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National Oceanic and Atmospheric Administration
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## ABSTRACT

This report provides ichthyoplankton data and associated station and tow data for Manta (surface) tows taken on California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises in 1980-81. It is the second report in a series that presents surface tow data for all biological-oceanographic CalCOFI surveys from 1977 to the present. A total of 985 stations (including oblique tows) was occupied during seven monthly multi-vessel cruises over the survey area which extended from Pt. Reyes, California to Punta San Juanico, Baja California Sur, Mexico, and seaward to several hundred miles. A total of 871 Manta net tows was taken during 1980-81. The data for stations on which Manta tows were taken 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 filtered are listed in the first table. Another table lists, by station and month, standardized counts of each of the 147 larval fish categories identified from Manta tows taken on the survey. 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 second in a series of surface tow data reports, provides ichthyoplankton and associated station and Manta net tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) joint biological-oceanographic survey cruises conducted in 1980–81. This program was initiated in 1949, under the sponsorship of the Marine Research Committee of the State of California, to study the population fluctuations of the Pacific sardine (*Sardinops sagax*) and the environmental factors that may play a role in these fluctuations. CalCOFI is a partnership among the Southwest Fisheries Science Center (SWFSC) of the National Marine Fisheries Service (NMFS), the Scripps Institution of Oceanography (SIO), and the California Department of Fish and Game (CDFG). NMFS and SIO supply ships and personnel to conduct the sea surveys, NMFS processes the plankton samples and analyzes the ichthyoplankton from them. SIO processes and analyzes hydrographic and biological samples and analyzes invertebrate groups from the plankton samples.

The boundaries, station placement, and sampling frequency for the CalCOFI surveys were based on the results of joint biological-oceanographic cruises conducted by NMFS and SIO during 1939–41. Originally, CalCOFI cruises were designed to collect sardine eggs and larvae in oblique net tows and hydrographic data associated with the tows 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; Moser et al. 1993, 1994, 2001a for summaries of historical CalCOFI sampling effort). Neuston[1] sampling was initiated in 1977-78 (Moser et al. 2001b), with Manta net (Figure 1) tows taken on ~ 40 % of the survey stations. Station and ichthyoplankton data for oblique tows taken on the 1980-81 CalCOFI survey were published in Ambrose et al. (1988). Ahlstrom and Stevens (1976), Gruber et al. (1982) and Doyle (1992a, b) provided initial information on the distribution and abundance of surface ichthyoplankton in the northeastern Pacific.

[1]Usage of the term "neuston" for surface-living marine organisms is controversial because it was applied originally to organisms associated with the surface film in freshwater habitats (Naumann 1917). Banse (1975) reviewed in detail the evolution of the usage of this term, a related term, "pleuston", and the various subdivisions of each. Neuston is now used by most workers in referring to the uppermost (upper ~10–20 cm) layer of the sea and to the assemblage of organisms that lives in that zone, either permanently or facultatively (Zaitsev 1970; Hempel and Weikert 1972; Peres 1982; Doyle 1992b). We accept this definition and use it interchangeably with the more general term "surface" (e.g., surface waters, surface zone, surface tow, surface assemblage).

Hydrographic and biological data from the 1980-81 CalCOFI survey were published by Scripps Institution of Oceanography (Univ. of Calif., SIO 1985a, b). All available records for Manta tows on the 1980-81 CalCOFI surveys were verified and edited to produce this data report. The CalCOFI ichthyoplankton data reports make CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the ichthyoplankton 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.

## SAMPLING AREA AND PATTERN

The 1980–81 CalCOFI survey consisted of a cruise (8012) in November–December 1980 and six cruises in 1981. A total of 871 Manta net tows was taken on the 985 standard CalCOFI net tow stations occupied during the survey (Table 1; Figures 2–9). Two vessels were employed on the survey, the NOAA vessel RV *David Starr Jordan* and the SIO vessel RV *New Horizon.* Dates and numbers of stations sampled by Manta tows in 1980-81 (Figures 2–8) are summarized below:

8012, RV *David Starr Jordan*, 142 stations, 26 November–19 December 1980 and
RV *New Horizon*, 53 stations, 9–18 December 1980;

8101, RV *David Starr Jordan*, 107 stations, 8–31 January 1981;

8102, RV *David Starr Jordan*, 81 stations, 12 February–10 March 1981 and
RV *New Horizon*,58 stations, 14 February–6 March 1981;

8104, RV *David Starr Jordan*, 62 stations, 2–27 April 1981, and
RV *New Horizon*,102 stations, 7–26 April 1981;

8105, RV *David Starr Jordan*, 64 stations, 18 May–12 June 1981 and
RV *New Horizon*, 46 stations, 19 May–5 June 1981;

8107, RV *David Starr Jordan*, 77 stations, 27 June–15 July 1981;

8108, RV *New Horizon*, 79 stations, 23 July–27 August 1981.

Coverage of the CalCOFI survey area varied among cruises and the entire survey area was not covered on any single cruise (Figures 2–8). Stations off central California (lines 60.0–76.7) were occupied on cruises 8101 through 8107 and only line 60.0 was excluded from the coverage on cruise 8012. The area between Point Conception, California and Punta San Juanico, Baja California Sur, Mexico (lines 80.0–136.7) was surveyed on cruise 8012; southerly coverage of this region stopped at line 133.3 on cruise 8104, line 130.0 on cruise 8102, line 123.3 on 8108, and line 110.0 on 8101 and 8105. Typically, coverage did not extend seaward beyond station 90.0 (approximately160–270 n. mi. offshore). Cruises 8107 and 8108 in this report are considered a single cruise (8107) in the SIO hydrographic data base and are combined in Figure 8.

## SAMPLING GEAR AND METHODS

Plankton tows were made with a modified version of the Manta net originally designed by Brown and Cheng (1981). It consists of a rectangular mouth 15.5 cm deep and 86 cm wide attached to a frame that supports square lateral extensions covered with plywood and urethane foam (Figure 1). These extensions stabilize the net when it is towed and keep the top of the net at the sea surface. The net is constructed of 0.505 mm nylon mesh. The towing bridle is asymmetrical with one side longer than the other; when the net

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

## LABORATORY PROCEDURES

The ichthyoplankton was removed from the invertebrate portion of each sample and bottled separately in 3% buffered formalin. In addition to fish eggs and larvae, some samples contained surface-living juvenile, and occasionally adult, stages of fishes; these were removed and bottled separately in 3% formalin. The volume of water filtered by each net was computed from the flowmeter readings. A "standard haul factor" is used for oblique CalCOFI net tows to calculate the total number of ichthyoplankters of a taxon per unit surface area (Kramer et al 1972; Smith and Richardson 1977; Moser et al. 1993). A requirement for this is the entire depth distribution of the taxon must be encompassed during the tow. The Manta net samples only the upper ~15.5 cm of the water column and most, if not all, ichthyoplankton taxa that inhabit the surface zone have a vertical range > 15.5 cm. Even taxa associated with the immediate surface layer may range deeper than 15.5 cm as a result of diel migratory patterns or vertical mixing (Hempel and Weikert 1972; Doyle 1992b). Calculation of total numbers of eggs or larvae per unit surface area from Manta net samples awaits accurate information on the fine-scale vertical distribution of these organisms in the upper region of the water column. Even if there are few species whose larvae are restricted to the upper 15.5 cm of the water column, the time series of Manta samples provides a useful index of relative abundance for species whose larvae appear in these samples. In this report we express quantities of eggs or larvae in each sample as unadjusted counts or as numbers of eggs or larvae per unit volume of water filtered by the net.

## IDENTIFICATION

Constituent taxa in the samples were identified by the following ichthyoplankton experts: Morgan Busby, Barbara MacCall, Elaine Sandknop, Elizabeth Stevens, and the senior author in the ichthyoplankton ecology laboratory of the La Jolla Fisheries Resources Division. Early ontogenetic stages of fishes are difficult to identify; most identifications were based on descriptions of ontogenetic series of fishes in published identification guides to early stages of fishes in the northeastern Pacific (Matarese et al. 1989; Moser 1996). Larval specimens that could not be identified with these guides were identified 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 (Miller and Lea 1972; Eschmeyer et al. 1983; Powles and Markle 1984). Except for damaged specimens, most of the larvae and juvenile/adults taken in the surface tows could be identified to species. A total of 147 larval fish categories (including unidentified and disintegrated) was identified: 106 to species, 19 to genus, 2 to subfamily, 16 to family, and 2 to order.

The following taxonomic categories in Tables 2–4 require special explanation:

*Citharichthys* spp.–if specimen condition permitted, all larvae of this genus from Manta tows in 1980-81 were identified to species; *Citharichthys* larvae taken in oblique tows during the 1980-81 survey (Ambrose et al. 1988) were not identified to species, except for specimens of *C. stigmaeus* > ~ 4.5 mm length.

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

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.

*Lampanyctus* spp.–most of the larvae in this category are small (< 5 mm), often damaged, specimens belonging to the subgroup of *Lampanyctus,* characterized by small or absent pectoral fins in adults, placed by Zahuranec (2000) in the genus *Nannobrachium*; two *Nannobrachium* species, *N. ritteri* (formerly *L. ritteri*) and *N. regale* (formerly *L. regalis*), occur commonly in the present CalCOFI survey pattern; larvae of these species > ~ 5 mm have been identified in oblique tow samples since 1954; beginning in 1985, larvae of two other species, *N. bristori* and *N. hawaiiensis*, have been identified and included in the CalCOFI data base for oblique tows; in previous oblique tow data reports these were referred to as *Lampanyctus* "niger" and *Lampanyctus* "no pectorals", respectively (see 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 rarely encountered; a small percentage of *V. poweriae* larvae may have been included in the *V. lucetia* category because of the difficulty in separating early larvae of the two species.

## SPECIES SUMMARY

Of the five most abundant larvae, northern anchovy (*Engraulis mordax*) ranked first in abundance with 85.6% of the total fish larvae and first in occurrence with larvae collected in 37.5% of the total samples (Tables 2 and 3). They were approximately 39 times as abundant as the second most abundant species, Pacific mackerel *Scomber japonicus*, which had 2.2% of the total larvae and ranked fourth in occurrence (9.5% of the total samples). California grunion (*Leuresthes tenuis*) was the third most abundant taxon with 1.7% of the total larvae and ranked tied for 8$^{th}$ in frequency of occurrence (5.2% of the samples). Pacific sardine (*Sardinops sagax*) ranked fourth in abundance (1.6% of total larvae) and tied for 6$^{th}$ in frequency of occurrence (7.2% of the samples). The rockfish genus *Sebastes* ranked fifth in abundance (1.3% of total larvae) and third in occurrence (20.2% of the samples). The next five most abundant taxa were Pacific saury *Cololabis saira* (1.3% of total larvae), mussel blenny *Hypsoblennius jenkinsi* (0.9%), cabezon *Scorpaenichthys marmoratus* (0.9%), jacksmelt *Atherinopsis californiensis* (0.6%), and lingcod *Ophiodon elongatus* (0.4%). These species ranked 2$^{nd}$, tied for 6$^{th}$, 5$^{th}$, tied for 13$^{th}$, and tied for 23$^{rd}$ in frequency of occurrence, respectively. The ten most abundant taxa comprised 96.5% of all the larvae collected in Manta net tows on CalCOFI cruises in 1980-81. The remaining 3.5% was distributed among 137 other taxa (including the disintegrated and unidentified categories). Of the ten most abundant taxa, half were coastal pelagic species, four were coastal demersal taxa, and one was an epipelagic species.

In comparison with the surface samples, among the 150 taxa collected in the oblique tows during the 1980-81 survey, northern anchovy also ranked first in both abundance and occurrence (65.5% of the total larvae and 47.4% positive tows), with more than ten times as many larvae as the second-ranked taxon, the rockfish genus *Sebastes*, (6.4% of the total larvae). Panama lightfish larvae ranked third in abundance in oblique tows but 14$^{th}$ in Manta tows (Ambrose et al. 1999).

## EXPLANATION OF TABLES

Table 1. This table lists for each tow the pertinent station and tow data, the volume of water filtered, and the total number of fish eggs and larvae for ichthyoplankton stations occupied during the 1980-81 CalCOFI survey. Cruises are designated by a six character alphanumeric code; the first two digits indicate the year and the second two the month, followed by the ship code, JD (*David Starr Jordan*) or RV *New Horizon*. Within each cruise the data are listed in order of increasing line and station number (southerly and seaward directions); the order of station occupancy is shown on the station charts (Figures 3–8). Stations are designated by two groups of numbers; the first set indicates the line and decimal fraction and the second set indicates the station and decimal fraction. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. The values for total fish eggs and larvae are raw counts (unadjusted for volume of water filtered). The listings for station latitude and longitude in this table may differ from values given for the same station in the SIO data reports, reflecting the slight difference in position of the net tow and hydrocast.

Table 2. Pooled occurrences of all larval fish taxa taken in Manta nets on the RV *David Starr Jordan* and the RV *New Horizon* during the 1980-81 CalCOFI survey. Taxa are listed in rank order.

Table 3. Pooled counts (unadjusted for volume of water filtered) of all larval fish taxa taken in Manta net tows on the the RV *David Starr Jordan* and the RV *New Horizon* during the 1980-81 CalCOFI survey. Taxa are listed in rank order.

Table 4. Numbers of fish larvae for each taxon taken in Manta net tows on the RV *David Starr Jordan* and the RV *New Horizon* during the 1980-81 CalCOFI survey. Numbers of larvae are listed as number per 100 $m^3$ of water filtered. Orders and families are listed in phylogenetic sequence (Eschmeyer 1998); other taxa are listed alphabetically.

## ACKNOWLEDGMENTS

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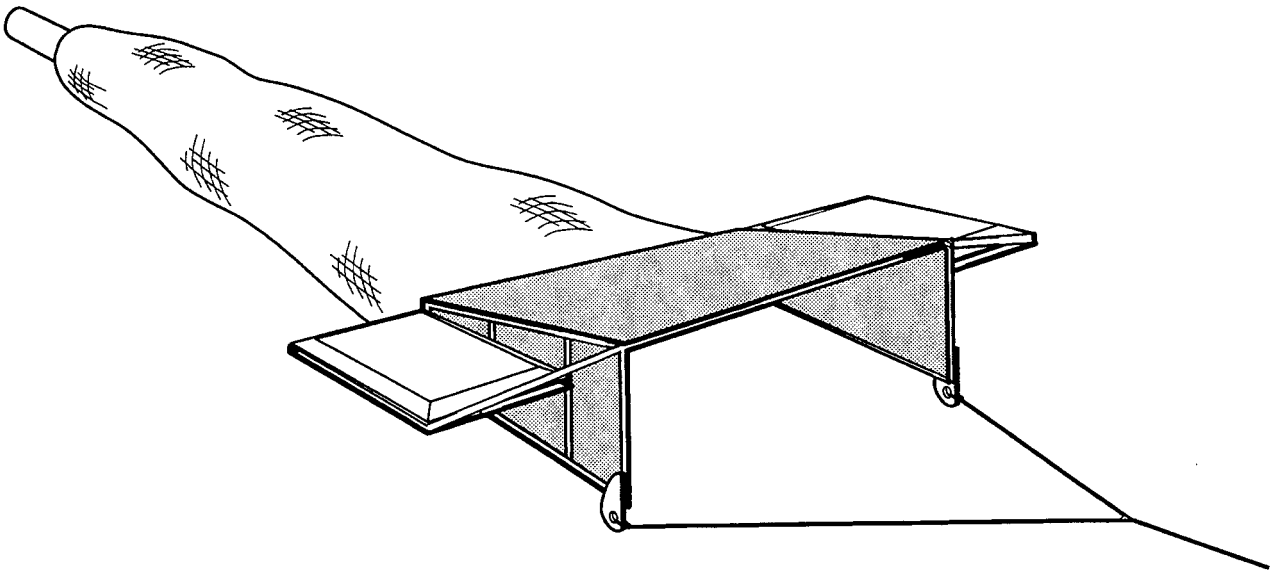

Figure 1. Diagram of the Manta net used on CalCOFI surveys.

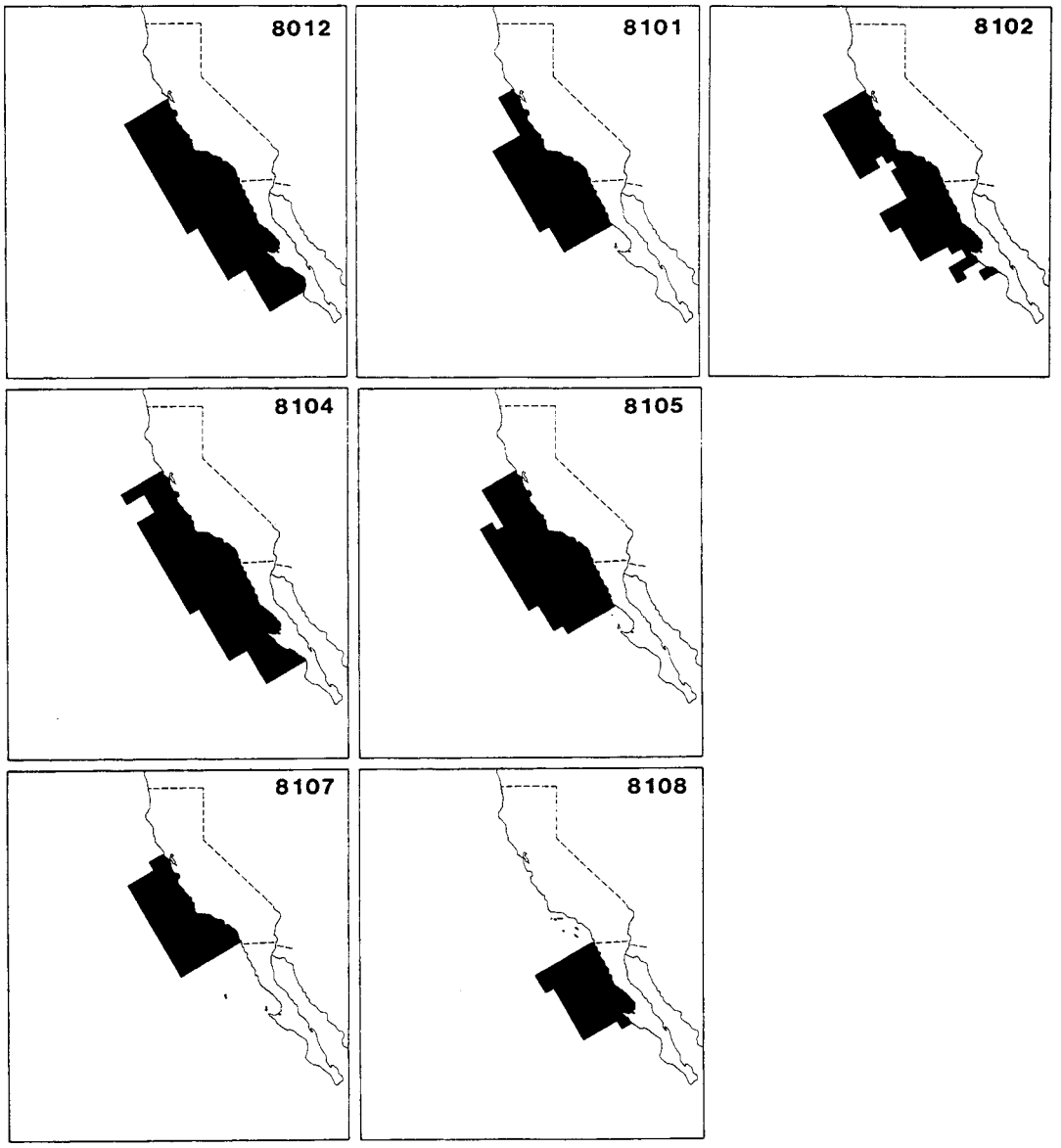


Figure 2. Composite arrangement of diagrammatic charts showing areas sampled on each CalCOFI cruise during 1980 - 81.

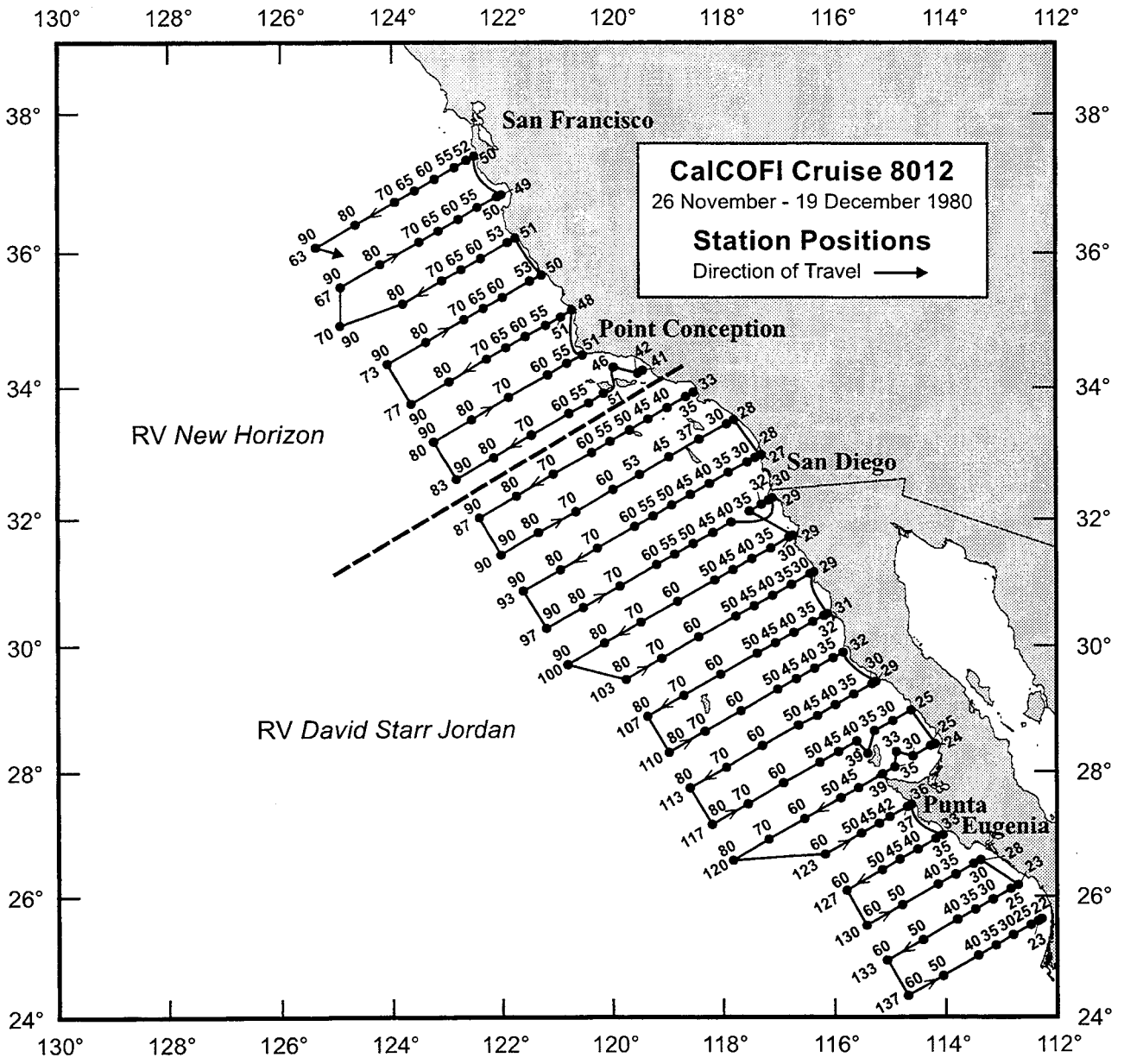


Figure 3. Stations and cruise tracks for CalCOFI Cruise 8012. Dots indicate stations where Manta and oblique tows were taken; open circles indicate stations where only oblique tows were taken.

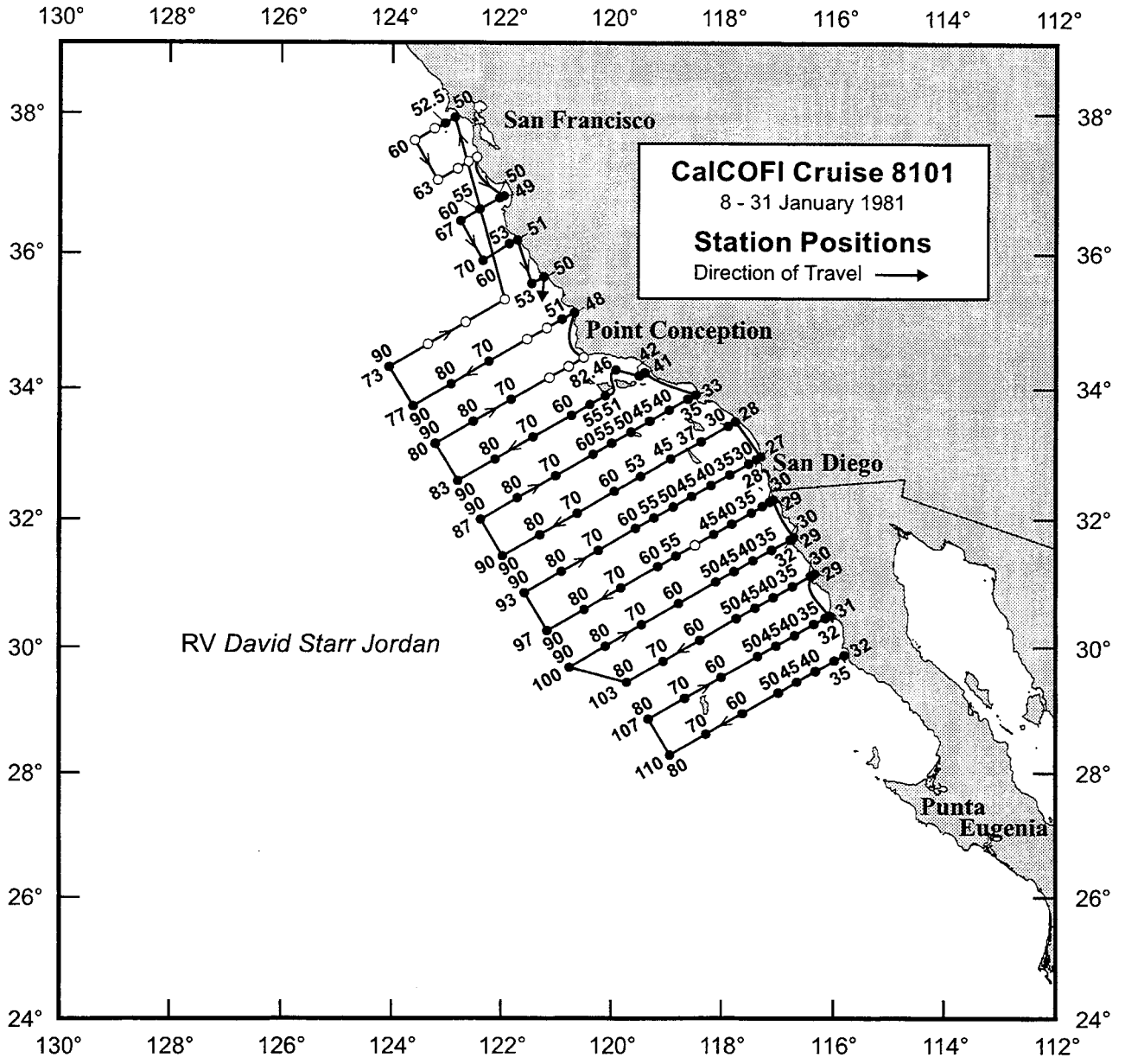


Figure 4. Stations and cruise tracks for CalCOFI Cruise 8101. Symbols as in Figure 3.

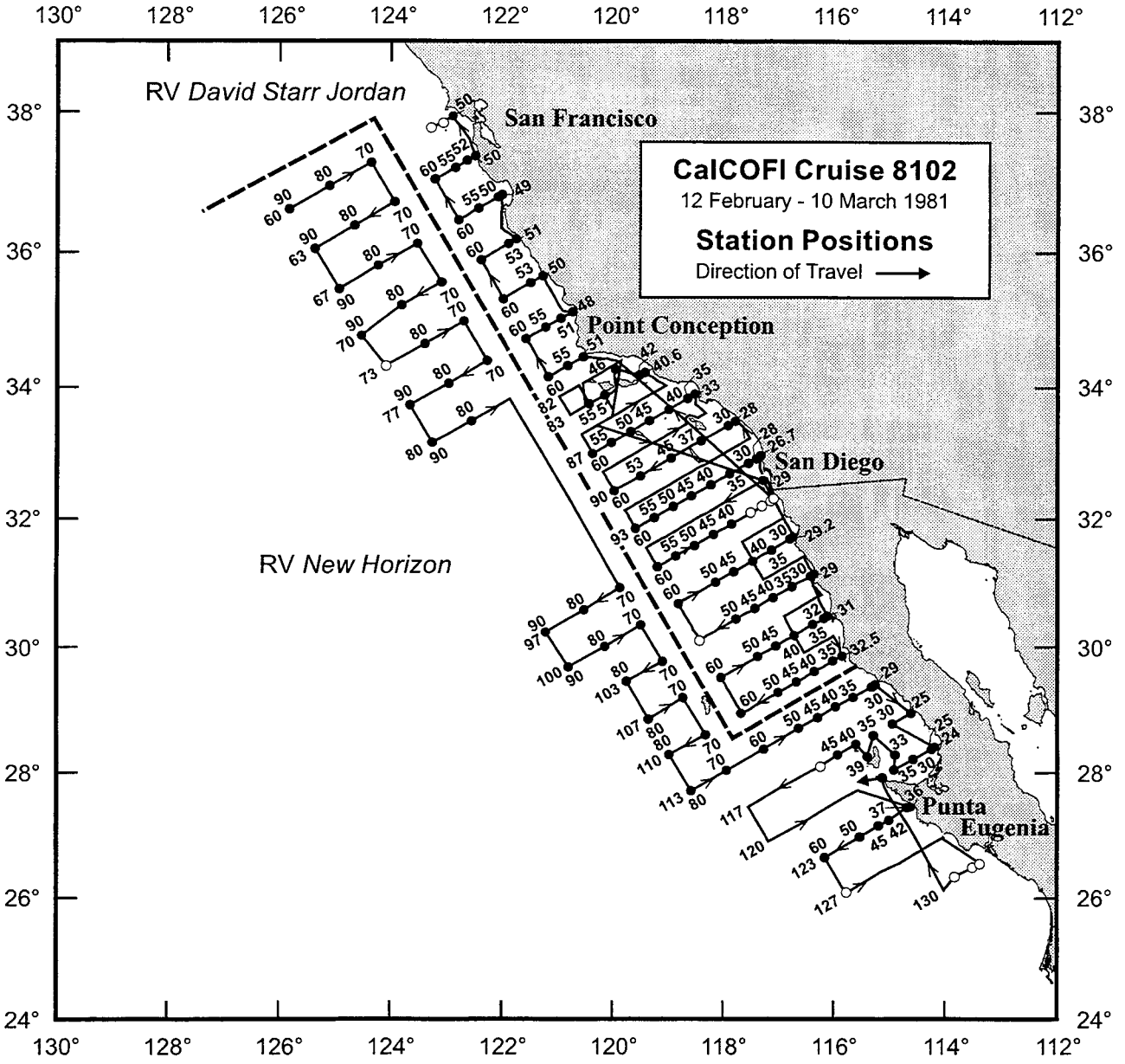


Figure 5. Stations and cruise tracks for CalCOFI Cruise 8102. Symbols as in Figure 3. A Manta tow without an accompanying oblique tow was taken at station 60.0 50.0.

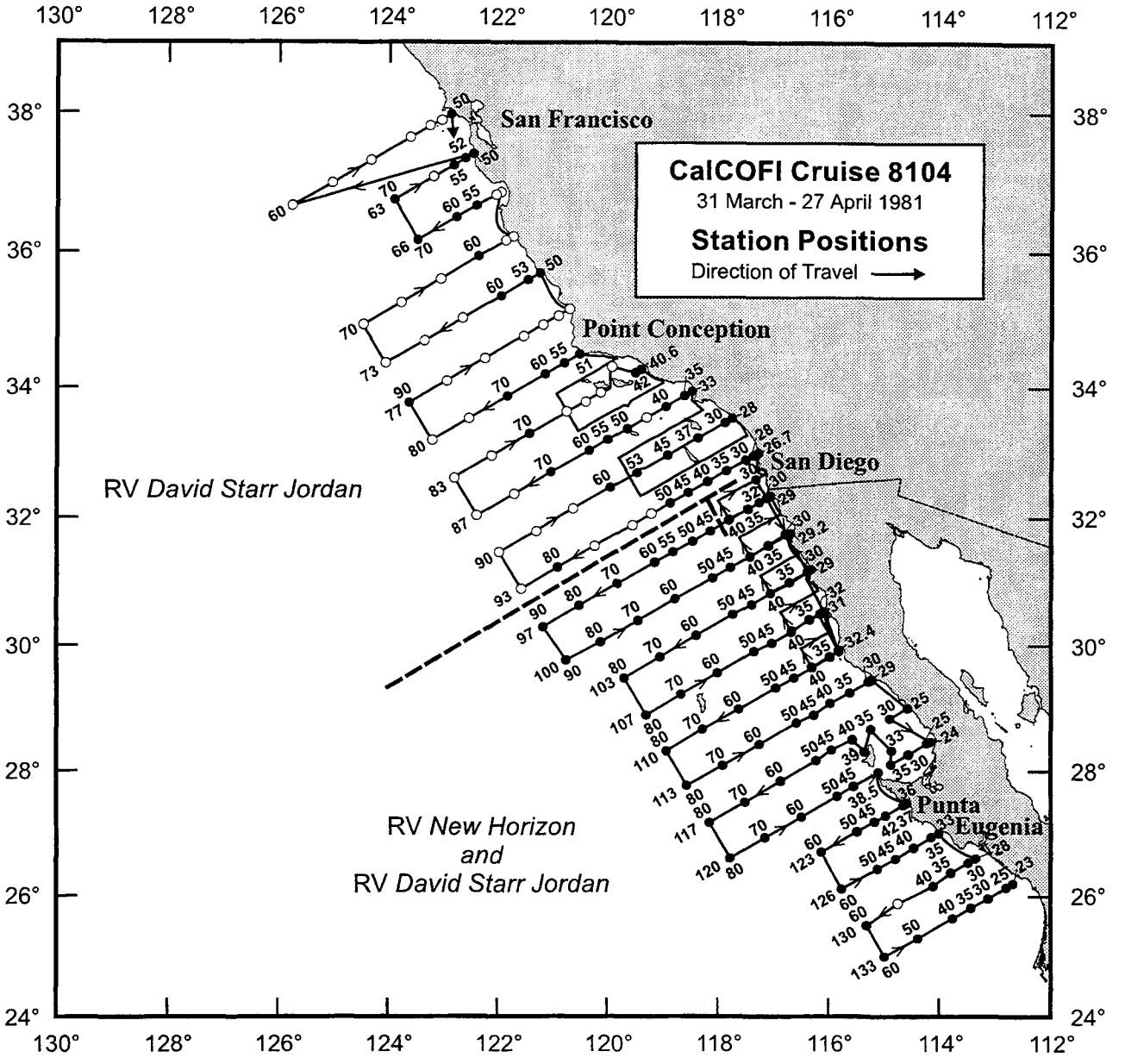


Figure 6. Stations and cruise tracks for CalCOFI Cruise 8104. Symbols as in Figure 3. RV *David Starr Jordan's* first station was 95.0 30.0 and then it transited south to station 110.0 32.5 and sampled the first 10 lines south of San Diego out to station 40.0 and all lines north of San Diego. RV *New Horizon's* first station was 96.7 29.0 and it sampled the 12 basic CalCOFI lines south of San Diego. Both ships occupied some of the same inshore stations (see Table 1).

