | - | - | - | - | - |
| 80.0 | 80.0 | 0.0 | - | 5.1 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 80.0 | 90.0 | 0.0 | - | 5249.0 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 80.0 | 100.0 | 0.0 | - | 648.3 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 83.3 | 51.0 | 65.4 | - | 8.8 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 83.3 | 55.0 | 114.2 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 83.3 | 60.0 | 0.0 | - | 58.8 | - | - | 0.0 | - | - | 0.0 | - | - | - |
| 83.3 | 70.0 | 0.0 | - | 650.4 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |
| 83.3 | 80.0 | 0.0 | - | 275.4 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |
| 83.3 | 90.0 | 0.0 | - | 2560.2 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |
| 83.3 | 100.0 | 0.0 | - | 1194.8 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |
| 83.3 | 110.0 | 0.0 | - | 55.8 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |
| 86.7 | 33.0 | 0.0 | - | 0.0 | - | - | 25.2 | - | 0.0 | 0.0 | - | - | - |
| 86.7 | 35.0 | 5.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | <i>Sardinops sagax</i> (cont.) | | | | | | | | | | | |
|------------|------|--------------------------------|------|-------|-----|------|------|------|------|-------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 50.0 | - | 3.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 70.0 | - | 0.0 | - | 180.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 80.0 | - | 0.0 | - | 775.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 90.0 | - | 0.0 | - | 254.3 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 100.0 | - | 0.0 | - | 649.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 110.0 | - | 0.0 | - | 52.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 30.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 45.0 | - | 0.0 | - | 43.3 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 60.0 | - | 0.0 | - | 962.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 70.0 | - | 0.0 | - | 777.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 80.0 | - | 0.0 | - | 924.3 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 90.0 | - | 0.0 | - | 320.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 100.0 | - | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 28.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 35.0 | 4.9 | - | - | 22.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 40.0 | 10.1 | - | - | 147.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 45.0 | 20.1 | - | - | 8.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 50.0 | 0.0 | - | - | 87.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 55.0 | 0.0 | - | - | 14.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 60.0 | 0.0 | - | - | 178.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 70.0 | 0.0 | - | - | 96.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 90.0 | 0.0 | - | - | 44.1 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Engraulis mordax</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 75.0 50.0 | - | 10.1 | - | - | - | - | - | - | - | - | - | - | |
| 76.7 51.0 | - | 0.0 | - | 54.3 | - | - | 12.0 | - | - | - | - | - | |
| 76.7 55.0 | - | 93.0 | - | 9.2 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 60.0 | - | 46.6 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 65.0 | - | 35.6 | - | - | - | - | - | - | - | - | - | - | |
| 76.7 70.0 | - | 42.2 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 51.0 | - | 671.7 | - | 29.8 | - | - | 0.0 | - | - | 222.3 | - | - | |

TABLE 4. (cont.)

| Station | <i>Engraulis mordax</i> (cont.) | | | | | | | | | | | |
|------------|---------------------------------|--------|------|-------|-----|------|------|------|------|-------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 55.0 | - | 513.6 | - | 20.0 | - | - | 0.0 | - | - | 23.9 | - | - |
| 80.0 60.0 | - | 0.0 | - | 0.0 | - | - | 35.5 | - | - | 0.0 | - | - |
| 80.0 70.0 | - | 0.0 | - | 0.0 | - | - | 11.5 | - | - | - | - | - |
| 80.0 90.0 | - | 0.0 | - | 10.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 100.0 | - | 0.0 | - | 8.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 81.8 46.9 | - | 593.0 | - | 21.2 | - | - | 31.7 | - | - | 4.0 | - | - |
| 83.3 40.6 | - | 3.6 | - | 402.0 | - | - | 44.5 | - | - | 463.1 | - | - |
| 83.3 42.0 | - | 699.7 | - | 396.2 | - | - | 21.0 | - | - | 15.6 | - | - |
| 83.3 51.0 | - | 298.9 | - | 100.7 | - | - | 0.0 | - | - | 3.7 | - | - |
| 83.3 55.0 | - | 280.3 | - | 124.7 | - | - | 0.0 | - | - | 9.6 | - | - |
| 83.3 60.0 | - | 0.0 | - | 5.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 70.0 | - | 0.0 | - | 4.9 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 100.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 33.0 | - | 76.3 | - | 53.1 | - | - | 15.1 | - | 98.1 | - | - | - |
| 86.7 35.0 | - | 1384.8 | - | 150.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 40.0 | - | 241.0 | - | 7.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 45.0 | - | 152.7 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 50.0 | - | 3.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 60.0 | - | 0.0 | - | - | - | - | 0.0 | - | 8.6 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 7.2 | - | - | - |
| 90.0 28.0 | - | 9.2 | - | 12.5 | - | - | 18.2 | - | 24.4 | - | - | - |
| 90.0 30.0 | - | 10.2 | - | 14.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 22.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 53.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 19.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 8.9 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 35.0 | 58.7 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 40.0 | 10.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 45.0 | 5.0 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 4.8 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 55.0 | 0.0 | - | - | 4.9 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| Station | <i>Argentina stialis</i> | | | | | | | | | | | |
|------------------------------|--------------------------|-------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 | 50.0 | 10.1 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 51.0 | 9.6 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 60.0 | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 51.0 | 0.0 | - | 4.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 55.0 | 10.3 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 81.8 | 46.9 | 64.7 | - | 10.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 42.0 | 28.6 | - | 19.3 | - | - | 0.0 | - | - | 10.4 | - | - |
| 83.3 | 55.0 | 0.0 | - | 9.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 | 35.0 | 35.8 | - | 4.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| <i>Microstoma</i> spp. | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 | 70.0 | 0.0 | - | 4.2 | - | - | 7.7 | - | 0.0 | - | - | - |
| 86.7 | 90.0 | 9.4 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 110.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 80.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Nansenia candida</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 | 100.0 | 0.0 | - | 20.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 35.0 | - | - | 0.0 | - | - | 0.0 | - | 8.0 | - | - | - |
| 93.3 | 80.0 | - | - | 0.0 | - | - | 10.2 | - | 0.0 | - | - | - |
| <i>Bathylagus milleri</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 90.0 | 70.0 | 0.0 | - | 5.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Bathylagus ochotensis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 | 55.0 | 82.2 | - | - | - | - | - | - | - | - | - | - |
| 75.0 | 60.0 | 100.4 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 49.0 | 4.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 51.0 | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 55.0 | 18.6 | - | 9.2 | - | - | 0.0 | - | - | - | - | - |

TABLE 4. (cont.)

| Station | <i>Bathylagus ochotensis</i> (cont.) | | | | | | | | | | | |
|------------|--------------------------------------|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 60.0 | - | 0.0 | - | 26.5 | - | - | 20.2 | - | - | - | - | - |
| 76.7 65.0 | - | 8.9 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 0.0 | - | 27.4 | - | - | 0.0 | - | - | - | - | - |
| 76.7 80.0 | - | 25.3 | - | 10.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 100.0 | - | 0.0 | - | 30.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 51.0 | - | 0.0 | - | 4.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 60.0 | - | 0.0 | - | 21.9 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 70.0 | - | 20.6 | - | 0.0 | - | - | 11.5 | - | - | - | - | - |
| 80.0 80.0 | - | 67.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 42.0 | - | 9.5 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 55.0 | - | 10.4 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 60.0 | - | 10.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 70.0 | - | 0.0 | - | 9.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 4.7 | - | - | 5.4 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 12.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 28.0 | - | 4.6 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 30.0 | - | 5.1 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 5.5 | - | - | 5.4 | - | 0.0 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 5.5 | - | - | 5.2 | - | 0.0 | - | - | - |
| 90.0 53.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 45.0 | 5.0 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 10.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 55.0 | 0.0 | - | - | 4.9 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | <i>Bathylagus ochotensis</i> (cont.) | | | | | | | | | | | |
|------------|------|--------------------------------------|------|------|-----|------|------|------|-------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 93.3 80.0 | 0.0 | - | - | 4.3 | - | - | 10.2 | - | 0.0 | - | - | - | |
| 93.3 110.0 | - | 0.0 | - | 9.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Bathylagus pacificus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 90.0 | - | 15.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 93.3 45.0 | 10.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Bathylagus wesethi</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - | |
| 76.7 90.0 | - | 0.0 | - | 18.5 | - | - | 39.2 | - | - | - | - | - | |
| 76.7 100.0 | - | 0.0 | - | 5.0 | - | - | 10.9 | - | - | 0.0 | - | - | |
| 80.0 70.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.9 | - | - | |
| 80.0 90.0 | - | 0.0 | - | 10.8 | - | - | 52.9 | - | - | 32.1 | - | - | |
| 80.0 100.0 | - | 0.0 | - | 33.7 | - | - | 62.5 | - | - | 0.0 | - | - | |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 22.5 | - | - | - | |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 10.3 | - | 9.8 | - | - | - | |
| 83.3 100.0 | - | 0.0 | - | 19.0 | - | - | 9.8 | - | 18.3 | - | - | - | |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 51.1 | - | 0.0 | - | - | - | |
| 86.7 70.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 90.0 | - | 0.0 | - | 17.2 | - | - | 85.0 | - | 41.9 | - | - | - | |
| 86.7 100.0 | - | 0.0 | - | 4.2 | - | - | 53.1 | - | 31.9 | - | - | - | |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 35.4 | - | 17.1 | - | - | - | |
| 90.0 45.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - | |
| 90.0 53.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.0 | - | - | - | |
| 90.0 60.0 | - | 0.0 | - | 14.4 | - | - | 0.0 | - | 8.6 | - | - | - | |
| 90.0 70.0 | - | 0.0 | - | 15.5 | - | - | 0.0 | - | 4.4 | - | - | - | |
| 90.0 80.0 | - | 0.0 | - | 9.5 | - | - | 10.8 | - | 9.2 | - | - | - | |
| 90.0 90.0 | - | 0.0 | - | 51.0 | - | - | 5.4 | - | 129.3 | - | - | - | |
| 90.0 100.0 | - | 0.0 | - | 23.8 | - | - | 0.0 | - | 84.7 | - | - | - | |

TABLE 4. (cont.)