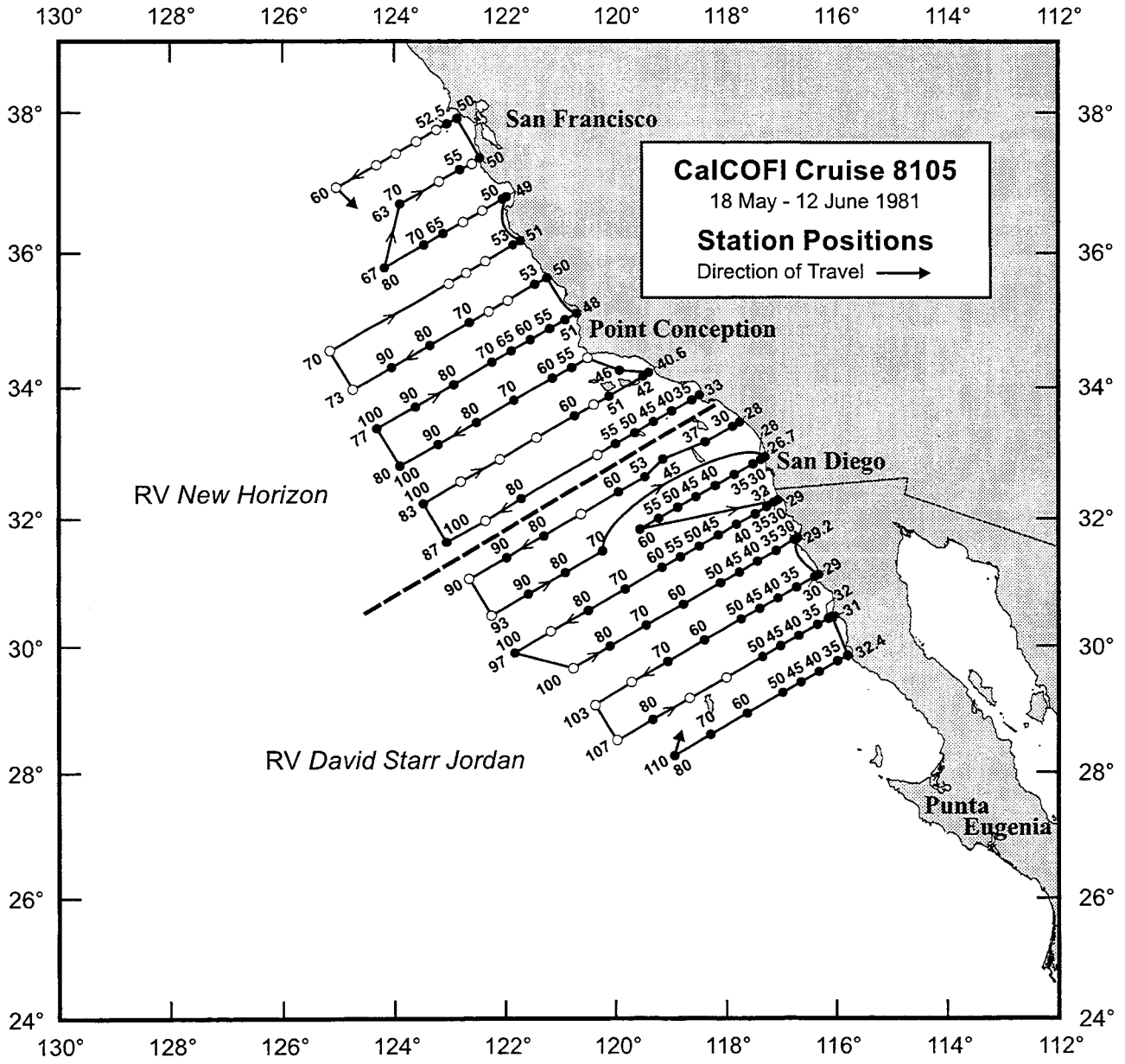


Figure 7. Stations and cruise tracks for CalCOFI Cruise 8105. Symbols as in Figure 3. Manta tows without accompanying oblique tows were taken at stations 70.0 53.0 and 73.3 70.0.

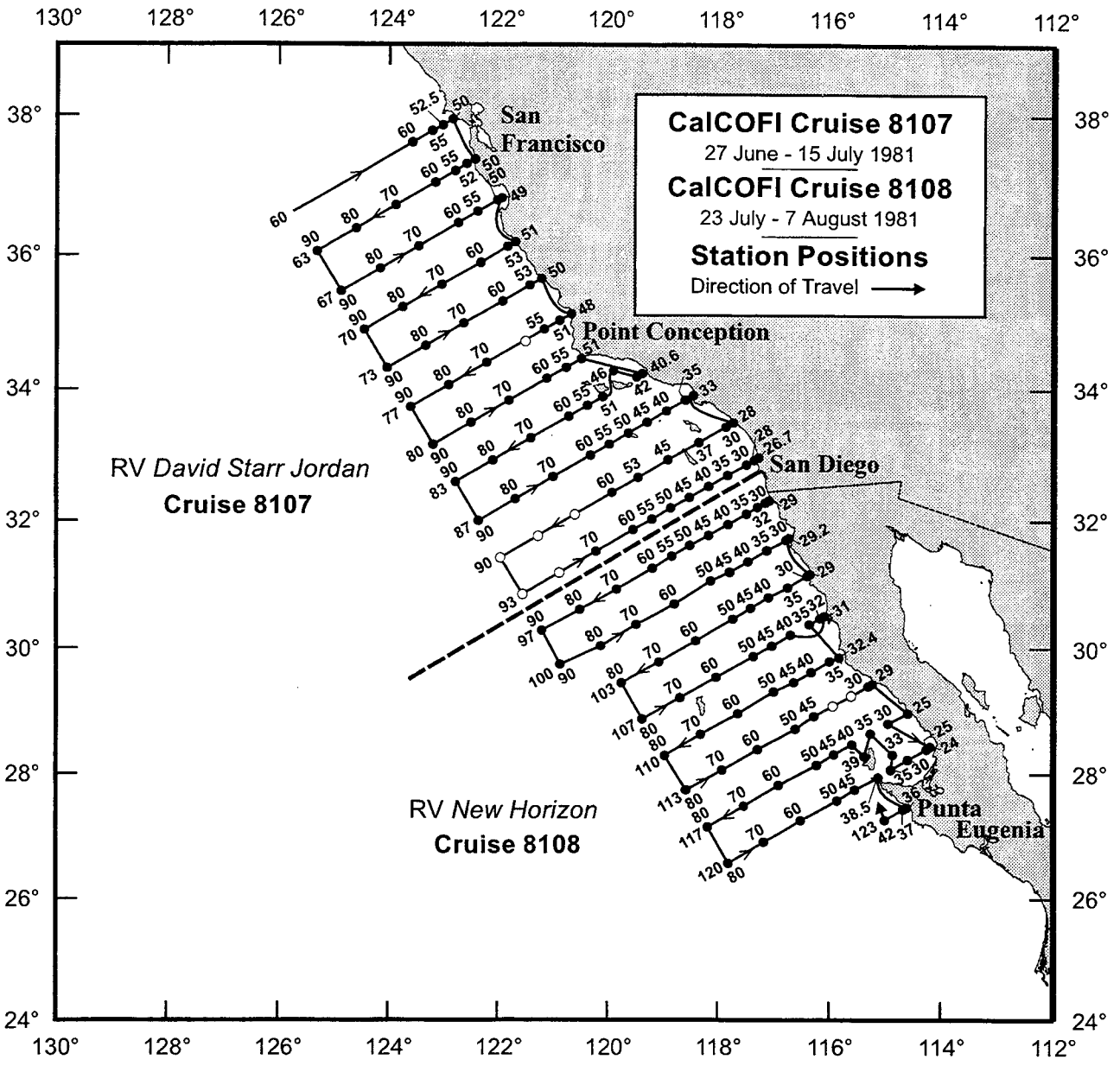


Figure 8. Stations and cruise tracks for CalCOFI Cruises 8107 and 8108. Symbols as in Figure 3.

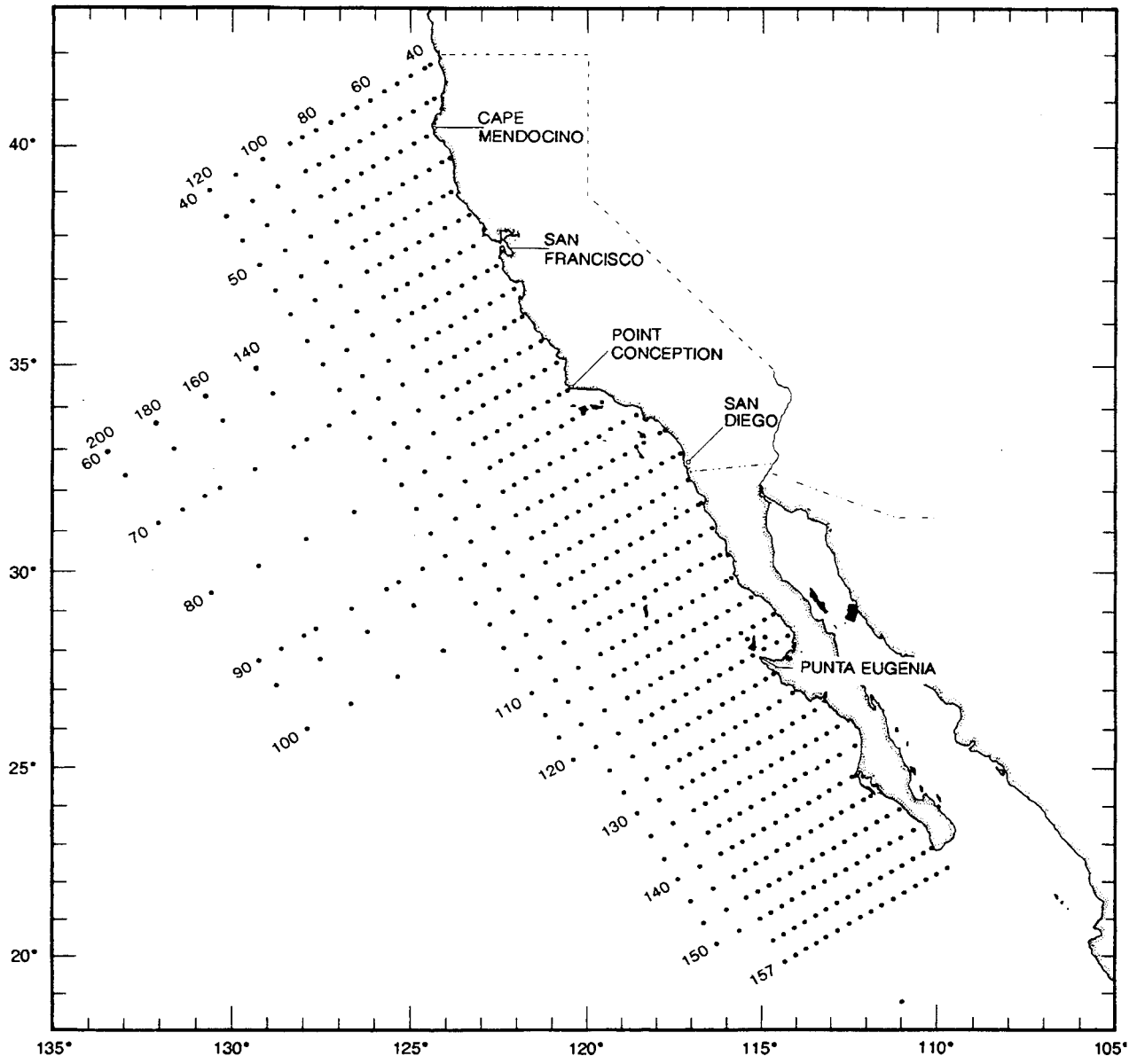


Figure 9. The basic station plan for CalCOFI cruises from 1950 - 1984.

TABLE 1. Station and plankton tow data for Manta tows taken on the 1980 and 1981 CalCOFI surveys. Numbers of fish eggs and larvae are raw counts, unadjusted for volume (cubic meters) of water filtered.

CalCOFI Cruise 8012

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 | 50.0 | 37 | 22.7 | 122 | 28.6 | NH | 80 | 12 | 17 | 1014 | 77 | 0 | 58 |
| 63.3 | 52.0 | 37 | 18.9 | 122 | 37.0 | NH | 80 | 12 | 17 | 1200 | 72 | 31 | 2126 |
| 63.3 | 55.0 | 37 | 12.5 | 122 | 50.3 | NH | 80 | 12 | 17 | 1451 | 78 | 15 | 39 |
| 63.3 | 60.0 | 37 | 02.5 | 123 | 11.9 | NH | 80 | 12 | 17 | 1846 | 75 | 10 | 2 |
| 63.3 | 65.0 | 36 | 52.5 | 123 | 33.4 | NH | 80 | 12 | 17 | 2232 | 67 | 26 | 4 |
| 63.3 | 70.0 | 36 | 42.4 | 123 | 55.0 | NH | 80 | 12 | 18 | 0217 | 69 | 2 | 10 |
| 63.3 | 80.0 | 36 | 22.6 | 124 | 37.6 | NH | 80 | 12 | 18 | 0746 | 79 | 1 | 195 |
| 63.3 | 90.0 | 36 | 02.6 | 125 | 20.5 | NH | 80 | 12 | 18 | 1302 | 67 | 1 | 26 |
| 66.7 | 49.0 | 36 | 49.2 | 121 | 59.1 | NH | 80 | 12 | 17 | 0442 | 110 | 78 | 3203 |
| 66.7 | 50.0 | 36 | 47.3 | 122 | 03.4 | NH | 80 | 12 | 17 | 0307 | 88 | 40 | 2 |
| 66.7 | 55.0 | 36 | 37.7 | 122 | 25.0 | NH | 80 | 12 | 16 | 2344 | 68 | 28 | 190 |
| 66.7 | 60.0 | 36 | 27.2 | 122 | 46.4 | NH | 80 | 12 | 16 | 2039 | 94 | 12 | 33 |
| 66.7 | 65.0 | 36 | 17.2 | 123 | 07.8 | NH | 80 | 12 | 16 | 1713 | 77 | 8 | 2 |
| 66.7 | 70.0 | 36 | 07.2 | 123 | 29.1 | NH | 80 | 12 | 16 | 1257 | 78 | 0 | 3 |
| 66.7 | 80.0 | 35 | 47.2 | 124 | 11.7 | NH | 80 | 12 | 16 | 0720 | 66 | 4 | 2 |
| 66.7 | 90.0 | 35 | 27.3 | 124 | 54.1 | NH | 80 | 12 | 16 | 0111 | 75 | 7 | 1 |
| 70.0 | 51.0 | 36 | 10.9 | 121 | 43.6 | NH | 80 | 12 | 14 | 1605 | 80 | 57 | 8 |
| 70.0 | 53.0 | 36 | 06.9 | 121 | 52.3 | NH | 80 | 12 | 14 | 1855 | 75 | 359 | 1 |
| 70.0 | 60.0 | 35 | 52.9 | 122 | 21.9 | NH | 80 | 12 | 14 | 2335 | 65 | 16 | 1 |
| 70.0 | 65.0 | 35 | 42.9 | 122 | 43.1 | NH | 80 | 12 | 15 | 0338 | 65 | 3 | 1 |
| 70.0 | 70.0 | 35 | 32.9 | 123 | 04.4 | NH | 80 | 12 | 15 | 0641 | 68 | 3 | 3 |
| 70.0 | 80.0 | 35 | 12.6 | 123 | 46.9 | NH | 80 | 12 | 15 | 1402 | 84 | 2 | 5 |
| 70.0 | 90.0 | 34 | 53.0 | 124 | 54.3 | NH | 80 | 12 | 15 | 2006 | 82 | 2 | 4 |
| 73.3 | 50.0 | 35 | 38.2 | 121 | 15.4 | NH | 80 | 12 | 14 | 1035 | 96 | 165 | 26 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.1 | NH | 80 | 12 | 14 | 0846 | 77 | 3 | 2 |
| 73.3 | 60.0 | 35 | 18.6 | 121 | 57.7 | NH | 80 | 12 | 14 | 0437 | 70 | 1 | 7 |
| 73.3 | 65.0 | 35 | 08.6 | 122 | 18.8 | NH | 80 | 12 | 14 | 0127 | 91 | 5 | 3 |
| 73.3 | 70.0 | 34 | 58.6 | 122 | 40.1 | NH | 80 | 12 | 13 | 2214 | 95 | 6 | 9 |
| 73.3 | 80.0 | 34 | 38.6 | 123 | 21.9 | NH | 80 | 12 | 13 | 1654 | 78 | 2 | 1 |
| 73.3 | 90.0 | 34 | 18.3 | 124 | 03.9 | NH | 80 | 12 | 13 | 1136 | 97 | 0 | 10 |
| 76.7 | 48.0 | 35 | 07.3 | 120 | 42.4 | NH | 80 | 12 | 12 | 0549 | 89 | 132 | 245 |
| 76.7 | 51.0 | 35 | 00.8 | 120 | 54.7 | NH | 80 | 12 | 12 | 0809 | 91 | 12 | 12 |
| 76.7 | 55.0 | 34 | 53.5 | 121 | 11.4 | NH | 80 | 12 | 12 | 1044 | 88 | 7 | 58 |
| 76.7 | 60.0 | 34 | 43.3 | 121 | 32.9 | NH | 80 | 12 | 12 | 1351 | 73 | 1 | 55 |
| 76.7 | 65.0 | 34 | 33.3 | 121 | 53.9 | NH | 80 | 12 | 12 | 1659 | 87 | 20 | 203 |
| 76.7 | 70.0 | 34 | 23.3 | 122 | 14.8 | NH | 80 | 12 | 12 | 2000 | 82 | 12 | 5 |
| 76.7 | 80.0 | 34 | 03.2 | 122 | 56.6 | NH | 80 | 12 | 13 | 0103 | 81 | 4 | 4 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | NH | 80 | 12 | 13 | 0619 | 68 | 6 | 6 |
| 80.0 | 51.0 | 34 | 27.0 | 120 | 31.4 | NH | 80 | 12 | 12 | 0011 | 130 | 40 | 338 |
| 80.0 | 55.0 | 34 | 19.5 | 120 | 48.0 | NH | 80 | 12 | 11 | 2116 | 89 | 6 | 4 |
| 80.0 | 60.0 | 34 | 09.0 | 121 | 09.0 | NH | 80 | 12 | 11 | 1709 | 82 | 5 | 6 |
| 80.0 | 70.0 | 33 | 48.9 | 121 | 50.8 | NH | 80 | 12 | 11 | 1116 | 86 | 0 | 7 |
| 80.0 | 80.0 | 33 | 29.0 | 122 | 32.0 | NH | 80 | 12 | 11 | 0512 | 76 | 21 | 3 |
| 80.0 | 90.0 | 33 | 09.0 | 123 | 13.3 | NH | 80 | 12 | 10 | 2213 | 85 | 6 | 1 |
| 82.0 | 46.0 | 34 | 15.8 | 119 | 57.0 | NH | 80 | 12 | 09 | 1355 | 78 | 9 | 102 |
| 83.3 | 40.6 | 34 | 13.0 | 119 | 25.5 | NH | 80 | 12 | 09 | 0915 | 83 | 3 | 939 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | NH | 80 | 12 | 09 | 1055 | 82 | 0 | 125 |

TABLE 1. (cont.) CalCOFI Cruise 8012 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 | 51.0 | 33 | 52.7 | 120 | 08.0 | NH | 80 | 12 | 09 | 1900 | 113 | 2 | 30 |
| 83.3 | 55.0 | 33 | 44.3 | 120 | 23.8 | NH | 80 | 12 | 09 | 2126 | 82 | 1 | 3 |
| 83.3 | 60.0 | 33 | 34.7 | 120 | 45.4 | NH | 80 | 12 | 10 | 0105 | 88 | 5 | 2 |
| 83.3 | 70.0 | 33 | 14.7 | 121 | 26.6 | NH | 80 | 12 | 10 | 0623 | 88 | 1 | 3 |
| 83.3 | 80.0 | 32 | 54.9 | 122 | 07.5 | NH | 80 | 12 | 10 | 1135 | 77 | 8 | 4 |
| 83.3 | 90.0 | 32 | 34.7 | 122 | 48.7 | NH | 80 | 12 | 10 | 1712 | 103 | 0 | 9 |
| 86.7 | 33.0 | 33 | 53.4 | 118 | 29.4 | JD | 80 | 11 | 26 | 0630 | 139 | 8 | 59 |
| 86.7 | 35.0 | 33 | 49.4 | 118 | 37.7 | JD | 80 | 11 | 26 | 0825 | 133 | 1 | 4 |
| 86.7 | 40.0 | 33 | 39.4 | 118 | 58.5 | JD | 80 | 11 | 26 | 1125 | 124 | 0 | 0 |
| 86.7 | 45.0 | 33 | 29.4 | 119 | 19.1 | JD | 80 | 11 | 26 | 1450 | 117 | 0 | 14 |
| 86.7 | 50.0 | 33 | 19.4 | 119 | 39.7 | JD | 80 | 11 | 26 | 1830 | 67 | 12 | 18 |
| 86.7 | 55.0 | 33 | 09.5 | 120 | 00.4 | JD | 80 | 11 | 26 | 2150 | 114 | 3 | 0 |
| 86.7 | 60.0 | 32 | 59.4 | 120 | 21.0 | JD | 80 | 11 | 27 | 0110 | 84 | 5 | 3 |
| 86.7 | 70.0 | 32 | 39.4 | 121 | 02.8 | JD | 80 | 11 | 27 | 0640 | 79 | 1 | 1 |
| 86.7 | 80.0 | 32 | 19.4 | 121 | 42.8 | JD | 80 | 11 | 27 | 1145 | 90 | 3 | 7 |
| 86.7 | 90.0 | 31 | 59.4 | 122 | 23.6 | JD | 80 | 11 | 27 | 1705 | 92 | 1 | 2 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 80 | 11 | 29 | 1305 | 120 | 2 | 2 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 80 | 11 | 29 | 1100 | 94 | 0 | 1 |
| 90.0 | 37.0 | 33 | 11.2 | 118 | 23.2 | JD | 80 | 11 | 29 | 0630 | 116 | 0 | 120 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.1 | JD | 80 | 11 | 29 | 0140 | 114 | 0 | 1 |
| 90.0 | 53.0 | 32 | 39.2 | 119 | 28.9 | JD | 80 | 11 | 28 | 2025 | 141 | 1 | 3 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 80 | 11 | 28 | 1610 | 71 | 1 | 2 |
| 90.0 | 70.0 | 32 | 05.0 | 120 | 38.2 | JD | 80 | 11 | 28 | 1035 | 97 | 1 | 16 |
| 90.0 | 80.0 | 31 | 45.2 | 121 | 19.0 | JD | 80 | 11 | 28 | 0450 | 86 | 9 | 2 |
| 90.0 | 90.0 | 31 | 25.1 | 121 | 59.4 | JD | 80 | 11 | 27 | 2255 | 119 | 19 | 7 |
| 93.3 | 26.7 | 32 | 57.3 | 117 | 18.4 | JD | 80 | 11 | 29 | 1745 | 91 | 5 | 0 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.4 | JD | 80 | 11 | 29 | 1910 | 86 | 1 | 0 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 80 | 11 | 29 | 2115 | 105 | 0 | 0 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 80 | 11 | 30 | 0020 | 112 | 6 | 3 |
| 93.3 | 40.0 | 32 | 30.8 | 118 | 12.8 | JD | 80 | 11 | 30 | 0320 | 114 | 0 | 0 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.2 | JD | 80 | 11 | 30 | 0615 | 58 | 0 | 1 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.5 | JD | 80 | 11 | 30 | 0915 | 104 | 1 | 0 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 14.0 | JD | 80 | 11 | 30 | 1225 | 93 | 0 | 0 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 80 | 11 | 30 | 1530 | 108 | 0 | 3 |
| 93.3 | 70.0 | 31 | 30.8 | 120 | 14.7 | JD | 80 | 11 | 30 | 2030 | 91 | 13 | 2 |
| 93.3 | 80.0 | 31 | 10.8 | 120 | 55.2 | JD | 80 | 12 | 01 | 0145 | 116 | 7 | 2 |
| 93.3 | 90.0 | 30 | 50.8 | 121 | 35.4 | JD | 80 | 12 | 01 | 0640 | 109 | 24 | 22 |
| 96.7 | 29.0 | 32 | 17.4 | 117 | 04.8 | JD | 80 | 12 | 03 | 0220 | 103 | 19 | 22 |
| 96.7 | 30.0 | 32 | 15.4 | 117 | 08.8 | JD | 80 | 12 | 03 | 0350 | 101 | 2 | 2 |
| 96.7 | 32.0 | 32 | 11.4 | 117 | 17.0 | JD | 80 | 12 | 03 | 0540 | 88 | 1 | 2 |
| 96.7 | 35.0 | 32 | 05.5 | 117 | 29.3 | JD | 80 | 12 | 03 | 0805 | 102 | 0 | 0 |
| 96.7 | 40.0 | 31 | 55.4 | 117 | 49.3 | JD | 80 | 12 | 02 | 1555 | 106 | 0 | 0 |
| 96.7 | 45.0 | 31 | 45.4 | 118 | 09.1 | JD | 80 | 12 | 02 | 1250 | 85 | 0 | 1 |
| 96.7 | 50.0 | 31 | 35.4 | 118 | 30.1 | JD | 80 | 12 | 02 | 0905 | 133 | 0 | 0 |
| 96.7 | 55.0 | 31 | 25.5 | 118 | 50.2 | JD | 80 | 12 | 02 | 0535 | 95 | 6 | 4 |
| 96.7 | 60.0 | 31 | 15.4 | 119 | 10.5 | JD | 80 | 12 | 02 | 0235 | 103 | 5 | 5 |
| 96.7 | 70.0 | 30 | 55.4 | 119 | 50.7 | JD | 80 | 12 | 01 | 2140 | 107 | 11 | 6 |
| 96.7 | 80.0 | 30 | 35.3 | 120 | 30.8 | JD | 80 | 12 | 01 | 1645 | 108 | 8 | 5 |
| 96.7 | 90.0 | 30 | 15.3 | 121 | 10.8 | JD | 80 | 12 | 01 | 1150 | 104 | 9 | 34 |

TABLE 1. (cont.) CalCOFI Cruise 8012 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 | 29.2 | 31 | 42.8 | 116 | 43.4 | JD | 80 | 12 | 03 | 1425 | 114 | 24 | 132 |
| 100.0 | 30.0 | 31 | 41.2 | 116 | 46.6 | JD | 80 | 12 | 03 | 1615 | 101 | 10 | 30 |
| 100.0 | 35.0 | 31 | 31.3 | 117 | 06.6 | JD | 80 | 12 | 03 | 2020 | 117 | 1 | 0 |
| 100.0 | 40.0 | 31 | 21.2 | 117 | 27.1 | JD | 80 | 12 | 04 | 0010 | 118 | 1 | 3 |
| 100.0 | 45.0 | 31 | 11.2 | 117 | 47.2 | JD | 80 | 12 | 04 | 0345 | 94 | 1 | 0 |
| 100.0 | 50.0 | 31 | 01.2 | 118 | 07.0 | JD | 80 | 12 | 04 | 0735 | 97 | 0 | 0 |
| 100.0 | 60.0 | 30 | 41.2 | 118 | 47.5 | JD | 80 | 12 | 04 | 1340 | 94 | 0 | 1 |
| 100.0 | 70.0 | 30 | 21.2 | 119 | 27.7 | JD | 80 | 12 | 04 | 1920 | 92 | 2 | 0 |
| 100.0 | 80.0 | 30 | 01.2 | 120 | 07.4 | JD | 80 | 12 | 05 | 0055 | 70 | 5 | 2 |
| 100.0 | 90.0 | 29 | 41.2 | 120 | 47.2 | JD | 80 | 12 | 05 | 0635 | 91 | 33 | 10 |
| 103.3 | 29.0 | 31 | 08.9 | 116 | 20.5 | JD | 80 | 12 | 06 | 1845 | 96 | 15 | 226 |
| 103.3 | 30.0 | 31 | 07.1 | 116 | 24.5 | JD | 80 | 12 | 06 | 1730 | 96 | 15 | 0 |
| 103.3 | 35.0 | 30 | 56.9 | 116 | 44.6 | JD | 80 | 12 | 06 | 1420 | 104 | 0 | 0 |
| 103.3 | 40.0 | 30 | 46.8 | 117 | 04.8 | JD | 80 | 12 | 06 | 1110 | 89 | 0 | 0 |
| 103.3 | 45.0 | 30 | 37.0 | 117 | 24.7 | JD | 80 | 12 | 06 | 0755 | 102 | 0 | 1 |
| 103.3 | 50.0 | 30 | 26.9 | 117 | 44.6 | JD | 80 | 12 | 06 | 0435 | 84 | 5 | 0 |
| 103.3 | 60.0 | 30 | 06.9 | 118 | 24.6 | JD | 80 | 12 | 05 | 2335 | 85 | 4 | 3 |
| 103.3 | 70.0 | 29 | 46.6 | 119 | 04.6 | JD | 80 | 12 | 05 | 1835 | 85 | 3 | 0 |
| 103.3 | 80.0 | 29 | 26.9 | 119 | 44.1 | JD | 80 | 12 | 05 | 1315 | 88 | 2 | 8 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.8 | JD | 80 | 12 | 07 | 0010 | 114 | 42 | 308 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 09.8 | JD | 80 | 12 | 07 | 0105 | 110 | 39 | 127 |
| 106.7 | 35.0 | 30 | 21.5 | 116 | 21.8 | JD | 80 | 12 | 07 | 0320 | 90 | 12 | 4 |
| 106.7 | 40.0 | 30 | 11.5 | 116 | 41.8 | JD | 80 | 12 | 07 | 0640 | 96 | 0 | 0 |
| 106.7 | 45.0 | 30 | 01.4 | 117 | 01.7 | JD | 80 | 12 | 07 | 0950 | 91 | 0 | 0 |
| 106.7 | 50.0 | 29 | 51.5 | 117 | 21.6 | JD | 80 | 12 | 07 | 1245 | 78 | 0 | 0 |
| 106.7 | 60.0 | 29 | 31.6 | 118 | 01.3 | JD | 80 | 12 | 07 | 1800 | 98 | 40 | 0 |
| 106.7 | 70.0 | 29 | 11.4 | 118 | 40.8 | JD | 80 | 12 | 07 | 2305 | 114 | 20 | 27 |
| 106.7 | 80.0 | 28 | 51.6 | 119 | 20.2 | JD | 80 | 12 | 08 | 0440 | 101 | 48 | 58 |
| 110.0 | 32.4 | 29 | 52.4 | 115 | 49.5 | JD | 80 | 12 | 09 | 1755 | 108 | 48 | 129 |
| 110.0 | 35.0 | 29 | 47.2 | 115 | 59.8 | JD | 80 | 12 | 09 | 1525 | 101 | 31 | 61 |
| 110.0 | 40.0 | 29 | 37.1 | 116 | 19.7 | JD | 80 | 12 | 09 | 1145 | 89 | 2 | 0 |
| 110.0 | 45.0 | 29 | 27.2 | 116 | 39.4 | JD | 80 | 12 | 09 | 0815 | 84 | 4 | 0 |
| 110.0 | 50.0 | 29 | 17.2 | 116 | 59.2 | JD | 80 | 12 | 09 | 0405 | 85 | 12 | 6 |
| 110.0 | 60.0 | 28 | 57.1 | 117 | 38.8 | JD | 80 | 12 | 08 | 2235 | 92 | 26 | 2 |
| 110.0 | 70.0 | 28 | 37.2 | 118 | 18.0 | JD | 80 | 12 | 08 | 1600 | 86 | 6 | 15 |
| 110.0 | 80.0 | 28 | 17.2 | 118 | 57.2 | JD | 80 | 12 | 08 | 1020 | 71 | 0 | 58 |
| 113.3 | 29.0 | 29 | 24.9 | 115 | 14.2 | JD | 80 | 12 | 09 | 2320 | 119 | 37 | 9 |
| 113.3 | 30.0 | 29 | 22.9 | 115 | 18.2 | JD | 80 | 12 | 10 | 0040 | 105 | 4 | 2 |
| 113.3 | 35.0 | 29 | 12.9 | 115 | 37.9 | JD | 80 | 12 | 10 | 0330 | 92 | 0 | 12 |
| 113.3 | 40.0 | 29 | 02.9 | 115 | 57.4 | JD | 80 | 12 | 10 | 0630 | 84 | 2 | 0 |
| 113.3 | 45.0 | 28 | 52.0 | 116 | 17.0 | JD | 80 | 12 | 10 | 1045 | 76 | 0 | 0 |
| 113.3 | 50.0 | 28 | 42.9 | 116 | 37.0 | JD | 80 | 12 | 10 | 1350 | 89 | 0 | 2 |
| 113.3 | 60.0 | 28 | 23.3 | 117 | 16.3 | JD | 80 | 12 | 10 | 1835 | 93 | 29 | 2 |
| 113.3 | 70.0 | 28 | 02.8 | 117 | 55.3 | JD | 80 | 12 | 10 | 2350 | 87 | 1 | 1 |
| 113.3 | 80.0 | 27 | 42.9 | 118 | 34.4 | JD | 80 | 12 | 11 | 0440 | 101 | 16 | 24 |
| 116.7 | 25.0 | 28 | 57.6 | 114 | 36.2 | JD | 80 | 12 | 12 | 1910 | 108 | 23 | 4 |
| 116.7 | 30.0 | 28 | 47.6 | 114 | 55.8 | JD | 80 | 12 | 12 | 1620 | 96 | 0 | 74 |
| 116.7 | 35.0 | 28 | 37.6 | 115 | 15.5 | JD | 80 | 12 | 12 | 1330 | 102 | 0 | 53 |
| 116.7 | 40.0 | 28 | 27.6 | 115 | 35.1 | JD | 80 | 12 | 12 | 0645 | 92 | 4 | 0 |

TABLE 1. (cont.) CalCOFI Cruise 8012 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 | 45.0 | 28 | 17.6 | 115 | 54.7 | JD | 80 | 12 | 12 | 0335 | 107 | 26 | 16 |
| 116.7 | 50.0 | 28 | 07.6 | 116 | 14.2 | JD | 80 | 12 | 12 | 0035 | 114 | 16 | 28 |
| 116.7 | 60.0 | 27 | 47.6 | 116 | 53.1 | JD | 80 | 12 | 11 | 1935 | 105 | 23 | 10 |
| 116.7 | 70.0 | 27 | 27.6 | 117 | 32.1 | JD | 80 | 12 | 11 | 1445 | 100 | 3 | 5 |
| 116.7 | 80.0 | 27 | 07.6 | 118 | 10.9 | JD | 80 | 12 | 11 | 0930 | 86 | 3 | 31 |
| 118.0 | 39.0 | 28 | 16.1 | 115 | 22.6 | JD | 80 | 12 | 12 | 0925 | 109 | 7 | 3 |
| 119.0 | 33.0 | 28 | 17.6 | 114 | 52.3 | JD | 80 | 12 | 13 | 0650 | 112 | 1 | 518 |
| 120.0 | 24.0 | 28 | 25.0 | 114 | 10.0 | JD | 80 | 12 | 12 | 2355 | 104 | 221 | 69 |
| 120.0 | 25.0 | 28 | 23.3 | 114 | 14.7 | JD | 80 | 12 | 13 | 0120 | 116 | 52 | 59 |
| 120.0 | 30.0 | 28 | 13.3 | 114 | 34.4 | JD | 80 | 12 | 13 | 0415 | 113 | 34 | 7 |
| 120.0 | 35.0 | 28 | 03.3 | 114 | 53.8 | JD | 80 | 12 | 13 | 0915 | 116 | 1 | 91 |
| 120.0 | 38.5 | 27 | 56.3 | 115 | 07.4 | JD | 80 | 12 | 13 | 1140 | 115 | 12 | 22 |
| 120.0 | 45.0 | 27 | 43.3 | 115 | 32.8 | JD | 80 | 12 | 13 | 1540 | 102 | 14 | 50 |
| 120.0 | 50.0 | 27 | 33.3 | 115 | 52.2 | JD | 80 | 12 | 13 | 1920 | 98 | 4 | 95 |
| 120.0 | 60.0 | 27 | 13.3 | 116 | 31.0 | JD | 80 | 12 | 14 | 0050 | 95 | 32 | 37 |
| 120.0 | 70.0 | 26 | 53.3 | 117 | 09.6 | JD | 80 | 12 | 14 | 0615 | 94 | 12 | 1 |
| 120.0 | 80.0 | 26 | 33.0 | 117 | 48.0 | JD | 80 | 12 | 14 | 1200 | 97 | 1 | 36 |
| 123.3 | 36.0 | 27 | 27.0 | 114 | 36.1 | JD | 80 | 12 | 15 | 1405 | 112 | 137 | 228 |
| 123.3 | 37.0 | 27 | 25.0 | 114 | 40.0 | JD | 80 | 12 | 15 | 1240 | 119 | 24 | 1419 |
| 123.3 | 42.0 | 27 | 15.0 | 114 | 59.4 | JD | 80 | 12 | 15 | 0935 | 91 | 2 | 2 |
| 123.3 | 45.0 | 27 | 09.0 | 115 | 11.0 | JD | 80 | 12 | 15 | 0700 | 96 | 1 | 2 |
| 123.3 | 50.0 | 26 | 59.0 | 115 | 30.3 | JD | 80 | 12 | 15 | 0340 | 91 | 3 | 3 |
| 123.3 | 60.0 | 26 | 38.9 | 116 | 08.9 | JD | 80 | 12 | 14 | 2205 | 84 | 1 | 10 |
| 126.7 | 33.0 | 26 | 57.7 | 114 | 02.2 | JD | 80 | 12 | 15 | 1910 | 96 | 4 | 13 |
| 126.7 | 35.0 | 26 | 53.7 | 114 | 10.0 | JD | 80 | 12 | 15 | 2110 | 102 | 5 | 94 |
| 126.7 | 40.0 | 26 | 43.7 | 114 | 29.4 | JD | 80 | 12 | 16 | 0015 | 97 | 3 | 2 |
| 126.7 | 45.0 | 26 | 33.7 | 114 | 48.6 | JD | 80 | 12 | 16 | 0325 | 101 | 1 | 25 |
| 126.7 | 50.0 | 26 | 23.7 | 115 | 08.0 | JD | 80 | 12 | 16 | 0640 | 94 | 0 | 0 |
| 126.7 | 60.0 | 26 | 03.7 | 115 | 46.2 | JD | 80 | 12 | 16 | 1150 | 101 | 0 | 14 |
| 130.0 | 28.0 | 26 | 33.4 | 113 | 21.7 | JD | 80 | 12 | 17 | 1400 | 120 | 18 | 965 |
| 130.0 | 30.0 | 26 | 29.4 | 113 | 29.3 | JD | 80 | 12 | 17 | 1145 | 112 | 12 | 1345 |
| 130.0 | 35.0 | 26 | 19.4 | 113 | 48.7 | JD | 80 | 12 | 17 | 0830 | 98 | 2 | 0 |
| 130.0 | 40.0 | 26 | 09.4 | 114 | 07.9 | JD | 80 | 12 | 17 | 0510 | 113 | 1 | 5 |
| 130.0 | 50.0 | 25 | 49.4 | 114 | 46.1 | JD | 80 | 12 | 16 | 2330 | 107 | 0 | 40 |
| 130.0 | 60.0 | 25 | 29.4 | 115 | 24.4 | JD | 80 | 12 | 16 | 1725 | 98 | 0 | 0 |
| 133.3 | 23.0 | 26 | 09.1 | 112 | 41.3 | JD | 80 | 12 | 17 | 1855 | 106 | 0 | 275 |
| 133.3 | 25.0 | 26 | 05.1 | 112 | 49.1 | JD | 80 | 12 | 17 | 2030 | 115 | 0 | 0 |
| 133.3 | 30.0 | 25 | 55.1 | 113 | 08.1 | JD | 80 | 12 | 17 | 2320 | 108 | 0 | 0 |
| 133.3 | 35.0 | 25 | 45.1 | 113 | 27.4 | JD | 80 | 12 | 18 | 0215 | 114 | 1 | 9 |
| 133.3 | 40.0 | 25 | 35.5 | 113 | 46.7 | JD | 80 | 12 | 18 | 0505 | 110 | 0 | 1431 |
| 133.3 | 50.0 | 25 | 15.0 | 114 | 24.0 | JD | 80 | 12 | 18 | 1015 | 101 | 2 | 4 |
| 133.3 | 60.0 | 24 | 55.1 | 115 | 02.7 | JD | 80 | 12 | 18 | 1500 | 109 | 2 | 4 |
| 136.7 | 22.0 | 25 | 35.8 | 112 | 16.2 | JD | 80 | 12 | 19 | 1945 | 97 | 21 | 52 |
| 136.7 | 23.0 | 25 | 33.8 | 112 | 19.8 | JD | 80 | 12 | 19 | 1815 | 106 | 7 | 29 |
| 136.7 | 25.0 | 25 | 29.8 | 112 | 27.4 | JD | 80 | 12 | 19 | 1630 | 100 | 24 | 565 |
| 136.7 | 30.0 | 25 | 19.8 | 112 | 46.5 | JD | 80 | 12 | 19 | 1235 | 91 | 0 | 0 |
| 136.7 | 35.0 | 25 | 09.7 | 113 | 05.5 | JD | 80 | 12 | 19 | 0930 | 104 | 0 | 40 |
| 136.7 | 40.0 | 24 | 59.9 | 113 | 24.4 | JD | 80 | 12 | 19 | 0620 | 101 | 1 | 46 |
| 136.7 | 50.0 | 24 | 39.8 | 114 | 02.5 | JD | 80 | 12 | 19 | 0115 | 106 | 4 | 75 |
| 136.7 | 60.0 | 24 | 19.8 | 114 | 40.3 | JD | 80 | 12 | 18 | 2005 | 94 | 7 | 3 |

TABLE 1. (cont.) CalCOFI Cruise 8101

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 37 | 56.8 | 122 | 52.9 | JD | 81 | 01 | 29 | 1223 | 75 | 164 | 1372 |
| 60.0 | 52.5 | 37 | 51.8 | 123 | 03.8 | JD | 81 | 01 | 29 | 1447 | 56 | 6 | 15 |
| 66.7 | 49.0 | 36 | 49.2 | 121 | 59.1 | JD | 81 | 01 | 30 | 1208 | 71 | 23 | 777 |
| 66.7 | 50.0 | 36 | 47.2 | 122 | 03.4 | JD | 81 | 01 | 30 | 1348 | 69 | 17 | 4 |
| 66.7 | 55.0 | 36 | 37.2 | 122 | 24.9 | JD | 81 | 01 | 30 | 1647 | 70 | 7 | 1 |
| 66.7 | 60.0 | 36 | 27.3 | 122 | 46.4 | JD | 81 | 01 | 30 | 1940 | 75 | 4 | 1 |
| 70.0 | 51.0 | 36 | 10.7 | 121 | 43.9 | JD | 81 | 01 | 31 | 0717 | 77 | 28 | 1 |
| 70.0 | 53.0 | 36 | 07.1 | 121 | 52.6 | JD | 81 | 01 | 31 | 0511 | 81 | 42 | 1 |
| 70.0 | 60.0 | 35 | 52.9 | 122 | 21.9 | JD | 81 | 01 | 31 | 0048 | 74 | 19 | 4 |
| 73.3 | 50.0 | 35 | 38.6 | 121 | 15.3 | JD | 81 | 01 | 31 | 1347 | 86 | 28 | 53 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.0 | JD | 81 | 01 | 31 | 1158 | 97 | 5 | 18 |
| 73.3 | 90.0 | 34 | 18.4 | 124 | 03.4 | JD | 81 | 01 | 26 | 1945 | 70 | 0 | 2 |
| 76.7 | 48.0 | 35 | 07.3 | 120 | 42.3 | JD | 81 | 01 | 25 | 1119 | 82 | 102 | 196 |
| 76.7 | 51.0 | 35 | 01.3 | 120 | 55.1 | JD | 81 | 01 | 25 | 1330 | 65 | 39 | 1 |
| 76.7 | 70.0 | 34 | 23.3 | 122 | 14.7 | JD | 81 | 01 | 26 | 0429 | 64 | 6 | 2 |
| 76.7 | 80.0 | 34 | 03.3 | 122 | 56.4 | JD | 81 | 01 | 26 | 0938 | 87 | 7 | 5 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | JD | 81 | 01 | 26 | 1427 | 77 | 0 | 1 |
| 80.0 | 70.0 | 33 | 49.0 | 121 | 50.6 | JD | 81 | 01 | 24 | 1715 | 54 | 1 | 3 |
| 80.0 | 80.0 | 33 | 28.9 | 122 | 32.0 | JD | 81 | 01 | 24 | 1122 | 81 | 4 | 1 |
| 80.0 | 90.0 | 33 | 08.9 | 123 | 13.1 | JD | 81 | 01 | 24 | 0611 | 70 | 7 | 0 |
| 82.0 | 46.0 | 34 | 16.2 | 119 | 56.2 | JD | 81 | 01 | 22 | 2300 | 87 | 109 | 1117 |
| 83.3 | 40.6 | 34 | 13.5 | 119 | 24.7 | JD | 81 | 01 | 22 | 1804 | 94 | 281 | 4314 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | JD | 81 | 01 | 22 | 1952 | 79 | 31 | 2925 |
| 83.3 | 51.0 | 33 | 52.7 | 120 | 08.0 | JD | 81 | 01 | 23 | 0307 | 86 | 63 | 135 |
| 83.3 | 55.0 | 33 | 44.7 | 120 | 24.6 | JD | 81 | 01 | 23 | 0538 | 68 | 3 | 0 |
| 83.3 | 60.0 | 33 | 34.6 | 120 | 45.3 | JD | 81 | 01 | 23 | 0846 | 76 | 0 | 42 |
| 83.3 | 70.0 | 33 | 14.7 | 121 | 26.6 | JD | 81 | 01 | 23 | 1407 | 83 | 0 | 17 |
| 83.3 | 80.0 | 32 | 54.7 | 122 | 07.7 | JD | 81 | 01 | 23 | 1927 | 83 | 8 | 1 |
| 83.3 | 90.0 | 32 | 34.7 | 122 | 48.7 | JD | 81 | 01 | 24 | 0030 | 70 | 4 | 2 |
| 86.7 | 33.0 | 33 | 53.4 | 118 | 29.4 | JD | 81 | 01 | 22 | 0554 | 79 | 116 | 8842 |
| 86.7 | 35.0 | 33 | 49.4 | 118 | 37.7 | JD | 81 | 01 | 22 | 0419 | 90 | 18 | 474 |
| 86.7 | 40.0 | 33 | 39.4 | 118 | 58.5 | JD | 81 | 01 | 22 | 0058 | 92 | 7 | 9637 |
| 86.7 | 45.0 | 33 | 29.4 | 119 | 19.4 | JD | 81 | 01 | 21 | 2144 | 85 | 9 | 2618 |
| 86.7 | 50.0 | 33 | 19.4 | 119 | 39.8 | JD | 81 | 01 | 21 | 1855 | 86 | 118 | 1 |
| 86.7 | 55.0 | 33 | 09.4 | 120 | 00.4 | JD | 81 | 01 | 21 | 1620 | 77 | 1 | 21 |
| 86.7 | 60.0 | 32 | 59.4 | 120 | 21.0 | JD | 81 | 01 | 21 | 1336 | 86 | 0 | 5 |
| 86.7 | 70.0 | 32 | 39.4 | 121 | 01.9 | JD | 81 | 01 | 21 | 0831 | 93 | 2 | 4 |
| 86.7 | 80.0 | 32 | 19.4 | 121 | 42.9 | JD | 81 | 01 | 21 | 0400 | 69 | 1 | 1 |
| 86.7 | 90.0 | 31 | 59.3 | 122 | 23.5 | JD | 81 | 01 | 20 | 2306 | 95 | 10 | 5 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 81 | 01 | 19 | 0523 | 98 | 1 | 19 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 81 | 01 | 19 | 0748 | 89 | 6 | 54 |
| 90.0 | 37.0 | 33 | 11.1 | 118 | 23.1 | JD | 81 | 01 | 19 | 1151 | 84 | 0 | 586 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.1 | JD | 81 | 01 | 19 | 1635 | 78 | 6 | 2688 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.8 | JD | 81 | 01 | 19 | 2117 | 89 | 0 | 5 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 81 | 01 | 20 | 0137 | 57 | 1 | 5 |
| 90.0 | 70.0 | 32 | 05.1 | 120 | 38.3 | JD | 81 | 01 | 20 | 0717 | 90 | 3 | 7 |
| 90.0 | 80.0 | 31 | 45.1 | 121 | 18.9 | JD | 81 | 01 | 20 | 1257 | 87 | 7 | 6 |
| 90.0 | 90.0 | 31 | 25.2 | 121 | 59.5 | JD | 81 | 01 | 20 | 1827 | 98 | 20 | 4 |
| 93.3 | 26.7 | 32 | 57.4 | 117 | 18.3 | JD | 81 | 01 | 19 | 0029 | 96 | 8 | 619 |

TABLE 1. (cont.) CalCOFI Cruise 8101 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 28.0 | 32 | 54.7 | 117 | 23.7 | JD | 81 | 01 | 18 | 2312 | 104 | 0 | 1459 |
| 93.3 | 30.0 | 32 | 50.7 | 117 | 31.9 | JD | 81 | 01 | 18 | 2122 | 96 | 0 | 1513 |
| 93.3 | 35.0 | 32 | 40.7 | 117 | 52.3 | JD | 81 | 01 | 18 | 1828 | 81 | 0 | 26 |
| 93.3 | 40.0 | 32 | 30.8 | 118 | 12.8 | JD | 81 | 01 | 18 | 1525 | 80 | 0 | 54 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.3 | JD | 81 | 01 | 18 | 1222 | 94 | 0 | 1273 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 81 | 01 | 18 | 0918 | 94 | 0 | 262 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 14.4 | JD | 81 | 01 | 18 | 0626 | 98 | 10 | 4 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 81 | 01 | 18 | 0317 | 89 | 5 | 16 |
| 93.3 | 70.0 | 31 | 30.7 | 120 | 14.8 | JD | 81 | 01 | 17 | 2200 | 90 | 10 | 18 |
| 93.3 | 80.0 | 31 | 10.8 | 120 | 55.2 | JD | 81 | 01 | 17 | 1649 | 99 | 0 | 8 |
| 93.3 | 90.0 | 30 | 50.7 | 121 | 35.3 | JD | 81 | 01 | 17 | 1139 | 82 | 2 | 11 |
| 96.7 | 29.0 | 32 | 17.4 | 117 | 04.8 | JD | 81 | 01 | 15 | 0141 | 114 | 16 | 3 |
| 96.7 | 30.0 | 32 | 15.4 | 117 | 08.8 | JD | 81 | 01 | 15 | 0252 | 121 | 4 | 2112 |
| 96.7 | 32.0 | 32 | 11.4 | 117 | 17.0 | JD | 81 | 01 | 15 | 0438 | 90 | 1 | 806 |
| 96.7 | 35.0 | 32 | 05.4 | 117 | 29.1 | JD | 81 | 01 | 15 | 2145 | 84 | 8 | 160 |
| 96.7 | 40.0 | 31 | 55.4 | 117 | 49.5 | JD | 81 | 01 | 16 | 0051 | 80 | 0 | 1 |
| 96.7 | 45.0 | 31 | 45.4 | 118 | 09.8 | JD | 81 | 01 | 16 | 0406 | 72 | 0 | 240 |
| 96.7 | 55.0 | 31 | 25.4 | 118 | 50.3 | JD | 81 | 01 | 16 | 1056 | 92 | 1 | 9 |
| 96.7 | 60.0 | 31 | 15.4 | 119 | 10.5 | JD | 81 | 01 | 16 | 1412 | 80 | 0 | 4 |
| 96.7 | 70.0 | 30 | 55.4 | 119 | 50.5 | JD | 81 | 01 | 16 | 1934 | 80 | 1 | 0 |
| 96.7 | 80.0 | 30 | 35.4 | 120 | 30.8 | JD | 81 | 01 | 17 | 0047 | 85 | 2 | 9 |
| 96.7 | 90.0 | 30 | 15.3 | 121 | 10.8 | JD | 81 | 01 | 17 | 0601 | 86 | 5 | 5 |
| 100.0 | 29.2 | 31 | 42.8 | 116 | 43.4 | JD | 81 | 01 | 14 | 2055 | 89 | 2 | 21 |
| 100.0 | 30.0 | 31 | 41.0 | 116 | 46.5 | JD | 81 | 01 | 14 | 1925 | 98 | 34 | 107 |
| 100.0 | 35.0 | 31 | 31.2 | 117 | 06.9 | JD | 81 | 01 | 14 | 1554 | 102 | 2 | 2 |
| 100.0 | 40.0 | 31 | 21.2 | 117 | 27.1 | JD | 81 | 01 | 14 | 1220 | 88 | 1 | 1 |
| 100.0 | 45.0 | 31 | 11.0 | 117 | 47.3 | JD | 81 | 01 | 14 | 0845 | 85 | 2 | 1 |
| 100.0 | 50.0 | 31 | 01.2 | 118 | 07.3 | JD | 81 | 01 | 14 | 0456 | 95 | 4 | 4 |
| 100.0 | 60.0 | 30 | 41.2 | 118 | 47.5 | JD | 81 | 01 | 13 | 2315 | 94 | 6 | 6 |
| 100.0 | 70.0 | 30 | 21.3 | 119 | 27.5 | JD | 81 | 01 | 13 | 1728 | 97 | 2 | 23 |
| 100.0 | 80.0 | 30 | 01.1 | 120 | 07.4 | JD | 81 | 01 | 13 | 1118 | 93 | 1 | 8 |
| 100.0 | 90.0 | 29 | 41.2 | 120 | 46.9 | JD | 81 | 01 | 13 | 0541 | 85 | 4 | 83 |
| 103.3 | 29.0 | 31 | 08.9 | 116 | 20.5 | JD | 81 | 01 | 11 | 1447 | 74 | 5 | 171 |
| 103.3 | 30.0 | 31 | 06.9 | 116 | 24.5 | JD | 81 | 01 | 11 | 1554 | 87 | 12 | 2 |
| 103.3 | 35.0 | 30 | 56.9 | 116 | 44.6 | JD | 81 | 01 | 11 | 1858 | 94 | 1 | 5 |
| 103.3 | 40.0 | 30 | 46.9 | 117 | 04.6 | JD | 81 | 01 | 11 | 2226 | 87 | 0 | 2 |
| 103.3 | 45.0 | 30 | 36.9 | 117 | 24.7 | JD | 81 | 01 | 12 | 0207 | 55 | 1 | 0 |
| 103.3 | 50.0 | 30 | 26.9 | 117 | 44.7 | JD | 81 | 01 | 12 | 0541 | 70 | 6 | 4 |
| 103.3 | 60.0 | 30 | 06.8 | 118 | 24.6 | JD | 81 | 01 | 12 | 1107 | 97 | 3 | 33 |
| 103.3 | 70.0 | 29 | 46.9 | 119 | 04.4 | JD | 81 | 01 | 12 | 1612 | 87 | 1 | 61 |
| 103.3 | 80.0 | 29 | 26.9 | 119 | 44.0 | JD | 81 | 01 | 12 | 2140 | 92 | 8 | 16 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.8 | JD | 81 | 01 | 11 | 0951 | 107 | 129 | 2272 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 09.6 | JD | 81 | 01 | 11 | 0754 | 123 | 1 | 1 |
| 106.7 | 35.0 | 30 | 21.5 | 116 | 21.8 | JD | 81 | 01 | 11 | 0520 | 83 | 17 | 1 |
| 106.7 | 40.0 | 30 | 11.5 | 116 | 41.8 | JD | 81 | 01 | 11 | 0155 | 71 | 0 | 2 |
| 106.7 | 45.0 | 30 | 01.5 | 117 | 01.7 | JD | 81 | 01 | 10 | 2235 | 94 | 1 | 0 |
| 106.7 | 50.0 | 29 | 51.3 | 117 | 21.7 | JD | 81 | 01 | 10 | 1918 | 93 | 1 | 1 |
| 106.7 | 60.0 | 29 | 31.5 | 118 | 01.3 | JD | 81 | 01 | 10 | 1344 | 84 | 10 | 3 |
| 106.7 | 70.0 | 29 | 11.4 | 118 | 40.7 | JD | 81 | 01 | 10 | 0839 | 91 | 0 | 4 |
| 106.7 | 80.0 | 28 | 51.5 | 119 | 20.2 | JD | 81 | 01 | 10 | 0321 | 125 | 17 | 56 |

TABLE 1. (cont.)

CalCOFI Cruise 8101 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.0 | 32.4 | 29 | 52.4 | 115 | 49.5 | JD | 81 | 01 | 08 | 1333 | 95 | 0 | 1016 |
| 110.0 | 35.0 | 29 | 47.2 | 115 | 59.8 | JD | 81 | 01 | 08 | 1806 | 98 | 0 | 1 |
| 110.0 | 40.0 | 29 | 37.2 | 116 | 19.6 | JD | 81 | 01 | 08 | 2154 | 106 | 0 | 0 |
| 110.0 | 45.0 | 29 | 27.2 | 116 | 39.5 | JD | 81 | 01 | 09 | 0139 | 104 | 0 | 0 |
| 110.0 | 50.0 | 29 | 17.0 | 116 | 59.5 | JD | 81 | 01 | 09 | 0525 | 86 | 1 | 1 |
| 110.0 | 60.0 | 28 | 57.1 | 117 | 38.7 | JD | 81 | 01 | 09 | 1058 | 96 | 1 | 0 |
| 110.0 | 70.0 | 28 | 37.2 | 118 | 18.0 | JD | 81 | 01 | 09 | 1657 | 89 | 0 | 1 |
| 110.0 | 80.0 | 28 | 17.2 | 118 | 57.1 | JD | 81 | 01 | 09 | 2217 | 88 | 1 | 136 |

CalCOFI Cruise 8102

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 37 | 56.8 | 122 | 52.9 | JD | 81 | 03 | 10 | 1125 | 72 | 95 | 117 |
| 60.0 | 70.0 | 37 | 16.9 | 124 | 19.5 | NH | 81 | 02 | 15 | 1035 | 35 | 0 | 2 |
| 60.0 | 80.0 | 36 | 56.5 | 125 | 05.0 | NH | 81 | 02 | 15 | 0157 | 32 | 0 | 3 |
| 60.0 | 90.0 | 36 | 36.5 | 125 | 48.1 | NH | 81 | 02 | 14 | 1810 | 107 | 0 | 45 |
| 63.3 | 50.0 | 37 | 22.6 | 122 | 28.3 | JD | 81 | 03 | 10 | 0435 | 79 | 595 | 2233 |
| 63.3 | 52.0 | 37 | 18.6 | 122 | 37.1 | JD | 81 | 03 | 10 | 0230 | 70 | 126 | 1086 |
| 63.3 | 55.0 | 37 | 12.5 | 122 | 50.1 | JD | 81 | 03 | 09 | 2342 | 71 | 421 | 25 |
| 63.3 | 60.0 | 37 | 02.4 | 123 | 11.6 | JD | 81 | 03 | 09 | 1950 | 100 | 92 | 12 |
| 63.3 | 70.0 | 36 | 42.8 | 123 | 54.5 | NH | 81 | 02 | 15 | 1717 | 67 | 0 | 5 |
| 63.3 | 80.0 | 36 | 22.6 | 124 | 37.9 | NH | 81 | 02 | 15 | 2313 | 115 | 24 | 190 |
| 63.3 | 90.0 | 36 | 02.7 | 125 | 20.4 | NH | 81 | 02 | 16 | 0457 | 55 | 6 | 44 |
| 66.7 | 49.0 | 36 | 49.1 | 121 | 59.4 | JD | 81 | 03 | 09 | 0430 | 106 | 892 | 11 |
| 66.7 | 50.0 | 36 | 47.2 | 122 | 03.4 | JD | 81 | 03 | 09 | 0605 | 101 | 190 | 137 |
| 66.7 | 55.0 | 36 | 37.2 | 122 | 24.8 | JD | 81 | 03 | 09 | 0935 | 86 | 9 | 52 |
| 66.7 | 60.0 | 36 | 27.2 | 122 | 46.4 | JD | 81 | 03 | 09 | 1308 | 87 | 2 | 15 |
| 66.7 | 70.0 | 36 | 07.0 | 123 | 30.0 | NH | 81 | 02 | 16 | 2129 | 93 | 10 | 21 |
| 66.7 | 80.0 | 35 | 47.7 | 124 | 12.2 | NH | 81 | 02 | 16 | 1541 | 122 | 4 | 239 |
| 66.7 | 90.0 | 35 | 27.1 | 124 | 53.9 | NH | 81 | 02 | 16 | 1012 | 107 | 14 | 5 |
| 70.0 | 51.0 | 36 | 10.9 | 121 | 43.6 | JD | 81 | 03 | 08 | 2119 | 96 | 108 | 17 |
| 70.0 | 53.0 | 36 | 06.9 | 121 | 52.2 | JD | 81 | 03 | 08 | 1840 | 79 | 65 | 6 |
| 70.0 | 60.0 | 35 | 52.9 | 122 | 21.9 | JD | 81 | 03 | 08 | 1325 | 103 | 1 | 33 |
| 70.0 | 70.0 | 35 | 33.1 | 123 | 04.4 | NH | 81 | 02 | 17 | 0251 | 63 | 10 | 7 |
| 70.0 | 80.0 | 35 | 13.0 | 123 | 46.6 | NH | 81 | 02 | 17 | 0938 | 69 | 5 | 18 |
| 70.0 | 90.0 | 34 | 46.0 | 124 | 30.0 | NH | 81 | 02 | 17 | 1634 | 78 | 25 | 63 |
| 73.3 | 50.0 | 35 | 38.5 | 121 | 15.3 | JD | 81 | 03 | 07 | 2315 | 91 | 433 | 67 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.1 | JD | 81 | 03 | 08 | 0125 | 90 | 206 | 5 |
| 73.3 | 60.0 | 35 | 18.6 | 121 | 57.7 | JD | 81 | 03 | 08 | 0620 | 109 | 17 | 52 |
| 73.3 | 70.0 | 34 | 58.5 | 122 | 40.0 | NH | 81 | 02 | 18 | 1000 | 31 | 0 | 0 |
| 73.3 | 80.0 | 34 | 38.5 | 123 | 21.7 | NH | 81 | 02 | 18 | 0425 | 90 | 5 | 2 |
| 76.7 | 48.0 | 35 | 07.3 | 120 | 42.4 | JD | 81 | 03 | 07 | 1645 | 96 | 72 | 1549 |
| 76.7 | 51.0 | 35 | 01.3 | 120 | 55.1 | JD | 81 | 03 | 07 | 1405 | 95 | 0 | 5 |
| 76.7 | 55.0 | 34 | 53.2 | 121 | 11.9 | JD | 81 | 03 | 07 | 1055 | 98 | 2 | 482 |
| 76.7 | 60.0 | 34 | 43.1 | 121 | 32.8 | JD | 81 | 03 | 07 | 0705 | 87 | 11 | 28 |
| 76.7 | 70.0 | 34 | 23.7 | 122 | 15.2 | NH | 81 | 02 | 18 | 1513 | 85 | 19 | 2 |

TABLE 1. (cont.) CalCOFI Cruise 8102 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 | 80.0 | 34 | 03.1 | 122 | 56.3 | NH | 81 | 02 | 18 | 2026 | 79 | 14 | 26 |
| 76.7 | 90.0 | 33 | 43.6 | 123 | 37.9 | NH | 81 | 02 | 19 | 0206 | 78 | 10 | 9 |
| 80.0 | 51.0 | 34 | 27.0 | 120 | 31.0 | JD | 81 | 03 | 06 | 1605 | 94 | 1100 | 127 |
| 80.0 | 55.0 | 34 | 19.0 | 120 | 47.9 | JD | 81 | 03 | 06 | 1935 | 83 | 2068 | 4 |
| 80.0 | 60.0 | 34 | 09.1 | 121 | 08.9 | JD | 81 | 03 | 06 | 2340 | 89 | 343 | 10 |
| 80.0 | 80.0 | 33 | 29.0 | 122 | 32.1 | NH | 81 | 02 | 19 | 1507 | 76 | 15 | 1 |
| 80.0 | 90.0 | 33 | 09.3 | 123 | 13.7 | NH | 81 | 02 | 19 | 0725 | 124 | 40 | 3 |
| 82.0 | 46.0 | 34 | 16.2 | 119 | 56.3 | JD | 81 | 02 | 19 | 0350 | 118 | 90 | 2622 |
| 83.3 | 40.6 | 34 | 13.2 | 119 | 24.3 | JD | 81 | 02 | 18 | 2235 | 122 | 32 | 4721 |
| 83.3 | 42.0 | 34 | 10.6 | 119 | 30.0 | JD | 81 | 02 | 18 | 2350 | 106 | 37 | 583 |
| 83.3 | 51.0 | 33 | 52.7 | 120 | 08.0 | JD | 81 | 02 | 19 | 0915 | 91 | 13232 | 18 |
| 83.3 | 55.0 | 33 | 44.7 | 120 | 24.6 | JD | 81 | 02 | 19 | 1200 | 93 | 3 | 13 |
| 86.7 | 33.0 | 33 | 53.8 | 118 | 29.8 | JD | 81 | 02 | 17 | 0645 | 111 | 84 | 1366 |
| 86.7 | 35.0 | 33 | 49.4 | 118 | 37.7 | JD | 81 | 02 | 17 | 0850 | 110 | 3768 | 2346 |
| 86.7 | 40.0 | 33 | 39.4 | 118 | 58.5 | JD | 81 | 02 | 17 | 1255 | 99 | 28 | 7868 |
| 86.7 | 45.0 | 33 | 29.4 | 119 | 19.1 | JD | 81 | 02 | 17 | 1645 | 83 | 444 | 9590 |
| 86.7 | 50.0 | 33 | 19.3 | 119 | 39.6 | JD | 81 | 02 | 17 | 2045 | 93 | 520 | 8 |
| 86.7 | 55.0 | 33 | 09.4 | 120 | 00.4 | JD | 81 | 02 | 18 | 0005 | 78 | 13 | 4 |
| 86.7 | 60.0 | 32 | 59.4 | 120 | 21.0 | JD | 81 | 02 | 18 | 0410 | 82 | 18 | 15 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 81 | 02 | 15 | 0625 | 104 | 305 | 1146 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 81 | 02 | 15 | 0900 | 128 | 10 | 3693 |
| 90.0 | 37.0 | 33 | 11.1 | 118 | 23.2 | JD | 81 | 02 | 15 | 1500 | 85 | 55 | 4260 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.0 | JD | 81 | 02 | 15 | 2050 | 101 | 11 | 5 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.9 | JD | 81 | 02 | 16 | 0250 | 93 | 1 | 7 |
| 90.0 | 60.0 | 32 | 25.4 | 119 | 57.6 | JD | 81 | 02 | 16 | 0830 | 101 | 11 | 87 |
| 93.3 | 26.7 | 32 | 57.5 | 117 | 18.3 | JD | 81 | 02 | 12 | 2240 | 106 | 45 | 3477 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.7 | JD | 81 | 02 | 13 | 0005 | 113 | 12 | 84 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 81 | 02 | 13 | 0215 | 103 | 94 | 697 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 81 | 02 | 13 | 0625 | 75 | 4 | 3211 |
| 93.3 | 40.0 | 32 | 30.7 | 118 | 12.8 | JD | 81 | 02 | 13 | 1100 | 98 | 2 | 350 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.3 | JD | 81 | 02 | 13 | 1445 | 95 | 0 | 3403 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 81 | 02 | 13 | 1825 | 99 | 329 | 1389 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 13.9 | JD | 81 | 02 | 13 | 2215 | 101 | 4 | 1986 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 81 | 02 | 14 | 0145 | 94 | 17 | 222 |
| 95.0 | 29.0 | 32 | 35.1 | 117 | 16.3 | JD | 81 | 02 | 23 | 1835 | 65 | 8 | 1492 |
| 96.7 | 40.0 | 31 | 55.4 | 117 | 49.5 | JD | 81 | 03 | 04 | 1700 | 77 | 9 | 110 |
| 96.7 | 45.0 | 31 | 45.4 | 118 | 09.8 | JD | 81 | 03 | 04 | 1340 | 79 | 0 | 1 |
| 96.7 | 50.0 | 31 | 35.3 | 118 | 30.2 | JD | 81 | 03 | 04 | 0955 | 108 | 1 | 6 |
| 96.7 | 55.0 | 31 | 25.3 | 118 | 50.3 | JD | 81 | 03 | 04 | 0545 | 69 | 4 | 23 |
| 96.7 | 60.0 | 31 | 15.4 | 119 | 10.4 | JD | 81 | 03 | 04 | 0145 | 78 | 2 | 17 |
| 96.7 | 70.0 | 30 | 56.0 | 119 | 50.8 | NH | 81 | 02 | 25 | 0539 | 39 | 20 | 4 |
| 96.7 | 80.0 | 30 | 35.2 | 120 | 30.1 | NH | 81 | 02 | 25 | 1121 | 95 | 2 | 18 |
| 96.7 | 90.0 | 30 | 14.2 | 121 | 11.3 | NH | 81 | 02 | 25 | 1656 | 78 | 1 | 6 |
| 100.0 | 29.2 | 31 | 42.7 | 116 | 43.8 | JD | 81 | 03 | 02 | 1835 | 101 | 366 | 506 |
| 100.0 | 30.0 | 31 | 41.2 | 116 | 46.6 | JD | 81 | 03 | 02 | 1715 | 91 | 253 | 1029 |
| 100.0 | 35.0 | 31 | 31.2 | 117 | 06.9 | JD | 81 | 03 | 02 | 1230 | 83 | 8 | 3 |
| 100.0 | 40.0 | 31 | 21.0 | 117 | 27.2 | JD | 81 | 03 | 02 | 0715 | 90 | 30 | 2 |
| 100.0 | 45.0 | 31 | 11.2 | 117 | 47.2 | JD | 81 | 03 | 02 | 0225 | 94 | 5 | 0 |
| 100.0 | 50.0 | 31 | 01.2 | 118 | 07.3 | JD | 81 | 03 | 01 | 2145 | 88 | 0 | 0 |
| 100.0 | 60.0 | 30 | 41.2 | 118 | 47.5 | JD | 81 | 03 | 01 | 1450 | 101 | 1 | 6 |

TABLE 1. (cont.) CalCOFI Cruise 8102 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 | 70.0 | 30 | 21.3 | 119 | 28.0 | NH | 81 | 02 | 26 | 0911 | 80 | 2 | 10 |
| 100.0 | 80.0 | 30 | 01.0 | 120 | 07.2 | NH | 81 | 02 | 26 | 0408 | 62 | 6 | 3 |
| 100.0 | 90.0 | 29 | 41.6 | 120 | 46.5 | NH | 81 | 02 | 25 | 2138 | 102 | 6 | 18 |
| 103.3 | 29.0 | 31 | 08.9 | 116 | 20.5 | JD | 81 | 02 | 28 | 0745 | 126 | 576 | 1649 |
| 103.3 | 30.0 | 31 | 06.7 | 116 | 24.0 | JD | 81 | 02 | 28 | 0905 | 107 | 974 | 3721 |
| 103.3 | 35.0 | 30 | 56.9 | 116 | 44.6 | JD | 81 | 02 | 28 | 1255 | 113 | 0 | 3 |
| 103.3 | 40.0 | 30 | 46.9 | 117 | 04.7 | JD | 81 | 02 | 28 | 1655 | 85 | 0 | 0 |
| 103.3 | 45.0 | 30 | 36.9 | 117 | 24.7 | JD | 81 | 02 | 28 | 2045 | 107 | 3 | 6 |
| 103.3 | 50.0 | 30 | 26.9 | 117 | 44.7 | JD | 81 | 03 | 01 | 0045 | 85 | 2 | 0 |
| 103.3 | 70.0 | 29 | 46.8 | 119 | 04.5 | NH | 81 | 02 | 26 | 1523 | 115 | 4 | 25 |
| 103.3 | 80.0 | 29 | 27.9 | 119 | 43.8 | NH | 81 | 02 | 26 | 2041 | 73 | 1 | 2 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.8 | JD | 81 | 02 | 28 | 0100 | 109 | 150 | 2346 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 09.8 | JD | 81 | 02 | 27 | 2255 | 102 | 70 | 6020 |
| 106.7 | 35.0 | 30 | 21.9 | 116 | 21.5 | JD | 81 | 02 | 27 | 2015 | 97 | 554 | 1133 |
| 106.7 | 40.0 | 30 | 11.4 | 116 | 41.8 | JD | 81 | 02 | 27 | 1625 | 93 | 11 | 2118 |
| 106.7 | 45.0 | 30 | 01.5 | 117 | 01.7 | JD | 81 | 02 | 27 | 1235 | 96 | 1 | 67 |
| 106.7 | 50.0 | 29 | 51.5 | 117 | 21.4 | JD | 81 | 02 | 27 | 0845 | 96 | 1 | 13 |
| 106.7 | 60.0 | 29 | 31.5 | 118 | 01.3 | JD | 81 | 02 | 27 | 0200 | 97 | 3 | 8 |
| 106.7 | 70.0 | 29 | 12.4 | 118 | 42.6 | NH | 81 | 02 | 27 | 0706 | 86 | 3 | 20 |
| 106.7 | 80.0 | 28 | 51.8 | 119 | 20.0 | NH | 81 | 02 | 27 | 0206 | 103 | 5 | 45 |
| 110.0 | 32.5 | 29 | 52.2 | 115 | 49.9 | JD | 81 | 02 | 25 | 2035 | 109 | 119 | 1822 |
| 110.0 | 35.0 | 29 | 47.2 | 115 | 59.8 | JD | 81 | 02 | 25 | 2255 | 114 | 10 | 1475 |
| 110.0 | 40.0 | 29 | 37.2 | 116 | 19.7 | JD | 81 | 02 | 26 | 0350 | 96 | 8 | 0 |
| 110.0 | 45.0 | 29 | 27.2 | 116 | 39.4 | JD | 81 | 02 | 26 | 0815 | 105 | 0 | 1 |
| 110.0 | 50.0 | 29 | 17.2 | 116 | 59.2 | JD | 81 | 02 | 26 | 1220 | 94 | 2 | 3 |
| 110.0 | 60.0 | 28 | 57.3 | 117 | 39.5 | JD | 81 | 02 | 26 | 1930 | 87 | 5 | 5 |
| 110.0 | 70.0 | 28 | 37.0 | 118 | 18.0 | NH | 81 | 02 | 27 | 1207 | 86 | 0 | 17 |
| 110.0 | 80.0 | 28 | 17.9 | 118 | 57.8 | NH | 81 | 02 | 27 | 1750 | 82 | 0 | 3 |
| 113.3 | 29.0 | 29 | 25.0 | 115 | 14.2 | NH | 81 | 03 | 01 | 0228 | 57 | 15 | 0 |
| 113.3 | 30.0 | 29 | 22.9 | 115 | 18.0 | NH | 81 | 03 | 01 | 0059 | 76 | 22 | 2 |
| 113.3 | 35.0 | 29 | 12.6 | 115 | 37.7 | NH | 81 | 02 | 28 | 2207 | 97 | 1 | 0 |
| 113.3 | 40.0 | 29 | 03.9 | 115 | 57.0 | NH | 81 | 02 | 28 | 1922 | 92 | 14 | 7 |
| 113.3 | 45.0 | 28 | 53.2 | 116 | 16.1 | NH | 81 | 02 | 28 | 1645 | 82 | 3 | 2 |
| 113.3 | 50.0 | 28 | 43.0 | 116 | 37.3 | NH | 81 | 02 | 28 | 1422 | 87 | 2 | 4 |
| 113.3 | 60.0 | 28 | 22.8 | 117 | 15.3 | NH | 81 | 02 | 28 | 0925 | 87 | 1 | 2 |
| 113.3 | 70.0 | 28 | 03.0 | 117 | 55.0 | NH | 81 | 02 | 28 | 0426 | 80 | 3 | 4 |
| 113.3 | 80.0 | 27 | 43.1 | 118 | 33.6 | NH | 81 | 02 | 27 | 2330 | 81 | 20 | 29 |
| 116.7 | 25.0 | 28 | 57.5 | 114 | 36.2 | NH | 81 | 03 | 01 | 0758 | 88 | 0 | 0 |
| 116.7 | 30.0 | 28 | 47.5 | 114 | 55.9 | NH | 81 | 03 | 01 | 1043 | 120 | 0 | 1 |
| 116.7 | 35.0 | 28 | 36.0 | 115 | 16.2 | NH | 81 | 03 | 02 | 0738 | 125 | 5 | 2252 |
| 116.7 | 40.0 | 28 | 27.6 | 115 | 35.1 | NH | 81 | 03 | 02 | 1315 | 90 | 4 | 62 |
| 116.7 | 45.0 | 28 | 17.6 | 115 | 54.6 | NH | 81 | 03 | 02 | 1612 | 92 | 0 | 391 |
| 118.0 | 39.0 | 28 | 16.1 | 115 | 22.6 | NH | 81 | 03 | 02 | 1032 | 96 | 0 | 746 |
| 119.0 | 33.0 | 28 | 17.7 | 114 | 52.5 | NH | 81 | 03 | 02 | 0301 | 85 | 4 | 6346 |
| 120.0 | 24.0 | 28 | 25.3 | 114 | 10.8 | NH | 81 | 03 | 01 | 1542 | 83 | 4 | 3927 |
| 120.0 | 25.0 | 28 | 23.1 | 114 | 13.7 | NH | 81 | 03 | 01 | 1724 | 103 | 60 | 2710 |
| 120.0 | 30.0 | 28 | 13.6 | 114 | 33.9 | NH | 81 | 03 | 01 | 2013 | 75 | 120 | 54 |
| 120.0 | 35.0 | 28 | 03.2 | 114 | 53.8 | NH | 81 | 03 | 02 | 0002 | 81 | 3 | 69 |
| 120.0 | 38.5 | 27 | 56.0 | 115 | 06.9 | NH | 81 | 03 | 06 | 2023 | 83 | 0 | 25 |
| 123.3 | 36.0 | 27 | 27.3 | 114 | 36.9 | NH | 81 | 03 | 04 | 0516 | 103 | 12 | 1920 |

TABLE 1. (cont.)