| Station | <i>Bathylagus wesethi</i> (cont.) | | | | | | | | | | | |
|------------|-----------------------------------|-------|------|-------|------|------|-------|------|-------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 90.0 110.0 | - | 0.0 | - | 12.7 | - | - | 237.8 | - | 65.1 | - | - | - |
| 90.0 120.0 | - | 15.0 | - | 4.0 | - | - | 25.2 | - | 86.0 | - | - | - |
| 93.3 35.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 8.0 | - | - | - |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 45.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 51.7 | - | - | - |
| 93.3 55.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 15.4 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 10.1 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 142.6 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 47.8 | - | - | 0.0 | - | 25.9 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 61.7 | - | - | 5.4 | - | 182.1 | - | - | - |
| 93.3 100.0 | 0.0 | - | - | 12.8 | - | - | 40.2 | - | 61.0 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 36.1 | - | - | 58.8 | - | 121.9 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 30.8 | - | - | 41.7 | - | 69.6 | - | - | - |
| Station | <i>Leuroglossus stilbius</i> | | | | | | | | | | | |
| Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 75.0 55.0 | - | 154.2 | - | - | - | - | - | - | - | - | - | - |
| 75.0 60.0 | - | 140.5 | - | - | - | - | - | - | - | - | - | - |
| 75.0 65.0 | - | 112.9 | - | - | - | - | - | - | - | - | - | - |
| 76.7 49.0 | - | 0.0 | - | 4.3 | - | 0.0 | - | - | - | - | - | - |
| 76.7 51.0 | - | 346.3 | - | 81.4 | - | 0.0 | - | - | - | - | - | - |
| 76.7 55.0 | - | 344.0 | - | 100.9 | - | 0.0 | - | - | - | - | - | - |
| 76.7 60.0 | - | 139.8 | - | 44.2 | - | 10.1 | - | - | - | - | - | - |
| 76.7 65.0 | - | 106.7 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 67.5 | - | 27.4 | - | 10.5 | - | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 9.3 | - | 0.0 | - | - | - | - | - | - |
| 80.0 55.0 | - | 143.8 | - | 16.0 | - | 0.0 | - | - | - | - | - | - |
| 80.0 60.0 | - | 18.7 | - | 16.4 | - | 0.0 | - | - | - | - | - | - |
| 80.0 80.0 | - | 87.1 | - | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 80.0 100.0 | - | 0.0 | - | 4.2 | - | 0.0 | - | - | - | - | - | - |
| 81.8 46.9 | - | 722.4 | - | 31.8 | - | 10.6 | - | - | - | - | - | - |

TABLE 4. (cont.)

| Station | <i>Leuroglossus stilbius</i> (cont.) | | | | | | | | | | | |
|------------|--------------------------------------|-------|------|-------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 42.0 | - | 242.8 | - | 48.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 51.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 55.0 | - | 207.6 | - | 86.3 | - | - | 5.3 | - | - | 0.0 | - | - |
| 83.3 60.0 | - | 0.0 | - | 48.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 70.0 | - | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 83.3 80.0 | - | 0.0 | - | 9.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 90.0 | - | 0.0 | - | 35.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 100.0 | - | 0.0 | - | 28.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 35.0 | - | 143.1 | - | 47.1 | - | - | 10.7 | - | - | 0.0 | - | - |
| 86.7 40.0 | - | 70.3 | - | 3.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 45.0 | - | 545.4 | - | - | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 50.0 | - | 7.9 | - | - | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 70.0 | - | 5.1 | - | 29.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 80.0 | - | 0.0 | - | 42.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 90.0 | - | 9.4 | - | 4.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 100.0 | - | 0.0 | - | 21.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 28.0 | - | 4.6 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 30.0 | - | 102.2 | - | 168.7 | - | - | 5.5 | - | - | 0.0 | - | - |
| 90.0 35.0 | - | 65.1 | - | 93.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 37.0 | - | 69.7 | - | 60.5 | - | - | 5.2 | - | - | 0.0 | - | - |
| 90.0 45.0 | - | 147.9 | - | 43.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 53.0 | - | 9.0 | - | 28.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 28.0 | 15.6 | - | - | 4.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 30.0 | 14.8 | - | - | 22.3 | - | - | 5.2 | - | - | 0.0 | - | - |
| 93.3 35.0 | 0.0 | - | - | 108.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 40.0 | 70.4 | - | - | 26.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 45.0 | 40.2 | - | - | 33.9 | - | - | 4.5 | - | - | 0.0 | - | - |
| 93.3 50.0 | 152.6 | - | - | 107.5 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|--------------------------------------|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Leuroglossus stilbius</i> (cont.) | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 93.3 | 55.0 | 0.0 | - | - | 63.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 60.0 | 0.0 | - | - | 14.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 80.0 | 0.0 | - | - | 4.3 | - | - | 15.3 | - | 0.0 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - |
| 93.3 | 110.0 | - | 0.0 | - | 9.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Dolichopteryx longipes</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 93.3 | 50.0 | 0.0 | - | - | 5.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 55.0 | 0.0 | - | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| <i>Cyclothone</i> spp. | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 76.7 | 100.0 | - | 0.0 | - | 0.0 | - | - | 5.5 | - | - | 0.0 | - | - |
| 90.0 | 120.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.8 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Cyclothone acclinidens</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 19.6 | - | - | - |
| 83.3 | 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 14.2 | - | - | - |
| 86.7 | 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 | 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 | 120.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.8 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 18.7 | - | - | - |
| 93.3 | 100.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 | 120.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - |
| <i>Cyclothone pseudopalida</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 90.0 | 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Cyclothone signata</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 90.0 | - | 5.1 | - | 18.5 | - | - | 22.4 | - | - | - | - | - |

TABLE 4. (cont.)

| Station | <i>Cyclothone signata</i> (cont.) | | | | | | | | | | | |
|------------|-----------------------------------|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 100.0 | - | 9.6 | - | 10.1 | - | - | 0.0 | - | - | 10.5 | - | - |
| 80.0 60.0 | - | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 70.0 | - | 0.0 | - | 10.1 | - | - | 0.0 | - | - | - | - | - |
| 80.0 80.0 | - | 0.0 | - | 5.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 18.4 | - | - |
| 80.0 100.0 | - | 4.9 | - | 4.2 | - | - | 26.1 | - | - | 15.3 | - | - |
| 83.3 70.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 4.5 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 9.5 | - | - | 4.9 | - | 4.6 | - | - | - |
| 83.3 110.0 | - | 0.0 | - | 10.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 90.0 | - | 4.7 | - | 0.0 | - | - | 10.0 | - | 18.6 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 9.7 | - | 43.9 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 90.0 45.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 17.6 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 46.4 | - | - | 0.0 | - | 5.2 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 28.5 | - | - | 0.0 | - | 22.3 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 8.5 | - | - | 5.1 | - | 46.5 | - | - | - |
| 90.0 120.0 | - | 10.0 | - | 4.0 | - | - | 10.1 | - | 38.2 | - | - | - |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 45.0 | 0.0 | - | - | 8.5 | - | - | 0.0 | - | 4.9 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 14.1 | - | - | - |
| 93.3 55.0 | 5.1 | - | - | 0.0 | - | - | 0.0 | - | 5.1 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 9.1 | - | - | 0.0 | - | 13.8 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 13.0 | - | - | 0.0 | - | 20.7 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 4.4 | - | - | 10.8 | - | 23.4 | - | - | - |
| 93.3 100.0 | 0.0 | - | - | 4.3 | - | - | 5.0 | - | 18.8 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 22.5 | - | - | 10.7 | - | 46.9 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 4.4 | - | - | 5.2 | - | 32.5 | - | - | - |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| 90.0 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| <i>Diplophos taenia</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| <i>Argyropelecus spp.</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 100.0 | - | 4.9 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 100.0 | - | 4.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Argyropelecus affinis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.4 | - | - | - |
| <i>Argyropelecus hemigymnus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 5.5 | - | - | 0.0 | - | - |
| 86.7 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| <i>Argyropelecus tychnus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 60.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 10.3 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Argyropelecus sladeni</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 60.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 10.3 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |

TABLE 4. (cont.)

| | | <i>Argyropelecus sladeni</i> (cont.) | | | | | | | | | | | |
|------------|------|--------------------------------------|------|------|-----|------|-------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 93.3 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - | |
| 93.3 120.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |
| | | <i>Danaphos oculatus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 11.2 | - | - | - | - | - | |
| 86.7 70.0 | - | 0.0 | - | 0.0 | - | - | 7.7 | - | 0.0 | - | - | - | |
| 90.0 80.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 4.6 | - | - | - | |
| 93.3 28.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 55.0 | 5.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 90.0 | 5.5 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Sternopyx</i> spp. | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 100.0 | - | 4.8 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 90.0 | - | 0.0 | - | 10.8 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 90.0 35.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - | |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - | |
| 90.0 110.0 | - | 0.0 | - | 4.2 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 10.1 | - | 0.0 | - | - | - | |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 80.0 | 0.0 | - | - | 8.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 90.0 | 0.0 | - | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 100.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| | | <i>Ichthyococcus irregularis</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - | |
| | | <i>Vinciguerria lucentia</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 90.0 | - | 5.1 | - | 0.0 | - | - | 599.2 | - | - | - | - | - | |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 163.5 | - | - | 62.9 | - | - | |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 14.9 | - | - | |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 201.0 | - | - | 82.6 | - | - | |

TABLE 4. (cont.)

| Station | <i>Vinciguerria lucetia</i> (cont.) | | | | | | | | | | | |
|------------|-------------------------------------|------|------|------|-----|------|-------|------|-------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 100.0 | - | 0.0 | - | 0.0 | - | - | 323.0 | - | - | 91.7 | - | - |
| 81.8 46.9 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.0 | - | - |
| 83.3 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.7 | - | - |
| 83.3 55.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 19.2 | - | - |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 58.2 | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 10.3 | - | 40.6 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 68.6 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 4.8 | - | - | 29.3 | - | 68.6 | - | - | - |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 107.3 | - | 85.3 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.2 | - | - | - |
| 86.7 45.0 | - | 0.0 | - | - | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 55.0 | - | 0.0 | - | - | - | - | 0.0 | - | 14.5 | - | - | - |
| 86.7 60.0 | - | 0.0 | - | - | - | - | 0.0 | - | 34.3 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 14.5 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 0.0 | - | - | 820.0 | - | 158.1 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 318.8 | - | 259.4 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 237.8 | - | 107.0 | - | - | - |
| 90.0 30.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 36.7 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 58.8 | - | - | - |
| 90.0 45.0 | - | 0.0 | - | 9.6 | - | - | 0.0 | - | 276.6 | - | - | - |
| 90.0 53.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 99.4 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 64.5 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 17.7 | - | - | - |
| 90.0 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 50.8 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 351.6 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 410.3 | - | - | - |
| 90.0 110.0 | - | 4.5 | - | 0.0 | - | - | 268.2 | - | 655.7 | - | - | - |
| 90.0 120.0 | - | 10.0 | - | 4.0 | - | - | 538.2 | - | 807.8 | - | - | - |
| 93.3 35.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 119.6 | - | - | - |

TABLE 4. (cont.)