CalCOFI Cruise 8102 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123.3 | 37.0 | 27 | 26.8 | 114 | 39.9 | NH | 81 | 03 | 04 | 0641 | 66 | 7 | 1404 |
| 123.3 | 42.0 | 27 | 14.8 | 114 | 59.3 | NH | 81 | 03 | 04 | 0956 | 82 | 4 | 74 |
| 123.3 | 45.0 | 27 | 09.3 | 115 | 10.8 | NH | 81 | 03 | 04 | 1227 | 63 | 0 | 3 |
| 123.3 | 50.0 | 26 | 58.8 | 115 | 30.5 | NH | 81 | 03 | 04 | 1521 | 92 | 16 | 22 |
| 123.3 | 60.0 | 26 | 38.6 | 116 | 08.2 | NH | 81 | 03 | 04 | 2021 | 113 | 19 | 11 |

CalCOFI Cruise 8104

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 37 | 56.8 | 122 | 52.9 | JD | 81 | 04 | 27 | 0930 | 89 | 0 | 15 |
| 63.3 | 50.0 | 37 | 22.6 | 122 | 28.4 | JD | 81 | 04 | 25 | 1455 | 100 | 1 | 33 |
| 63.3 | 52.0 | 37 | 18.8 | 122 | 37.1 | JD | 81 | 04 | 25 | 1310 | 102 | 1 | 2 |
| 63.3 | 55.0 | 37 | 12.5 | 122 | 50.1 | JD | 81 | 04 | 25 | 1030 | 85 | 29 | 77 |
| 63.3 | 70.0 | 36 | 42.6 | 123 | 54.8 | JD | 81 | 04 | 25 | 0145 | 67 | 0 | 2 |
| 66.7 | 55.0 | 36 | 37.2 | 122 | 24.8 | JD | 81 | 04 | 24 | 1145 | 94 | 1 | 46 |
| 66.7 | 60.0 | 36 | 27.2 | 122 | 46.4 | JD | 81 | 04 | 24 | 1435 | 80 | 0 | 10 |
| 66.7 | 70.0 | 36 | 07.3 | 123 | 29.1 | JD | 81 | 04 | 24 | 1940 | 88 | 4 | 1 |
| 70.0 | 60.0 | 35 | 53.0 | 122 | 22.1 | JD | 81 | 04 | 23 | 1850 | 88 | 7 | 13 |
| 73.3 | 50.0 | 35 | 38.6 | 121 | 15.3 | JD | 81 | 04 | 21 | 2058 | 98 | 21 | 9 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.1 | JD | 81 | 04 | 21 | 2300 | 89 | 5 | 5 |
| 73.3 | 60.0 | 35 | 18.6 | 121 | 57.7 | JD | 81 | 04 | 22 | 0250 | 84 | 21 | 1 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | JD | 81 | 04 | 20 | 1405 | 89 | 0 | 1 |
| 80.0 | 51.0 | 34 | 27.0 | 120 | 31.4 | JD | 81 | 04 | 19 | 0755 | 90 | 30 | 11 |
| 80.0 | 55.0 | 34 | 19.0 | 120 | 48.0 | JD | 81 | 04 | 19 | 1120 | 95 | 1 | 288 |
| 80.0 | 60.0 | 34 | 09.0 | 121 | 09.0 | JD | 81 | 04 | 19 | 1550 | 81 | 5 | 273 |
| 80.0 | 70.0 | 33 | 49.0 | 121 | 50.6 | JD | 81 | 04 | 19 | 2123 | 103 | 20 | 19 |
| 83.3 | 40.6 | 34 | 13.5 | 119 | 24.7 | JD | 81 | 04 | 17 | 0215 | 80 | 110 | 482 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | JD | 81 | 04 | 17 | 0025 | 83 | 56 | 341 |
| 83.3 | 70.0 | 33 | 14.7 | 121 | 26.6 | JD | 81 | 04 | 15 | 2135 | 90 | 5 | 724 |
| 86.7 | 33.0 | 33 | 53.4 | 118 | 29.4 | JD | 81 | 04 | 13 | 1335 | 101 | 65 | 459 |
| 86.7 | 35.0 | 33 | 49.4 | 118 | 37.7 | JD | 81 | 04 | 13 | 1530 | 90 | 785 | 14 |
| 86.7 | 40.0 | 33 | 39.5 | 118 | 58.2 | JD | 81 | 04 | 13 | 1910 | 102 | 1110 | 354 |
| 86.7 | 50.0 | 33 | 19.4 | 119 | 39.8 | JD | 81 | 04 | 14 | 0305 | 82 | 32 | 42 |
| 86.7 | 55.0 | 33 | 09.4 | 120 | 00.4 | JD | 81 | 04 | 14 | 0655 | 95 | 0 | 74 |
| 86.7 | 60.0 | 32 | 59.4 | 120 | 21.0 | JD | 81 | 04 | 14 | 1135 | 84 | 0 | 104 |
| 86.7 | 70.0 | 32 | 39.3 | 121 | 02.5 | JD | 81 | 04 | 14 | 1825 | 92 | 2 | 18 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 81 | 04 | 11 | 1840 | 99 | 216 | 716 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 81 | 04 | 11 | 1625 | 102 | 930 | 600 |
| 90.0 | 37.0 | 33 | 11.1 | 118 | 23.1 | JD | 81 | 04 | 11 | 1110 | 98 | 27 | 6 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.1 | JD | 81 | 04 | 11 | 0405 | 108 | 230 | 3519 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.9 | JD | 81 | 04 | 10 | 2050 | 84 | 499 | 35 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 81 | 04 | 10 | 1500 | 71 | 3 | 191 |
| 93.3 | 26.7 | 32 | 57.4 | 117 | 18.2 | JD | 81 | 04 | 07 | 2055 | 89 | 270 | 2173 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.7 | JD | 81 | 04 | 07 | 2225 | 88 | 946 | 3986 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 81 | 04 | 08 | 0040 | 96 | 1742 | 954 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 81 | 04 | 08 | 0415 | 109 | 9999 | 158 |

TABLE 1. (cont.) CalCOFI Cruise 8104 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 40.0 | 32 | 30.9 | 118 | 12.6 | JD | 81 | 04 | 08 | 0750 | 86 | 441 | 9611 |
| 93.3 | 45.0 | 32 | 20.7 | 118 | 33.3 | JD | 81 | 04 | 08 | 1140 | 90 | 116 | 2620 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 81 | 04 | 08 | 1605 | 105 | 102 | 308 |
| 93.3 | 80.0 | 31 | 10.9 | 120 | 55.2 | JD | 81 | 04 | 09 | 0905 | 85 | 1 | 9 |
| 95.0 | 30.0 | 32 | 33.1 | 117 | 20.3 | JD | 81 | 03 | 31 | 2030 | 114 | 2654 | 3887 |
| 96.7 | 29.0 | 32 | 17.4 | 117 | 04.8 | JD | 81 | 04 | 05 | 2140 | 98 | 2372 | 1021 |
| 96.7 | 29.0 | 32 | 17.3 | 117 | 04.7 | NH | 81 | 04 | 07 | 1918 | 100 | 1526 | 43 |
| 96.7 | 30.0 | 32 | 15.4 | 117 | 08.8 | JD | 81 | 04 | 05 | 2300 | 92 | 1150 | 4366 |
| 96.7 | 30.0 | 32 | 15.4 | 117 | 08.8 | NH | 81 | 04 | 08 | 1520 | 94 | 457 | 2 |
| 96.7 | 32.0 | 32 | 11.5 | 117 | 16.7 | NH | 81 | 04 | 08 | 1725 | 95 | 1329 | 0 |
| 96.7 | 32.0 | 32 | 11.4 | 117 | 17.0 | JD | 81 | 04 | 06 | 0110 | 105 | 2641 | 159 |
| 96.7 | 35.0 | 32 | 05.5 | 117 | 28.6 | NH | 81 | 04 | 08 | 1957 | 87 | 3670 | 6 |
| 96.7 | 35.0 | 32 | 05.4 | 117 | 29.2 | JD | 81 | 04 | 06 | 0350 | 78 | 1334 | 185 |
| 96.7 | 40.0 | 31 | 55.3 | 117 | 49.5 | NH | 81 | 04 | 08 | 2330 | 82 | 55 | 3 |
| 96.7 | 40.0 | 31 | 55.6 | 117 | 49.2 | JD | 81 | 04 | 06 | 0725 | 76 | 68 | 311 |
| 96.7 | 45.0 | 31 | 45.1 | 118 | 09.6 | NH | 81 | 04 | 09 | 0250 | 82 | 159 | 217 |
| 96.7 | 50.0 | 31 | 35.0 | 118 | 28.9 | NH | 81 | 04 | 09 | 0610 | 94 | 16 | 506 |
| 96.7 | 55.0 | 31 | 25.5 | 118 | 50.3 | NH | 81 | 04 | 09 | 1000 | 89 | 2 | 156 |
| 96.7 | 60.0 | 31 | 15.5 | 119 | 10.4 | NH | 81 | 04 | 09 | 1324 | 77 | 4 | 41 |
| 96.7 | 70.0 | 30 | 56.1 | 119 | 50.6 | NH | 81 | 04 | 09 | 1845 | 98 | 29 | 49 |
| 96.7 | 80.0 | 30 | 35.2 | 120 | 31.0 | NH | 81 | 04 | 10 | 0001 | 54 | 3 | 2 |
| 96.7 | 90.0 | 30 | 14.9 | 121 | 10.9 | NH | 81 | 04 | 10 | 0525 | 101 | 14 | 4 |
| 100.0 | 29.2 | 31 | 42.8 | 116 | 43.5 | NH | 81 | 04 | 12 | 0814 | 71 | 6 | 153 |
| 100.0 | 29.2 | 31 | 42.4 | 116 | 44.1 | JD | 81 | 04 | 04 | 2200 | 98 | 429 | 230 |
| 100.0 | 30.0 | 31 | 42.0 | 116 | 48.5 | NH | 81 | 04 | 12 | 0545 | 77 | 82 | 230 |
| 100.0 | 30.0 | 31 | 41.1 | 116 | 46.7 | JD | 81 | 04 | 04 | 2355 | 105 | 367 | 1411 |
| 100.0 | 35.0 | 31 | 31.2 | 117 | 06.9 | JD | 81 | 04 | 05 | 0400 | 89 | 86 | 1 |
| 100.0 | 35.0 | 31 | 31.6 | 117 | 07.5 | NH | 81 | 04 | 12 | 0200 | 56 | 18 | 20 |
| 100.0 | 40.0 | 31 | 21.0 | 117 | 27.2 | NH | 81 | 04 | 11 | 2001 | 86 | 57 | 0 |
| 100.0 | 40.0 | 31 | 21.3 | 117 | 26.8 | JD | 81 | 04 | 05 | 0835 | 95 | 1 | 42 |
| 100.0 | 45.0 | 31 | 10.9 | 117 | 47.7 | NH | 81 | 04 | 11 | 1641 | 78 | 0 | 1 |
| 100.0 | 50.0 | 31 | 01.0 | 118 | 07.0 | NH | 81 | 04 | 11 | 1105 | 95 | 8 | 3 |
| 100.0 | 60.0 | 30 | 41.3 | 118 | 48.2 | NH | 81 | 04 | 11 | 0600 | 73 | 11 | 122 |
| 100.0 | 70.0 | 30 | 21.0 | 119 | 27.6 | NH | 81 | 04 | 10 | 2228 | 79 | 0 | 146 |
| 100.0 | 80.0 | 30 | 01.1 | 120 | 07.6 | NH | 81 | 04 | 10 | 1706 | 85 | 0 | 10 |
| 100.0 | 90.0 | 29 | 43.6 | 120 | 45.8 | NH | 81 | 04 | 10 | 1010 | 79 | 1 | 14 |
| 103.3 | 29.0 | 31 | 09.1 | 116 | 21.2 | NH | 81 | 04 | 12 | 1323 | 67 | 39 | 462 |
| 103.3 | 29.0 | 31 | 08.9 | 116 | 20.5 | JD | 81 | 04 | 03 | 2120 | 79 | 91 | 2425 |
| 103.3 | 30.0 | 31 | 06.9 | 116 | 24.5 | JD | 81 | 04 | 03 | 2305 | 74 | 5079 | 5555 |
| 103.3 | 30.0 | 31 | 06.3 | 116 | 24.5 | NH | 81 | 04 | 12 | 1456 | 88 | 11 | 917 |
| 103.3 | 35.0 | 30 | 57.2 | 116 | 42.1 | NH | 81 | 04 | 12 | 1754 | 88 | 4 | 2 |
| 103.3 | 35.0 | 30 | 56.9 | 116 | 44.6 | JD | 81 | 04 | 04 | 0310 | 81 | 125 | 1950 |
| 103.3 | 40.0 | 30 | 46.8 | 117 | 04.8 | JD | 81 | 04 | 04 | 0730 | 84 | 8 | 4 |
| 103.3 | 40.0 | 30 | 46.9 | 117 | 04.8 | NH | 81 | 04 | 12 | 2154 | 90 | 530 | 60 |
| 103.3 | 45.0 | 30 | 36.5 | 117 | 24.8 | NH | 81 | 04 | 13 | 0055 | 73 | 1 | 4 |
| 103.3 | 50.0 | 30 | 26.9 | 117 | 44.8 | NH | 81 | 04 | 13 | 0400 | 75 | 15 | 17 |
| 103.3 | 60.0 | 30 | 07.0 | 118 | 24.5 | NH | 81 | 04 | 13 | 0915 | 86 | 3 | 4 |
| 103.3 | 70.0 | 29 | 46.8 | 119 | 04.1 | NH | 81 | 04 | 13 | 1425 | 99 | 1 | 353 |
| 103.3 | 80.0 | 29 | 26.7 | 119 | 42.6 | NH | 81 | 04 | 13 | 1938 | 75 | 2 | 55 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.7 | NH | 81 | 04 | 15 | 0840 | 96 | 426 | 209 |

TABLE 1. (cont.) CalCOFI Cruise 8104 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.8 | JD | 81 | 04 | 02 | 2145 | 74 | 106 | 3320 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 09.8 | JD | 81 | 04 | 02 | 2355 | 98 | 382 | 47 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 10.0 | NH | 81 | 04 | 15 | 0655 | 93 | 1485 | 221 |
| 106.7 | 35.0 | 30 | 21.5 | 116 | 21.8 | JD | 81 | 04 | 03 | 0300 | 97 | 441 | 1 |
| 106.7 | 35.0 | 30 | 22.1 | 116 | 22.1 | NH | 81 | 04 | 15 | 0430 | 63 | 207 | 0 |
| 106.7 | 40.0 | 30 | 11.6 | 116 | 41.7 | JD | 81 | 04 | 03 | 0655 | 93 | 226 | 0 |
| 106.7 | 40.0 | 30 | 10.2 | 116 | 41.8 | NH | 81 | 04 | 15 | 0040 | 62 | 286 | 227 |
| 106.7 | 45.0 | 30 | 00.1 | 117 | 03.0 | NH | 81 | 04 | 14 | 1950 | 106 | 22 | 217 |
| 106.7 | 50.0 | 29 | 51.9 | 117 | 22.0 | NH | 81 | 04 | 14 | 1649 | 87 | 31 | 5 |
| 106.7 | 60.0 | 29 | 31.8 | 118 | 02.0 | NH | 81 | 04 | 14 | 1120 | 82 | 2 | 4 |
| 106.7 | 70.0 | 29 | 11.2 | 118 | 41.4 | NH | 81 | 04 | 14 | 0550 | 71 | 4 | 14 |
| 106.7 | 80.0 | 28 | 51.1 | 119 | 19.4 | NH | 81 | 04 | 14 | 0045 | 64 | 2 | 76 |
| 110.0 | 32.4 | 29 | 53.0 | 115 | 50.5 | NH | 81 | 04 | 15 | 1337 | 95 | 40 | 528 |
| 110.0 | 32.5 | 29 | 52.2 | 115 | 49.9 | JD | 81 | 04 | 02 | 0105 | 94 | 319 | 128 |
| 110.0 | 35.0 | 29 | 47.2 | 115 | 59.8 | JD | 81 | 04 | 02 | 0400 | 90 | 181 | 108 |
| 110.0 | 35.0 | 29 | 46.9 | 115 | 59.4 | NH | 81 | 04 | 15 | 1655 | 104 | 24 | 153 |
| 110.0 | 40.0 | 29 | 36.3 | 116 | 19.3 | NH | 81 | 04 | 15 | 2000 | 95 | 803 | 43 |
| 110.0 | 40.0 | 29 | 37.1 | 116 | 19.5 | JD | 81 | 04 | 02 | 0830 | 99 | 0 | 0 |
| 110.0 | 45.0 | 29 | 26.6 | 116 | 38.8 | NH | 81 | 04 | 16 | 0100 | 76 | 2 | 2 |
| 110.0 | 50.0 | 29 | 17.4 | 116 | 58.8 | NH | 81 | 04 | 16 | 0415 | 97 | 3 | 1 |
| 110.0 | 60.0 | 28 | 57.1 | 117 | 38.8 | NH | 81 | 04 | 16 | 1140 | 73 | 35 | 0 |
| 110.0 | 70.0 | 28 | 37.1 | 118 | 17.9 | NH | 81 | 04 | 16 | 1649 | 80 | 3 | 67 |
| 110.0 | 80.0 | 28 | 16.8 | 118 | 57.2 | NH | 81 | 04 | 17 | 0010 | 85 | 1 | 152 |
| 113.3 | 29.0 | 29 | 25.2 | 115 | 14.3 | NH | 81 | 04 | 18 | 1416 | 67 | 3 | 24 |
| 113.3 | 30.0 | 29 | 23.2 | 115 | 18.2 | NH | 81 | 04 | 18 | 1244 | 85 | 1 | 8 |
| 113.3 | 35.0 | 29 | 12.7 | 115 | 37.8 | NH | 81 | 04 | 18 | 0910 | 90 | 88 | 0 |
| 113.3 | 40.0 | 29 | 02.6 | 115 | 59.3 | NH | 81 | 04 | 18 | 0540 | 80 | 35 | 845 |
| 113.3 | 45.0 | 28 | 50.9 | 116 | 17.7 | NH | 81 | 04 | 18 | 0140 | 81 | 4 | 0 |
| 113.3 | 50.0 | 28 | 43.6 | 116 | 36.7 | NH | 81 | 04 | 17 | 2221 | 53 | 2 | 275 |
| 113.3 | 60.0 | 28 | 23.0 | 117 | 16.0 | NH | 81 | 04 | 17 | 1657 | 113 | 49 | 10 |
| 113.3 | 70.0 | 28 | 02.7 | 117 | 55.9 | NH | 81 | 04 | 17 | 1110 | 95 | 4 | 311 |
| 113.3 | 80.0 | 27 | 43.5 | 118 | 34.7 | NH | 81 | 04 | 17 | 0545 | 106 | 4 | 107 |
| 116.7 | 25.0 | 28 | 57.8 | 114 | 36.0 | NH | 81 | 04 | 18 | 1952 | 85 | 16 | 0 |
| 116.7 | 30.0 | 28 | 47.7 | 114 | 55.1 | NH | 81 | 04 | 18 | 2307 | 125 | 408 | 1227 |
| 116.7 | 35.0 | 28 | 37.5 | 115 | 15.6 | NH | 81 | 04 | 19 | 2056 | 95 | 335 | 53 |
| 116.7 | 40.0 | 28 | 27.7 | 115 | 35.1 | NH | 81 | 04 | 20 | 0345 | 83 | 14 | 521 |
| 116.7 | 45.0 | 28 | 17.6 | 115 | 57.8 | NH | 81 | 04 | 20 | 0655 | 70 | 43 | 175 |
| 116.7 | 50.0 | 28 | 07.5 | 116 | 14.4 | NH | 81 | 04 | 20 | 0940 | 79 | 387 | 289 |
| 116.7 | 60.0 | 27 | 47.8 | 116 | 53.1 | NH | 81 | 04 | 20 | 1454 | 86 | 12 | 22 |
| 116.7 | 70.0 | 27 | 27.4 | 117 | 31.8 | NH | 81 | 04 | 20 | 2015 | 78 | 5 | 40 |
| 116.7 | 80.0 | 27 | 07.7 | 118 | 10.5 | NH | 81 | 04 | 21 | 0125 | 89 | 4 | 8 |
| 118.0 | 39.0 | 28 | 16.2 | 115 | 22.4 | NH | 81 | 04 | 20 | 0045 | 74 | 53 | 256 |
| 119.0 | 33.0 | 28 | 17.3 | 114 | 52.7 | NH | 81 | 04 | 19 | 1611 | 94 | 30 | 16 |
| 120.0 | 24.0 | 28 | 25.4 | 114 | 10.9 | NH | 81 | 04 | 19 | 0450 | 116 | 4 | 103 |
| 120.0 | 25.0 | 28 | 23.8 | 114 | 14.7 | NH | 81 | 04 | 19 | 0640 | 100 | 2 | 7 |
| 120.0 | 30.0 | 28 | 13.2 | 114 | 34.7 | NH | 81 | 04 | 19 | 0950 | 63 | 455 | 17 |
| 120.0 | 35.0 | 28 | 03.6 | 114 | 53.7 | NH | 81 | 04 | 19 | 1332 | 86 | 5 | 13 |
| 120.0 | 38.5 | 27 | 56.3 | 115 | 07.3 | NH | 81 | 04 | 22 | 1233 | 71 | 10 | 2 |
| 120.0 | 45.0 | 27 | 43.2 | 115 | 33.4 | NH | 81 | 04 | 22 | 0510 | 89 | 50 | 123 |
| 120.0 | 50.0 | 27 | 33.3 | 115 | 51.5 | NH | 81 | 04 | 22 | 0120 | 81 | 164 | 2 |

TABLE 1. (cont.) CalCOFI Cruise 8104 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 | 60.0 | 27 | 13.2 | 116 | 30.9 | NH | 81 | 04 | 21 | 1846 | 86 | 43 | 71 |
| 120.0 | 70.0 | 26 | 53.4 | 117 | 10.4 | NH | 81 | 04 | 21 | 1319 | 70 | 4 | 159 |
| 120.0 | 80.0 | 26 | 33.4 | 117 | 48.0 | NH | 81 | 04 | 21 | 0630 | 86 | 11 | 31 |
| 123.3 | 36.0 | 27 | 27.0 | 114 | 36.3 | NH | 81 | 04 | 22 | 1738 | 97 | 3 | 0 |
| 123.3 | 37.0 | 27 | 24.9 | 114 | 40.5 | NH | 81 | 04 | 22 | 1858 | 130 | 63 | 34 |
| 123.3 | 42.0 | 27 | 14.9 | 114 | 59.5 | NH | 81 | 04 | 22 | 2208 | 92 | 549 | 202 |
| 123.3 | 45.0 | 27 | 08.9 | 115 | 11.2 | NH | 81 | 04 | 23 | 0040 | 73 | 288 | 3 |
| 123.3 | 50.0 | 26 | 59.1 | 115 | 29.9 | NH | 81 | 04 | 23 | 0340 | 84 | 160 | 8 |
| 123.3 | 60.0 | 26 | 39.1 | 116 | 09.2 | NH | 81 | 04 | 23 | 0855 | 90 | 20 | 356 |
| 126.7 | 33.0 | 26 | 57.7 | 114 | 02.0 | NH | 81 | 04 | 24 | 0615 | 83 | 5 | 15 |
| 126.7 | 35.0 | 26 | 53.7 | 114 | 10.2 | NH | 81 | 04 | 24 | 0435 | 101 | 170 | 541 |
| 126.7 | 40.0 | 26 | 43.7 | 114 | 29.4 | NH | 81 | 04 | 24 | 0135 | 84 | 497 | 34 |
| 126.7 | 45.0 | 26 | 32.9 | 114 | 48.3 | NH | 81 | 04 | 23 | 2225 | 74 | 170 | 7 |
| 126.7 | 50.0 | 26 | 23.2 | 115 | 07.7 | NH | 81 | 04 | 23 | 1910 | 81 | 8 | 20 |
| 126.7 | 60.0 | 26 | 03.8 | 115 | 46.3 | NH | 81 | 04 | 23 | 1401 | 85 | 0 | 28 |
| 130.0 | 28.0 | 26 | 33.3 | 113 | 21.6 | NH | 81 | 04 | 24 | 1100 | 73 | 28 | 100 |
| 130.0 | 30.0 | 26 | 29.2 | 113 | 29.3 | NH | 81 | 04 | 24 | 1314 | 95 | 7 | 86 |
| 130.0 | 35.0 | 26 | 19.4 | 113 | 48.5 | NH | 81 | 04 | 24 | 1618 | 100 | 5 | 203 |
| 130.0 | 40.0 | 26 | 06.5 | 114 | 07.6 | NH | 81 | 04 | 24 | 2106 | 70 | 2 | 275 |
| 130.0 | 60.0 | 25 | 27.6 | 115 | 19.5 | NH | 81 | 04 | 25 | 0825 | 86 | 1 | 107 |
| 133.3 | 23.0 | 26 | 09.1 | 112 | 41.3 | NH | 81 | 04 | 26 | 1150 | 69 | 0 | 214 |
| 133.3 | 25.0 | 26 | 04.9 | 112 | 48.7 | NH | 81 | 04 | 26 | 1000 | 34 | 0 | 6 |
| 133.3 | 30.0 | 25 | 54.5 | 113 | 07.7 | NH | 81 | 04 | 26 | 0655 | 94 | 3 | 7 |
| 133.3 | 35.0 | 25 | 45.0 | 113 | 26.7 | NH | 81 | 04 | 26 | 0340 | 74 | 77 | 6 |
| 133.3 | 40.0 | 25 | 34.8 | 113 | 46.9 | NH | 81 | 04 | 26 | 0001 | 92 | 6 | 13 |
| 133.3 | 50.0 | 25 | 15.3 | 114 | 24.8 | NH | 81 | 04 | 25 | 1843 | 84 | 147 | 143 |
| 133.3 | 60.0 | 24 | 57.0 | 115 | 00.4 | NH | 81 | 04 | 25 | 1331 | 96 | 3 | 18 |

CalCOFI Cruise 8105

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 37 | 56.7 | 122 | 52.8 | NH | 81 | 06 | 04 | 0050 | 68 | 4 | 3 |
| 60.0 | 52.5 | 37 | 51.6 | 123 | 03.8 | NH | 81 | 06 | 04 | 0305 | 60 | 3 | 2 |
| 63.3 | 50.0 | 37 | 22.6 | 122 | 28.4 | NH | 81 | 06 | 03 | 1942 | 87 | 0 | 40 |
| 63.3 | 55.0 | 37 | 12.7 | 122 | 50.1 | NH | 81 | 06 | 03 | 1445 | 93 | 0 | 4 |
| 63.3 | 70.0 | 36 | 42.7 | 123 | 54.8 | NH | 81 | 06 | 03 | 0100 | 96 | 1 | 5 |
| 66.7 | 49.0 | 36 | 49.2 | 121 | 59.2 | NH | 81 | 06 | 01 | 1340 | 77 | 0 | 0 |
| 66.7 | 50.0 | 36 | 47.0 | 122 | 03.4 | NH | 81 | 06 | 01 | 1630 | 75 | 1 | 6 |
| 66.7 | 65.0 | 36 | 17.2 | 123 | 07.9 | NH | 81 | 06 | 02 | 0325 | 89 | 0 | 5 |
| 66.7 | 70.0 | 36 | 07.4 | 123 | 28.6 | NH | 81 | 06 | 02 | 0650 | 89 | 1 | 1 |
| 66.7 | 80.0 | 35 | 47.2 | 124 | 11.7 | NH | 81 | 06 | 02 | 1635 | 104 | 0 | 0 |
| 70.0 | 51.0 | 36 | 10.9 | 121 | 43.6 | NH | 81 | 06 | 01 | 0640 | 73 | 1 | 1 |
| 70.0 | 53.0 | 36 | 07.1 | 121 | 52.1 | NH | 81 | 06 | 01 | 0410 | 107 | 50 | 0 |
| 73.3 | 50.0 | 35 | 38.5 | 121 | 15.3 | NH | 81 | 05 | 28 | 1454 | 109 | 0 | 2 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.0 | NH | 81 | 05 | 28 | 1710 | 89 | 3 | 9 |
| 73.3 | 70.0 | 34 | 58.5 | 122 | 39.8 | NH | 81 | 05 | 29 | 0605 | 126 | 3 | 75 |

TABLE 1. (cont.) CalCOFI Cruise 8105 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 | 80.0 | 34 | 38.4 | 123 | 22.0 | NH | 81 | 05 | 29 | 2120 | 97 | 1 | 42 |
| 73.3 | 90.0 | 34 | 18.6 | 124 | 03.8 | NH | 81 | 05 | 30 | 0345 | 102 | 6 | 207 |
| 76.7 | 48.0 | 35 | 07.3 | 120 | 42.4 | NH | 81 | 05 | 28 | 0815 | 105 | 0 | 182 |
| 76.7 | 51.0 | 35 | 01.4 | 120 | 55.2 | NH | 81 | 05 | 28 | 0545 | 96 | 0 | 8 |
| 76.7 | 55.0 | 34 | 53.3 | 121 | 12.2 | NH | 81 | 05 | 28 | 0050 | 84 | 196 | 0 |
| 76.7 | 60.0 | 34 | 43.4 | 121 | 33.2 | NH | 81 | 05 | 27 | 2109 | 95 | 5 | 6 |
| 76.7 | 65.0 | 34 | 33.3 | 121 | 53.9 | NH | 81 | 05 | 27 | 1632 | 111 | 3 | 638 |
| 76.7 | 70.0 | 34 | 23.7 | 122 | 14.8 | NH | 81 | 05 | 27 | 1055 | 90 | 3 | 1110 |
| 76.7 | 80.0 | 34 | 03.2 | 122 | 56.6 | NH | 81 | 05 | 27 | 0445 | 98 | 13 | 154 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | NH | 81 | 05 | 26 | 2216 | 70 | 2 | 32 |
| 76.7 | 100.0 | 33 | 23.5 | 124 | 19.5 | NH | 81 | 05 | 26 | 1627 | 78 | 0 | 59 |
| 80.0 | 55.0 | 34 | 18.7 | 120 | 48.0 | NH | 81 | 05 | 25 | 0115 | 95 | 6 | 6 |
| 80.0 | 60.0 | 34 | 09.3 | 121 | 08.8 | NH | 81 | 05 | 25 | 0615 | 82 | 8 | 1359 |
| 80.0 | 70.0 | 33 | 48.9 | 121 | 50.8 | NH | 81 | 05 | 25 | 1418 | 98 | 1 | 2802 |
| 80.0 | 80.0 | 33 | 28.8 | 122 | 31.7 | NH | 81 | 05 | 25 | 2039 | 92 | 23 | 436 |
| 80.0 | 90.0 | 33 | 09.0 | 123 | 13.3 | NH | 81 | 05 | 26 | 0355 | 106 | 0 | 39 |
| 80.0 | 100.0 | 32 | 49.1 | 123 | 54.5 | NH | 81 | 05 | 26 | 1010 | 95 | 6 | 100 |
| 82.0 | 46.0 | 34 | 16.2 | 119 | 56.4 | NH | 81 | 05 | 24 | 1758 | 80 | 0 | 11 |
| 83.3 | 40.6 | 34 | 14.0 | 119 | 24.4 | NH | 81 | 05 | 24 | 0655 | 107 | 5 | 285 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | NH | 81 | 05 | 24 | 0520 | 115 | 520 | 1102 |
| 83.3 | 51.0 | 33 | 52.7 | 120 | 07.8 | NH | 81 | 05 | 23 | 2211 | 62 | 49 | 91 |
| 83.3 | 60.0 | 33 | 34.8 | 120 | 45.2 | NH | 81 | 05 | 23 | 1442 | 80 | 2 | 5607 |
| 83.3 | 100.0 | 32 | 14.6 | 123 | 29.5 | NH | 81 | 05 | 22 | 1030 | 88 | 0 | 18 |
| 86.7 | 33.0 | 33 | 53.4 | 118 | 29.6 | NH | 81 | 05 | 19 | 2157 | 87 | 10642 | 324 |
| 86.7 | 35.0 | 33 | 49.2 | 118 | 37.8 | NH | 81 | 05 | 20 | 0400 | 84 | 10258 | 156 |
| 86.7 | 40.0 | 33 | 39.1 | 118 | 59.5 | NH | 81 | 05 | 20 | 1035 | 72 | 3 | 6 |
| 86.7 | 45.0 | 33 | 29.5 | 119 | 19.0 | NH | 81 | 05 | 20 | 1452 | 99 | 18 | 135 |
| 86.7 | 50.0 | 33 | 19.4 | 119 | 39.8 | NH | 81 | 05 | 20 | 1901 | 74 | 141 | 130 |
| 86.7 | 55.0 | 33 | 09.3 | 120 | 00.5 | NH | 81 | 05 | 20 | 2230 | 99 | 17 | 65 |
| 86.7 | 80.0 | 32 | 19.3 | 121 | 42.9 | NH | 81 | 05 | 21 | 1437 | 89 | 7 | 466 |
| 86.7 | 100.0 | 31 | 39.4 | 123 | 04.3 | NH | 81 | 05 | 22 | 0345 | 87 | 3 | 123 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 81 | 05 | 18 | 2310 | 92 | 332 | 436 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 81 | 05 | 19 | 0135 | 91 | 961 | 7466 |
| 90.0 | 37.0 | 33 | 11.1 | 118 | 23.2 | JD | 81 | 05 | 19 | 0620 | 109 | 45 | 14 |
| 90.0 | 45.0 | 32 | 55.0 | 119 | 09.0 | JD | 81 | 05 | 21 | 1100 | 99 | 0 | 0 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.9 | JD | 81 | 05 | 21 | 1650 | 91 | 16 | 31 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 81 | 05 | 21 | 2215 | 96 | 55 | 1520 |
| 90.0 | 80.0 | 31 | 45.1 | 121 | 18.9 | JD | 81 | 05 | 24 | 0825 | 89 | 10 | 46 |
| 90.0 | 90.0 | 31 | 25.1 | 121 | 59.4 | JD | 81 | 05 | 24 | 1515 | 86 | 1 | 5 |
| 93.3 | 26.7 | 32 | 57.4 | 117 | 18.3 | JD | 81 | 05 | 27 | 1745 | 101 | 412 | 2059 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.7 | JD | 81 | 05 | 27 | 1925 | 100 | 461 | 21 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 81 | 05 | 27 | 2155 | 108 | 508 | 461 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 81 | 05 | 28 | 0055 | 95 | 357 | 206 |
| 93.3 | 40.0 | 32 | 30.8 | 118 | 12.8 | JD | 81 | 05 | 28 | 0510 | 102 | 25 | 18 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.3 | JD | 81 | 05 | 30 | 0420 | 100 | 25 | 80 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 81 | 05 | 30 | 0820 | 90 | 103 | 10 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 14.0 | JD | 81 | 05 | 30 | 1220 | 96 | 50 | 660 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 81 | 05 | 30 | 1535 | 89 | 14 | 149 |
| 93.3 | 70.0 | 31 | 30.8 | 120 | 14.8 | JD | 81 | 05 | 25 | 2135 | 92 | 109 | 401 |

TABLE 1. (cont.) CalCOFI Cruise 8105 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 80.0 | 31 | 10.8 | 120 | 55.2 | JD | 81 | 05 | 25 | 1515 | 89 | 2 | 22 |
| 93.3 | 90.0 | 30 | 50.8 | 121 | 35.4 | JD | 81 | 05 | 25 | 0835 | 70 | 7 | 71 |
| 96.7 | 29.0 | 32 | 17.4 | 117 | 04.8 | JD | 81 | 06 | 02 | 0255 | 112 | 1086 | 1368 |
| 96.7 | 30.0 | 32 | 15.4 | 117 | 08.8 | JD | 81 | 06 | 02 | 0500 | 100 | 48 | 2541 |
| 96.7 | 32.0 | 32 | 11.4 | 117 | 17.0 | JD | 81 | 06 | 02 | 0655 | 66 | 19 | 19 |
| 96.7 | 35.0 | 32 | 05.0 | 117 | 29.2 | JD | 81 | 06 | 02 | 0910 | 97 | 1 | 67 |
| 96.7 | 40.0 | 31 | 55.4 | 117 | 49.5 | JD | 81 | 06 | 02 | 1420 | 115 | 8 | 2 |
| 96.7 | 45.0 | 31 | 45.4 | 118 | 09.8 | JD | 81 | 06 | 02 | 1745 | 98 | 2 | 61 |
| 96.7 | 50.0 | 31 | 35.4 | 118 | 30.1 | JD | 81 | 06 | 02 | 2150 | 77 | 45 | 14 |
| 96.7 | 55.0 | 31 | 25.4 | 118 | 50.3 | JD | 81 | 06 | 03 | 0105 | 97 | 12 | 5 |
| 96.7 | 60.0 | 31 | 15.4 | 119 | 10.5 | JD | 81 | 06 | 03 | 0600 | 98 | 3 | 12 |
| 96.7 | 70.0 | 30 | 55.4 | 119 | 50.7 | JD | 81 | 06 | 03 | 1310 | 95 | 0 | 44 |
| 96.7 | 80.0 | 30 | 35.4 | 120 | 30.8 | JD | 81 | 06 | 03 | 2000 | 86 | 4 | 197 |
| 96.7 | 100.0 | 29 | 55.4 | 121 | 50.6 | JD | 81 | 06 | 04 | 0820 | 94 | 3 | 370 |
| 100.0 | 29.2 | 31 | 42.8 | 116 | 43.4 | JD | 81 | 06 | 06 | 0945 | 108 | 332 | 2820 |
| 100.0 | 30.0 | 31 | 41.2 | 116 | 46.6 | JD | 81 | 06 | 06 | 0815 | 98 | 52 | 593 |
| 100.0 | 35.0 | 31 | 31.2 | 117 | 06.9 | JD | 81 | 06 | 06 | 0400 | 92 | 68 | 46 |
| 100.0 | 40.0 | 31 | 21.2 | 117 | 27.1 | JD | 81 | 06 | 06 | 0105 | 88 | 7 | 3 |
| 100.0 | 45.0 | 31 | 11.2 | 117 | 47.1 | JD | 81 | 06 | 05 | 2120 | 101 | 1 | 13 |
| 100.0 | 50.0 | 31 | 01.2 | 118 | 07.3 | JD | 81 | 06 | 05 | 1810 | 103 | 0 | 13 |
| 100.0 | 60.0 | 30 | 41.2 | 118 | 47.5 | JD | 81 | 06 | 05 | 1150 | 87 | 1 | 3 |
| 100.0 | 70.0 | 30 | 21.2 | 119 | 27.5 | JD | 81 | 06 | 05 | 0505 | 36 | 5 | 9 |
| 100.0 | 80.0 | 30 | 01.2 | 120 | 07.4 | JD | 81 | 06 | 04 | 2245 | 96 | 6 | 124 |
| 103.3 | 29.0 | 31 | 08.9 | 116 | 20.5 | JD | 81 | 06 | 07 | 0610 | 101 | 285 | 135 |
| 103.3 | 30.0 | 31 | 06.9 | 116 | 24.5 | JD | 81 | 06 | 07 | 0805 | 103 | 21 | 531 |
| 103.3 | 35.0 | 30 | 56.9 | 116 | 44.6 | JD | 81 | 06 | 07 | 1155 | 106 | 1 | 12 |
| 103.3 | 40.0 | 30 | 46.9 | 117 | 04.7 | JD | 81 | 06 | 07 | 1545 | 114 | 3 | 11 |
| 103.3 | 45.0 | 30 | 36.9 | 117 | 24.7 | JD | 81 | 06 | 07 | 1845 | 101 | 72 | 1 |
| 103.3 | 50.0 | 30 | 26.9 | 117 | 44.7 | JD | 81 | 06 | 07 | 2230 | 83 | 2 | 0 |
| 103.3 | 60.0 | 30 | 06.9 | 118 | 24.7 | JD | 81 | 06 | 08 | 0430 | 98 | 2 | 78 |
| 103.3 | 70.0 | 29 | 46.9 | 119 | 04.4 | JD | 81 | 06 | 08 | 1015 | 82 | 0 | 40 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 05.8 | JD | 81 | 06 | 10 | 1940 | 106 | 31 | 1978 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 09.8 | JD | 81 | 06 | 10 | 1825 | 100 | 32 | 65 |
| 106.7 | 35.0 | 30 | 21.5 | 116 | 21.8 | JD | 81 | 06 | 10 | 1545 | 113 | 8 | 159 |
| 106.7 | 40.0 | 30 | 11.5 | 116 | 41.8 | JD | 81 | 06 | 10 | 1225 | 99 | 0 | 53 |
| 106.7 | 45.0 | 30 | 01.5 | 117 | 01.7 | JD | 81 | 06 | 10 | 0730 | 100 | 4 | 15 |
| 106.7 | 50.0 | 29 | 51.5 | 117 | 21.6 | JD | 81 | 06 | 10 | 0415 | 103 | 71 | 1 |
| 106.7 | 80.0 | 28 | 51.5 | 119 | 20.3 | JD | 81 | 06 | 09 | 0935 | 78 | 0 | 191 |
| 110.0 | 32.4 | 29 | 52.4 | 115 | 49.5 | JD | 81 | 06 | 11 | 0045 | 93 | 78 | 78 |
| 110.0 | 35.0 | 29 | 47.2 | 115 | 59.8 | JD | 81 | 06 | 11 | 0255 | 86 | 35 | 14 |
| 110.0 | 40.0 | 29 | 37.2 | 116 | 19.7 | JD | 81 | 06 | 11 | 0700 | 87 | 0 | 0 |
| 110.0 | 45.0 | 29 | 27.2 | 116 | 39.5 | JD | 81 | 06 | 11 | 0945 | 80 | 0 | 1 |
| 110.0 | 50.0 | 29 | 17.2 | 116 | 59.2 | JD | 81 | 06 | 11 | 1410 | 86 | 0 | 0 |
| 110.0 | 60.0 | 28 | 57.2 | 117 | 38.7 | JD | 81 | 06 | 11 | 2025 | 88 | 0 | 44 |
| 110.0 | 70.0 | 28 | 37.2 | 118 | 18.0 | JD | 81 | 06 | 12 | 0245 | 84 | 1 | 145 |
| 110.0 | 80.0 | 28 | 17.2 | 118 | 57.2 | JD | 81 | 06 | 12 | 0900 | 72 | 0 | 196 |

TABLE 1. (cont.) CalCOFI Cruise 8107

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 37 | 56.8 | 122 | 52.9 | JD | 81 | 06 | 28 | 0126 | 96 | 1 | 20 |
| 60.0 | 52.5 | 37 | 51.8 | 123 | 03.8 | JD | 81 | 06 | 27 | 2326 | 92 | 4 | 296 |
| 60.0 | 55.0 | 37 | 46.8 | 123 | 14.7 | JD | 81 | 06 | 27 | 2123 | 88 | 0 | 228 |
| 60.0 | 60.0 | 37 | 36.8 | 123 | 36.5 | JD | 81 | 06 | 27 | 1808 | 92 | 1 | 13 |
| 63.3 | 50.0 | 37 | 22.6 | 122 | 28.4 | JD | 81 | 06 | 28 | 1155 | 101 | 0 | 11 |
| 63.3 | 52.0 | 37 | 18.6 | 122 | 37.1 | JD | 81 | 06 | 28 | 1400 | 88 | 0 | 1 |
| 63.3 | 55.0 | 37 | 12.6 | 122 | 50.1 | JD | 81 | 06 | 28 | 1630 | 123 | 14 | 15 |
| 63.3 | 60.0 | 37 | 02.6 | 123 | 11.7 | JD | 81 | 06 | 28 | 2005 | 103 | 39 | 44 |
| 63.3 | 70.0 | 36 | 42.6 | 123 | 54.8 | JD | 81 | 06 | 29 | 0224 | 110 | 2 | 333 |
| 63.3 | 80.0 | 36 | 22.6 | 124 | 37.7 | JD | 81 | 06 | 29 | 0747 | 107 | 2 | 264 |
| 63.3 | 90.0 | 36 | 02.6 | 125 | 20.5 | JD | 81 | 06 | 29 | 1323 | 83 | 4 | 53 |
| 66.7 | 49.0 | 36 | 49.2 | 121 | 59.1 | JD | 81 | 06 | 30 | 2215 | 108 | 9 | 53 |
| 66.7 | 50.0 | 36 | 47.2 | 122 | 03.4 | JD | 81 | 06 | 30 | 2000 | 109 | 33 | 90 |
| 66.7 | 55.0 | 36 | 37.2 | 122 | 24.9 | JD | 81 | 06 | 30 | 1620 | 95 | 3 | 86 |
| 66.7 | 60.0 | 36 | 27.2 | 122 | 46.4 | JD | 81 | 06 | 30 | 1245 | 123 | 2 | 31 |
| 66.7 | 70.0 | 36 | 07.0 | 123 | 29.3 | JD | 81 | 06 | 30 | 0707 | 107 | 6 | 141 |
| 66.7 | 80.0 | 35 | 47.2 | 124 | 11.7 | JD | 81 | 06 | 30 | 0123 | 112 | 14 | 2625 |
| 66.7 | 90.0 | 35 | 27.2 | 124 | 54.2 | JD | 81 | 06 | 29 | 1950 | 95 | 3 | 19 |
| 70.0 | 51.0 | 36 | 10.9 | 121 | 43.6 | JD | 81 | 07 | 01 | 0447 | 96 | 13 | 2 |
| 70.0 | 53.0 | 36 | 06.9 | 121 | 52.1 | JD | 81 | 07 | 01 | 0718 | 82 | 4 | 13 |
| 70.0 | 60.0 | 35 | 52.9 | 122 | 21.9 | JD | 81 | 07 | 01 | 1146 | 84 | 2 | 26 |
| 70.0 | 70.0 | 35 | 32.9 | 123 | 04.4 | JD | 81 | 07 | 01 | 1815 | 91 | 2 | 55 |
| 70.0 | 80.0 | 35 | 12.9 | 123 | 46.7 | JD | 81 | 07 | 02 | 0013 | 100 | 9 | 1 |
| 70.0 | 90.0 | 34 | 52.9 | 124 | 28.8 | JD | 81 | 07 | 02 | 0610 | 103 | 3 | 1 |
| 73.3 | 50.0 | 35 | 38.6 | 121 | 15.3 | JD | 81 | 07 | 03 | 1301 | 109 | 0 | 222 |
| 73.3 | 53.0 | 35 | 32.6 | 121 | 28.1 | JD | 81 | 07 | 03 | 1025 | 93 | 1 | 7 |
| 73.3 | 60.0 | 35 | 18.6 | 121 | 57.7 | JD | 81 | 07 | 03 | 0547 | 115 | 14 | 235 |
| 73.3 | 70.0 | 34 | 58.6 | 122 | 39.9 | JD | 81 | 07 | 03 | 0010 | 102 | 3 | 11 |
| 73.3 | 80.0 | 34 | 38.6 | 123 | 21.9 | JD | 81 | 07 | 02 | 1805 | 107 | 1 | 4 |
| 73.3 | 90.0 | 34 | 18.6 | 124 | 03.7 | JD | 81 | 07 | 02 | 1200 | 90 | 2 | 6 |
| 76.7 | 48.0 | 35 | 07.3 | 120 | 42.4 | JD | 81 | 07 | 03 | 1805 | 94 | 11 | 153 |
| 76.7 | 51.0 | 35 | 01.3 | 120 | 55.1 | JD | 81 | 07 | 03 | 2045 | 70 | 10 | 29 |
| 76.7 | 55.0 | 34 | 53.3 | 121 | 11.9 | JD | 81 | 07 | 04 | 0004 | 89 | 17 | 2 |
| 76.7 | 70.0 | 34 | 23.3 | 122 | 14.8 | JD | 81 | 07 | 04 | 0911 | 74 | 1 | 2 |
| 76.7 | 80.0 | 34 | 03.3 | 122 | 56.5 | JD | 81 | 07 | 04 | 1420 | 92 | 4 | 2 |
| 76.7 | 90.0 | 33 | 43.3 | 123 | 38.0 | JD | 81 | 07 | 04 | 2005 | 69 | 7 | 14 |
| 80.0 | 51.0 | 34 | 27.0 | 120 | 31.4 | JD | 81 | 07 | 06 | 0138 | 102 | 65 | 499 |
| 80.0 | 55.0 | 34 | 19.0 | 120 | 48.1 | JD | 81 | 07 | 05 | 2245 | 78 | 33 | 41 |
| 80.0 | 60.0 | 34 | 09.0 | 121 | 09.0 | JD | 81 | 07 | 05 | 1908 | 107 | 73 | 13 |
| 80.0 | 70.0 | 33 | 49.0 | 121 | 50.6 | JD | 81 | 07 | 05 | 1325 | 92 | 2 | 1 |
| 80.0 | 80.0 | 33 | 29.0 | 122 | 32.0 | JD | 81 | 07 | 05 | 0731 | 100 | 0 | 2 |
| 80.0 | 90.0 | 33 | 09.0 | 123 | 13.3 | JD | 81 | 07 | 05 | 0139 | 101 | 5 | 1 |
| 82.0 | 46.0 | 34 | 16.2 | 119 | 56.3 | JD | 81 | 07 | 07 | 1452 | 105 | 76 | 104 |
| 83.3 | 40.6 | 34 | 13.5 | 119 | 24.7 | JD | 81 | 07 | 07 | 0803 | 84 | 58 | 2842 |
| 83.3 | 42.0 | 34 | 10.7 | 119 | 30.5 | JD | 81 | 07 | 07 | 0955 | 104 | 12 | 1654 |
| 83.3 | 51.0 | 33 | 52.7 | 120 | 08.0 | JD | 81 | 07 | 07 | 1925 | 103 | 70 | 577 |
| 83.3 | 55.0 | 33 | 44.7 | 120 | 24.6 | JD | 81 | 07 | 07 | 2238 | 75 | 53 | 71 |
| 83.3 | 60.0 | 33 | 34.7 | 120 | 45.3 | JD | 81 | 07 | 08 | 0206 | 89 | 28 | 12 |
| 83.3 | 70.0 | 33 | 14.7 | 121 | 26.6 | JD | 81 | 07 | 08 | 0744 | 84 | 0 | 3 |

TABLE 1. (cont.) CalCOFI Cruise 8107 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 | 80.0 | 32 | 54.7 | 122 | 07.7 | JD | 81 | 07 | 08 | 1352 | 90 | 0 | 0 |
| 83.3 | 90.0 | 32 | 34.7 | 122 | 48.7 | JD | 81 | 07 | 08 | 2025 | 63 | 2 | 1 |
| 86.7 | 33.0 | 33 | 53.4 | 118 | 29.4 | JD | 81 | 07 | 10 | 2006 | 75 | 189 | 264 |
| 86.7 | 35.0 | 33 | 49.4 | 118 | 37.7 | JD | 81 | 07 | 10 | 1812 | 105 | 59 | 492 |
| 86.7 | 40.0 | 33 | 39.4 | 118 | 58.5 | JD | 81 | 07 | 10 | 1340 | 107 | 3 | 538 |
| 86.7 | 45.0 | 33 | 29.4 | 119 | 19.1 | JD | 81 | 07 | 10 | 0955 | 69 | 2 | 4 |
| 86.7 | 50.0 | 33 | 19.4 | 119 | 39.8 | JD | 81 | 07 | 10 | 0506 | 112 | 12 | 38 |
| 86.7 | 55.0 | 33 | 09.4 | 120 | 00.4 | JD | 81 | 07 | 10 | 0138 | 86 | 17 | 7 |
| 86.7 | 60.0 | 32 | 59.4 | 120 | 21.0 | JD | 81 | 07 | 09 | 2155 | 68 | 2 | 6 |
| 86.7 | 70.0 | 32 | 39.4 | 121 | 02.0 | JD | 81 | 07 | 09 | 1520 | 106 | 1 | 31 |
| 86.7 | 80.0 | 32 | 19.4 | 121 | 42.9 | JD | 81 | 07 | 09 | 0846 | 83 | 3 | 2 |
| 86.7 | 90.0 | 31 | 59.4 | 122 | 23.6 | JD | 81 | 07 | 09 | 0219 | 90 | 20 | 152 |
| 90.0 | 28.0 | 33 | 29.1 | 117 | 46.1 | JD | 81 | 07 | 11 | 0200 | 100 | 1218 | 3652 |
| 90.0 | 30.0 | 33 | 25.1 | 117 | 54.3 | JD | 81 | 07 | 11 | 0423 | 103 | 75 | 600 |
| 90.0 | 37.0 | 33 | 11.1 | 118 | 23.2 | JD | 81 | 07 | 11 | 0858 | 97 | 22 | 541 |
| 90.0 | 45.0 | 32 | 55.1 | 118 | 56.1 | JD | 81 | 07 | 11 | 1402 | 94 | 0 | 28 |
| 90.0 | 53.0 | 32 | 39.1 | 119 | 28.9 | JD | 81 | 07 | 11 | 1926 | 96 | 15 | 1 |
| 90.0 | 60.0 | 32 | 25.1 | 119 | 57.6 | JD | 81 | 07 | 12 | 0007 | 95 | 2 | 9 |
| 93.3 | 26.7 | 32 | 57.4 | 117 | 18.3 | JD | 81 | 07 | 15 | 0348 | 102 | 339 | 711 |
| 93.3 | 28.0 | 32 | 54.8 | 117 | 23.7 | JD | 81 | 07 | 15 | 0206 | 103 | 22 | 1811 |
| 93.3 | 30.0 | 32 | 50.8 | 117 | 31.9 | JD | 81 | 07 | 14 | 2340 | 105 | 21 | 218 |
| 93.3 | 35.0 | 32 | 40.8 | 117 | 52.4 | JD | 81 | 07 | 14 | 1952 | 94 | 26 | 105 |
| 93.3 | 40.0 | 32 | 30.8 | 118 | 12.8 | JD | 81 | 07 | 14 | 1609 | 106 | 14 | 78 |
| 93.3 | 45.0 | 32 | 20.8 | 118 | 33.3 | JD | 81 | 07 | 14 | 1044 | 98 | 0 | 358 |
| 93.3 | 50.0 | 32 | 10.8 | 118 | 53.6 | JD | 81 | 07 | 14 | 0609 | 82 | 8 | 10 |
| 93.3 | 55.0 | 32 | 00.8 | 119 | 14.0 | JD | 81 | 07 | 14 | 0138 | 84 | 9 | 3 |
| 93.3 | 60.0 | 31 | 50.8 | 119 | 34.3 | JD | 81 | 07 | 13 | 2138 | 77 | 13 | 20 |
| 93.3 | 70.0 | 31 | 30.8 | 120 | 14.8 | JD | 81 | 07 | 13 | 1425 | 101 | 15 | 8 |

CalCOFI Cruise 8108

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 | 29.0 | 32 | 17.3 | 117 | 04.8 | NH | 81 | 07 | 23 | 1453 | 60 | 4 | 163 |
| 96.7 | 30.0 | 32 | 15.3 | 117 | 09.0 | NH | 81 | 07 | 23 | 1655 | 99 | 4 | 238 |
| 96.7 | 32.0 | 32 | 11.0 | 117 | 17.6 | NH | 81 | 07 | 23 | 1929 | 99 | 478 | 12 |
| 96.7 | 35.0 | 32 | 05.1 | 117 | 29.2 | NH | 81 | 07 | 23 | 2208 | 87 | 23 | 22 |
| 96.7 | 40.0 | 31 | 55.0 | 117 | 49.0 | NH | 81 | 07 | 24 | 0127 | 95 | 9 | 5 |
| 96.7 | 45.0 | 31 | 45.0 | 118 | 10.0 | NH | 81 | 07 | 24 | 0457 | 60 | 0 | 1 |
| 96.7 | 50.0 | 31 | 35.7 | 118 | 30.4 | NH | 81 | 07 | 24 | 0841 | 81 | 1 | 54 |
| 96.7 | 55.0 | 31 | 26.1 | 118 | 50.0 | NH | 81 | 07 | 24 | 1256 | 93 | 1 | 199 |
| 96.7 | 60.0 | 31 | 14.7 | 119 | 10.8 | NH | 81 | 07 | 24 | 1659 | 102 | 1 | 233 |
| 96.7 | 70.0 | 30 | 55.1 | 119 | 49.9 | NH | 81 | 07 | 24 | 2251 | 70 | 2 | 845 |
| 96.7 | 80.0 | 30 | 35.7 | 120 | 30.3 | NH | 81 | 07 | 25 | 0418 | 90 | 5 | 858 |
| 96.7 | 90.0 | 30 | 15.9 | 121 | 11.7 | NH | 81 | 07 | 25 | 0922 | 103 | 7 | 526 |
| 100.0 | 29.2 | 31 | 42.4 | 116 | 43.7 | NH | 81 | 07 | 27 | 1845 | 80 | 10 | 383 |
| 100.0 | 30.0 | 31 | 41.0 | 116 | 46.5 | NH | 81 | 07 | 27 | 1541 | 131 | 1 | 571 |
| 100.0 | 35.0 | 31 | 31.0 | 117 | 07.5 | NH | 81 | 07 | 27 | 1055 | 78 | 0 | 1 |

TABLE 1. (cont.) CalCOFI Cruise 8108 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 | 40.0 | 31 | 20.6 | 117 | 27.6 | NH | 81 | 07 | 27 | 0621 | 127 | 10 | 42 |
| 100.0 | 45.0 | 31 | 10.8 | 117 | 47.2 | NH | 81 | 07 | 27 | 0142 | 78 | 4 | 67 |
| 100.0 | 50.0 | 31 | 02.6 | 118 | 07.6 | NH | 81 | 07 | 26 | 2122 | 76 | 10 | 4 |
| 100.0 | 60.0 | 30 | 40.9 | 118 | 47.1 | NH | 81 | 07 | 26 | 1253 | 94 | 0 | 62 |
| 100.0 | 70.0 | 30 | 22.0 | 119 | 28.2 | NH | 81 | 07 | 26 | 0613 | 90 | 4 | 1853 |
| 100.0 | 80.0 | 30 | 01.5 | 120 | 07.0 | NH | 81 | 07 | 25 | 2311 | 83 | 8 | 100 |
| 100.0 | 90.0 | 29 | 43.8 | 120 | 51.5 | NH | 81 | 07 | 25 | 1625 | 82 | 0 | 241 |
| 103.3 | 29.0 | 31 | 09.0 | 116 | 20.8 | NH | 81 | 07 | 28 | 0048 | 72 | 194 | 1390 |
| 103.3 | 30.0 | 31 | 07.2 | 116 | 24.3 | NH | 81 | 07 | 28 | 0222 | 73 | 2726 | 15 |
| 103.3 | 35.0 | 30 | 56.7 | 116 | 45.3 | NH | 81 | 07 | 28 | 0549 | 89 | 17 | 12 |
| 103.3 | 40.0 | 30 | 47.2 | 117 | 05.4 | NH | 81 | 07 | 28 | 0853 | 75 | 2 | 14 |
| 103.3 | 45.0 | 30 | 37.1 | 117 | 24.8 | NH | 81 | 07 | 28 | 1232 | 88 | 3 | 28 |
| 103.3 | 50.0 | 30 | 27.0 | 117 | 44.0 | NH | 81 | 07 | 28 | 1651 | 116 | 8 | 4 |
| 103.3 | 60.0 | 30 | 06.0 | 118 | 24.1 | NH | 81 | 07 | 28 | 2220 | 80 | 1 | 268 |
| 103.3 | 70.0 | 29 | 46.0 | 119 | 03.5 | NH | 81 | 07 | 29 | 0331 | 86 | 7 | 31 |
| 103.3 | 80.0 | 29 | 26.5 | 119 | 44.5 | NH | 81 | 07 | 29 | 0843 | 86 | 2 | 14 |
| 106.7 | 31.0 | 30 | 29.5 | 116 | 06.0 | NH | 81 | 07 | 30 | 1849 | 119 | 90 | 193 |
| 106.7 | 32.0 | 30 | 27.5 | 116 | 10.0 | NH | 81 | 07 | 30 | 2055 | 89 | 84 | 250 |
| 106.7 | 35.0 | 30 | 21.5 | 116 | 21.5 | NH | 81 | 07 | 30 | 2323 | 83 | 18 | 1 |
| 106.7 | 40.0 | 30 | 12.0 | 116 | 42.0 | NH | 81 | 07 | 30 | 1402 | 78 | 1 | 14 |
| 106.7 | 45.0 | 30 | 01.5 | 117 | 02.1 | NH | 81 | 07 | 30 | 1033 | 86 | 163 | 1 |
| 106.7 | 50.0 | 29 | 51.3 | 117 | 21.9 | NH | 81 | 07 | 30 | 0713 | 77 | 0 | 9 |
| 106.7 | 60.0 | 29 | 31.4 | 118 | 01.8 | NH | 81 | 07 | 30 | 0148 | 72 | 0 | 53 |
| 106.7 | 70.0 | 29 | 12.0 | 118 | 41.0 | NH | 81 | 07 | 29 | 2014 | 65 | 2 | 0 |
| 106.7 | 80.0 | 28 | 51.7 | 119 | 21.3 | NH | 81 | 07 | 29 | 1420 | 51 | 0 | 404 |
| 110.0 | 32.4 | 29 | 50.2 | 115 | 50.1 | NH | 81 | 07 | 31 | 0448 | 94 | 440 | 6168 |
| 110.0 | 35.0 | 29 | 46.8 | 116 | 00.0 | NH | 81 | 07 | 31 | 0755 | 78 | 16 | 29 |
| 110.0 | 40.0 | 29 | 36.4 | 116 | 19.5 | NH | 81 | 07 | 31 | 1127 | 66 | 10 | 7 |
| 110.0 | 45.0 | 29 | 27.1 | 116 | 38.4 | NH | 81 | 07 | 31 | 1555 | 112 | 0 | 1 |
| 110.0 | 50.0 | 29 | 18.0 | 116 | 59.7 | NH | 81 | 07 | 31 | 2015 | 64 | 0 | 0 |
| 110.0 | 60.0 | 28 | 56.7 | 117 | 38.4 | NH | 81 | 08 | 01 | 0229 | 71 | 28 | 250 |
| 110.0 | 70.0 | 28 | 36.9 | 118 | 18.3 | NH | 81 | 08 | 01 | 0812 | 55 | 0 | 171 |
| 110.0 | 80.0 | 28 | 16.7 | 118 | 57.0 | NH | 81 | 08 | 01 | 1514 | 74 | 0 | 79 |
| 113.3 | 29.0 | 29 | 25.3 | 115 | 14.0 | NH | 81 | 08 | 03 | 0639 | 100 | 28 | 2804 |
| 113.3 | 30.0 | 29 | 23.0 | 115 | 18.0 | NH | 81 | 08 | 03 | 0445 | 55 | 276 | 159 |
| 113.3 | 45.0 | 28 | 54.0 | 116 | 16.5 | NH | 81 | 08 | 02 | 1721 | 57 | 11 | 66 |
| 113.3 | 50.0 | 28 | 42.3 | 116 | 36.7 | NH | 81 | 08 | 02 | 1347 | 86 | 1 | 103 |
| 113.3 | 60.0 | 28 | 22.2 | 117 | 16.5 | NH | 81 | 08 | 02 | 0751 | 72 | 3 | 33 |
| 113.3 | 70.0 | 28 | 02.7 | 117 | 55.4 | NH | 81 | 08 | 02 | 0227 | 89 | 0 | 178 |
| 113.3 | 80.0 | 27 | 43.4 | 118 | 34.3 | NH | 81 | 08 | 01 | 2052 | 45 | 0 | 63 |
| 116.7 | 25.0 | 28 | 57.2 | 114 | 35.7 | NH | 81 | 08 | 03 | 1312 | 92 | 15 | 7 |
| 116.7 | 30.0 | 28 | 47.5 | 114 | 56.2 | NH | 81 | 08 | 03 | 1650 | 68 | 5 | 2 |
| 116.7 | 35.0 | 28 | 37.6 | 115 | 15.6 | NH | 81 | 08 | 04 | 1514 | 79 | 1 | 19 |
| 116.7 | 40.0 | 28 | 27.1 | 115 | 35.7 | NH | 81 | 08 | 04 | 2206 | 73 | 10 | 7 |
| 116.7 | 45.0 | 28 | 17.7 | 115 | 54.9 | NH | 81 | 08 | 05 | 0125 | 71 | 11 | 119 |
| 116.7 | 50.0 | 28 | 07.6 | 116 | 14.0 | NH | 81 | 08 | 05 | 0435 | 93 | 163 | 24 |
| 116.7 | 60.0 | 27 | 48.3 | 116 | 54.5 | NH | 81 | 08 | 05 | 0929 | 83 | 3 | 62 |
| 116.7 | 70.0 | 27 | 27.9 | 117 | 32.1 | NH | 81 | 08 | 05 | 1500 | 90 | 1 | 112 |
| 116.7 | 80.0 | 27 | 07.9 | 118 | 10.7 | NH | 81 | 08 | 05 | 2022 | 68 | 0 | 150 |

TABLE 1. (cont.) CalCOFI Cruise 8108 (cont.)

| Line | Station | Latitude (N) deg. | min. | Longitude (W) deg. | min. | Ship Code | Tow Date yr. | mo. | day | Time (PST) | Volume Water Strained | Total Larvae | Total Eggs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118.0 | 39.0 | 28 | 16.0 | 115 | 22.4 | NH | 81 | 08 | 04 | 1847 | 82 | 97 | 2 |
| 119.0 | 33.0 | 28 | 17.8 | 114 | 51.8 | NH | 81 | 08 | 04 | 1040 | 96 | 8 | 3 |
| 120.0 | 24.0 | 28 | 25.0 | 114 | 11.2 | NH | 81 | 08 | 03 | 2249 | 75 | 367 | 6 |
| 120.0 | 25.0 | 28 | 23.2 | 114 | 15.0 | NH | 81 | 08 | 04 | 0045 | 79 | 79 | 0 |
| 120.0 | 30.0 | 28 | 12.8 | 114 | 35.7 | NH | 81 | 08 | 04 | 0411 | 92 | 30 | 3 |
| 120.0 | 35.0 | 28 | 03.3 | 114 | 53.5 | NH | 81 | 08 | 04 | 0752 | 73 | 0 | 191 |
| 120.0 | 38.5 | 27 | 56.0 | 115 | 07.0 | NH | 81 | 08 | 07 | 0550 | 139 | 241 | 5208 |
| 120.0 | 45.0 | 27 | 44.0 | 115 | 32.3 | NH | 81 | 08 | 07 | 0125 | 55 | 39 | 12 |
| 120.0 | 50.0 | 27 | 33.7 | 115 | 51.8 | NH | 81 | 08 | 06 | 2047 | 53 | 41 | 23 |
| 120.0 | 60.0 | 27 | 13.9 | 116 | 30.7 | NH | 81 | 08 | 06 | 1441 | 79 | 4 | 608 |
| 120.0 | 70.0 | 26 | 53.4 | 117 | 10.3 | NH | 81 | 08 | 06 | 0812 | 78 | 1 | 121 |
| 120.0 | 80.0 | 26 | 33.0 | 117 | 48.8 | NH | 81 | 08 | 06 | 0238 | 71 | 0 | 7 |
| 123.3 | 36.0 | 27 | 26.8 | 114 | 36.3 | NH | 81 | 08 | 07 | 1054 | 90 | 5 | 1859 |
| 123.3 | 37.0 | 27 | 25.2 | 114 | 40.4 | NH | 81 | 08 | 07 | 1250 | 93 | 6 | 104 |
| 123.3 | 42.0 | 27 | 14.5 | 115 | 00.1 | NH | 81 | 08 | 07 | 1634 | 90 | 2 | 26 |

TABLE 2. Pooled occurrences of fish larvae taken in Manta tows on the 1980 and 1981 CalCOFI surveys.

| Rank | Taxon | Occurrences |
|---|---|---|
| 1 | *Engraulis mordax* | 327 |
| 2 | *Cololabis saira* | 318 |
| 3 | *Sebastes* spp. | 176 |
| 4 | *Scomber japonicus* | 83 |
| 5 | *Scorpaenichthys marmoratus* | 80 |
| 6 | *Hypsoblennius jenkinsi* | 63 |
| 6 | *Sardinops sagax* | 63 |
| 8 | *Leuresthes tenuis* | 45 |
| 8 | *Vinciguerria lucetia* | 45 |
| 10 | *Trachurus symmetricus* | 42 |
| 11 | *Chromis punctipinnis* | 40 |
| 12 | *Oxyjulis californica* | 37 |
| 13 | *Sebastes diploproa* | 31 |
| 13 | *Triphoturus mexicanus* | 31 |
| 15 | *Atherinopsis californiensis* | 30 |
| 16 | *Paralichthys californicus* | 27 |
| 17 | *Girella nigricans* | 26 |
| 18 | *Hexagrammos decagrammus* | 25 |
| 18 | *Seriphus politus* | 25 |
| 18 | Disintegrated fish larvae | 25 |
| 21 | *Hypsoblennius gilberti* | 24 |
| 21 | *Genyonemus lineatus* | 24 |
| 23 | *Ophiodon elongatus* | 23 |
| 23 | *Hypsoblennius gentilis* | 23 |
| 25 | *Sphyraena argentea* | 22 |
| 26 | *Stenobrachius leucopsarus* | 21 |
| 27 | *Cheilopogon heterurus* | 18 |
| 28 | *Citharichthys stigmaeus* | 16 |
| 28 | *Cheilopogon* spp. | 16 |
| 30 | *Hermosilla azurea* | 15 |
| 31 | *Pleuronichthys verticalis* | 14 |
| 31 | *Sebastes jordani* | 14 |
| 33 | *Cyclothone* spp. | 13 |
| 33 | *Macroramphosus gracilis* | 13 |
| 33 | *Paralabrax* spp. | 13 |
| 36 | *Hemilepidotus spinosus* | 12 |
| 36 | *Pleuronichthys ritteri* | 12 |
| 38 | *Ceratoscopelus townsendi* | 11 |
| 38 | *Pleuronichthys coenosus* | 11 |
| 40 | *Synodus lucioceps* | 10 |
| 40 | *Hypsoblennius* spp. | 10 |
| 40 | Unidentified fish larvae | 10 |
| 43 | *Seriola lalandi* | 9 |
| 43 | *Xenistius californiensis* | 9 |
| 43 | *Medialuna californiensis* | 9 |
| 43 | *Merluccius productus* | 9 |
| 43 | *Neoclinus stephensae* | 9 |
| 43 | *Stomias atriventer* | 9 |
| 49 | *Citharichthys sordidus* | 8 |