| | | <i>Vinciguerria lucetia</i> (cont.) | | | | | | | | | | | |
|------------|------|-------------------------------------|------|------|-----|------|--------|------|--------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 131.7 | - | - | - | |
| 93.3 45.0 | 0.0 | - | - | 12.7 | - | - | 0.0 | - | 775.9 | - | - | - | |
| 93.3 50.0 | 0.0 | - | - | 5.1 | - | - | 0.0 | - | 178.6 | - | - | - | |
| 93.3 55.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 102.8 | - | - | - | |
| 93.3 60.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 110.9 | - | - | - | |
| 93.3 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 1012.0 | - | - | - | |
| 93.3 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 620.4 | - | - | - | |
| 93.3 90.0 | 0.0 | - | - | 4.4 | - | - | 5.4 | - | 845.3 | - | - | - | |
| 93.3 100.0 | 0.0 | - | - | 0.0 | - | - | 230.9 | - | 1167.8 | - | - | - | |
| 93.3 110.0 | - | 5.1 | - | 0.0 | - | - | 1096.8 | - | 651.9 | - | - | - | |
| 93.3 120.0 | - | 0.0 | - | 0.0 | - | - | 1109.7 | - | 607.8 | - | - | - | |
| | | <i>Vinciguerria poweriae</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - | |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.6 | - | - | |
| 80.0 100.0 | - | 0.0 | - | 0.0 | - | - | 119.8 | - | - | 0.0 | - | - | |
| | | <i>Chauliodus macouni</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 80.0 | - | 0.0 | - | 10.3 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 100.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 70.0 | - | 0.0 | - | 0.0 | - | - | 11.5 | - | - | - | - | - | |
| 80.0 80.0 | - | 9.7 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - | |
| 83.3 60.0 | - | 10.1 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 30.0 | - | 5.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.8 | - | - | - | |
| 93.3 45.0 | 0.0 | - | - | 21.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |

TABLE 4. (cont.)

| <i>Chaulioides macouni</i> (cont.) | | | | | | | | | | | | |
|------------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 110.0 | - | 0.0 | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Stomias atriventer</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 80.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 8.6 | - | - | 5.0 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 50.0 | 9.5 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 4.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 110.0 | - | 5.1 | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 120.0 | - | 5.3 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Tactostoma macropus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.2 | - | - |
| 80.0 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| 90.0 120.0 | - | 0.0 | - | 8.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Aristostomias scintillans</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 100.0 | 0.0 | - | - | 4.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Idiacanthus antrostomus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.2 | - | - |
| 80.0 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 14.9 | - | - |

TABLE 4. (cont.)

| | | <i>Idiocranthus antrostomus</i> (cont.) | | | | | | | | | | | |
|---------|-------|---|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 80.0 | 90.0 | 0.0 | - | 0.0 | - | - | 52.9 | - | - | 9.2 | - | - | |
| 83.3 | 60.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.7 | - | - | |
| 83.3 | 80.0 | 0.0 | - | 0.0 | - | - | 5.2 | - | 9.0 | - | - | - | |
| 83.3 | 110.0 | 0.0 | - | 0.0 | - | - | 5.1 | - | 9.5 | - | - | - | |
| 86.7 | 45.0 | 0.0 | - | - | - | - | 0.0 | - | 4.7 | - | - | - | |
| 86.7 | 55.0 | 0.0 | - | - | - | - | 0.0 | - | 9.7 | - | - | - | |
| 86.7 | 60.0 | 0.0 | - | - | - | - | 0.0 | - | 17.1 | - | - | - | |
| 86.7 | 80.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 15.4 | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.0 | - | - | - | |
| 86.7 | 110.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - | |
| 90.0 | 45.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - | |
| 90.0 | 70.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - | |
| 90.0 | 80.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |
| 90.0 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 8.9 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 0.0 | - | - | 5.1 | - | 9.3 | - | - | - | |
| 90.0 | 120.0 | 0.0 | - | 0.0 | - | - | 25.2 | - | 4.8 | - | - | - | |
| 93.3 | 80.0 | - | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 93.3 | 110.0 | 0.0 | - | 4.5 | - | - | 32.1 | - | 0.0 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 0.0 | - | - | 15.6 | - | 4.6 | - | - | - | |
| | | <i>Benthalbella dentata</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 | 80.0 | 4.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 90.0 | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - | |
| 90.0 | 90.0 | 4.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 80.0 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Scopelarchus analis</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 100.0 | 4.8 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| | | <i>Scopelosaurus harryi</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 80.0 | 60.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - | |

TABLE 4. (cont.)

| <i>Scopelosaurus harryi</i> (cont.) | | | | | | | | | | | | |
|-------------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 70.0 | - | 0.0 | - | 0.0 | - | - | 11.5 | - | - | - | - | - |
| 80.0 80.0 | - | 0.0 | - | 5.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| <i>Arctozenus risso</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 51.0 | - | 0.0 | - | 0.0 | - | - | 12.0 | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - |
| 80.0 90.0 | - | 0.0 | - | 10.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 3.8 | - | - |
| 86.7 110.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 14.0 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| <i>Lestidiops ringens</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 55.0 | - | 10.3 | - | - | - | - | - | - | - | - | - | - |
| 76.7 80.0 | - | 0.0 | - | 10.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 100.0 | - | 0.0 | - | 5.0 | - | - | 10.9 | - | - | 5.2 | - | - |
| 80.0 55.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.8 | - | - |
| 80.0 80.0 | - | 19.4 | - | 0.0 | - | - | 0.0 | - | - | 9.9 | - | - |
| 80.0 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | - | 0.0 | - | - |
| 83.3 55.0 | - | 0.0 | - | 9.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.7 | - | - |
| 83.3 70.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 80.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 83.3 100.0 | - | 4.9 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.0 | - | - | - |

TABLE 4. (cont.)

| <i>Lestidiops ringens</i> (cont.) | | | | | | | | | | | | |
|-----------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 90.0 37.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 90.0 45.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 10.3 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 9.2 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 0.0 | - | - | 10.8 | - | 0.0 | - | - | - |
| 93.3 100.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 23.5 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 4.5 | - | - | 0.0 | - | 14.1 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 4.4 | - | - | 10.4 | - | 0.0 | - | - | - |
| <i>Myctophidae</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.2 | - | - |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 11.6 | - | - | 0.0 | - | - |
| 86.7 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 90.0 120.0 | - | 0.0 | - | 16.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| <i>Ceratoscopelus townsendi</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 56.0 | - | - | - | - | - |
| 76.7 100.0 | - | 0.0 | - | 5.0 | - | - | 27.3 | - | - | 0.0 | - | - |
| 80.0 60.0 | - | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 21.2 | - | - | 36.7 | - | - |
| 80.0 100.0 | - | 9.7 | - | 4.2 | - | - | 41.7 | - | - | 34.4 | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 9.8 | - | - | - |

TABLE 4. (cont.)

| | | <i>Ceratoscopelus townsendi</i> (cont.) | | | | | | | | | | | |
|---------|-------|---|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 | 100.0 | 0.0 | - | 4.8 | - | - | 24.4 | - | 0.0 | - | - | - | |
| 83.3 | 110.0 | 0.0 | - | 5.1 | - | - | 5.1 | - | 28.4 | - | - | - | |
| 86.7 | 90.0 | 0.0 | - | 12.9 | - | - | 15.0 | - | 9.3 | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 0.0 | - | - | 4.8 | - | 20.0 | - | - | - | |
| 86.7 | 110.0 | 0.0 | - | 4.4 | - | - | 15.2 | - | 4.3 | - | - | - | |
| 90.0 | 45.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 8.8 | - | - | - | |
| 90.0 | 53.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.0 | - | - | - | |
| 90.0 | 60.0 | 0.0 | - | 9.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 80.0 | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 90.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 4.5 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 8.5 | - | - | 5.1 | - | 65.1 | - | - | - | |
| 90.0 | 120.0 | 10.0 | - | 8.0 | - | - | 45.3 | - | 23.9 | - | - | - | |
| 93.3 | 35.0 | - | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 40.0 | - | - | 0.0 | - | - | 10.1 | - | 4.5 | - | - | - | |
| 93.3 | 50.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 | 70.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |
| 93.3 | 80.0 | - | - | 13.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 90.0 | - | - | 13.2 | - | - | 0.0 | - | 18.7 | - | - | - | |
| 93.3 | 100.0 | - | - | 12.8 | - | - | 0.0 | - | 14.1 | - | - | - | |
| 93.3 | 110.0 | 0.0 | - | 4.5 | - | - | 42.8 | - | 9.4 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 4.4 | - | - | 36.5 | - | 13.9 | - | - | - | |
| | | <i>Diaphus</i> spp. | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 80.0 | 0.0 | - | 0.0 | - | - | 12.4 | - | - | - | - | - | |
| 76.7 | 90.0 | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - | |
| 76.7 | 100.0 | 0.0 | - | 5.0 | - | - | 0.0 | - | - | 5.2 | - | - | |
| 80.0 | 80.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - | |
| 80.0 | 100.0 | 0.0 | - | 0.0 | - | - | 5.2 | - | - | 3.8 | - | - | |
| 83.3 | 70.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.8 | - | - | - | |
| 83.3 | 90.0 | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| | | <i>Diaphus</i> spp. (cont.) | | | | | | | | | | | |
|---------|-------|-----------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 | 80.0 | 0.0 | - | 0.0 | - | - | 10.8 | - | 0.0 | - | - | - | |
| 90.0 | 90.0 | 0.0 | - | 0.0 | - | - | 5.4 | - | 5.2 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 0.0 | - | - | 31.3 | - | 0.0 | - | - | - | |
| | | <i>Lampadena urophaos</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 | 90.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - | |
| 90.0 | 90.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 10.3 | - | - | - | |
| 90.0 | 100.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 90.0 | 120.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 23.9 | - | - | - | |
| 93.3 | 90.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 0.0 | - | - | 5.2 | - | 4.6 | - | - | - | |
| | | <i>Lampanyctus</i> spp. | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 49.0 | 0.0 | - | 4.3 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 55.0 | 0.0 | - | 18.3 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 60.0 | 0.0 | - | 8.8 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 70.0 | 0.0 | - | 18.2 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 90.0 | 0.0 | - | 0.0 | - | - | 11.2 | - | - | - | - | - | |
| 76.7 | 100.0 | 0.0 | - | 10.1 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 60.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 90.0 | 0.0 | - | 10.8 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 100.0 | 0.0 | - | 16.8 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 80.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 83.3 | 90.0 | 0.0 | - | 15.1 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 83.3 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 70.0 | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 90.0 | 4.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 110.0 | 0.0 | - | 21.9 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 90.0 | 35.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| | | <i>Lampanyctus</i> spp. (cont.) | | | | | | | | | | | |
|---------|-------|-----------------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 | 45.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 60.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - | |
| 90.0 | 90.0 | 0.0 | - | 27.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 100.0 | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 120.0 | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 45.0 | - | - | 12.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 55.0 | - | - | 4.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 60.0 | - | - | 9.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 70.0 | - | - | 13.7 | - | - | 0.0 | - | 13.8 | - | - | - | |
| 93.3 | 90.0 | - | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 100.0 | - | - | 8.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 110.0 | 0.0 | - | 9.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 120.0 | 5.3 | - | 8.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Lampanyctus</i> "no pectorals" | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 80.0 | 100.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - | |
| | | <i>Lampanyctus regalis</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 70.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.4 | - | - | - | |
| | | <i>Lampanyctus ritteri</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 55.0 | 0.0 | - | 9.2 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 70.0 | 0.0 | - | 0.0 | - | - | 52.7 | - | - | - | - | - | |
| 76.7 | 80.0 | 0.0 | - | 30.8 | - | - | 12.4 | - | - | - | - | - | |
| 76.7 | 90.0 | 20.5 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 100.0 | 4.8 | - | 25.2 | - | - | 16.4 | - | - | 0.0 | - | - | |
| 80.0 | 55.0 | 0.0 | - | 12.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 60.0 | 0.0 | - | 16.4 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 70.0 | 0.0 | - | 15.1 | - | - | 11.5 | - | - | - | - | - | |

TABLE 4. (cont.)

| Station | <i>Lampanyctus ritteri</i> (cont.) | | | | | | | | | | | |
|---------|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 | 80.0 | - | 19.4 | - | 5.1 | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 90.0 | - | 0.0 | - | 0.0 | - | 10.6 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 58.9 | - | 0.0 | - | - | 3.8 | - | - |
| 83.3 | 55.0 | - | 0.0 | - | 9.6 | - | 0.0 | - | - | 9.6 | - | - |
| 83.3 | 70.0 | - | 0.0 | - | 9.8 | - | 0.0 | - | 4.9 | - | - | - |
| 83.3 | 80.0 | - | 0.0 | - | 9.2 | - | 10.3 | - | 0.0 | - | - | - |
| 83.3 | 90.0 | - | 0.0 | - | 10.0 | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | - | 0.0 | - | 19.0 | - | 9.8 | - | 0.0 | - | - | - |
| 83.3 | 110.0 | - | 4.7 | - | 10.1 | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 35.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 4.6 | - | - | - |
| 86.7 | 60.0 | - | 0.0 | - | - | - | 10.1 | - | 0.0 | - | - | - |
| 86.7 | 70.0 | - | 0.0 | - | 4.2 | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 90.0 | - | 0.0 | - | 4.3 | - | 15.0 | - | 0.0 | - | - | - |
| 86.7 | 100.0 | - | 4.9 | - | 4.2 | - | 14.5 | - | 4.0 | - | - | - |
| 90.0 | 30.0 | - | 0.0 | - | 4.8 | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 35.0 | - | 0.0 | - | 0.0 | - | 5.4 | - | 0.0 | - | - | - |
| 90.0 | 37.0 | - | 0.0 | - | 0.0 | - | 5.2 | - | 0.0 | - | - | - |
| 90.0 | 45.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 21.9 | - | - | - |
| 90.0 | 60.0 | - | 0.0 | - | 48.1 | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 70.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 4.4 | - | - | - |
| 90.0 | 80.0 | - | 4.5 | - | 28.4 | - | 16.2 | - | 4.6 | - | - | - |
| 90.0 | 90.0 | - | 0.0 | - | 13.9 | - | 5.4 | - | 0.0 | - | - | - |
| 90.0 | 110.0 | - | 0.0 | - | 4.2 | - | 10.1 | - | 0.0 | - | - | - |
| 90.0 | 120.0 | - | 0.0 | - | 16.0 | - | 5.0 | - | 4.8 | - | - | - |
| 93.3 | 35.0 | 0.0 | - | - | 4.5 | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 45.0 | 10.1 | - | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 55.0 | 0.0 | - | - | 0.0 | - | 0.0 | - | 5.1 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 18.3 | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 0.0 | - | 10.8 | - | 0.0 | - | - | - |
| 93.3 | 100.0 | 0.0 | - | - | 0.0 | - | 5.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|------------------------------------|------|-------|------|-------|-----|------|------|------|------|------|------|------|
| <i>Lampanyctus ritteri</i> (cont.) | | | | | | | | | | | | |
| 93.3 110.0 | - | 0.0 | - | 4.5 | - | - | 5.3 | - | 18.8 | - | - | - |
| <i>Lampanyctus steinbecki</i> | | | | | | | | | | | | |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - |
| <i>Notoscopelus resplendens</i> | | | | | | | | | | | | |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 20.1 | - | 0.0 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 0.0 | - | - | 20.8 | - | 0.0 | - | - | - |
| <i>Parvulus ingens</i> | | | | | | | | | | | | |
| 76.7 100.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| <i>Stenobrachius leucopsarus</i> | | | | | | | | | | | | |
| 75.0 50.0 | - | 30.4 | - | - | - | - | - | - | - | - | - | - |
| 75.0 55.0 | - | 164.5 | - | - | - | - | - | - | - | - | - | - |
| 75.0 60.0 | - | 230.9 | - | - | - | - | - | - | - | - | - | - |
| 75.0 65.0 | - | 41.1 | - | - | - | - | - | - | - | - | - | - |
| 76.7 51.0 | - | 173.2 | - | 180.9 | - | - | 0.0 | - | - | - | - | - |
| 76.7 55.0 | - | 102.3 | - | 412.6 | - | - | 0.0 | - | - | - | - | - |
| 76.7 60.0 | - | 37.3 | - | 177.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 65.0 | - | 35.6 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 84.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 80.0 | - | 33.7 | - | 112.8 | - | - | 0.0 | - | - | - | - | - |
| 76.7 90.0 | - | 46.2 | - | 18.5 | - | - | 0.0 | - | - | - | - | - |
| 76.7 100.0 | - | 4.8 | - | 20.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 51.0 | - | 0.0 | - | 12.8 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 55.0 | - | 195.2 | - | 135.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 60.0 | - | 46.7 | - | 76.6 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| Station | <i>Stenobrachius leucopsarus</i> (cont.) | | | | | | | | | | | |
|---------|--|-------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 | 70.0 | 30.9 | - | 30.2 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 80.0 | 96.8 | - | 5.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 90.0 | 0.0 | - | 64.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | 0.0 | - | 67.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 81.8 | 46.9 | 97.0 | - | 10.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 42.0 | 57.1 | - | 29.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 51.0 | 28.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 55.0 | 72.7 | - | 38.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 60.0 | 0.0 | - | 32.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 70.0 | 0.0 | - | 53.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 80.0 | 0.0 | - | 18.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 90.0 | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | 0.0 | - | 23.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 110.0 | 4.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 35.0 | 163.5 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 45.0 | 10.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 50.0 | 39.3 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 60.0 | 9.4 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 70.0 | 0.0 | - | 37.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 80.0 | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 100.0 | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 110.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 30.0 | 30.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 35.0 | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 45.0 | 9.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 53.0 | 9.0 | - | 18.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 80.0 | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 90.0 | 0.0 | - | 18.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 100.0 | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 120.0 | 0.0 | - | 4.0 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| <i>Stenobrachius leucopsarus</i> (cont.) | | | | | | | | | | | | |
|--|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 26.7 | 5.4 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 28.0 | 5.2 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 4.8 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 9.1 | - | - | 10.6 | - | 9.2 | - | - | - |
| 93.3 80.0 | 5.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 110.0 | - | 5.1 | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Triphoturus mexicanus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 44.8 | - | - | - | - | - |
| 76.7 100.0 | - | 0.0 | - | 0.0 | - | - | 38.1 | - | - | 0.0 | - | - |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.9 | - | - |
| 80.0 55.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 19.2 | - | - |
| 80.0 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.9 | - | - |
| 80.0 100.0 | - | 0.0 | - | 12.6 | - | - | 10.4 | - | - | 0.0 | - | - |
| 81.8 46.9 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 12.0 | - | - |
| 83.3 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.6 | - | - |
| 83.3 42.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 15.6 | - | - |
| 83.3 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 14.9 | - | - |
| 83.3 55.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.6 | - | - |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.7 | - | - |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 4.9 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 13.7 | - | - | - |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 15.3 | - | 0.0 | - | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 10.1 | - | 4.7 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 0.0 | - | - | 21.5 | - | 18.3 | - | - | - |
| 86.7 55.0 | - | 0.0 | - | - | - | - | 0.0 | - | 14.5 | - | - | - |
| 86.7 60.0 | - | 0.0 | - | - | - | - | 0.0 | - | 17.1 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 21.7 | - | - | - |

TABLE 4. (cont.)

| Station | <i>Triphoturus mexicanus</i> (cont.) | | | | | | | | | | | |
|------------|--------------------------------------|------|------|------|-----|------|------|------|-------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 90.0 | - | 0.0 | - | 0.0 | - | - | 35.0 | - | 0.0 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 53.1 | - | 0.0 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 25.3 | - | 4.3 | - | - | - |
| 90.0 30.0 | - | 0.0 | - | 4.8 | - | - | 5.5 | - | 8.5 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 0.0 | - | - | 16.1 | - | 26.2 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 0.0 | - | - | 26.0 | - | 0.0 | - | - | - |
| 90.0 45.0 | - | 0.0 | - | 19.2 | - | - | 0.0 | - | 4.4 | - | - | - |
| 90.0 53.0 | - | 0.0 | - | 0.0 | - | - | 9.2 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 33.7 | - | - | 0.0 | - | 17.2 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 61.9 | - | - | - |
| 90.0 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 60.1 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 10.8 | - | 10.3 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 8.9 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 55.7 | - | 4.7 | - | - | - |
| 90.0 120.0 | - | 0.0 | - | 8.0 | - | - | 10.1 | - | 23.9 | - | - | - |
| 93.3 28.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 0.0 | - | - | 15.7 | - | 4.6 | - | - | - |
| 93.3 35.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 119.6 | - | - | - |
| 93.3 40.0 | 0.0 | - | - | 22.3 | - | - | 0.0 | - | 199.8 | - | - | - |
| 93.3 45.0 | 0.0 | - | - | 8.5 | - | - | 0.0 | - | 146.4 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 18.8 | - | - | - |
| 93.3 55.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 30.8 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 20.2 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 21.2 | - | 36.8 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 13.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 32.7 | - | - | - |
| 93.3 100.0 | 0.0 | - | - | 8.6 | - | - | 5.0 | - | 215.7 | - | - | - |
| 93.3 110.0 | - | 0.0 | - | 0.0 | - | - | 16.0 | - | 18.8 | - | - | - |
| 93.3 120.0 | - | 0.0 | - | 8.8 | - | - | 0.0 | - | 13.9 | - | - | - |

TABLE 4. (cont.)