TABLE 2. (cont.)

| Rank | Taxon | Occurrences |
|---|---|---|
| 49 | *Hexagrammos lagocephalus* | 8 |
| 51 | *Halichoeres semicinctus* | 7 |
| 51 | *Peprilus simillimus* | 7 |
| 51 | *Tetragonurus cuvieri* | 7 |
| 51 | *Oxylebius pictus* | 7 |
| 51 | *Nannobrachium ritteri* | 7 |
| 56 | *Labrisomus multiporosus* | 6 |
| 56 | *Lampanyctus* spp. | 6 |
| 58 | *Etrumeus teres* | 5 |
| 58 | *Scorpaena guttata* | 5 |
| 58 | *Sebastes aurora* | 5 |
| 58 | *Parophrys vetulus* | 5 |
| 58 | *Citharichthys* spp. | 5 |
| 58 | *Semicossyphus pulcher* | 5 |
| 64 | *Lyopsetta exilis* | 4 |
| 64 | *Icichthys lockingtoni* | 4 |
| 64 | *Hirundichthys marginatus* | 4 |
| 64 | *Sebastes paucispinis* | 4 |
| 64 | Cottidae | 4 |
| 64 | *Anisotremus davidsoni* | 4 |
| 70 | Cyclopteridae | 3 |
| 70 | *Cyclothone signata* | 3 |
| 70 | *Cyclothone acclinidens* | 3 |
| 70 | *Hypsypops rubicundus* | 3 |
| 70 | *Hypsopsetta guttulata* | 3 |
| 70 | *Neoclinus blanchardi* | 3 |
| 70 | *Eucinostomus* spp. | 3 |
| 70 | *Roncador stearnsii* | 3 |
| 70 | *Symphurus atricaudus* | 3 |
| 79 | *Anoplopoma fimbria* | 2 |
| 79 | *Psettichthys melanostictus* | 2 |
| 79 | Serraninae | 2 |
| 79 | *Sebastolobus* spp. | 2 |
| 79 | *Cheilopogon pinnatibarbatus* | 2 |
| 79 | *Hippoglossina stomata* | 2 |
| 79 | *Sebastes levis* | 2 |
| 79 | *Artedius harringtoni* | 2 |
| 79 | *Hirundichthys* spp. | 2 |
| 79 | *Hygophum reinhardtii* | 2 |
| 79 | Stomiiformes | 2 |
| 79 | *Labrisomus xanti* | 2 |
| 79 | Sciaenidae | 2 |
| 79 | Gonostomatidae | 2 |
| 79 | *Lampadena urophaos* | 2 |
| 79 | Gerreidae | 2 |
| 79 | *Diogenichthys laternatus* | 2 |
| 79 | *Chilara taylori* | 2 |
| 79 | *Lepidogobius lepidus* | 2 |
| 79 | Clupeidae | 2 |
| 79 | *Tarletonbeania crenularis* | 2 |
| 79 | Stichaeidae | 2 |
| 79 | *Typhlogobius californiensis* | 2 |

TABLE 2. (cont.)

| Rank | Taxon | Occurrences |
|---|---|---|
| 79 | *Xystreurys liolepis* | 2 |
| 79 | *Leptocottus armatus* | 2 |
| 104 | *Atherinops affinis* | 1 |
| 104 | Trachipteridae | 1 |
| 104 | *Stomias* spp. | 1 |
| 104 | *Diogenichthys atlanticus* | 1 |
| 104 | Melanostomiinae | 1 |
| 104 | *Gigantactis* spp. | 1 |
| 104 | *Bolinichthys longipes* | 1 |
| 104 | Atherinidae | 1 |
| 104 | *Opisthonema* spp. | 1 |
| 104 | *Etropus crossotus* | 1 |
| 104 | *Labrisomus* spp. | 1 |
| 104 | Clinidae | 1 |
| 104 | Gobiidae | 1 |
| 104 | *Coryphopterus nicholsii* | 1 |
| 104 | *Lythrypnus zebra* | 1 |
| 104 | *Diplospinus multistriatus* | 1 |
| 104 | Carangidae | 1 |
| 104 | Pleuronectiformes | 1 |
| 104 | *Cheilotrema saturnum* | 1 |
| 104 | Bothidae | 1 |
| 104 | *Glyptocephalus zachirus* | 1 |
| 104 | *Microstomus pacificus* | 1 |
| 104 | *Platichthys stellatus* | 1 |
| 104 | *Pleuronichthys decurrens* | 1 |
| 104 | *Symphurus* spp. | 1 |
| 104 | *Auxis* spp. | 1 |
| 104 | *Pronotogrammus multifasciatus* | 1 |
| 104 | *Fodiator acutus* | 1 |
| 104 | *Poromitra* spp. | 1 |
| 104 | *Artedius lateralis* | 1 |
| 104 | *Chitonotus pugetensis* | 1 |
| 104 | *Icelinus* spp. | 1 |
| 104 | *Liparis florae* | 1 |
| 104 | *Mugil cephalus* | 1 |
| 104 | *Hemanthias signifer* | 1 |
| 104 | Kyphosidae | 1 |
| 104 | *Chloroscombrus orqueta* | 1 |
| 104 | *Coryphaena* spp. | 1 |
| 104 | *Coryphaena hippurus* | 1 |
| 104 | Haemulidae | 1 |
| 104 | *Calamus brachysomus* | 1 |
| 104 | *Atractoscion nobilis* | 1 |
| 104 | Exocoetidae | 1 |
| 104 | *Liparis pulchellus* | 1 |
| | Total | 2176 |

TABLE 3. Pooled raw counts of fish larvae taken in Manta tows on the 1980 and 1981 CalCOFI surveys.

| Rank | Taxon | Count |
|---|---|---|
| 1 | *Engraulis mordax* | 104777 |
| 2 | *Scomber japonicus* | 2736 |
| 3 | *Leuresthes tenuis* | 2068 |
| 4 | *Sardinops sagax* | 1933 |
| 5 | *Sebastes* spp. | 1630 |
| 6 | *Cololabis saira* | 1564 |
| 7 | *Hypsoblennius jenkinsi* | 1140 |
| 8 | *Scorpaenichthys marmoratus* | 1044 |
| 9 | *Atherinopsis californiensis* | 686 |
| 10 | *Ophiodon elongatus* | 445 |
| 11 | *Sebastes jordani* | 278 |
| 12 | *Genyonemus lineatus* | 267 |
| 13 | *Chromis punctipinnis* | 249 |
| 14 | *Vinciguerria lucetia* | 243 |
| 15 | *Etrumeus teres* | 229 |
| 16 | *Cheilopogon heterurus* | 216 |
| 17 | *Xenistius californiensis* | 210 |
| 18 | *Seriphus politus* | 165 |
| 19 | *Trachurus symmetricus* | 153 |
| 20 | *Triphoturus mexicanus* | 135 |
| 21 | *Oxyjulis californica* | 130 |
| 22 | *Hemilepidotus spinosus* | 110 |
| 23 | *Hexagrammos decagrammus* | 107 |
| 24 | *Hypsoblennius gilberti* | 104 |
| 25 | *Sphyraena argentea* | 92 |
| 26 | *Neoclinus stephensae* | 88 |
| 27 | *Paralichthys californicus* | 83 |
| 28 | *Paralabrax* spp. | 80 |
| 28 | *Halichoeres semicinctus* | 80 |
| 30 | *Girella nigricans* | 77 |
| 31 | *Sebastes diploproa* | 76 |
| 32 | *Hypsoblennius* spp. | 67 |
| 33 | *Stenobrachius leucopsarus* | 61 |
| 34 | *Synodus lucioceps* | 59 |
| 35 | *Cheilopogon* spp. | 50 |
| 36 | Disintegrated fish larvae | 46 |
| 37 | *Hypsoblennius gentilis* | 43 |
| 38 | *Citharichthys stigmaeus* | 41 |
| 39 | *Seriola lalandi* | 40 |
| 40 | *Macroramphosus gracilis* | 36 |
| 41 | *Citharichthys sordidus* | 31 |
| 42 | *Hermosilla azurea* | 29 |
| 42 | *Parophrys vetulus* | 29 |
| 44 | *Anisotremus davidsoni* | 28 |
| 45 | *Peprilus simillimus* | 26 |
| 45 | *Pleuronichthys ritteri* | 26 |
| 47 | *Pleuronichthys verticalis* | 24 |
| 48 | *Hypsypops rubicundus* | 23 |
| 48 | *Pleuronichthys coenosus* | 23 |

TABLE 3. (cont.)

| Rank | Taxon | Count |
|---|---|---|
| 50 | *Cyclothone* spp. | 22 |
| 51 | *Ceratoscopelus townsendi* | 21 |
| 52 | *Medialuna californiensis* | 20 |
| 52 | *Auxis* spp. | 20 |
| 54 | *Scorpaena guttata* | 19 |
| 55 | *Hexagrammos lagocephalus* | 17 |
| 56 | Cottidae | 16 |
| 56 | Atherinidae | 16 |
| 58 | *Opisthonema* spp. | 12 |
| 59 | Unidentified fish larvae | 11 |
| 59 | *Merluccius productus* | 11 |
| 59 | *Stomias atriventer* | 11 |
| 62 | *Labrisomus multiporosus* | 10 |
| 62 | *Sebastes paucispinis* | 10 |
| 64 | *Oxylebius pictus* | 9 |
| 64 | *Chloroscombrus orqueta* | 9 |
| 64 | *Leptocottus armatus* | 9 |
| 64 | *Hirundichthys marginatus* | 9 |
| 68 | *Semicossyphus pulcher* | 8 |
| 68 | *Lampanyctus* spp. | 8 |
| 68 | *Nannobrachium ritteri* | 8 |
| 68 | *Tetragonurus cuvieri* | 8 |
| 72 | *Psettichthys melanostictus* | 7 |
| 72 | Kyphosidae | 7 |
| 72 | *Eucinostomus* spp. | 7 |
| 72 | *Lampadena urophaos* | 7 |
| 76 | *Hemanthias signifer* | 6 |
| 76 | *Citharichthys* spp. | 6 |
| 78 | *Sebastes aurora* | 5 |
| 78 | *Symphurus atricaudus* | 5 |
| 78 | *Lyopsetta exilis* | 5 |
| 78 | *Anoplopoma fimbria* | 5 |
| 82 | *Atherinops affinis* | 4 |
| 82 | *Calamus brachysomus* | 4 |
| 82 | *Icichthys lockingtoni* | 4 |
| 85 | Gerreidae | 3 |
| 85 | Clupeidae | 3 |
| 85 | *Cyclothone acclinidens* | 3 |
| 85 | *Hypsopsetta guttulata* | 3 |
| 85 | Serraninae | 3 |
| 85 | *Hygophum reinhardtii* | 3 |
| 85 | *Etropus crossotus* | 3 |
| 85 | *Tarletonbeania crenularis* | 3 |
| 85 | *Platichthys stellatus* | 3 |
| 85 | *Hirundichthys* spp. | 3 |
| 85 | *Cyclothone signata* | 3 |
| 85 | *Roncador stearnsii* | 3 |
| 85 | Cyclopteridae | 3 |
| 85 | *Sebastolobus* spp. | 3 |
| 85 | *Neoclinus blanchardi* | 3 |
| 100 | *Hippoglossina stomata* | 2 |

TABLE 3. (cont.)

| Rank | Taxon | Count |
|---|---|---|
| 100 | *Lythrypnus zebra* | 2 |
| 100 | *Lepidogobius lepidus* | 2 |
| 100 | *Chilara taylori* | 2 |
| 100 | *Xystreurys liolepis* | 2 |
| 100 | *Diogenichthys laternatus* | 2 |
| 100 | Stomiiformes | 2 |
| 100 | *Labrisomus xanti* | 2 |
| 100 | *Cheilopogon pinnatibarbatus* | 2 |
| 100 | Sciaenidae | 2 |
| 100 | *Typhlogobius californiensis* | 2 |
| 100 | *Coryphaena* spp. | 2 |
| 100 | *Artedius harringtoni* | 2 |
| 100 | *Pronotogrammus multifasciatus* | 2 |
| 100 | Gonostomatidae | 2 |
| 100 | Stichaeidae | 2 |
| 100 | *Sebastes levis* | 2 |
| 117 | *Microstomus pacificus* | 1 |
| 117 | *Coryphopterus nicholsii* | 1 |
| 117 | *Stomias* spp. | 1 |
| 117 | *Symphurus* spp. | 1 |
| 117 | *Liparis pulchellus* | 1 |
| 117 | Melanostomiinae | 1 |
| 117 | *Artedius lateralis* | 1 |
| 117 | Gobiidae | 1 |
| 117 | *Pleuronichthys decurrens* | 1 |
| 117 | *Liparis florae* | 1 |
| 117 | *Chitonotus pugetensis* | 1 |
| 117 | Haemulidae | 1 |
| 117 | *Icelinus* spp. | 1 |
| 117 | *Mugil cephalus* | 1 |
| 117 | Pleuronectiformes | 1 |
| 117 | Bothidae | 1 |
| 117 | *Coryphaena hippurus* | 1 |
| 117 | Clinidae | 1 |
| 117 | *Diplospinus multistriatus* | 1 |
| 117 | *Fodiator acutus* | 1 |
| 117 | Trachipteridae | 1 |
| 117 | Exocoetidae | 1 |
| 117 | *Atractoscion nobilis* | 1 |
| 117 | *Bolinichthys longipes* | 1 |
| 117 | *Cheilotrema saturnum* | 1 |
| 117 | *Diogenichthys atlanticus* | 1 |
| 117 | *Labrisomus* spp. | 1 |
| 117 | Carangidae | 1 |
| 117 | *Glyptocephalus zachirus* | 1 |
| 117 | *Gigantactis* spp. | 1 |
| 117 | *Poromitra* spp. | 1 |
| | Total | 122343 |

TABLE 4. Numbers of fish larvae taken in Manta net tows on the 1980 and 1981 CalCOFI surveys, listed by taxon, station, and month. Numbers of larvae are expressed as larvae per 100 cubic meters of water filtered. Unoccupied stations are indicated by a dash.

**Clupeidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 40.0 | 0.0 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 45.0 | 0.0 | 0.0 | - | - | 2.0 | - | 0.0 | - | - | - | 0.0 | - |

***Etrumeus teres***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 146.8 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 24.6 | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.6 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 0.5 | - | - | - | 0.0 |

***Opisthonema* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 6.3 | - | - | - | 0.0 |

***Sardinops sagax***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 1.6 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 7.2 | - | - | - | - | 0.0 |
| 83.3 55.0 | 0.0 | 0.0 | - | - | - | - | 0.7 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 9.7 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 29.9 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 7.8 | - | 69.6 | 0.6 | - | - | - | - | 0.0 |
| 96.7 30.0 | 0.0 | - | - | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 50.0 | - | - | 0.0 | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 3.2 | 0.0 | - | - | - | - | 0.0 |
| 100.0 40.0 | 0.0 | - | 0.0 | 3.4 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 6.4 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 11.7 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 12.6 | - | 1.1 | 44.1 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Sardinops sagax* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 2.7 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 91.5 | - | - | - | - | 0.0 |
| 110.0 32.5 | - | 0.0 | - | 0.9 | - | - | - | - | - | - | - | - |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.6 | - | - | - | - | 1.0 |
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 10.0 | - | - | - | 0.0 |
| 113.3 30.0 | - | - | 0.0 | 0.0 | - | - | - | 104.0 | - | - | - | 0.0 |
| 113.3 35.0 | - | 0.0 | - | 0.9 | - | - | - | - | - | - | - | 0.0 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 12.9 | - | - | - | 0.0 |
| 116.7 30.0 | - | - | 0.0 | 36.2 | - | - | - | 0.7 | - | - | - | 0.0 |
| 116.7 45.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 116.7 50.0 | - | - | - | 4.8 | - | - | - | 83.8 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 22.2 | - | - | - | 8.2 | - | - | - | 1.1 |
| 119.0 33.0 | - | - | 0.0 | 3.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.8 | 0.0 | - | - | - | 32.4 | - | - | - | 202.3 |
| 120.0 25.0 | - | - | 44.4 | 0.0 | - | - | - | 20.6 | - | - | - | 23.2 |
| 120.0 30.0 | - | - | 0.0 | 281.5 | - | - | - | 9.2 | - | - | - | 24.8 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 317.4 | - | - | - | 2.3 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 4.4 | - | - | - | 1.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 1.6 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 46.0 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 2.4 |
| 123.3 50.0 | - | - | 0.0 | 80.9 | - | - | - | - | - | - | - | 0.0 |
| 126.7 35.0 | - | - | - | 10.1 | - | - | - | - | - | - | - | 0.0 |
| 130.0 28.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 3.6 |
| 130.0 30.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 2.2 |
| 136.7 22.0 | - | - | - | - | - | - | - | - | - | - | - | 4.9 |

*Engraulis mordax*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 112.7 | - | 8.7 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 47.5 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 52.0 | - | - | 62.6 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 20.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 60.0 | - | - | 3.0 | - | - | 1.0 | - | - | - | - | - | 0.0 |
| 63.3 80.0 | - | 1.1 | - | - | - | 0.0 | - | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 | 49.0 | 0.0 | - | 826.2 | - | - | 2.2 | - | - | - | - | - | 47.5 |
| 66.7 | 50.0 | 0.0 | - | 0.0 | - | - | 1.1 | - | - | - | - | - | 2.6 |
| 66.7 | 70.0 | - | 1.9 | - | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 70.0 | 51.0 | 1.5 | - | 70.3 | - | - | 0.7 | 0.0 | - | - | - | - | 10.4 |
| 70.0 | 53.0 | 0.0 | - | 10.2 | - | - | 6.4 | 0.0 | - | - | - | - | 141.4 |
| 70.0 | 60.0 | 7.4 | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 70.0 | 80.0 | - | 0.0 | - | - | - | - | 1.0 | - | - | - | - | 0.0 |
| 73.3 | 50.0 | 0.0 | - | 303.6 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 151.5 |
| 73.3 | 53.0 | 0.0 | - | 69.4 | 0.9 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 48.0 | 50.8 | - | 67.4 | - | 0.0 | - | 3.8 | - | - | - | - | 11.6 |
| 76.7 | 51.0 | 5.8 | - | 0.0 | - | 0.0 | - | 1.4 | - | - | - | - | 7.2 |
| 76.7 | 55.0 | - | - | 0.0 | - | 162.2 | - | 2.7 | - | - | - | - | 0.0 |
| 76.7 | 60.0 | - | - | 0.0 | - | 1.9 | - | - | - | - | - | - | 0.0 |
| 76.7 | 80.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 90.0 | 0.0 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 51.0 | - | - | 922.0 | 6.3 | - | - | 34.5 | - | - | - | - | 26.0 |
| 80.0 | 55.0 | - | - | 1673.4 | 0.0 | 2.9 | - | 5.5 | - | - | - | - | 0.9 |
| 80.0 | 60.0 | - | - | 278.2 | 0.0 | 2.4 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 70.0 | 0.0 | - | - | 12.4 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 90.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 82.0 | 46.0 | 86.5 | 18.9 | - | - | 0.0 | - | 3.1 | - | - | - | - | 7.0 |
| 83.3 | 40.6 | 237.6 | 25.5 | - | 70.5 | 2.1 | - | 1.7 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 24.5 | 4.2 | - | 29.1 | 6.9 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 51.0 | 31.9 | 12030.2 | - | - | 25.9 | - | 4.1 | - | - | - | - | 2.3 |
| 83.3 | 55.0 | 0.0 | 2.8 | - | - | - | - | 2.2 | - | - | - | - | 0.0 |
| 83.3 | 60.0 | 0.0 | - | - | - | 0.8 | - | 10.7 | - | - | - | - | 0.9 |
| 83.3 | 70.0 | 0.0 | - | - | 2.7 | - | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 90.0 | 0.0 | - | - | - | - | - | 0.6 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 83.4 | 70.8 | - | 0.0 | 8689.1 | - | 0.0 | - | - | - | 4.2 | - |
| 86.7 | 35.0 | 10.8 | 3966.6 | - | 701.2 | 8439.2 | - | 8.4 | - | - | - | 1.3 | - |
| 86.7 | 40.0 | 5.5 | 24.8 | - | 1077.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 45.0 | 3.4 | 364.7 | - | - | 12.8 | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 82.5 | 345.4 | - | 18.8 | 81.5 | - | 0.0 | - | - | - | 1.3 | - |
| 86.7 | 55.0 | 0.8 | 2.3 | - | 0.0 | 9.9 | - | 1.7 | - | - | - | 3.4 | - |
| 86.7 | 60.0 | 0.0 | 9.8 | - | 0.0 | - | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 28.0 | 0.0 | 284.9 | - | 178.5 | 46.8 | - | 375.2 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 | 30.0 | 4.4 | 12.8 | - | 929.1 | 805.4 | - | 5.2 | - | - | - | 0.0 | - |
| 90.0 | 37.0 | 0.0 | 46.9 | - | 19.7 | 46.7 | - | 1.0 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 4.7 | 8.1 | - | 227.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.0 | - | 409.2 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 60.0 | 0.0 | 8.1 | - | 0.0 | 11.5 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 26.7 | 0.0 | 10.6 | - | 228.5 | 392.7 | - | 86.8 | - | - | - | 0.0 | - |
| 93.3 | 28.0 | 0.0 | 12.4 | - | 824.6 | 459.9 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 30.0 | 0.0 | 97.0 | - | 1661.5 | 546.9 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 | 35.0 | 0.0 | 3.0 | - | 10908.9 | 331.5 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 40.0 | 0.0 | 1.0 | - | 376.7 | 24.5 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 45.0 | 0.0 | 0.0 | - | 102.9 | 11.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 50.0 | 0.0 | 325.7 | - | 105.7 | 41.4 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 55.0 | 9.8 | 3.0 | - | - | 37.4 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 0.0 | 16.0 | - | - | 6.3 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 70.0 | 0.0 | - | - | - | 13.9 | - | 0.0 | - | - | - | 0.0 | - |
| 95.0 | 29.0 | - | 5.2 | - | - | - | - | - | - | - | - | - | - |
| 95.0 | 30.0 | - | - | 3008.9 | - | - | - | - | - | - | - | - | - |
| 96.7 | 29.0 | 0.0 | - | - | 1722.7 | - | 230.2 | 1.2 | - | - | - | - | 2.1 |
| 96.7 | 30.0 | 0.0 | - | - | 733.5 | - | 6.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 32.0 | 0.0 | - | - | 2013.1 | - | 11.8 | 143.8 | - | - | - | - | 0.0 |
| 96.7 | 35.0 | 0.8 | - | - | 2104.8 | - | 1.0 | 0.9 | - | - | - | - | 0.0 |
| 96.7 | 40.0 | 0.0 | - | 6.2 | 48.1 | - | 2.3 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 45.0 | 0.0 | - | 0.0 | 126.3 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 50.0 | - | - | 0.0 | 12.3 | - | 0.8 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 55.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 60.0 | 0.0 | - | 0.0 | 3.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 70.0 | 0.0 | 1.9 | - | 9.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 80.0 | 0.0 | 0.0 | - | 0.5 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 29.2 | 0.0 | - | 227.7 | 185.2 | - | 294.8 | 0.0 | - | - | - | - | 18.3 |
| 100.0 | 30.0 | 0.0 | - | 221.1 | 216.6 | - | 34.2 | 0.0 | - | - | - | - | 3.0 |
| 100.0 | 35.0 | 0.0 | - | 6.6 | 43.2 | - | 61.9 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 40.0 | 0.0 | - | 25.1 | 42.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 45.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 60.0 | 0.0 | - | 0.0 | 2.2 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 80.0 | 0.0 | 1.2 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 29.0 | 3.7 | 80.5 | - | 65.3 | - | 62.7 | 72.2 | - | - | - | - | 5.7 |

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 30.0 | 6.1 | 1034.1 | - | 1863.9 | - | 16.4 | 1909.1 | - | - | - | - | 11.5 |
| 103.3 35.0 | 0.9 | 0.0 | - | 50.6 | - | 0.0 | 2.7 | - | - | - | - | 0.0 |
| 103.3 40.0 | 0.0 | 0.0 | - | 242.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 45.0 | 0.0 | 1.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 50.0 | 0.0 | - | 1.7 | 9.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 137.2 | 114.9 | - | 226.3 | - | 25.5 | 2.4 | - | - | - | - | 13.6 |
| 106.7 32.0 | 0.0 | 42.8 | - | 875.5 | - | 6.0 | 52.4 | - | - | - | - | 36.1 |
| 106.7 35.0 | 12.5 | 538.5 | - | 275.1 | - | 1.1 | 0.0 | - | - | - | - | 8.1 |
| 106.7 40.0 | 0.0 | 10.2 | - | 193.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 45.0 | 0.0 | 0.0 | - | 23.3 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.0 | 0.0 | - | 26.1 | - | 10.3 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 32.3 | - | 63.8 | 0.0 | - | - | - | - | 20.4 |
| 110.0 32.5 | - | 129.7 | - | 290.1 | - | - | - | - | - | - | - | - |
| 110.0 35.0 | 0.0 | 10.3 | - | 93.9 | - | 24.0 | 0.0 | - | - | - | - | 26.2 |
| 110.0 40.0 | 0.0 | 5.8 | - | 759.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 50.0 | 0.0 | 1.9 | - | 1.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 60.0 | 0.0 | 4.4 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 |
| 113.3 29.0 | - | - | 0.6 | 0.0 | - | - | - | 0.0 | - | - | - | 2.4 |
| 113.3 30.0 | - | - | 16.0 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 113.3 35.0 | - | 0.0 | - | 74.9 | - | - | - | - | - | - | - | 0.0 |
| 113.3 40.0 | - | 4.6 | - | 27.9 | - | - | - | - | - | - | - | 0.0 |
| 113.3 45.0 | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 113.3 60.0 | - | 0.0 | - | 1.1 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 17.2 |
| 116.7 30.0 | - | - | 0.0 | 428.1 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 35.0 | - | - | 3.8 | 314.7 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 40.0 | - | - | 0.0 | 5.8 | - | - | - | 5.1 | - | - | - | 0.0 |
| 116.7 45.0 | - | - | 0.0 | 27.3 | - | - | - | 6.4 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 251.4 | - | - | - | 1.9 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 2.2 | - | - | - | 0.8 | - | - | - | 1.1 |
| 119.0 33.0 | - | - | 3.4 | 15.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 1.7 | 2.3 | - | - | - | 0.0 | - | - | - | 24.0 |
| 120.0 25.0 | - | - | 15.5 | 1.0 | - | - | - | 0.0 | - | - | - | 1.2 |
| 120.0 30.0 | - | - | 87.1 | 6.3 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 35.0 | - | - | 1.6 | 0.0 | - | - | - | 0.0 | - | - | - | 1.2 |
| 120.0 38.5 | - | - | 0.0 | 0.7 | - | - | - | 0.0 | - | - | - | 2.3 |

TABLE 4. (cont.)

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

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 45.0 | - | - | - | 25.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 130.1 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 60.0 | - | - | - | 24.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 11.3 | 0.0 | - | - | - | 0.0 | - | - | - | 6.7 |
| 123.3 37.0 | - | - | 0.0 | 74.1 | - | - | - | 0.0 | - | - | - | 9.5 |
| 123.3 42.0 | - | - | 0.0 | 465.4 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 45.0 | - | - | 0.0 | 201.1 | - | - | - | - | - | - | - | 0.0 |
| 123.3 50.0 | - | - | 0.0 | 28.7 | - | - | - | - | - | - | - | 2.7 |
| 123.3 60.0 | - | - | 16.9 | 0.9 | - | - | - | - | - | - | - | 0.0 |
| 126.7 33.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 2.9 |
| 126.7 35.0 | - | - | - | 160.6 | - | - | - | - | - | - | - | 0.0 |
| 126.7 40.0 | - | - | - | 410.3 | - | - | - | - | - | - | - | 0.0 |
| 126.7 45.0 | - | - | - | 123.6 | - | - | - | - | - | - | - | 0.0 |
| 130.0 28.0 | - | - | - | 10.9 | - | - | - | - | - | - | - | 15.6 |
| 130.0 30.0 | - | - | - | 6.6 | - | - | - | - | - | - | - | 0.0 |
| 130.0 35.0 | - | - | - | 3.0 | - | - | - | - | - | - | - | 1.0 |
| 130.0 40.0 | - | - | - | 0.7 | - | - | - | - | - | - | - | 0.0 |
| 133.3 35.0 | - | - | - | 55.0 | - | - | - | - | - | - | - | 0.0 |
| 133.3 40.0 | - | - | - | 0.9 | - | - | - | - | - | - | - | 0.0 |
| 133.3 50.0 | - | - | - | 119.8 | - | - | - | - | - | - | - | 0.0 |
| 136.7 22.0 | - | - | - | - | - | - | - | - | - | - | - | 7.8 |
| 136.7 23.0 | - | - | - | - | - | - | - | - | - | - | - | 1.1 |
| 136.7 25.0 | - | - | - | - | - | - | - | - | - | - | - | 23.9 |

**Stomiiformes**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 60.0 | - | - | 0.0 | 0.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 110.0 60.0 | 1.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 |

**Gonostomatidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 45.0 | 0.6 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Cyclothone* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | - | 1.1 |

TABLE 4. (cont.)

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

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 55.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 100.0 | - | - | - | - | - | 0.9 | - | - | - | - | - | - |
| 100.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 3.0 | - | - | - | - | 0.0 |
| 100.0 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 2.7 |
| 106.7 70.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 3.4 |
| 106.7 80.0 | 0.0 | 1.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.0 |
| 110.0 50.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 110.0 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | 0.0 |
| 120.0 60.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.9 |
| 126.7 45.0 | - | - | - | 0.7 | - | - | - | - | - | - | - | 0.0 |
| 133.3 40.0 | - | - | - | 0.9 | - | - | - | - | - | - | - | 0.0 |

***Cyclothone acclinidens***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.3 80.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 116.7 80.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 0.9 |

***Cyclothone signata***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.9 |
| 96.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 50.0 | 0.7 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Vinciguerria lucetia***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 90.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 90.0 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | 21.4 | - |
| 93.3 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | - | 1.1 |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 96.7 40.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 3.8 | - | - | - | - | 0.0 |
| 96.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 5.8 | 0.0 | - | - | - | - | 1.0 |
| 96.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 80.0 | 0.0 | 0.0 | - | 0.5 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 90.0 | 0.0 | 0.0 | - | 1.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 100.0 35.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Vinciguerria lucetia* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 3.0 | - | - | - | - | 0.0 |
| 100.0 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 100.0 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.3 | - | - | - | - | 0.0 |
| 100.0 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 18.2 |
| 103.3 45.0 | 0.0 | 1.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 50.0 | 3.5 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 103.3 60.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 2.5 |
| 103.3 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.4 | - | - | - | - | 0.0 |
| 106.7 60.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 3.9 |
| 106.7 70.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.7 | - | - | - | - | 11.4 |
| 106.7 80.0 | 0.0 | 1.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 38.4 |
| 110.0 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 110.0 50.0 | 0.9 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 3.4 |
| 110.0 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 14.2 | - | - | - | 0.0 |
| 110.0 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.8 | - | 0.0 | - | - | - | 0.0 |
| 113.3 35.0 | - | 1.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 |
| 113.3 60.0 | - | 0.0 | - | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |
| 116.7 45.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 3.2 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 4.6 |
| 116.7 60.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 13.8 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 4.2 | - | - | - | 0.0 |
| 120.0 60.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 19.0 |
| 120.0 70.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 8.5 |
| 126.7 45.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |
| 130.0 40.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |
| 133.3 40.0 | - | - | - | 1.8 | - | - | - | - | - | - | - | 0.0 |
| 136.7 40.0 | - | - | - | - | - | - | - | - | - | - | - | 1.0 |
| 136.7 50.0 | - | - | - | - | - | - | - | - | - | - | - | 4.2 |

***Stomias* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.7 |

TABLE 4. (cont.)

***Stomias atriventer***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | - | 2.2 |
| 96.7 50.0 | - | - | 1.1 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 60.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 80.0 | 1.3 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 113.3 70.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | - | - | 0.9 |
| 113.3 80.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 120.0 60.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.9 |
| 123.3 36.0 | - | - | 1.0 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |

**Melanostomiinae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |

***Synodus lucioceps***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 4.3 |
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 2.4 |
| 113.3 30.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 3.2 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 3.2 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 5.4 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 3.8 | - | - | - | 1.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 34.9 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 5.6 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.2 |

***Bolinichthys longipes***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 70.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 0.9 |

***Ceratoscopelus townsendi***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 80.0 | - | 0.0 | - | - | - | - | 1.0 | - | - | - | - | 0.0 |
| 96.7 100.0 | - | - | - | - | - | 0.9 | - | - | - | - | - | - |
| 100.0 40.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 3.8 | - | - | - | - | 0.0 |
| 100.0 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 3.6 |
| 103.3 80.0 | 0.0 | 0.7 | - | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 106.7 70.0 | 0.0 | 0.9 | - | 0.0 | - | - | 0.0 | - | - | - | - | 1.1 |

TABLE 4. (cont.)

*Ceratoscopelus townsendi* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 80.0 | 1.3 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 3.0 |
| 110.0 70.0 | 0.0 | 0.0 | - | 1.6 | - | 0.0 | - | 0.0 | - | - | - | 0.0 |
| 120.0 60.0 | - | - | - | 2.6 | - | - | - | 0.0 | - | - | - | 0.0 |

*Lampadena urophaos*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 4.6 |
| 120.0 70.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.9 |

*Lampanyctus* spp.

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 55.0 | 0.0 | - | 1.4 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 70.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 2.3 |
| 106.7 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 110.0 50.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 133.3 60.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |

*Nannobrachium ritteri*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 60.0 | 0.7 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | - | - | 1.8 |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 35.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 45.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 70.0 | 0.9 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 70.0 | 0.0 | 0.0 | - | 0.8 | - | 0.0 | - | 0.0 | - | - | - | 0.0 |

*Stenobrachius leucopsarus*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 1.6 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 52.0 | - | - | 3.5 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 5.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 49.0 | 0.0 | - | 0.0 | - | - | 1.1 | - | - | - | - | - | 0.0 |
| 66.7 55.0 | 0.7 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |

TABLE 4. (cont.)

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

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 | 51.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 1.6 |
| 70.0 | 53.0 | 1.6 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 70.0 | 65.0 | - | - | - | - | - | - | - | - | - | - | - | 0.7 |
| 73.3 | 50.0 | 0.0 | - | 3.6 | 4.9 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 60.0 | - | - | 0.0 | 10.9 | - | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 65.0 | - | - | - | - | - | - | - | - | - | - | - | 0.9 |
| 76.7 | 48.0 | 0.0 | - | 1.0 | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 55.0 | - | - | 0.0 | - | 0.8 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 51.0 | - | - | 0.0 | 1.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 5.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 60.0 | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.9 |
| 93.3 | 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | - | 1.1 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 | 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.9 |

***Triphoturus mexicanus***

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 | 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 86.7 | 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.2 | - | - | - | 0.0 | - |
| 90.0 | 37.0 | 0.0 | 0.0 | - | 0.0 | 1.1 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.0 | - | 0.0 | 1.8 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 0.0 | 0.0 | - | - | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 | 45.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 55.0 | 0.0 | - | 0.0 | 0.0 | - | 1.9 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 70.0 | 0.0 | 0.0 | - | 11.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 103.3 | 29.0 | 0.0 | 0.0 | - | 0.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 45.0 | 0.0 | 0.0 | - | 0.0 | - | 72.9 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 60.0 | 0.0 | - | - | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 106.7 | 35.0 | 0.0 | 0.0 | - | 3.9 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 50.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 | 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.9 | 0.8 | - | - | - | - | 0.0 |
| 110.0 | 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 2.8 | - | - | - | 0.0 |

TABLE 4. (cont.)