| Station | <i>Diogenichthys atlanticus</i> | | | | | | | | | | | |
|------------|---------------------------------|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 70.0 | - | 0.0 | - | 9.1 | - | - | 31.6 | - | - | - | - | - |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 11.2 | - | - | - | - | - |
| 76.7 100.0 | - | 4.8 | - | 5.0 | - | - | 0.0 | - | - | 5.2 | - | - |
| 80.0 60.0 | - | 0.0 | - | 10.9 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 70.0 | - | 0.0 | - | 10.1 | - | - | 0.0 | - | - | - | - | - |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.0 | - | - |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.6 | - | - |
| 80.0 100.0 | - | 0.0 | - | 25.3 | - | - | 0.0 | - | - | 19.1 | - | - |
| 81.8 46.9 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.0 | - | - |
| 83.3 70.0 | - | 0.0 | - | 4.9 | - | - | 0.0 | - | 4.9 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 19.6 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 14.2 | - | - | - |
| 86.7 40.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 7.2 | - | - | - |
| 86.7 90.0 | - | 4.7 | - | 12.9 | - | - | 10.0 | - | 0.0 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 9.7 | - | 4.0 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | 17.1 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | 4.4 | - | - | - |
| 90.0 80.0 | - | 0.0 | - | 0.0 | - | - | 10.8 | - | 4.6 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 15.5 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 8.9 | - | - | - |
| 90.0 110.0 | - | 4.5 | - | 4.2 | - | - | 0.0 | - | 74.4 | - | - | - |
| 90.0 120.0 | - | 0.0 | - | 8.0 | - | - | 0.0 | - | 9.6 | - | - | - |
| 93.3 45.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 8.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 4.4 | - | - | 10.8 | - | 18.7 | - | - | - |
| 93.3 100.0 | 0.0 | - | - | 8.6 | - | - | 0.0 | - | 4.7 | - | - | - |

TABLE 4. (cont.)

| | | <i>Diogenichthys atlanticus</i> (cont.) | | | | | | | | | | | |
|------------|------|---|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 93.3 110.0 | - | 0.0 | - | 18.0 | - | - | 5.3 | - | 0.0 | - | - | - | |
| 93.3 120.0 | - | 5.3 | - | 0.0 | - | - | 15.6 | - | 4.6 | - | - | - | |
| | | <i>Diogenichthys laternatus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 80.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 4.5 | - | - | - | |
| 93.3 28.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - | |
| 93.3 45.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - | |
| 93.3 50.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 28.2 | - | - | - | |
| | | <i>Electrona risso</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - | |
| 80.0 70.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.6 | - | - | |
| 80.0 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 70.0 | - | 0.0 | - | 4.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.0 | - | - | - | |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 10.1 | - | 0.0 | - | - | - | |
| | | <i>Hygophum reinhardtii</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - | |
| 80.0 70.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.6 | - | - | |
| 83.3 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 86.7 90.0 | - | 9.4 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 93.3 45.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - | |
| 93.3 120.0 | - | 0.0 | - | 0.0 | - | - | 20.8 | - | 0.0 | - | - | - | |
| | | <i>Loweina rara</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 100.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| | | <i>Myctophum nitidulum</i> | | | | | | | | | | | |
|------------|------|--------------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 12.0 | - | - | - | |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - | |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 4.8 | - | - | - | |
| 93.3 90.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - | |
| 93.3 110.0 | - | 0.0 | - | 0.0 | - | - | 5.3 | - | 0.0 | - | - | - | |
| | | <i>Protomyctophum crockeri</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 75.0 65.0 | - | 10.3 | - | - | - | - | - | - | - | - | - | - | |
| 76.7 51.0 | - | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 60.0 | - | 9.3 | - | 26.5 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 65.0 | - | 8.9 | - | - | - | - | - | - | - | - | - | - | |
| 76.7 70.0 | - | 0.0 | - | 9.1 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 80.0 | - | 25.3 | - | 20.5 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 5.6 | - | - | - | - | - | |
| 76.7 100.0 | - | 9.6 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 55.0 | - | 0.0 | - | 4.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 60.0 | - | 18.7 | - | 10.9 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 70.0 | - | 10.3 | - | 5.0 | - | - | 11.5 | - | - | - | - | - | |
| 80.0 80.0 | - | 19.4 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 90.0 | - | 5.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 100.0 | - | 0.0 | - | 21.1 | - | - | 5.2 | - | - | 0.0 | - | - | |
| 83.3 42.0 | - | 0.0 | - | 9.7 | - | - | 5.3 | - | - | 0.0 | - | - | |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 23.2 | - | - | 0.0 | - | - | |
| 83.3 70.0 | - | 0.0 | - | 19.6 | - | - | 10.6 | - | 0.0 | - | - | - | |
| 83.3 80.0 | - | 0.0 | - | 13.8 | - | - | 5.2 | - | 4.5 | - | - | - | |
| 83.3 90.0 | - | 4.5 | - | 25.1 | - | - | 0.0 | - | 4.9 | - | - | - | |
| 83.3 100.0 | - | 14.6 | - | 23.8 | - | - | 9.8 | - | 13.7 | - | - | - | |
| 83.3 110.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 35.0 | - | 0.0 | - | 4.7 | - | - | 10.7 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| Station | <i>Protomyctophum crockeri</i> (cont.) | | | | | | | | | | | |
|------------|--|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 40.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | 8.9 | - | - | - |
| 86.7 45.0 | - | 10.9 | - | - | - | - | 5.2 | - | 18.8 | - | - | - |
| 86.7 55.0 | - | 16.4 | - | - | - | - | 0.0 | - | 9.7 | - | - | - |
| 86.7 60.0 | - | 28.1 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 5.1 | - | 4.2 | - | - | 7.7 | - | 0.0 | - | - | - |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 90.0 | - | 23.6 | - | 8.6 | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 100.0 | - | 14.6 | - | 8.4 | - | - | 14.5 | - | 12.0 | - | - | - |
| 86.7 110.0 | - | 34.1 | - | 13.1 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 30.0 | - | 5.1 | - | 9.6 | - | - | 11.1 | - | 0.0 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 0.0 | - | - | 16.1 | - | 5.2 | - | - | - |
| 90.0 37.0 | - | 0.0 | - | 11.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 45.0 | - | 4.9 | - | 0.0 | - | - | 9.4 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | 17.7 | - | - | - |
| 90.0 80.0 | - | 9.1 | - | 9.5 | - | - | 16.2 | - | 9.2 | - | - | - |
| 90.0 90.0 | - | 4.8 | - | 4.6 | - | - | 5.4 | - | 15.5 | - | - | - |
| 90.0 100.0 | - | 0.0 | - | 9.5 | - | - | 0.0 | - | 4.5 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 8.5 | - | - | 0.0 | - | 14.0 | - | - | - |
| 90.0 120.0 | - | 5.0 | - | 12.0 | - | - | 0.0 | - | 4.8 | - | - | - |
| 93.3 28.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 4.5 | - | - | 10.4 | - | 0.0 | - | - | - |
| 93.3 35.0 | 14.7 | - | - | 0.0 | - | - | 0.0 | - | 8.0 | - | - | - |
| 93.3 40.0 | 0.0 | - | - | 4.5 | - | - | 20.2 | - | 0.0 | - | - | - |
| 93.3 45.0 | 5.0 | - | - | 8.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 4.8 | - | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 55.0 | 5.1 | - | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 4.8 | - | - | 10.6 | - | 10.1 | - | - | - |
| 93.3 70.0 | 9.4 | - | - | 27.4 | - | - | 21.2 | - | 4.6 | - | - | - |
| 93.3 80.0 | 10.2 | - | - | 0.0 | - | - | 15.3 | - | 0.0 | - | - | - |
| 93.3 90.0 | 0.0 | - | - | 0.0 | - | - | 5.4 | - | 14.0 | - | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Protomyctophum crockeri</i> (cont.) | | | | | | | | | | | | | |
| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 | 100.0 | 25.3 | - | - | 0.0 | - | - | 15.1 | - | 0.0 | - | - | - |
| 93.3 | 110.0 | - | 0.0 | - | 9.0 | - | - | 5.3 | - | 4.7 | - | - | - |
| 93.3 | 120.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Symbolophorus californiensis</i> | | | | | | | | | | | | | |
| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 | 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - |
| 76.7 | 90.0 | - | 5.1 | - | 0.0 | - | - | 28.0 | - | - | - | - | - |
| 76.7 | 100.0 | - | 9.6 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 60.0 | - | 0.0 | - | 10.9 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 70.0 | - | 0.0 | - | 10.1 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 90.0 | - | 0.0 | - | 0.0 | - | - | 63.5 | - | - | 4.6 | - | - |
| 80.0 | 100.0 | - | 4.9 | - | 8.4 | - | - | 26.1 | - | - | 0.0 | - | - |
| 83.3 | 80.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 4.5 | - | - | - |
| 83.3 | 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 14.7 | - | - | - |
| 83.3 | 100.0 | - | 9.7 | - | 0.0 | - | - | 9.8 | - | 0.0 | - | - | - |
| 86.7 | 45.0 | - | 0.0 | - | - | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 | 60.0 | - | 0.0 | - | - | - | - | 0.0 | - | 8.6 | - | - | - |
| 86.7 | 70.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 80.0 | - | 4.8 | - | 0.0 | - | - | 0.0 | - | 7.7 | - | - | - |
| 86.7 | 90.0 | - | 9.4 | - | 4.3 | - | - | 15.0 | - | 0.0 | - | - | - |
| 86.7 | 100.0 | - | 0.0 | - | 0.0 | - | - | 4.8 | - | 0.0 | - | - | - |
| 90.0 | 45.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 8.8 | - | - | - |
| 90.0 | 53.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 80.0 | - | 0.0 | - | 9.5 | - | - | 5.4 | - | 4.6 | - | - | - |
| 90.0 | 90.0 | - | 4.8 | - | 4.6 | - | - | 5.4 | - | 5.2 | - | - | - |
| 90.0 | 100.0 | - | 0.0 | - | 23.8 | - | - | 5.2 | - | 0.0 | - | - | - |
| 90.0 | 110.0 | - | 4.5 | - | 0.0 | - | - | 15.2 | - | 9.3 | - | - | - |
| 90.0 | 120.0 | - | 20.0 | - | 4.0 | - | - | 0.0 | - | 4.8 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 13.8 | - | - | - |
| 93.3 | 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 8.8 | - | - | 0.0 | - | 9.3 | - | - | - |

TABLE 4. (cont.)