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

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.3 60.0 | - | 0.0 | - | 0.0 | - | - | - | 0.7 | - | - | - | 0.0 |
| 116.7 30.0 | - | - | 0.0 | 1.2 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 1.9 | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 45.0 | - | - | - | 0.9 | - | - | - | 1.7 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 10.1 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.2 |
| 123.3 50.0 | - | - | 0.0 | 0.8 | - | - | - | - | - | - | - | 0.0 |
| 130.0 28.0 | - | - | - | 1.5 | - | - | - | - | - | - | - | 0.0 |
| 130.0 35.0 | - | - | - | 1.0 | - | - | - | - | - | - | - | 0.0 |

***Diogenichthys atlanticus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | - | 0.0 |

***Diogenichthys laternatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 45.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 60.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 0.9 |

***Hygophum reinhardtii***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 60.0 | 0.0 | 1.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 136.7 60.0 | - | - | - | - | - | - | - | - | - | - | - | 1.9 |

***Tarletonbeania crenularis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 49.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | 1.1 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 2.3 |

**Trachipteridae**

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

***Merluccius productus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 60.0 | 0.7 | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Merluccius productus*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 53.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 2.3 |
| 73.3 60.0 | - | - | 1.1 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 1.3 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.9 |
| 93.3 80.0 | 0.0 | - | - | 0.8 | 0.0 | - | - | - | - | - | - | 0.0 |
| 96.7 32.0 | 0.0 | - | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 55.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 30.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Chilara taylori***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |

***Gigantactis* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.3 80.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |

**Atherinidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 28.0 | 0.0 | 16.6 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

***Atherinops affinis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 4.3 | 0.0 | - | - | - | - | 0.0 |

***Atherinopsis californiensis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 1.4 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 76.7 48.0 | 2.5 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 1.8 |
| 82.0 46.0 | 0.0 | 2.4 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 40.6 | 7.5 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.8 |
| 83.3 42.0 | 0.0 | 0.0 | - | 1.7 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 51.0 | 1.7 | 4.6 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 16.6 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 35.0 | 2.7 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 6.7 | 36.9 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

*Atherinopsis californiensis* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 1.1 | - |
| 96.7 29.0 | 3.4 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 10.3 |
| 96.7 30.0 | 4.8 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 4.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.3 |
| 100.0 30.0 | 21.6 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 611.4 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 14.2 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 7.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 11.8 |
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 35.7 |
| 113.3 30.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 25.0 | - | - | 2.1 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |

*Leuresthes tenuis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 48.0 | 0.0 | - | 0.0 | - | 0.0 | - | 6.6 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 1.1 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 3.5 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 63.4 | 57.4 | - | 6.7 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 3.6 | 0.8 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 40.0 | 0.0 | 0.0 | - | 2.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 45.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 24.7 | 132.2 | - | 9.0 | - | - | - | 0.0 | - |
| 90.0 30.0 | 0.0 | 0.0 | - | 0.0 | 1.8 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 1.8 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 383.8 | - | 796.2 | 0.0 | - | - | - | - | 0.0 |
| 96.7 30.0 | 0.0 | - | - | 1.8 | - | 4.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 22.4 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 30.0 | 0.0 | - | 0.0 | 3.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 23.6 | - | 188.0 | 2.9 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Leuresthes tenuis* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.0 32.4 | 0.0 | - | - | 1.0 | - | 2.8 | 280.1 | - | - | - | - | 0.0 |
| 113.3 29.0 | - | - | 0.0 | 2.0 | - | - | - | 4.0 | - | - | - | 0.0 |
| 113.3 30.0 | - | - | 0.0 | 0.9 | - | - | - | 1.1 | - | - | - | 0.0 |
| 116.7 25.0 | - | - | 0.0 | 12.7 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 30.0 | - | - | 0.0 | 0.0 | - | - | - | 0.7 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 2.2 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 2.8 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 1.8 | - | - | - | 0.0 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 126.7 33.0 | - | - | - | 4.1 | - | - | - | - | - | - | - | 0.0 |
| 130.0 28.0 | - | - | - | 1.5 | - | - | - | - | - | - | - | 0.0 |

*Cololabis saira*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 55.0 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 1.6 |
| 63.3 60.0 | - | - | 6.0 | - | - | 1.0 | - | - | - | - | - | 0.0 |
| 63.3 70.0 | - | 0.0 | - | 0.0 | - | 1.1 | - | - | - | - | - | 1.4 |
| 63.3 80.0 | - | 8.0 | - | - | - | 0.0 | - | - | - | - | - | 0.8 |
| 63.3 90.0 | - | 3.3 | - | - | - | 3.3 | - | - | - | - | - | 0.0 |
| 66.7 50.0 | 0.0 | - | 1.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 1.4 |
| 66.7 60.0 | 2.2 | - | 0.0 | 0.0 | - | 2.5 | - | - | - | - | - | 1.9 |
| 66.7 65.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 3.8 |
| 66.7 70.0 | - | 3.7 | - | 0.0 | - | 2.0 | - | - | - | - | - | 0.0 |
| 66.7 80.0 | - | 2.4 | - | - | - | 12.3 | - | - | - | - | - | 2.6 |
| 66.7 90.0 | - | 12.8 | - | - | - | 0.9 | - | - | - | - | - | 5.2 |
| 70.0 53.0 | 0.8 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 5.3 |
| 70.0 60.0 | 1.5 | - | 1.0 | 0.0 | - | - | 0.8 | - | - | - | - | 2.0 |
| 70.0 65.0 | - | - | - | - | - | - | - | - | - | - | - | 1.3 |
| 70.0 70.0 | - | 2.5 | - | - | - | - | 0.0 | - | - | - | - | 2.0 |
| 70.0 80.0 | - | 0.0 | - | - | - | - | 6.0 | - | - | - | - | 0.8 |
| 70.0 90.0 | - | 3.9 | - | - | - | - | 3.1 | - | - | - | - | 1.6 |
| 73.3 50.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 2.9 |
| 73.3 53.0 | 1.9 | - | 7.2 | 0.0 | 0.9 | - | 0.9 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | *Cololabis saira* (cont.) May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 | 60.0 | - | - | 12.0 | 0.0 | - | - | 16.1 | - | - | - | - | 0.0 |
| 73.3 | 65.0 | - | - | - | - | - | - | - | - | - | - | - | 1.8 |
| 73.3 | 70.0 | - | 0.0 | - | - | 2.5 | - | 2.0 | - | - | - | - | 4.7 |
| 73.3 | 80.0 | - | 1.8 | - | - | 1.0 | - | 1.1 | - | - | - | - | 1.6 |
| 73.3 | 90.0 | 0.0 | - | - | - | 6.1 | - | 1.8 | - | - | - | - | 0.0 |
| 76.7 | 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | - | 0.0 |
| 76.7 | 55.0 | - | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 5.3 |
| 76.7 | 60.0 | - | - | 4.3 | - | 0.0 | - | - | - | - | - | - | 0.7 |
| 76.7 | 65.0 | - | - | - | - | 1.1 | - | - | - | - | - | - | 15.7 |
| 76.7 | 70.0 | 3.8 | 15.2 | - | - | 0.9 | - | 0.0 | - | - | - | - | 9.8 |
| 76.7 | 80.0 | 5.2 | 9.4 | - | - | 3.0 | - | 0.0 | - | - | - | - | 3.2 |
| 76.7 | 90.0 | 0.0 | 5.5 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | - | 3.4 |
| 80.0 | 60.0 | - | - | 4.4 | 0.0 | 1.6 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 70.0 | 0.5 | - | - | 1.0 | 0.0 | - | 1.8 | - | - | - | - | 0.0 |
| 80.0 | 80.0 | 3.2 | 11.4 | - | - | 21.2 | - | 0.0 | - | - | - | - | 15.9 |
| 80.0 | 90.0 | 4.9 | 49.6 | - | - | 0.0 | - | 2.0 | - | - | - | - | 5.1 |
| 80.0 | 100.0 | - | - | - | - | 0.9 | - | - | - | - | - | - | - |
| 83.3 | 42.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 | 55.0 | 2.0 | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 80.0 | 6.6 | - | - | - | - | - | 0.0 | - | - | - | - | 6.2 |
| 83.3 | 90.0 | 2.8 | - | - | - | - | - | 0.6 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 0.0 | 0.0 | - | 0.0 | 1.7 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 5.2 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 60.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 | 70.0 | 1.9 | - | - | 0.0 | - | - | 1.1 | - | - | - | 0.0 | - |
| 86.7 | 80.0 | 0.7 | - | - | - | 5.3 | - | 2.5 | - | - | - | 0.9 | - |
| 86.7 | 90.0 | 9.5 | - | - | - | - | - | 18.0 | - | - | - | 0.9 | - |
| 86.7 | 100.0 | - | - | - | - | 2.6 | - | - | - | - | - | - | - |
| 90.0 | 30.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 2.1 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 0.0 | - | 1.1 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 60.0 | 0.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | - | - | - | 0.7 | - |
| 90.0 | 70.0 | 2.7 | - | - | - | - | - | - | - | - | - | 1.0 | - |
| 90.0 | 80.0 | 5.2 | - | - | - | 3.6 | - | - | - | - | - | 7.8 | - |
| 90.0 | 90.0 | 18.6 | - | - | - | 0.9 | - | - | - | - | - | 0.0 | - |
| 93.3 | 26.7 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 | 28.0 | 0.0 | 1.1 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ***Cololabis saira*** (cont.) | | | | | | | |
| 93.3 | 30.0 | 0.0 | 0.0 | - | 0.0 | 3.2 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.8 | - | - | - | 0.0 | - |
| 93.3 | 40.0 | 0.0 | 1.0 | - | 0.0 | 1.0 | - | 3.2 | - | - | - | 0.0 | - |
| 93.3 | 45.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 4.4 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 70.0 | 8.1 | - | - | - | 0.0 | - | 15.2 | - | - | - | 11.8 | - |
| 93.3 | 80.0 | 0.0 | - | - | 0.0 | 0.9 | - | - | - | - | - | - | 8.1 |
| 93.3 | 90.0 | 1.6 | - | - | - | 0.7 | - | - | - | - | - | - | 20.8 |
| 96.7 | 30.0 | 0.0 | - | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 32.0 | 0.9 | - | - | 0.0 | - | 0.7 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 35.0 | 0.8 | - | - | 1.2 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 96.7 | 40.0 | 0.0 | - | 0.8 | 0.8 | - | 0.0 | 4.7 | - | - | - | - | 0.0 |
| 96.7 | 45.0 | 0.0 | - | 0.0 | 2.5 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 50.0 | - | - | 0.0 | 0.9 | - | 0.8 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 55.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | 0.9 | - | - | - | - | 3.8 |
| 96.7 | 60.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | 1.0 | - | - | - | - | 5.1 |
| 96.7 | 70.0 | 0.8 | 5.8 | - | 2.0 | - | 0.0 | 1.4 | - | - | - | - | 11.8 |
| 96.7 | 80.0 | 1.7 | 1.9 | - | 0.5 | - | 0.9 | 2.7 | - | - | - | - | 6.5 |
| 96.7 | 90.0 | 4.3 | 0.8 | - | 13.1 | - | - | 3.1 | - | - | - | - | 9.4 |
| 100.0 | 30.0 | 0.0 | - | 0.0 | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 35.0 | 0.0 | - | 0.0 | 0.6 | - | 0.0 | 0.0 | - | - | - | - | 1.2 |
| 100.0 | 40.0 | 0.9 | - | 0.0 | 1.3 | - | 0.9 | 2.5 | - | - | - | - | 1.2 |
| 100.0 | 45.0 | 1.7 | - | 2.8 | 0.0 | - | 1.0 | 3.1 | - | - | - | - | 0.9 |
| 100.0 | 50.0 | 3.8 | - | 0.0 | 1.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 60.0 | 5.6 | - | 1.0 | 0.7 | - | 0.9 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 70.0 | 1.9 | 1.6 | - | 0.0 | - | 1.1 | 1.8 | - | - | - | - | 1.8 |
| 100.0 | 80.0 | 0.9 | 2.5 | - | 0.0 | - | 5.8 | 1.7 | - | - | - | - | 2.8 |
| 100.0 | 90.0 | 3.4 | 6.1 | - | 0.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 103.3 | 40.0 | 0.0 | 0.0 | - | 0.8 | - | 3.4 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 45.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 103.3 | 50.0 | 0.0 | - | 0.0 | 0.8 | - | 0.8 | 0.0 | - | - | - | - | 2.5 |
| 103.3 | 60.0 | 2.9 | - | - | 2.6 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 103.3 | 70.0 | 0.0 | 4.6 | - | 1.0 | - | 0.0 | 0.9 | - | - | - | - | 2.6 |
| 103.3 | 80.0 | 7.4 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 1.8 |

TABLE 4. (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ***Cololabis saira*** (cont.) | | | | | | |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 1.2 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.8 | 0.0 | - | 0.6 | - | 2.3 | 0.0 | - | - | - | - | 0.0 |
| 106.7 45.0 | 0.9 | 1.0 | - | 0.0 | - | 3.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.9 | 1.0 | - | 0.0 | - | 8.2 | 0.0 | - | - | - | - | 0.0 |
| 106.7 60.0 | 4.2 | 1.9 | - | 0.8 | - | - | 0.0 | - | - | - | - | 35.2 |
| 106.7 70.0 | 0.0 | 1.7 | - | 2.8 | - | - | 0.0 | - | - | - | - | 4.5 |
| 106.7 80.0 | 18.8 | 3.1 | - | 1.3 | - | 0.0 | 0.0 | - | - | - | - | 2.0 |
| 110.0 40.0 | 0.0 | 1.9 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.9 |
| 110.0 45.0 | 0.0 | 0.0 | - | 1.5 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 50.0 | 0.0 | 0.0 | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 5.1 |
| 110.0 60.0 | 0.0 | 0.0 | - | 25.7 | - | 0.0 | - | 0.0 | - | - | - | 23.1 |
| 110.0 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 4.3 |
| 110.0 80.0 | 0.9 | 0.0 | - | 0.9 | - | 0.0 | - | 0.0 | - | - | - | 0.0 |
| 113.3 35.0 | - | 0.0 | - | 2.7 | - | - | - | - | - | - | - | 0.0 |
| 113.3 40.0 | - | 8.3 | - | 0.0 | - | - | - | - | - | - | - | 0.8 |
| 113.3 45.0 | - | 2.5 | - | 2.4 | - | - | - | 0.0 | - | - | - | 0.0 |
| 113.3 50.0 | - | 1.7 | - | 1.1 | - | - | - | 0.0 | - | - | - | 0.0 |
| 113.3 60.0 | - | 0.9 | - | 54.3 | - | - | - | 0.0 | - | - | - | 27.1 |
| 113.3 70.0 | - | 2.4 | - | 3.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 113.3 80.0 | - | 16.1 | - | 4.2 | - | - | - | 0.0 | - | - | - | 13.1 |
| 116.7 30.0 | - | - | 0.0 | 1.2 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 35.0 | - | - | 1.3 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 40.0 | - | - | 3.6 | 5.8 | - | - | - | 0.0 | - | - | - | 1.8 |
| 116.7 45.0 | - | - | 0.0 | 2.8 | - | - | - | 0.0 | - | - | - | 22.4 |
| 116.7 50.0 | - | - | - | 50.8 | - | - | - | 0.0 | - | - | - | 10.3 |
| 116.7 60.0 | - | - | - | 10.3 | - | - | - | 0.0 | - | - | - | 23.0 |
| 116.7 70.0 | - | - | - | 3.9 | - | - | - | 0.0 | - | - | - | 3.0 |
| 116.7 80.0 | - | - | - | 3.6 | - | - | - | 0.0 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 3.7 | - | - | - | 0.0 | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 0.9 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 35.0 | - | - | 0.0 | 4.3 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 6.4 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 45.0 | - | - | - | 17.9 | - | - | - | 0.0 | - | - | - | 1.0 |
| 120.0 50.0 | - | - | - | 2.4 | - | - | - | 0.0 | - | - | - | 3.9 |
| 120.0 60.0 | - | - | - | 9.4 | - | - | - | 0.0 | - | - | - | 6.6 |

TABLE 4. (cont.)

***Cololabis saira*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 70.0 | - | - | - | 2.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 80.0 | - | - | - | 9.4 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 1.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 42.0 | - | - | 2.5 | 2.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 45.0 | - | - | 0.0 | 7.3 | - | - | - | - | - | - | - | 0.0 |
| 123.3 50.0 | - | - | 12.9 | 23.6 | - | - | - | - | - | - | - | 0.0 |
| 123.3 60.0 | - | - | 4.5 | 15.3 | - | - | - | - | - | - | - | 0.0 |
| 126.7 40.0 | - | - | - | 5.9 | - | - | - | - | - | - | - | 0.0 |
| 126.7 45.0 | - | - | - | 1.5 | - | - | - | - | - | - | - | 0.0 |
| 126.7 50.0 | - | - | - | 6.5 | - | - | - | - | - | - | - | 0.0 |
| 130.0 40.0 | - | - | - | 0.7 | - | - | - | - | - | - | - | 0.0 |
| 130.0 60.0 | - | - | - | 0.9 | - | - | - | - | - | - | - | 0.0 |
| 133.3 30.0 | - | - | - | 2.8 | - | - | - | - | - | - | - | 0.0 |
| 133.3 35.0 | - | - | - | 2.2 | - | - | - | - | - | - | - | 0.0 |
| 133.3 40.0 | - | - | - | 1.8 | - | - | - | - | - | - | - | 0.0 |
| 133.3 50.0 | - | - | - | 4.2 | - | - | - | - | - | - | - | 2.0 |
| 133.3 60.0 | - | - | - | 2.9 | - | - | - | - | - | - | - | 1.1 |
| 136.7 60.0 | - | - | - | - | - | - | - | - | - | - | - | 4.7 |

**Exocoetidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |

***Cheilopogon* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 4.0 | - | - | - | 0.0 | - |
| 90.0 37.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.9 | - | - | - | 0.0 | - |
| 100.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 8.9 | - | - | - | - | 0.0 |
| 103.3 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.5 | - | - | - | - | 0.0 |
| 103.3 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.8 | - | - | - | - | 0.0 |
| 103.3 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 9.3 | - | - | - | - | 0.0 |
| 106.7 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 2.1 | 0.0 | - | - | - | - | 0.0 |
| 113.3 45.0 | - | 0.0 | - | 0.0 | - | - | - | 1.7 | - | - | - | 0.0 |
| 116.7 70.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 3.4 |

TABLE 4. (cont.)

***Cheilopogon* spp.** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123.3 42.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.8 |
| 126.7 35.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |
| 130.0 30.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 7.8 |
| 130.0 35.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |

***Cheilopogon heterurus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 10.2 | - | - | - | 0.0 | - |
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 13.2 | - | - | - | 0.0 | - |
| 93.3 40.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 11.6 | - | - | - | 0.0 | - |
| 93.3 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 3.3 | - | - | - | 0.0 | - |
| 100.0 40.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 5.1 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.2 | - | - | - | - | 0.0 |
| 106.7 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 124.3 | - | - | - | - | 0.0 |
| 116.7 35.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 3.7 | - | - | - | 0.0 |
| 116.7 60.0 | - | - | - | 0.0 | - | - | - | 2.5 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 1.6 | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 0.0 | - | - | - | 7.7 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |
| 120.0 60.0 | - | - | - | 0.0 | - | - | - | 3.1 | - | - | - | 0.0 |
| 120.0 70.0 | - | - | - | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 123.3 42.0 | - | - | 0.0 | 0.0 | - | - | - | 1.8 | - | - | - | 0.0 |

***Cheilopogon pinnatibarbatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 113.3 45.0 | - | 0.0 | - | 0.0 | - | - | - | 0.6 | - | - | - | 0.0 |

***Fodiator acutus***

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

TABLE 4. (cont.)

***Hirundichthys* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.7 | - | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

***Hirundichthys marginatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 4.1 | - | - | - | - | 0.0 |
| 100.0 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.7 | - | - | - | - | 0.0 |
| 103.3 80.0 | 0.0 | 0.0 | - | 0.0 | - | - | 1.7 | - | - | - | - | 0.0 |
| 110.0 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |

***Poromitra* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.0 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | 0.0 |

***Macroramphosus gracilis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 5.2 | - | - | - | - | 0.0 |
| 106.7 60.0 | 4.2 | 0.0 | - | 0.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 110.0 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.9 |
| 110.0 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.5 |
| 110.0 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.9 |
| 116.7 40.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.8 |
| 116.7 80.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.7 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 9.2 |
| 120.0 80.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 123.3 50.0 | - | - | 1.8 | 0.0 | - | - | - | - | - | - | - | 0.0 |
| 123.3 60.0 | - | - | 0.0 | 1.8 | - | - | - | - | - | - | - | 0.0 |

***Sebastes* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 1.5 | - | 0.7 | 0.0 | - | 0.7 | - | - | - | - | - | - |
| 60.0 52.5 | 3.4 | - | - | - | - | 0.0 | - | - | - | - | - | - |
| 60.0 60.0 | - | - | - | - | - | 0.9 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 0.0 | 1.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 52.0 | - | - | 20.2 | 1.0 | - | 0.0 | - | - | - | - | - | 15.8 |

TABLE 4. (cont.)

| Station | | *Sebastes* spp. (cont.) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 63.3 | 55.0 | - | - | 116.2 | 24.7 | - | 17.2 | - | - | - | - | - | 0.8 |
| 63.3 | 60.0 | - | - | 30.9 | - | - | 35.9 | - | - | - | - | - | 0.0 |
| 63.3 | 70.0 | - | 0.0 | - | 0.0 | - | 1.0 | - | - | - | - | - | 0.0 |
| 63.3 | 80.0 | - | 16.1 | - | - | - | 2.1 | - | - | - | - | - | 0.0 |
| 66.7 | 49.0 | 10.7 | - | 53.1 | - | - | 3.2 | - | - | - | - | - | 7.7 |
| 66.7 | 50.0 | 11.7 | - | 148.8 | - | - | 17.3 | - | - | - | - | - | 6.1 |
| 66.7 | 55.0 | 3.5 | - | 3.4 | 0.9 | - | 2.9 | - | - | - | - | - | 0.7 |
| 66.7 | 60.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 70.0 | - | 0.0 | - | 2.6 | - | 2.1 | - | - | - | - | - | 0.0 |
| 66.7 | 80.0 | - | 2.4 | - | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 70.0 | 51.0 | 4.6 | - | 6.7 | - | - | 0.0 | 7.7 | - | - | - | - | 13.6 |
| 70.0 | 53.0 | 1.6 | - | 29.9 | - | - | 2.1 | 3.3 | - | - | - | - | 3.0 |
| 70.0 | 60.0 | 4.5 | - | 0.0 | 4.4 | - | - | 0.0 | - | - | - | - | 0.0 |
| 70.0 | 70.0 | - | 3.2 | - | - | - | - | 1.8 | - | - | - | - | 0.0 |
| 70.0 | 80.0 | - | 3.5 | - | - | - | - | 0.0 | - | - | - | - | 0.0 |
| 70.0 | 90.0 | - | 15.6 | - | - | - | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 50.0 | 0.9 | - | 47.3 | 1.0 | 0.0 | - | 0.0 | - | - | - | - | 1.0 |
| 73.3 | 53.0 | 1.0 | - | 62.2 | 0.9 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 60.0 | - | - | 4.4 | 5.9 | - | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 80.0 | - | 2.7 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 48.0 | 1.6 | - | 1.0 | - | 0.0 | - | 0.0 | - | - | - | - | 1.8 |
| 76.7 | 51.0 | 19.4 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 0.9 |
| 76.7 | 55.0 | - | - | 0.0 | - | 0.8 | - | 2.7 | - | - | - | - | 0.9 |
| 76.7 | 60.0 | - | - | 4.3 | - | 2.9 | - | - | - | - | - | - | 0.0 |
| 76.7 | 65.0 | - | - | - | - | 2.2 | - | - | - | - | - | - | 0.0 |
| 76.7 | 70.0 | 0.0 | 0.8 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 80.0 | 0.0 | 1.6 | - | - | 5.9 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 90.0 | 0.0 | 2.3 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 51.0 | - | - | 18.7 | 18.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 14.9 | 0.9 | 0.0 | - | 4.7 | - | - | - | - | 1.3 |
| 80.0 | 60.0 | - | - | 5.3 | 3.2 | 0.0 | - | 66.6 | - | - | - | - | 0.0 |
| 80.0 | 70.0 | 0.0 | - | - | 7.2 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 82.0 | 46.0 | 1.7 | 2.4 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 10.9 | - | 8.0 | 2.1 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 10.6 | - | 10.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

| Station | | *Sebastes* spp. (cont.) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 83.3 | 51.0 | 0.0 | 21.0 | - | - | 0.6 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 55.0 | 0.0 | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 0.8 |
| 83.3 | 60.0 | 0.0 | - | - | - | 0.0 | - | 1.8 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 1.6 | 4.4 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 2.8 | - |
| 86.7 | 35.0 | 0.9 | 30.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 40.0 | 0.9 | 3.0 | - | 3.1 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 45.0 | 0.8 | 1.7 | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 12.0 | 125.7 | - | 4.9 | 4.4 | - | 0.0 | - | - | - | 4.7 | - |
| 86.7 | 55.0 | 0.0 | 6.2 | - | 0.0 | 2.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 60.0 | 0.0 | 4.1 | - | 0.0 | - | - | 0.0 | - | - | - | 3.4 | - |
| 86.7 | 70.0 | 0.0 | - | - | 0.9 | - | - | 0.0 | - | - | - | 0.8 | - |
| 90.0 | 28.0 | 0.0 | 12.4 | - | 2.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 30.0 | 0.9 | 0.0 | - | 14.3 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 37.0 | 0.0 | 0.0 | - | 0.0 | 1.1 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.9 | - | 2.5 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 60.0 | 0.0 | 1.0 | - | 0.0 | 1.9 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 30.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 40.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 45.0 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 1.0 | - |
| 93.3 | 55.0 | 0.0 | 0.0 | - | - | 2.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 | 29.0 | 1.1 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 30.0 | 0.0 | - | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 35.0 | 0.8 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 55.0 | 0.9 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.9 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 29.2 | 0.0 | - | 0.0 | 1.2 | - | 1.1 | 0.0 | - | - | - | - | 2.3 |
| 100.0 | 30.0 | 2.9 | - | 9.1 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.0 |
| 103.3 | 29.0 | 0.0 | 21.4 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 30.0 | 4.4 | 3.2 | - | 8.2 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 35.0 | 0.0 | 0.0 | - | 0.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 40.0 | 0.0 | 0.0 | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 1.1 | - | 1.5 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 32.0 | 0.0 | 2.0 | - | 3.7 | - | 0.0 | 0.0 | - | - | - | - | 2.2 |
| 106.7 | 35.0 | 0.0 | 0.0 | - | 1.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

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

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 50.0 | 0.0 | 0.0 | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 3.8 | - | 0.0 | 0.0 | - | - | - | - | 2.2 |
| 110.0 32.5 | - | 0.0 | - | 1.9 | - | - | - | - | - | - | - | - |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 113.3 29.0 | - | - | 7.4 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 35.0 | - | - | 1.3 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 2.3 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.6 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 2.2 |
| 123.3 37.0 | - | - | 4.6 | 2.6 | - | - | - | 0.0 | - | - | - | 1.2 |
| 123.3 42.0 | - | - | 0.8 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 45.0 | - | - | 0.0 | 0.7 | - | - | - | - | - | - | - | 0.0 |
| 126.7 35.0 | - | - | - | 1.0 | - | - | - | - | - | - | - | 0.0 |
| 130.0 28.0 | - | - | - | 6.6 | - | - | - | - | - | - | - | 0.0 |

***Sebastes aurora***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 49.0 | 0.0 | - | 0.0 | - | - | 1.1 | - | - | - | - | - | 1.1 |
| 73.3 53.0 | 0.0 | - | 0.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 113.3 35.0 | - | 0.0 | - | 0.9 | - | - | - | - | - | - | - | 0.0 |

***Sebastes diploproa***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 52.0 | - | - | 0.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 7.8 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 60.0 | - | - | 7.0 | - | - | 2.1 | - | - | - | - | - | 0.0 |
| 63.3 65.0 | - | - | - | - | - | - | - | - | - | - | - | 2.7 |
| 66.7 49.0 | 0.0 | - | 2.1 | - | - | 2.2 | - | - | - | - | - | 0.0 |
| 66.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 3.4 |
| 66.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 2.8 |
| 66.7 65.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 1.5 |
| 66.7 70.0 | - | 0.0 | - | 0.0 | - | 1.1 | - | - | - | - | - | 0.0 |
| 66.7 80.0 | - | 0.0 | - | - | - | 1.1 | - | - | - | - | - | 0.0 |
| 66.7 90.0 | - | 0.0 | - | - | - | 1.9 | - | - | - | - | - | 0.0 |
| 70.0 51.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.8 |

TABLE 4. (cont.)

*Sebastes diploproa* (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 | 53.0 | 0.0 | - | 3.9 | - | - | 0.0 | 0.0 | - | - | - | - | 1.5 |
| 73.3 | 53.0 | 0.0 | - | 1.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 60.0 | - | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 0.7 |
| 76.7 | 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 1.4 | - | - | - | - | 0.9 |
| 76.7 | 55.0 | - | - | 0.0 | - | 0.0 | - | 3.6 | - | - | - | - | 0.0 |
| 76.7 | 90.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.7 |
| 83.3 | 51.0 | 2.6 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 | 55.0 | 0.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 60.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | 0.8 | - |
| 90.0 | 60.0 | 0.6 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 80.0 | 0.9 | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - |
| 93.3 | 55.0 | 0.0 | 0.0 | - | - | 0.0 | - | 3.3 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 93.3 | 70.0 | 0.9 | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 110.0 | 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |

*Sebastes jordani*

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 | 55.0 | - | - | 124.1 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 | 60.0 | - | - | 1.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 50.0 | 0.0 | - | 2.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 55.0 | 0.0 | - | 4.3 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 73.3 | 50.0 | 0.0 | - | 2.7 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 53.0 | 0.0 | - | 26.1 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 80.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 5.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 60.0 | - | - | 1.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 0.0 | - | 1.6 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 51.0 | 0.0 | 10.9 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 0.0 | 1.1 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 35.0 | 0.0 | 37.4 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 0.0 | 5.6 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

*Sebastes levis*

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 | 60.0 | - | - | 1.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |

TABLE 4. (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 66.7 | 50.0 | 0.0 | - | 0.0 | - |

***Sebastes levis*** (cont.)

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| - | 1.1 | - | - | - | - | - | 0.0 |

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 63.3 | 60.0 | - | - | 1.0 | - |
| 66.7 | 70.0 | - | 0.0 | - | 0.9 |
| 86.7 | 50.0 | 0.9 | 6.5 | - | 0.0 |

***Sebastes paucispinis***

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| - | 0.0 | - | - | - | - | - | 0.0 |
| - | 0.0 | - | - | - | - | - | 0.0 |
| 0.0 | - | 0.0 | - | - | - | 0.0 | - |

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 73.3 | 70.0 | - | 0.0 | - | - |
| 76.7 | 55.0 | - | - | 2.0 | - |

***Sebastolobus* spp.**

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| 1.3 | - | 0.0 | - | - | - | - | 0.0 |
| 0.0 | - | 0.0 | - | - | - | - | 0.0 |

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 100.0 | 30.0 | 0.0 | - | 0.0 | 0.0 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 0.0 |
| 106.7 | 32.0 | 0.0 | 0.0 | - | 0.0 |
| 110.0 | 35.0 | 0.0 | 0.0 | - | 0.0 |
| 118.0 | 39.0 | - | - | 0.0 | 0.0 |

***Scorpaena guttata***

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| - | 5.9 | 0.0 | - | - | - | - | 0.0 |
| - | 0.0 | 6.0 | - | - | - | - | 0.0 |
| - | 0.0 | 1.8 | - | - | - | - | 0.0 |
| - | 0.0 | 3.9 | - | - | - | - | 0.0 |
| - | - | - | 0.8 | - | - | - | 0.0 |

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 63.3 | 60.0 | - | - | 4.0 | - |
| 83.3 | 42.0 | 0.0 | 0.0 | - | 0.8 |

***Anoplopoma fimbria***

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| - | 0.0 | - | - | - | - | - | 0.0 |
| 0.0 | - | 0.0 | - | - | - | - | 0.0 |

| Station | | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|---|
| 63.3 | 60.0 | - | - | 1.0 | - |
| 63.3 | 70.0 | - | 0.0 | - | 0.0 |
| 70.0 | 60.0 | 0.0 | - | 0.0 | 0.0 |
| 73.3 | 53.0 | 0.0 | - | 0.9 | 0.0 |
| 80.0 | 55.0 | - | - | 0.0 | 0.0 |
| 86.7 | 55.0 | 0.0 | 0.0 | - | 0.0 |
| 96.7 | 35.0 | 0.8 | - | - | 0.0 |

***Oxylebius pictus***

| May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|
| - | 0.0 | - | - | - | - | - | 0.0 |
| - | 1.1 | - | - | - | - | - | 0.0 |
| - | - | 0.0 | - | - | - | - | 0.7 |
| 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 3.0 | - | 0.0 | - | - | - | 0.0 | - |
| - | 0.0 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Hexagrammos decagrammus*

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 | 50.0 | - | - | 4.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 | 52.0 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 2.9 |
| 63.3 | 55.0 | - | - | 2.9 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 | 60.0 | - | - | 3.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 49.0 | 4.3 | - | 1.1 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 50.0 | 0.0 | - | 4.0 | - | - | 0.0 | - | - | - | - | - | 8.8 |
| 66.7 | 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 1.4 |
| 70.0 | 51.0 | 13.1 | - | 1.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 70.0 | 53.0 | 4.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 50.0 | 23.2 | - | 0.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 1.9 |
| 73.3 | 53.0 | 1.0 | - | 0.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 | 48.0 | 2.5 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 82.0 | 46.0 | 1.7 | 1.2 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 2.1 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 51.0 | 0.9 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 | 50.0 | 0.9 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 0.0 | - | 1.1 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

*Hexagrammos lagocephalus*

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 | 52.0 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 3.6 |
| 63.3 | 55.0 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.8 |
| 63.3 | 60.0 | - | - | 0.0 | - | - | 0.0 | - | - | - | - | - | 1.5 |
| 63.3 | 65.0 | - | - | - | - | - | - | - | - | - | - | - | 0.7 |
| 66.7 | 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 3.4 |
| 70.0 | 53.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 70.0 | 80.0 | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 0.8 |
| 73.3 | 50.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 1.0 |

*Ophiodon elongatus*

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 | 50.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 60.0 | 52.5 | 0.0 | - | - | - | - | 1.2 | - | - | - | - | - | - |
| 63.3 | 50.0 | - | - | 226.2 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 | 50.0 | 0.0 | - | 1.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Ophiodon elongatus*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 51.0 | 0.0 | - | 1.9 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 70.0 53.0 | 0.0 | - | 0.8 | - | - | 2.1 | 0.0 | - | - | - | - | 0.0 |
| 70.0 60.0 | 0.0 | - | 0.0 | 0.9 | - | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 50.0 | 0.0 | - | 3.6 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 48.0 | 2.5 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 82.0 46.0 | 1.7 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.9 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 40.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 29.2 | 0.0 | - | 110.3 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 30.0 | 0.0 | - | 0.0 | 3.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 2.2 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 1.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 2.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 5.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.5 | - | 0.0 | - | 7.5 | - | - | - | - | - | - | - | - |
| 123.3 36.0 | - | - | 0.0 | 1.9 | - | - | - | 0.0 | - | - | - | 0.0 |

**Cottidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | - | - | - |
| 60.0 52.5 | 0.0 | - | - | - | - | 0.6 | - | - | - | - | - | - |
| 73.3 50.0 | 0.0 | - | 0.0 | 11.7 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 2.2 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Artedius harringtoni***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | - | - | - |
| 60.0 52.5 | 0.0 | - | - | - | - | 0.9 | - | - | - | - | - | - |

***Artedius lateralis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 50.0 | 0.0 | - | 0.0 | 1.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |

***Chitonotus pugetensis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 1.0 | - | - | - | 0.0 |

TABLE 4. (cont.)