| <i>Symbolophorus californiensis</i> (cont.) | | | | | | | | | | | | |
|---|------|---------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 100.0 | 0.0 | - | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| 93.3 110.0 | - | 5.1 | - | 9.0 | - | - | 16.0 | - | 0.0 | - | - | - |
| 93.3 120.0 | - | 5.3 | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - |
| <i>Tarletonbeania crenularis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 60.0 | - | 20.1 | - | - | - | - | - | - | - | - | - | - |
| 76.7 55.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 60.0 | - | 0.0 | - | 8.8 | - | - | 0.0 | - | - | - | - | - |
| 76.7 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - |
| 76.7 80.0 | - | 8.4 | - | 20.5 | - | - | 0.0 | - | - | - | - | - |
| 80.0 55.0 | - | 10.3 | - | 4.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 70.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 80.0 | - | 0.0 | - | 0.0 | - | - | 10.3 | - | - | 0.0 | - | - |
| 83.3 70.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 90.0 120.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| <i>Desmodema lorum</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.9 | - | - |
| 86.7 100.0 | - | 0.0 | - | 0.0 | - | - | 4.8 | - | 0.0 | - | - | - |
| <i>Trachipterus altivelis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 60.0 | - | 10.0 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - |
| <i>Merluccius productus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 50.0 | - | 131.6 | - | - | - | - | - | - | - | - | - | - |
| 75.0 55.0 | - | 9251.6 | - | - | - | - | - | - | - | - | - | - |
| 75.0 60.0 | - | 19033.5 | - | - | - | - | - | - | - | - | - | - |
| 75.0 65.0 | - | 390.0 | - | - | - | - | - | - | - | - | - | - |

TABLE 4. (cont.)

| Station | <i>Merluccius productus</i> (cont.) | | | | | | | | | | | |
|------------|-------------------------------------|--------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 49.0 | - | 51.7 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 51.0 | - | 1404.5 | - | 18.1 | - | - | 0.0 | - | - | - | - | - |
| 76.7 55.0 | - | 353.3 | - | 91.7 | - | - | 0.0 | - | - | - | - | - |
| 76.7 60.0 | - | 111.8 | - | 26.5 | - | - | 0.0 | - | - | - | - | - |
| 76.7 65.0 | - | 418.1 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 80.0 | - | 8.4 | - | 10.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 90.0 | - | 5.1 | - | 9.3 | - | - | 0.0 | - | - | - | - | - |
| 80.0 51.0 | - | 8.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 55.0 | - | 5259.2 | - | 16.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 60.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 70.0 | - | 51.5 | - | 5.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 80.0 | - | 9.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 90.0 | - | 0.0 | - | 10.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 81.8 46.9 | - | 86.3 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 42.0 | - | 100.0 | - | 19.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 51.0 | - | 32.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 55.0 | - | 155.7 | - | 57.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 60.0 | - | 0.0 | - | 58.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 80.0 | - | 0.0 | - | 18.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 38.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 9.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 40.0 | - | 50.2 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 45.0 | - | 654.4 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 50.0 | - | 3.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 5.1 | - | 33.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 80.0 | - | 0.0 | - | 47.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 8.6 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | <i>Merluccius productus</i> (cont.) | | | | | | | | | | | |
|------------------------------|-------|-------------------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 | 100.0 | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 28.0 | 18.4 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 30.0 | 10.2 | - | 4.8 | - | - | 5.5 | - | 0.0 | - | - | - | |
| 90.0 | 35.0 | 65.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 37.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 45.0 | 19.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 53.0 | 9.0 | - | 42.1 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 60.0 | 0.0 | - | 9.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 70.0 | 0.0 | - | 57.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 80.0 | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 30.0 | 0.0 | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 35.0 | 4.9 | - | 18.1 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 40.0 | 120.7 | - | 8.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 45.0 | 15.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 50.0 | 4.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 60.0 | 0.0 | - | 29.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 90.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| <i>Ophidion scrippsae</i> | | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 49.0 | 0.0 | - | 0.0 | - | - | 4.7 | - | - | - | - | - | |
| 83.3 | 40.6 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.6 | - | - | |
| 90.0 | 28.0 | 0.0 | - | 0.0 | - | - | 27.2 | - | 0.0 | - | - | - | |
| 90.0 | 30.0 | 0.0 | - | 0.0 | - | - | 5.5 | - | 0.0 | - | - | - | |
| <i>Catactyx rubrirostris</i> | | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 | 28.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| <i>Dolopichthys</i> spp. | | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 | 60.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - | |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|-------------------------------------|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Atherinopsis californiensis</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 40.6 | - | 0.0 | - | 3.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 | 26.7 | 5.4 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Cololabis saira</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 80.0 | 60.0 | - | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 | 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 90.0 | 120.0 | - | 0.0 | - | 4.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Cheilopogon pinnatibarbatius</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 93.3 | 28.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | Aug. | Sep. | Oct. | Nov. | Dec. |
| | | | | | | | | | - | 4.7 | - | - | - |
| <i>Melamphaes</i> spp. | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 86.7 | 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | Aug. | Sep. | Oct. | Nov. | Dec. |
| 93.3 | 70.0 | 9.4 | - | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 93.3 | 120.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| <i>Melamphaes lugubris</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 60.0 | - | 0.0 | - | 8.8 | - | - | 0.0 | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 | 70.0 | - | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 90.0 | - | 0.0 | - | 9.3 | - | - | 5.6 | - | - | - | - | - |
| 76.7 | 100.0 | - | 0.0 | - | 5.0 | - | - | 10.9 | - | - | 0.0 | - | - |
| 80.0 | 90.0 | - | 10.1 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 8.4 | - | - | 5.2 | - | - | 3.8 | - | - |
| 83.3 | 70.0 | - | 0.0 | - | 4.9 | - | - | 10.6 | - | 0.0 | - | - | - |
| 83.3 | 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | - | 0.0 | - | 4.8 | - | - | 9.8 | - | 0.0 | - | - | - |
| 86.7 | 55.0 | - | 0.0 | - | - | - | - | 0.0 | - | 4.8 | - | - | - |
| 86.7 | 70.0 | - | 10.3 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 80.0 | - | 0.0 | - | 0.0 | - | - | 11.1 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | <i>Melamphaes lugubris</i> (cont.) | | | | | | | | | | | |
|---------|-------|------------------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 | 100.0 | 0.0 | - | 0.0 | - | - | 4.8 | - | 4.0 | - | - | - | |
| 90.0 | 37.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 70.0 | 0.0 | - | 10.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 80.0 | 0.0 | - | 9.5 | - | - | 16.2 | - | 4.6 | - | - | - | |
| 90.0 | 90.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 100.0 | 0.0 | - | 9.5 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 18.6 | - | - | - | |
| 93.3 | 40.0 | - | - | 0.0 | - | - | 10.1 | - | 0.0 | - | - | - | |
| 93.3 | 50.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 | 90.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - | |
| 93.3 | 100.0 | - | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - | |
| 93.3 | 110.0 | 5.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - | |
| | | <i>Melamphaes parvus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 51.0 | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 | 55.0 | 0.0 | - | 4.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 60.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 70.0 | 0.0 | - | 5.0 | - | - | 0.0 | - | - | - | - | - | |
| 83.3 | 80.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 83.3 | 90.0 | 0.0 | - | 5.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 110.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Poromitra crassiceps</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 83.3 | 100.0 | 4.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 30.0 | 0.0 | - | 0.0 | - | - | 5.5 | - | 0.0 | - | - | - | |
| 90.0 | 80.0 | 0.0 | - | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - | |
| 90.0 | 110.0 | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - | |
| 93.3 | 90.0 | - | - | 0.0 | - | - | 0.0 | - | 9.3 | - | - | - | |

TABLE 4. (cont.)

| Station | <i>Scopeloberyx robustus</i> | | | | | | | | | | | |
|---------|--------------------------------|-------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 | 90.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 90.0 | 110.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| Station | <i>Scopelogadus bispinosus</i> | | | | | | | | | | | |
| 76.7 | 100.0 | 0.0 | - | 0.0 | - | - | 5.5 | - | - | 0.0 | Nov. | Dec. |
| 83.3 | 70.0 | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| 86.7 | 100.0 | 4.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 50.0 | - | - | 0.0 | - | - | 0.0 | - | 9.4 | - | - | - |
| 93.3 | 80.0 | - | - | 0.0 | - | - | 0.0 | - | 10.3 | - | - | - |
| Station | <i>Sebastes spp.</i> | | | | | | | | | | | |
| 75.0 | 50.0 | 10.1 | - | - | - | - | - | - | - | - | Nov. | Dec. |
| 75.0 | 55.0 | 20.6 | - | - | - | - | - | - | - | - | - | - |
| 75.0 | 60.0 | 10.0 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 49.0 | 81.9 | - | 4.3 | - | - | 4.7 | - | - | - | - | - |
| 76.7 | 51.0 | 28.9 | - | 36.2 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 55.0 | 139.5 | - | 9.2 | - | - | 11.1 | - | - | - | - | - |
| 76.7 | 60.0 | 102.5 | - | 0.0 | - | - | 30.3 | - | - | - | - | - |
| 76.7 | 65.0 | 115.6 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 70.0 | 75.9 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 51.0 | 8.8 | - | 4.3 | - | - | 0.0 | - | - | 9.9 | - | - |
| 80.0 | 55.0 | 10.3 | - | 8.0 | - | - | 0.0 | - | - | 14.4 | - | - |
| 80.0 | 60.0 | 9.3 | - | 0.0 | - | - | 11.8 | - | - | 0.0 | - | - |
| 80.0 | 70.0 | 0.0 | - | 0.0 | - | - | 11.5 | - | - | - | - | - |
| 80.0 | 80.0 | 9.7 | - | 0.0 | - | - | 10.3 | - | - | 0.0 | - | - |
| 81.8 | 46.9 | 43.1 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 83.3 | 40.6 | 0.0 | - | 3.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 42.0 | 14.3 | - | 77.3 | - | - | 5.3 | - | - | 5.2 | - | - |
| 83.3 | 51.0 | 37.4 | - | 17.5 | - | - | 5.5 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| Station | <i>Sebastes spp.</i> (cont.) | | | | | | | | | | | |
|------------|------------------------------|-------|------|-------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 55.0 | - | 301.0 | - | 191.9 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 60.0 | - | 0.0 | - | 10.7 | - | - | 11.6 | - | - | 0.0 | - | - |
| 83.3 80.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 90.0 | - | 0.0 | - | 10.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 100.0 | - | 0.0 | - | 19.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 33.0 | - | 0.0 | - | 24.1 | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 35.0 | - | 46.0 | - | 18.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 40.0 | - | 50.2 | - | 42.4 | - | - | 0.0 | - | 17.8 | - | - | - |
| 86.7 45.0 | - | 294.5 | - | - | - | - | 10.5 | - | 4.7 | - | - | - |
| 86.7 50.0 | - | 302.6 | - | - | - | - | 14.5 | - | 0.0 | - | - | - |
| 86.7 55.0 | - | 156.3 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 12.6 | - | - | 15.5 | - | 50.7 | - | - | - |
| 86.7 80.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 90.0 30.0 | - | 30.7 | - | 0.0 | - | - | 11.1 | - | 0.0 | - | - | - |
| 90.0 35.0 | - | 0.0 | - | 22.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 37.0 | - | 10.0 | - | 5.5 | - | - | 5.2 | - | 0.0 | - | - | - |
| 90.0 45.0 | - | 9.9 | - | 153.9 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 53.0 | - | 18.0 | - | 285.5 | - | - | 9.2 | - | 0.0 | - | - | - |
| 90.0 60.0 | - | 0.0 | - | 0.0 | - | - | 15.9 | - | 0.0 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 10.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 80.0 | - | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 26.7 | 10.8 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 28.0 | 0.0 | - | - | 14.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 30.0 | 14.8 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 35.0 | 0.0 | - | - | 77.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 40.0 | 30.2 | - | - | 4.5 | - | - | 10.1 | - | 0.0 | - | - | - |
| 93.3 45.0 | 30.2 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 33.4 | - | - | 56.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | <i>Sebastes spp.</i> (cont.) | | | | | | | | | | | |
|---------|------|------------------------------|------|------|---------------------------|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | <i>Sebastes aurora</i> | | | Aug. | Sep. | Oct. | Nov. | Dec. | |
| | | | | | May | June | July | | | | | | |
| 93.3 | 70.0 | 0.0 | - | 9.1 | - | - | 10.6 | - | 0.0 | - | - | - | |
| | | | | | | | | | | | | | |
| | | <i>Sebastes diploproa</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | <i>Sebastes diploproa</i> | | | Aug. | Sep. | Oct. | Nov. | Dec. | |
| | | | | | May | June | July | | | | | | |
| 76.7 | 70.0 | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 83.3 | 55.0 | 0.0 | - | 9.6 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 60.0 | 0.0 | - | 5.3 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 86.7 | 35.0 | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | | | | | | | | | | | | |
| | | <i>Sebastes jordani</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | <i>Sebastes jordani</i> | | | Aug. | Sep. | Oct. | Nov. | Dec. | |
| | | | | | May | June | July | | | | | | |
| 76.7 | 51.0 | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 60.0 | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 | 51.0 | 0.0 | - | 4.3 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 80.0 | 55.0 | 10.3 | - | 4.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 81.8 | 46.9 | 43.1 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 40.6 | 0.0 | - | 3.4 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 42.0 | 61.9 | - | 48.3 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 51.0 | 28.0 | - | 8.8 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 55.0 | 31.1 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 60.0 | 0.0 | - | 5.3 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 86.7 | 35.0 | 10.2 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 86.7 | 40.0 | 0.0 | - | 45.9 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 30.0 | 25.6 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 35.0 | 20.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 37.0 | 24.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| | | <i>Sebastes jordani</i> (cont.) | | | | | | | | | | | |
|---------|-------|---------------------------------|------|------|-----|------|------|------|------|------|------|------|--|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 90.0 | 53.0 | 0.0 | - | 46.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Sebastes paucispinis</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 51.0 | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - | |
| 76.7 | 70.0 | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 80.0 | 55.0 | 10.3 | - | 4.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 80.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 35.0 | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 37.0 | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 90.0 | 53.0 | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 28.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Sebastolobus</i> spp. | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 55.0 | 0.0 | - | 9.2 | - | - | 0.0 | - | - | - | - | - | |
| 86.7 | 100.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - | |
| 93.3 | 120.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - | |
| | | <i>Sebastolobus altivelis</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 93.3 | 50.0 | - | - | 0.0 | - | - | 10.3 | - | 0.0 | - | - | - | |
| | | <i>Ophiodon elongatus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 76.7 | 49.0 | 4.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | |
| 83.3 | 51.0 | 14.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| | | <i>Oxylebius pictus</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 81.8 | 46.9 | 10.8 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 42.0 | 0.0 | - | 9.7 | - | - | 0.0 | - | - | 0.0 | - | - | |
| 83.3 | 60.0 | 0.0 | - | 5.3 | - | - | 0.0 | - | - | 0.0 | - | - | |
| | | <i>Zaniolepis frenata</i> | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. | |
| 86.7 | 33.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - | |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|------------------------------|-------|------|------|-------|-----|------|------|------|------|------|------|------|
| 76.7 | 49.0 | 0.0 | - | 0.0 | - | - | 4.7 | - | - | - | - | - |
| <i>Liparis fucensis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 | 51.0 | 0.0 | - | 4.4 | - | - | 0.0 | - | - | 0.0 | - | - |
| <i>Liparis mucosus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 81.8 | 46.9 | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 83.3 | 40.6 | 0.0 | - | 0.0 | - | - | 6.8 | - | - | 3.6 | - | - |
| 83.3 | 42.0 | 0.0 | - | 0.0 | - | - | 5.3 | - | - | 0.0 | - | - |
| 86.7 | 33.0 | 0.0 | - | 0.0 | - | - | 5.0 | - | 4.7 | - | - | - |
| 86.7 | 60.0 | 0.0 | - | - | - | - | 0.0 | - | 8.6 | - | - | - |
| 90.0 | 28.0 | 0.0 | - | 0.0 | - | - | 31.8 | - | 7.0 | - | - | - |
| 90.0 | 37.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.9 | - | - | - |
| <i>Paralabrax spp.</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 | 90.0 | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.8 | - | - |
| 83.3 | 110.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 90.0 | 120.0 | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| 93.3 | 90.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| <i>Howella spp.</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 | 33.0 | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| <i>Seriola lalandi</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 | 33.0 | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| <i>Trachurus symmetricus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 | 60.0 | 0.0 | - | 8.8 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 80.0 | 0.0 | - | 10.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 90.0 | 0.0 | - | 46.4 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 100.0 | 0.0 | - | 141.1 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 70.0 | 0.0 | - | 30.2 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 90.0 | 0.0 | - | 516.3 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|--------------------------------------|-------|------|------|------|--------|-----|------|------|------|------|------|------|------|
| <i>Trachurus symmetricus</i> (cont.) | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 80.0 | 100.0 | - | 4.9 | - | 1684.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 80.0 | - | 0.0 | - | 32.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 90.0 | - | 0.0 | - | 150.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | - | 0.0 | - | 114.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 86.7 | 90.0 | - | 0.0 | - | 21.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 100.0 | - | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 110.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 80.0 | - | 0.0 | - | 14.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 90.0 | - | 0.0 | - | 106.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 120.0 | - | 0.0 | - | 4.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Coryphaena equisetis</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 93.3 | 55.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.1 | - | - | - |
| <i>Brama japonica</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 80.0 | 100.0 | - | 0.0 | - | 0.0 | - | - | 5.2 | - | - | 0.0 | - | - |
| 83.3 | 80.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 86.7 | 90.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| 86.7 | 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 90.0 | 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 90.0 | 120.0 | - | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Caristius maderensis</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 90.0 | 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| <i>Genyonemus lineatus</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 80.0 | 51.0 | - | 43.9 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 81.8 | 46.9 | - | 10.8 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 | 30.0 | - | 20.4 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | | | | | | | | | | | |
|-------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| <i>Girella nigricans</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 81.8 46.9 | - | 0.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 83.3 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 35.9 | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 23.4 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 13.7 | - | - | - |
| 90.0 30.0 | - | 0.0 | - | 0.0 | - | - | 5.5 | - | 4.3 | - | - | - |
| 93.3 26.7 | 0.0 | - | - | 0.0 | - | - | 4.8 | - | 4.3 | - | - | - |
| <i>Haichoeres semicinctus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 7.2 | - | - |
| 83.3 42.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 5.2 | - | - |
| <i>Oxyjulis californica</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 10.1 | - | 4.7 | - | - | - |
| <i>Rathbunella alleni</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| Stichaeidae | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 49.0 | - | 0.0 | - | 8.7 | - | - | 0.0 | - | - | - | - | - |
| 83.3 51.0 | - | 14.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| <i>Chiasmodon niger</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 90.0 | - | 0.0 | - | 0.0 | - | - | 11.2 | - | - | - | - | - |
| 90.0 90.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 110.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 93.3 80.0 | 0.0 | - | - | 4.3 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|--------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Cryptotrema corallinum</i> | | | | | | | | | | | | |
| 83.3 51.0 | - | 4.7 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| <i>Neoclinus stephensae</i> | | | | | | | | | | | | |
| 76.7 49.0 | - | 0.0 | - | 0.0 | - | - | 14.1 | - | - | - | - | - |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 10.1 | - | - | 0.0 | - | - |
| <i>Hypsoblennius gentilis</i> | | | | | | | | | | | | |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.9 | - | - |
| 83.3 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.6 | - | - |
| <i>Hypsoblennius gilberti</i> | | | | | | | | | | | | |
| 86.7 33.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 28.0 | - | 0.0 | - | 0.0 | - | - | 9.1 | - | 0.0 | - | - | - |
| <i>Hypsoblennius jenkinsi</i> | | | | | | | | | | | | |
| 83.3 40.6 | - | 0.0 | - | 0.0 | - | - | 30.8 | - | - | 0.0 | - | - |
| 83.3 42.0 | - | 0.0 | - | 0.0 | - | - | 5.3 | - | - | 0.0 | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 25.2 | - | 0.0 | - | - | - |
| 86.7 35.0 | - | 0.0 | - | 0.0 | - | - | 10.7 | - | 0.0 | - | - | - |
| 90.0 30.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.3 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Coryphopterus nicholsii</i> | | | | | | | | | | | | |
| 76.7 49.0 | - | 0.0 | - | 0.0 | - | - | 4.7 | - | - | - | - | - |
| 76.7 51.0 | - | 0.0 | - | 9.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 60.0 | - | 9.3 | - | 8.8 | - | - | 0.0 | - | - | - | - | - |
| 76.7 65.0 | - | 8.9 | - | - | - | - | - | - | - | - | - | - |
| 76.7 70.0 | - | 0.0 | - | 0.0 | - | - | 10.5 | - | - | - | - | - |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.9 | - | - |
| 80.0 55.0 | - | 10.3 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|-------|------|------|------|------|-----|------|-------|------|------|------|------|------|
| <i>Coryphopterus nicholsii</i> (cont.) | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 55.0 | - | 10.4 | - | 19.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 | 33.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 4.7 | - | - | - |
| 86.7 | 40.0 | - | 10.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 55.0 | - | 16.4 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 70.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 7.2 | - | - | - |
| 90.0 | 35.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 90.0 | 53.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 26.7 | 5.4 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.6 | - | - | - |
| <i>Lepidogobius lepidus</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 40.6 | - | 0.0 | - | 0.0 | - | - | 3.4 | - | - | 0.0 | - | - |
| <i>Sphyræna argentea</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 25.1 | - | - |
| 86.7 | 33.0 | - | 0.0 | - | 0.0 | - | - | 312.5 | - | 0.0 | - | - | - |
| 90.0 | 28.0 | - | 0.0 | - | 0.0 | - | - | 9.1 | - | 0.0 | - | - | - |
| 90.0 | 30.0 | - | 0.0 | - | 0.0 | - | - | 5.5 | - | 0.0 | - | - | - |
| <i>Scomber japonicus</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 80.0 | 90.0 | - | 0.0 | - | 21.5 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 80.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 40.6 | - | 0.0 | - | 0.0 | - | - | 3.4 | - | - | 10.8 | - | - |
| 83.3 | 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 7.5 | - | - |
| 83.3 | 80.0 | - | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 33.0 | - | 0.0 | - | 0.0 | - | - | 393.1 | - | 0.0 | - | - | - |
| 86.7 | 35.0 | - | 0.0 | - | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - |
| 86.7 | 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 28.0 | - | 0.0 | - | 0.0 | - | - | 27.2 | - | 0.0 | - | - | - |
| 90.0 | 60.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 | 80.0 | - | 0.0 | - | 37.9 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|----------------------------------|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Scomber japonicus</i> (cont.) | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 90.0 | 90.0 | - | 0.0 | - | 13.9 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 40.0 | 0.0 | - | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Icichthys lockingtoni</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 60.0 | - | 0.0 | - | 8.8 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 70.0 | - | 0.0 | - | 9.1 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 90.0 | - | 5.1 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 81.8 | 46.9 | - | 10.8 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 | 45.0 | - | 0.0 | - | 0.0 | - | - | 9.4 | - | 0.0 | - | - | - |
| 90.0 | 70.0 | - | 0.0 | - | 5.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Tetragonurus cuvieri</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 90.0 | - | 0.0 | - | 0.0 | - | - | 22.4 | - | - | - | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.8 | - | - |
| 83.3 | 100.0 | - | 4.9 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 55.0 | - | 0.0 | - | - | - | - | 0.0 | - | 4.8 | - | - | - |
| 86.7 | 90.0 | - | 0.0 | - | 0.0 | - | - | 10.0 | - | 0.0 | - | - | - |
| 86.7 | 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 90.0 | 60.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 12.9 | - | - | - |
| 90.0 | 90.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 90.0 | 110.0 | - | 0.0 | - | 0.0 | - | - | 5.1 | - | 0.0 | - | - | - |
| 93.3 | 40.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.5 | - | - | - |
| 93.3 | 55.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 10.3 | - | - | - |
| 93.3 | 60.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 20.2 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 13.8 | - | - | - |
| 93.3 | 100.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| <i>Citharichthys</i> spp. | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 49.0 | - | 4.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |

TABLE 4. (cont.)

| Station | <i>Citharichthys</i> spp. (cont.) | | | | | | | | | | | |
|---------|-----------------------------------|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 | 51.0 | 4.4 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 | 35.0 | 0.0 | - | 4.7 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 50.0 | 3.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| Station | <i>Citharichthys fragilis</i> | | | | | | | | | | | |
| 80.0 | 70.0 | 0.0 | - | 0.0 | - | - | 11.5 | - | - | - | - | - |
| Station | <i>Citharichthys sordidus</i> | | | | | | | | | | | |
| 75.0 | 55.0 | 51.4 | - | - | - | - | - | - | - | - | - | - |
| 75.0 | 60.0 | 40.2 | - | - | - | - | - | - | - | - | - | - |
| 75.0 | 65.0 | 41.1 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 51.0 | 19.2 | - | 9.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 55.0 | 55.8 | - | 18.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 60.0 | 28.0 | - | 0.0 | - | - | 20.2 | - | - | - | - | - |
| 76.7 | 65.0 | 26.7 | - | - | - | - | - | - | - | - | - | - |
| 76.7 | 70.0 | 8.4 | - | 0.0 | - | - | 31.6 | - | - | - | - | - |
| 76.7 | 80.0 | 0.0 | - | 0.0 | - | - | 37.3 | - | - | - | - | - |
| 80.0 | 55.0 | 30.8 | - | 8.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 | 60.0 | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 | 80.0 | 29.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 80.0 | 100.0 | 0.0 | - | 4.2 | - | - | 0.0 | - | 0.0 | - | - | - |
| 81.8 | 46.9 | 10.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 42.0 | 0.0 | - | 0.0 | - | - | 5.3 | - | 0.0 | - | - | - |
| 83.3 | 55.0 | 10.4 | - | 9.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 60.0 | 0.0 | - | 5.3 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 80.0 | 0.0 | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 83.3 | 90.0 | 0.0 | - | 0.0 | - | - | 5.2 | - | 0.0 | - | - | - |
| 83.3 | 100.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 33.0 | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 | 35.0 | 35.8 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |

TABLE 4. (cont.)

| Station | <i>Citharichthys sordidus</i> (cont.) | | | | | | | | | | | |
|--------------------------------|---------------------------------------|------|------|------|-----|------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 45.0 | - | 10.9 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 55.0 | - | 16.4 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 60.0 | - | 9.4 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 70.0 | - | 5.1 | - | 8.4 | - | - | 0.0 | - | 7.2 | - | - | - |
| 86.7 90.0 | - | 0.0 | - | 8.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 100.0 | - | 0.0 | - | 8.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 35.0 | - | 5.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 53.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 70.0 | - | 0.0 | - | 10.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 45.0 | 10.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 50.0 | 0.0 | - | - | 5.1 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 55.0 | 0.0 | - | - | 4.9 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 14.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 70.0 | 9.4 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Citharichthys stigmaeus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 55.0 | - | 61.7 | - | - | - | - | - | - | - | - | - | - |
| 75.0 60.0 | - | 10.0 | - | - | - | - | - | - | - | - | - | - |
| 75.0 65.0 | - | 10.3 | - | - | - | - | - | - | - | - | - | - |
| 76.7 51.0 | - | 0.0 | - | 0.0 | - | - | 12.0 | - | - | - | - | - |
| 76.7 55.0 | - | 9.3 | - | 9.2 | - | - | 11.1 | - | - | - | - | - |
| 76.7 60.0 | - | 28.0 | - | 8.8 | - | - | 20.2 | - | - | - | - | - |
| 76.7 65.0 | - | 53.4 | - | - | - | - | - | - | - | - | - | - |
| 76.7 80.0 | - | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 60.0 | - | 9.3 | - | 5.5 | - | - | 0.0 | - | - | 5.0 | - | - |
| 80.0 70.0 | - | 10.3 | - | 0.0 | - | - | 23.1 | - | - | - | - | - |
| 83.3 42.0 | - | 4.8 | - | 19.3 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 60.0 | - | 0.0 | - | 10.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 70.0 | - | 9.0 | - | 0.0 | - | - | 10.6 | - | - | 0.0 | - | - |
| 83.3 90.0 | - | 0.0 | - | 5.0 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|--|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Citharichthys stigmaeus</i> (cont.) | | | | | | | | | | | | |
| 86.7 45.0 | - | 10.9 | - | - | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 50.0 | - | 0.0 | - | - | - | - | 9.6 | - | 0.0 | - | - | - |
| 86.7 55.0 | - | 24.7 | - | - | - | - | 0.0 | - | 0.0 | - | - | - |
| 86.7 60.0 | - | 0.0 | - | - | - | - | 0.0 | - | 8.6 | - | - | - |
| 86.7 70.0 | - | 0.0 | - | 4.2 | - | - | 23.2 | - | 21.7 | - | - | - |
| 90.0 45.0 | - | 19.7 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 53.0 | - | 9.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 80.0 | - | 4.5 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 30.0 | 0.0 | - | - | 4.5 | - | - | 5.2 | - | 0.0 | - | - | - |
| 93.3 35.0 | 4.9 | - | - | 0.0 | - | - | 22.5 | - | 0.0 | - | - | - |
| 93.3 40.0 | 10.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 60.0 | 0.0 | - | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 80.0 | 5.1 | - | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Hippoglossina stomata</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 4.9 | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| <i>Paralichthys californicus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 40.6 | - | 3.6 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 33.0 | - | 0.0 | - | 14.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| <i>Xystreureys liolepis</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 19.8 | - | - |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 18.7 | - | - | - |
| <i>Glyptocephalus zachirus</i> | | | | | | | | | | | | |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 80.0 | - | 0.0 | - | 0.0 | - | - | 12.4 | - | - | - | - | - |

TABLE 4. (cont.)

| | | | | | | | | | | | | |
|-----------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 51.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 3.7 | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 75.0 55.0 | - | 10.3 | - | - | - | - | - | - | - | - | - | - |
| 76.7 51.0 | - | 9.6 | - | 9.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 55.0 | - | 9.3 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 51.0 | - | 17.6 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 80.0 55.0 | - | 10.3 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 55.0 | - | 0.0 | - | 9.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 90.0 37.0 | - | 0.0 | - | 5.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| 90.0 45.0 | - | 0.0 | - | 4.8 | - | - | 0.0 | - | 0.0 | - | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 76.7 49.0 | - | 0.0 | - | 4.3 | - | - | 0.0 | - | - | - | - | - |
| 76.7 60.0 | - | 0.0 | - | 8.8 | - | - | 0.0 | - | - | - | - | - |
| 83.3 60.0 | - | 0.0 | - | 0.0 | - | - | 11.6 | - | - | 0.0 | - | - |
| 93.3 35.0 | 0.0 | - | - | 4.5 | - | - | 0.0 | - | 0.0 | - | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 42.0 | - | 0.0 | - | 9.7 | - | - | 0.0 | - | - | 0.0 | - | - |
| 93.3 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 86.7 33.0 | - | 0.0 | - | 0.0 | - | - | 5.0 | - | 0.0 | - | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 80.0 51.0 | - | 4.4 | - | 0.0 | - | - | 10.1 | - | - | 9.9 | - | - |
| 83.3 40.6 | - | 0.0 | - | 3.4 | - | - | 3.4 | - | - | 0.0 | - | - |
| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 51.0 | - | 0.0 | - | 4.4 | - | - | 0.0 | - | - | 0.0 | - | - |

TABLE 4. (cont.)

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|----------------------------------|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <i>Symphurus atricaudus</i> | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 83.3 | 40.6 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 10.8 | - | - |
| 83.3 | 55.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 9.6 | - | - |
| 86.7 | 33.0 | - | 0.0 | - | 0.0 | - | - | 0.0 | - | 4.7 | - | - | - |
| 86.7 | 35.0 | - | 5.1 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| Disintegrated fish larvae | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 80.0 | - | 8.4 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 76.7 | 90.0 | - | 5.1 | - | 0.0 | - | - | 0.0 | - | - | - | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 12.6 | - | - | 0.0 | - | - | 0.0 | - | - |
| 83.3 | 80.0 | - | 4.3 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 70.0 | 0.0 | - | - | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - |
| 93.3 | 80.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | 5.2 | - | - | - |
| 93.3 | 90.0 | 0.0 | - | - | 4.4 | - | - | 0.0 | - | 0.0 | - | - | - |
| Unidentified fish larvae | | | | | | | | | | | | | |
| Station | | | | | | | | | | | | | |
| 76.7 | 100.0 | - | 0.0 | - | 0.0 | - | - | 5.5 | - | - | 0.0 | - | - |
| 80.0 | 100.0 | - | 0.0 | - | 4.2 | - | - | 0.0 | - | - | 0.0 | - | - |
| 86.7 | 100.0 | - | 0.0 | - | 0.0 | - | - | 4.8 | - | 0.0 | - | - | - |

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