***Hemilepidotus spinosus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 50.0 | - | - | 43.5 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 52.0 | - | - | 0.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 6.4 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 60.0 | - | - | 20.9 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 49.0 | 0.7 | - | 6.4 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 50.0 | 0.0 | - | 6.1 | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 55.0 | 0.7 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 3.5 |
| 70.0 53.0 | 3.2 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 73.3 60.0 | - | - | 1.1 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 60.0 | - | - | 0.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |

***Icelinus* spp.**

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

***Leptocottus armatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 9.1 |

***Scorpaenichthys marmoratus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 52.5 | 0.0 | - | - | - | - | 1.8 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 95.7 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 16.4 | 0.0 | - | 0.0 | - | - | - | - | - | 7.8 |
| 63.3 60.0 | - | - | 12.9 | - | - | 0.0 | - | - | - | - | - | 6.0 |
| 63.3 65.0 | - | - | - | - | - | - | - | - | - | - | - | 14.0 |
| 66.7 49.0 | 0.0 | - | 58.4 | - | - | 0.0 | - | - | - | - | - | 28.7 |
| 66.7 50.0 | 0.0 | - | 29.3 | - | - | 0.0 | - | - | - | - | - | 13.2 |
| 66.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 8.2 |
| 66.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 5.7 |
| 66.7 65.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.8 |
| 66.7 80.0 | - | 0.0 | - | - | - | 1.1 | - | - | - | - | - | 0.0 |
| 70.0 51.0 | 2.3 | - | 24.1 | - | - | 0.0 | 0.0 | - | - | - | - | 17.6 |
| 70.0 53.0 | 21.8 | - | 4.7 | - | - | 0.0 | 0.0 | - | - | - | - | 113.6 |
| 70.0 60.0 | 0.0 | - | 0.0 | 0.9 | - | - | 0.0 | - | - | - | - | 7.8 |

TABLE 4. (cont.)

*Scorpaenichthys marmoratus* (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 | 50.0 | 0.0 | - | 30.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 53.0 | 1.0 | - | 15.3 | 0.0 | 0.9 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 | 65.0 | - | - | - | - | - | - | - | - | - | - | - | 0.9 |
| 76.7 | 48.0 | 2.5 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 100.8 |
| 76.7 | 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 1.8 |
| 76.7 | 60.0 | - | - | 0.9 | - | 0.0 | - | - | - | - | - | - | 0.0 |
| 76.7 | 65.0 | - | - | - | - | 0.0 | - | - | - | - | - | - | 1.7 |
| 76.7 | 80.0 | 0.0 | 0.0 | - | - | 2.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 | 51.0 | - | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 9.1 |
| 80.0 | 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 3.6 |
| 80.0 | 60.0 | - | - | 13.3 | 0.8 | 0.0 | - | 0.0 | - | - | - | - | 3.3 |
| 82.0 | 46.0 | 2.6 | 81.6 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 2.4 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 20.1 | - | 2.5 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 51.0 | 17.2 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 2.4 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 40.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 45.0 | 3.4 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 0.0 | 0.9 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 55.0 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 | 60.0 | 0.0 | 0.8 | - | 0.0 | - | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 28.0 | 1.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 2.0 | - | 1.1 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 1.4 | - |
| 93.3 | 26.7 | 1.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.9 | - |
| 93.3 | 28.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 5.6 | - |
| 96.7 | 29.0 | 12.5 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 5.1 |
| 96.7 | 30.0 | 0.0 | - | - | 1.9 | - | 0.0 | 0.0 | - | - | - | - | 2.0 |
| 96.7 | 35.0 | 3.3 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 55.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 100.0 | 29.2 | 1.8 | - | 17.2 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.1 |
| 100.0 | 30.0 | 8.8 | - | 0.0 | 0.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 15.3 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 4.5 |
| 106.7 | 32.0 | 0.0 | 13.2 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.2 |
| 106.7 | 35.0 | 0.8 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Scorpaenichthys marmoratus*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 11.8 |
| 110.0 35.0 | 0.0 | 1.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 2.4 |

**Cyclopteridae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | - | - | - |
| 70.0 53.0 | 0.0 | - | 0.0 | - | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 1.0 | - | 0.0 | - | - | - | - | 0.0 |

***Liparis florae***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 52.5 | 0.0 | - | - | - | - | 0.9 | - | - | - | - | - | - |

***Liparis pulchellus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | - | - | - |

**Serraninae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 1.6 | - | - | - | 0.0 |
| 126.7 33.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |

***Paralabrax* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 55.0 | - | - | 0.0 | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 2.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 1.6 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.7 | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 30.6 | - | - | - | 0.0 | - |
| 86.7 55.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.9 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 12.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 10.2 | - | - | - | 0.0 | - |
| 96.7 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 1.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.6 | - | - | - | - | 0.0 |
| 106.7 70.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.7 | - | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

TABLE 4. (cont.)

***Hemanthias signifer***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 5.6 | - | - | - | 0.0 |

***Pronotogrammus multifasciatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 45.0 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |

**Carangidae**

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

***Chloroscombrus orqueta***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 4.7 | - | - | - | 0.0 |

***Seriola lalandi***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 4.8 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.8 | - | - | - | - | 0.0 |
| 106.7 45.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 11.2 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.6 | - | - | - | - | 0.0 |
| 110.0 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 113.3 45.0 | - | 0.0 | - | 0.0 | - | - | - | 4.0 | - | - | - | 0.0 |
| 116.7 40.0 | - | - | 0.0 | 0.0 | - | - | - | 0.7 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 8.4 | - | - | - | 0.0 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.6 | - | - | - | 0.0 |

***Trachurus symmetricus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 80.0 | - | 0.0 | - | - | - | 1.1 | - | - | - | - | - | 0.0 |
| 66.7 90.0 | - | 2.1 | - | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 70.0 60.0 | 0.0 | - | 0.0 | 0.0 | - | - | 0.8 | - | - | - | - | 0.0 |
| 70.0 80.0 | - | 0.0 | - | - | - | - | 1.0 | - | - | - | - | 0.0 |
| 73.3 70.0 | - | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 76.7 70.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.7 | - | - | - | - | 0.0 |
| 76.7 80.0 | 0.0 | 0.0 | - | - | 0.0 | - | 3.7 | - | - | - | - | 0.0 |
| 80.0 100.0 | - | - | - | - | 4.7 | - | - | - | - | - | - | - |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 2.3 | - | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Trachurus symmetricus* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 55.0 | 0.0 | 0.0 | - | - | - | - | 0.7 | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 1.8 | - | - | - | - | 0.0 |
| 83.3 70.0 | 0.0 | - | - | 1.8 | - | - | 0.0 | - | - | - | - | 0.0 |
| 90.0 45.0 | 0.0 | 0.0 | - | 2.2 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 53.0 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 60.0 | 0.0 | 0.0 | - | 1.4 | 13.4 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 80.0 | 0.0 | - | - | - | 3.6 | - | - | - | - | - | 0.0 | - |
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 2.8 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 50.0 | 0.0 | 0.0 | - | 1.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 55.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 93.3 60.0 | 0.0 | 0.0 | - | - | 5.4 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 70.0 | 0.0 | - | - | - | 14.8 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 80.0 | 0.0 | - | - | 0.0 | 0.9 | - | - | - | - | - | - | 0.0 |
| 93.3 90.0 | 0.0 | - | - | - | 4.2 | - | - | - | - | - | - | 0.0 |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 37.1 | 0.0 | - | - | - | - | 0.0 |
| 96.7 45.0 | 0.0 | - | 0.0 | 1.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 55.0 | 0.0 | - | 0.0 | 0.0 | - | 2.9 | 0.0 | - | - | - | - | 0.0 |
| 96.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 70.0 | 0.0 | 0.0 | - | 4.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 80.0 | 0.0 | 0.0 | - | 0.0 | - | 1.7 | 1.8 | - | - | - | - | 0.0 |
| 100.0 50.0 | 0.0 | - | 0.0 | 5.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 60.0 | 0.0 | - | 0.0 | 5.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 103.3 45.0 | 0.0 | 1.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 50.0 | 0.0 | - | 0.0 | 0.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 80.0 | 0.0 | 0.0 | - | 1.5 | - | - | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 2.3 | 0.0 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 60.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 1.4 | - | - | - | 0.0 |

***Coryphaena* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.8 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Coryphaena hippurus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

**Gerreidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 1.6 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 0.5 | - | - | - | 0.0 |

***Eucinostomus* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 3.7 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 2.8 | - | - | - | 0.0 |

**Haemulidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 0.5 | - | - | - | 0.0 |

***Anisotremus davidsoni***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.2 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 17.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 5.1 | - | - | - | 0.0 | - |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 2.1 | - | - | - | - | 0.0 |

***Xenistius californiensis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 40.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.1 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 64.9 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 75.6 | - | - | - | 0.0 | - |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 7.2 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.7 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.2 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.8 | - | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 35.4 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 4.0 | - | - | - | 0.0 |

TABLE 4. (cont.)

*Calamus brachysomus*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 2.1 | - | - | - | 0.0 |

**Sciaenidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 28.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |

*Atractoscion nobilis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 31.0 | 0.0 | 0.0 | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

*Cheilotrema saturnum*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130.0 28.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.2 |

*Genyonemus lineatus*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 28.2 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 45.1 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 60.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 73.3 50.0 | 0.0 | - | 0.9 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 48.0 | 21.3 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | 1.8 |
| 80.0 51.0 | - | - | 72.1 | 0.0 | - | - | 0.0 | - | - | - | - | 5.2 |
| 80.0 55.0 | - | - | 1.7 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 40.6 | 12.3 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 2.1 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 2.4 | 0.0 | - | 2.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 35.0 | 1.8 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 2.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 40.0 | 0.0 | - | 1.8 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 5.0 | - | 2.2 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 8.8 | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 12.5 |

TABLE 4. (cont.)

***Roncador stearnsii***

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 30.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 | 29.2 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Seriphus politus***

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 | 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | - | 0.0 |
| 80.0 | 51.0 | - | - | 1.9 | 0.0 | - | - | 2.0 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 0.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 86.7 | 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.5 | - | - | - | 0.0 | - |
| 90.0 | 28.0 | 0.0 | 1.0 | - | 1.0 | 70.7 | - | 7.0 | - | - | - | 0.0 | - |
| 90.0 | 30.0 | 0.0 | 0.0 | - | 0.0 | 3.6 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 26.7 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 4.1 | - | - | - | 0.0 | - |
| 95.0 | 30.0 | - | - | 4.6 | - | - | - | - | - | - | - | - | - |
| 96.7 | 29.0 | 0.0 | - | - | 5.9 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 30.0 | 0.0 | - | - | 4.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 29.2 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 30.0 | 0.0 | - | 0.0 | 2.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 29.0 | 0.0 | 0.0 | - | 2.4 | - | 3.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 30.0 | 0.0 | 0.0 | - | 23.7 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 1.5 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |

**Kyphosidae**

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 7.1 | - | - | - | 0.0 | - |

***Girella nigricans***

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 | 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 82.0 | 46.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.7 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 0.0 | - | 0.0 | 16.1 | - | 3.1 | - | - | - | - | 0.0 |
| 83.3 | 60.0 | 0.0 | - | - | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Girella nigricans* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 7.8 | - | 5.2 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 0.8 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 40.0 | 0.0 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 45.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 2.8 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.9 | - | - | - | 0.0 | - |
| 93.3 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.6 | - | - | - | 0.0 | - |
| 93.3 55.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 18.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 35.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.6 | - | - | - | - | 0.0 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 30.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 126.7 40.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |

*Hermosilla azurea*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 4.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 7.1 | - | - | - | 0.0 | - |
| 96.7 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 2.0 | - | - | - | - | 0.0 |
| 96.7 35.0 | 0.0 | - | - | 0.0 | - | 0.0 | 2.6 | - | - | - | - | 0.0 |
| 96.7 50.0 | - | - | 0.0 | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 100.0 30.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 1.3 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 2.4 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.8 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.6 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |

TABLE 4. (cont.)

*Medialuna californiensis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.2 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 3.1 | - | - | - | 0.0 | - |
| 93.3 50.0 | 0.0 | 0.0 | - | 0.0 | 3.6 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 35.0 | 0.0 | - | 0.0 | 0.0 | - | 0.9 | 0.0 | - | - | - | - | 0.0 |
| 100.0 40.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 1.3 | - | - | - | - | 0.0 |
| 100.0 70.0 | 0.0 | 0.0 | - | 0.0 | - | 0.7 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 5.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

*Mugil cephalus*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 126.7 35.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |

*Chromis punctipinnis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 53.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 2.3 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 7.8 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 82.0 46.0 | 0.0 | 0.0 | - | - | 0.0 | - | 34.6 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 5.0 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 3.1 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 8.3 | - | - | - | - | 0.0 |
| 83.3 55.0 | 0.0 | 0.0 | - | - | - | - | 1.5 | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 1.8 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 4.5 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 0.8 | - | 36.6 | - | - | - | 0.0 | - |
| 86.7 45.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.1 | - | - | - | 0.0 | - |
| 86.7 55.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 8.6 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 6.4 | - | 1.0 | - | - | - | 0.0 | - |
| 90.0 53.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.9 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 5.1 | - | - | - | 0.0 | - |
| 93.3 30.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 93.3 55.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

***Chromis punctipinnis*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 60.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |
| 96.7 35.0 | 0.0 | - | - | 0.0 | - | 0.0 | 1.7 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 2.4 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 5.7 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 2.9 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 2.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 4.4 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 13.2 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 11.3 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 3.1 | - | - | - | - | 0.0 |
| 110.0 40.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 5.3 | - | - | - | - | 0.0 |
| 113.3 29.0 | - | - | 0.0 | 0.0 | - | - | - | 13.0 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 1.9 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 14.7 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 6.8 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 1.6 | - | - | - | 0.0 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 2.8 | - | - | - | 0.0 |

***Hypsypops rubicundus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 5.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 5.1 | - | - | - | 0.0 | - |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 15.5 | - | - | - | - | 0.0 |

***Halichoeres semicinctus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 55.0 | 0.0 | 0.0 | - | - | - | - | 0.7 | - | - | - | - | 0.0 |
| 86.7 55.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.9 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.0 | - | - | - | 0.0 | - |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 48.2 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 6.4 | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 2.8 | - | - | - | 0.0 |

TABLE 4. (cont.)

| Station | | *Oxyjulis californica* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 70.0 | 51.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 76.7 | 55.0 | - | - | 0.0 | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |
| 80.0 | 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 2.3 | - | - | - | - | 0.0 |
| 82.0 | 46.0 | 0.0 | 0.0 | - | - | 0.0 | - | 2.1 | - | - | - | - | 0.0 |
| 83.3 | 40.6 | 0.0 | 0.0 | - | 3.2 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 42.0 | 0.0 | 0.0 | - | 0.8 | 12.7 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 | 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 12.4 | - | - | - | - | 0.0 |
| 86.7 | 40.0 | 0.0 | 0.0 | - | 7.1 | 0.0 | - | 1.1 | - | - | - | 0.0 | - |
| 86.7 | 50.0 | 0.0 | 0.0 | - | 0.0 | 2.2 | - | 2.2 | - | - | - | 0.0 | - |
| 86.7 | 55.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.6 | - | - | - | 0.0 | - |
| 86.7 | 60.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 | 70.0 | 0.0 | - | - | 0.9 | - | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 30.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 37.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 0.0 | - | 2.2 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.0 | - | 1.7 | 6.3 | - | 12.5 | - | - | - | 0.0 | - |
| 90.0 | 60.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 | 35.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 45.0 | 0.0 | 0.0 | - | 0.0 | 3.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 50.0 | 0.0 | 0.0 | - | 0.0 | 7.2 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 55.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 0.0 | 0.0 | - | - | 0.0 | - | 2.3 | - | - | - | 0.0 | - |
| 96.7 | 30.0 | 0.0 | - | - | 0.0 | - | 12.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 1.0 | - | - | - | - | 0.0 |
| 96.7 | 40.0 | 0.0 | - | 0.0 | 0.0 | - | 6.9 | 0.0 | - | - | - | - | 0.0 |
| 96.7 | 50.0 | - | - | 0.0 | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 29.2 | 0.0 | - | 0.0 | 0.0 | - | 3.2 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 30.0 | 0.0 | - | 0.0 | 0.0 | - | 4.9 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 103.3 | 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 2.2 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 | 32.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Semicossyphus pulcher***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 55.0 | - | - | 0.0 | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 3.4 | - | - | - | - | 0.0 |
| 90.0 60.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |

**Stichaeidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 93.3 55.0 | 0.0 | 1.0 | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

***Labrisomus* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |

***Labrisomus multiporosus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 4.1 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 0.5 | - | - | - | 0.0 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 1.2 |

***Labrisomus xanti***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 136.7 23.0 | - | - | - | - | - | - | - | - | - | - | - | 1.1 |

**Clinidae**

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

***Neoclinus blanchardi***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 0.0 | - | - | - | - | 1.3 |
| 96.7 29.0 | 0.0 | - | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |

TABLE 4. (cont.)

*Neoclinus stephensae*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 40.6 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.7 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 29.2 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 3.4 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.3 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 86.3 |
| 130.0 30.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |

*Hypsoblennius* spp.

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 41.3 | - | 10.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 5.1 | - | - | - | 0.0 | - |
| 100.0 30.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.1 |
| 116.7 25.0 | - | - | 0.0 | 0.8 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 130.0 30.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |

*Hypsoblennius gentilis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.8 |
| 90.0 28.0 | 0.0 | 0.0 | - | 5.9 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.9 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.2 | - | - | - | - | 3.4 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.1 |
| 113.3 29.0 | - | - | 0.6 | 0.0 | - | - | - | 0.0 | - | - | - | 1.2 |
| 113.3 40.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.8 |
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 1.9 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |

TABLE 4. (cont.)

*Hypsoblennius gentilis* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 2.8 | - | - | - | 7.9 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 123.3 36.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 4.8 |
| 126.7 40.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.0 |

*Hypsoblennius gilberti*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 53.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 1.5 |
| 76.7 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.7 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 3.1 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 2.1 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 6.0 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 3.4 | - | 3.1 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.7 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 2.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.9 | - | - | - | 0.0 | - |
| 100.0 30.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 5.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 10.7 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 16.8 | - | - | - | - | 1.9 |
| 106.7 31.0 | 1.1 | 0.0 | - | 0.0 | - | 0.0 | 1.2 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 14.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 5.6 | 0.0 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 4.3 | 0.0 | - | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

*Hypsoblennius jenkinsi*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 51.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 80.0 60.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.8 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.8 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 1.2 | - | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

*Hypsoblennius jenkinsi* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 74.7 | - | 56.7 | - | - | - | 4.2 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 32.9 | - | 6.3 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 1.5 | - | 5.6 | - | - | - | 0.7 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 1.8 | - | 243.5 | - | - | - | 2.4 | - |
| 90.0 30.0 | 0.0 | 0.0 | - | 0.0 | 17.3 | - | 67.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 5.1 | - | 76.6 | - | - | - | 3.6 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.9 | - |
| 93.3 30.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 9.4 | - | - | - | 0.0 | - |
| 93.3 35.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 1.1 | - | - | 0.0 | - | 14.6 | 0.0 | - | - | - | - | 0.0 |
| 96.7 30.0 | 0.0 | - | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 124.0 | - | - | - | - | 0.0 |
| 96.7 35.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 10.8 | 0.8 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 5.1 | 17.2 | - | - | - | - | 1.9 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 35.9 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 5.0 | 2.7 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 48.4 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 14.1 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.9 | 0.8 | - | - | - | - | 0.0 |
| 113.3 30.0 | - | - | 0.0 | 0.0 | - | - | - | 46.8 | - | - | - | 0.0 |
| 116.7 30.0 | - | - | 0.0 | 0.0 | - | - | - | 2.1 | - | - | - | 0.0 |
| 116.7 40.0 | - | - | 0.0 | 0.0 | - | - | - | 0.7 | - | - | - | 0.0 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 9.3 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 5.2 | - | - | - | 38.5 | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.0 | 0.0 | - | - | - | 8.3 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 3.4 |
| 120.0 45.0 | - | - | - | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 123.3 37.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 7.1 |
| 123.3 42.0 | - | - | 0.0 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 45.0 | - | - | 0.0 | 0.7 | - | - | - | - | - | - | - | 1.0 |
| 126.7 35.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 3.1 |

TABLE 4. (cont.)

***Hypsoblennius jenkinsi*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 126.7 40.0 | - | - | - | 0.8 | - | - | - | - | - | - | - | 1.0 |
| 130.0 30.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |

**Gobiidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |

***Coryphopterus nicholsii***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.1 |

***Lepidogobius lepidus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.1 |
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.2 |

***Lythrypnus zebra***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.4 | - | - | - | - | 0.0 |

***Typhlogobius californiensis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 40.6 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 93.3 60.0 | 0.0 | 0.0 | - | - | 0.0 | - | 0.8 | - | - | - | 0.0 | - |

***Sphyraena argentea***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.0 | 1.2 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 6.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 20.0 | - | - | - | 0.0 | - |
| 90.0 30.0 | 0.0 | 0.0 | - | 0.0 | 13.6 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.0 | 2.0 | - | 6.1 | - | - | - | 0.0 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 20.2 | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Sphyraena argentea*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96.7 30.0 | 0.0 | - | - | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 100.0 30.0 | 0.0 | - | 0.0 | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 1.4 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 2.4 | - | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 6.9 | - | - | - | 0.0 |

***Diplospinus multistriatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100.0 90.0 | 0.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | 0.9 |

***Auxis* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 18.6 | - | - | - | 0.0 |

***Scomber japonicus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 55.0 | - | - | 0.0 | - | 0.0 | - | 3.6 | - | - | - | - | 0.0 |
| 76.7 90.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 4.1 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 20.3 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 4.7 | - | - | - | - | 0.0 |
| 80.0 60.0 | - | - | 0.0 | 0.0 | 1.6 | - | 11.8 | - | - | - | - | 0.0 |
| 82.0 46.0 | 0.0 | 0.0 | - | - | 0.0 | - | 37.7 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 1.6 | 0.0 | - | 32.0 | - | - | - | - | 0.0 |
| 83.3 42.0 | 0.0 | 0.0 | - | 0.8 | 554.3 | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 3.1 | - | 33.0 | - | - | - | - | 0.0 |
| 83.3 55.0 | 0.0 | 0.0 | - | - | - | - | 33.7 | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 6.2 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 411.0 | - | 9.7 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.9 | 176.4 | - | 6.3 | - | - | - | 0.0 | - |
| 86.7 40.0 | 0.0 | 0.0 | - | 27.5 | 0.0 | - | 1.1 | - | - | - | 0.0 | - |
| 86.7 45.0 | 0.0 | 0.0 | - | - | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.8 | 12.6 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 407.2 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

*Scomber japonicus* (cont.)

| Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90.0 | 30.0 | 0.0 | 0.0 | - | 5.1 | 30.0 | - | 3.1 | - | - | - | 0.0 | - |
| 90.0 | 37.0 | 0.0 | 0.0 | - | 5.9 | 0.0 | - | 18.4 | - | - | - | 0.0 | - |
| 90.0 | 45.0 | 0.0 | 0.0 | - | 13.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 53.0 | 0.0 | 0.0 | - | 2.5 | 6.3 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 60.0 | 0.0 | 0.0 | - | 0.0 | 25.9 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 | 80.0 | 0.0 | - | - | - | 1.8 | - | - | - | - | - | 0.0 | - |
| 93.3 | 26.7 | 0.0 | 0.0 | - | 0.0 | 15.2 | - | 33.7 | - | - | - | 0.0 | - |
| 93.3 | 28.0 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 20.6 | - | - | - | 0.0 | - |
| 93.3 | 30.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 10.5 | - | - | - | 0.0 | - |
| 93.3 | 35.0 | 0.0 | 0.0 | - | 0.0 | 1.9 | - | 5.7 | - | - | - | 0.0 | - |
| 93.3 | 40.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 45.0 | 0.0 | 0.0 | - | 0.0 | 10.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 50.0 | 0.0 | 0.0 | - | 0.0 | 38.7 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 | 55.0 | 0.0 | 0.0 | - | - | 6.7 | - | 1.7 | - | - | - | 0.0 | - |
| 93.3 | 60.0 | 0.0 | 0.0 | - | - | 0.0 | - | 5.4 | - | - | - | 0.0 | - |
| 93.3 | 70.0 | 0.0 | - | - | - | 72.1 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 | 29.0 | 0.0 | - | - | 0.0 | - | 30.3 | 0.6 | - | - | - | - | 0.0 |
| 96.7 | 30.0 | 0.0 | - | - | 0.0 | - | 19.0 | 4.0 | - | - | - | - | 0.0 |
| 96.7 | 32.0 | 0.0 | - | - | 0.0 | - | 0.0 | 202.4 | - | - | - | - | 0.0 |
| 96.7 | 35.0 | 0.0 | - | - | 0.0 | - | 0.0 | 12.2 | - | - | - | - | 0.0 |
| 96.7 | 50.0 | - | - | 0.0 | 0.0 | - | 33.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 29.2 | 0.0 | - | 0.0 | 0.0 | - | 40.0 | 1.6 | - | - | - | - | 0.0 |
| 100.0 | 30.0 | 0.0 | - | 0.0 | 0.0 | - | 2.9 | 0.0 | - | - | - | - | 0.0 |
| 100.0 | 40.0 | 0.0 | - | 0.0 | 0.9 | - | 5.3 | 0.0 | - | - | - | - | 0.0 |
| 103.3 | 29.0 | 0.0 | 0.0 | - | 0.0 | - | 22.2 | 3.6 | - | - | - | - | 0.0 |
| 103.3 | 30.0 | 0.0 | 0.0 | - | 0.0 | - | 3.1 | 1.5 | - | - | - | - | 0.0 |
| 106.7 | 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 20.2 | - | - | - | - | 0.0 |
| 106.7 | 32.0 | 0.0 | 0.0 | - | 0.0 | - | 3.0 | 4.4 | - | - | - | - | 0.0 |
| 106.7 | 40.0 | 0.0 | 0.0 | - | 0.6 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 | 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 14.1 | - | - | - | - | 0.0 |
| 116.7 | 30.0 | - | - | 0.0 | 42.4 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 | 35.0 | - | - | 0.0 | 1.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 116.7 | 50.0 | - | - | - | 0.0 | - | - | - | 6.5 | - | - | - | 0.0 |
| 118.0 | 39.0 | - | - | 0.0 | 3.7 | - | - | - | 0.8 | - | - | - | 0.0 |
| 119.0 | 33.0 | - | - | 0.0 | 3.8 | - | - | - | 0.0 | - | - | - | 0.0 |

TABLE 4. (cont.)

*Scomber japonicus* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 25.0 | - | - | 0.0 | 0.0 | - | - | - | 0.8 | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |
| 123.3 42.0 | - | - | 0.0 | 34.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 45.0 | - | - | 0.0 | 1.5 | - | - | - | - | - | - | - | 0.0 |
| 123.3 50.0 | - | - | 0.0 | 0.8 | - | - | - | - | - | - | - | 0.0 |

*Icichthys lockingtoni*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 90.0 | - | 0.0 | - | - | - | 0.0 | - | - | - | - | - | 0.7 |
| 76.7 80.0 | 0.9 | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 90.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | - | 0.0 |
| 90.0 90.0 | 1.0 | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - |

*Tetragonurus cuvieri*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80.0 90.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 86.7 80.0 | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.9 | - |
| 90.0 90.0 | 0.0 | - | - | - | 0.0 | - | - | - | - | - | 1.2 | - |
| 96.7 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 2.2 |
| 100.0 80.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.7 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 123.3 60.0 | - | - | 0.0 | 0.0 | - | - | - | - | - | - | - | 0.8 |

*Peprilus simillimus*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 51.0 | 0.0 | - | 0.0 | - | - | 0.0 | 4.8 | - | - | - | - | 0.0 |
| 76.7 51.0 | 0.0 | - | 0.0 | - | 0.0 | - | 1.4 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 8.4 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 5.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 0.8 | - | 0.0 | - | - | - | 0.0 | - |
| 95.0 30.0 | - | - | 1.1 | - | - | - | - | - | - | - | - | - |
| 96.7 30.0 | 0.0 | - | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

**Pleuronectiformes**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 53.0 | 0.0 | - | 0.0 | 0.0 | 0.9 | - | 0.0 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

***Citharichthys* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 30.0 | 0.0 | - | - | 0.0 | - | 2.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 1.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 120.0 38.5 | - | - | 0.0 | 0.0 | - | - | - | 1.4 | - | - | - | 0.0 |

***Citharichthys sordidus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 50.0 | 0.0 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | 0.9 |
| 66.7 60.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.9 |
| 70.0 53.0 | 0.8 | - | 0.0 | - | - | 24.6 | 0.0 | - | - | - | - | 0.0 |
| 73.3 65.0 | - | - | - | - | - | - | - | - | - | - | - | 0.9 |
| 86.7 55.0 | 0.0 | 0.8 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.1 |
| 123.3 37.0 | - | - | 0.0 | 2.6 | - | - | - | 0.0 | - | - | - | 0.0 |

***Citharichthys stigmaeus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63.3 80.0 | - | 2.3 | - | - | - | 0.0 | - | - | - | - | - | 0.0 |
| 66.7 70.0 | - | 3.7 | - | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 70.0 53.0 | 0.0 | - | 0.8 | - | - | 16.0 | 0.0 | - | - | - | - | 0.0 |
| 70.0 70.0 | - | 0.6 | - | - | - | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 53.0 | 0.0 | - | 0.9 | 1.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 73.3 70.0 | - | 0.0 | - | - | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 76.7 70.0 | 0.0 | 0.0 | - | - | 0.9 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 0.0 | 0.0 | - | - | 1.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 4.1 | 0.0 | 1.9 | - | 0.0 | - | - | - | - | 0.0 |
| 106.7 35.0 | 0.0 | 0.0 | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 110.0 35.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.8 | - | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 1.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 25.0 | - | - | 0.0 | 1.0 | - | - | - | 0.0 | - | - | - | 0.0 |

***Etropus crossotus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 2.5 | - | - | - | 0.0 |

TABLE 4. (cont.)

***Hippoglossina stomata***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 60.0 | 0.0 | - | - | - | 0.0 | - | 0.9 | - | - | - | - | 0.0 |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

***Paralichthys californicus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 2.9 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 80.0 51.0 | - | - | 7.5 | 0.0 | - | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.8 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 40.6 | 7.5 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 1.6 | 0.0 | - | 0.0 | 1.7 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 0.8 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 40.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 95.0 30.0 | - | - | 4.6 | - | - | - | - | - | - | - | - | - |
| 96.7 29.0 | 0.0 | - | - | 4.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 96.7 30.0 | 0.0 | - | - | 1.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 32.0 | 0.0 | - | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 8.1 | 3.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 5.0 | - | 0.0 | - | 0.0 | 1.4 | - | - | - | - | 0.0 |
| 103.3 30.0 | 0.0 | 0.0 | - | 0.7 | - | 0.0 | 8.8 | - | - | - | - | 0.0 |
| 106.7 31.0 | 0.0 | 6.6 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 35.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 37.0 | - | - | 0.0 | 1.3 | - | - | - | 0.0 | - | - | - | 0.0 |

***Xystreurys liolepis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 120.0 30.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |

**Bothidae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136.7 22.0 | - | - | - | - | - | - | - | - | - | - | - | 1.0 |

TABLE 4. (cont.)

***Glyptocephalus zachirus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 0.7 | 0.0 | - | 0.0 | - | - | - | - | - | - |

***Hypsopsetta guttulata***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 33.0 | 0.8 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 130.0 28.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.2 |

***Lyopsetta exilis***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 50.0 | 0.0 | - | 0.0 | 1.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.6 | - | 0.0 | - | - | - | - | 0.0 |
| 93.3 50.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 100.0 30.0 | 0.0 | - | 0.0 | 2.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |

***Microstomus pacificus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73.3 50.0 | 0.0 | - | 0.0 | 1.0 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |

***Parophrys vetulus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 1.5 | - | 17.4 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 70.0 53.0 | 0.0 | - | 0.8 | - | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 90.0 60.0 | 0.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |

***Platichthys stellatus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 2.2 | 0.0 | - | 0.0 | - | - | - | - | - | - |

***Pleuronichthys coenosus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 53.0 | 0.0 | - | 0.0 | - | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 73.3 53.0 | 0.0 | - | 0.0 | 0.9 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 80.0 55.0 | - | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | 0.9 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 35.0 | 0.0 | 0.0 | - | 0.0 | 1.7 | - | 0.0 | - | - | - | 0.0 | - |

TABLE 4. (cont.)

*Pleuronichthys coenosus* (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.7 40.0 | 0.0 | 0.0 | - | 9.2 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 0.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 1.8 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 30.0 | 0.0 | 0.0 | - | 1.9 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 32.0 | 0.0 | - | - | 2.1 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 116.7 40.0 | - | - | 0.0 | 0.0 | - | - | - | 0.7 | - | - | - | 0.0 |

*Pleuronichthys decurrens*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.7 49.0 | 0.7 | - | 0.0 | - | - | 0.0 | - | - | - | - | - | 0.0 |

*Pleuronichthys ritteri*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 40.6 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 40.0 | 0.0 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 55.0 | 0.0 | 0.0 | - | 0.0 | 1.0 | - | 0.0 | - | - | - | 0.0 | - |
| 90.0 28.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 3.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 96.7 30.0 | 0.0 | - | - | 2.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 100.0 29.2 | 0.0 | - | 1.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.0 |
| 106.7 31.0 | 0.0 | 1.1 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 0.0 | - | - | - | 1.0 |
| 136.7 22.0 | - | - | - | - | - | - | - | - | - | - | - | 6.8 |
| 136.7 23.0 | - | - | - | - | - | - | - | - | - | - | - | 5.3 |

*Pleuronichthys verticalis*

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 53.0 | 0.0 | - | 0.0 | - | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.8 | 0.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 26.7 | 0.0 | 0.0 | - | 5.3 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 93.3 28.0 | 0.0 | 0.0 | - | 3.5 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 95.0 30.0 | - | - | 1.1 | - | - | - | - | - | - | - | - | - |
| 96.7 30.0 | 0.0 | - | - | 0.9 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 1.9 |

TABLE 4. (cont.)

***Pleuronichthys verticalis*** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 30.0 | 0.0 | 0.0 | - | 1.5 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 35.0 | 0.0 | 0.0 | - | 0.8 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 120.0 30.0 | - | - | 0.8 | 0.0 | - | - | - | 0.0 | - | - | - | 0.0 |
| 123.3 37.0 | - | - | 0.0 | 1.3 | - | - | - | 0.0 | - | - | - | 0.0 |
| 130.0 35.0 | - | - | - | 1.0 | - | - | - | - | - | - | - | 0.0 |

***Psettichthys melanostictus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 3.6 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 1.6 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |

***Symphurus* spp.**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106.7 50.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |

***Symphurus atricaudus***

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 3.1 | - | - | - | - | 0.0 |
| 83.3 70.0 | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | - | - | 0.9 |
| 116.7 50.0 | - | - | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |

**Disintegrated fish larvae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 4.5 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 63.3 50.0 | - | - | 3.2 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| 63.3 55.0 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.8 |
| 76.7 70.0 | 0.0 | 0.0 | - | - | 0.9 | - | 0.0 | - | - | - | - | 0.0 |
| 82.0 46.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 40.6 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.8 | - | - | - | - | 0.0 |
| 83.3 51.0 | 0.0 | 0.0 | - | - | 0.0 | - | 1.0 | - | - | - | - | 0.0 |
| 83.3 60.0 | 0.0 | - | - | - | 0.8 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 40.0 | 0.0 | 0.0 | - | 0.0 | 0.7 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 50.0 | 0.0 | 0.0 | - | 0.0 | 1.5 | - | 0.0 | - | - | - | 0.0 | - |
| 86.7 80.0 | 0.0 | - | - | - | 0.9 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 100.0 | - | - | - | - | - | 0.9 | - | - | - | - | - | - |
| 100.0 29.2 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 2.4 | - | - | - | - | 0.0 |

TABLE 4. (cont.)

**Disintegrated fish larvae** (cont.)

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103.3 29.0 | 0.0 | 1.3 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 103.3 50.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | - | - | - | - | 0.8 |
| 106.7 31.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 1.2 | - | - | - | - | 1.1 |
| 106.7 32.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 0.0 | - | 0.0 | 3.8 | - | - | - | - | 0.0 |
| 113.3 50.0 | - | 0.0 | - | 0.0 | - | - | - | 0.9 | - | - | - | 0.0 |
| 118.0 39.0 | - | - | 0.0 | 0.0 | - | - | - | 4.9 | - | - | - | 0.0 |
| 119.0 33.0 | - | - | 0.0 | 0.9 | - | - | - | 0.0 | - | - | - | 0.0 |
| 120.0 24.0 | - | - | 0.0 | 0.0 | - | - | - | 2.3 | - | - | - | 0.0 |
| 120.0 50.0 | - | - | - | 0.0 | - | - | - | 0.5 | - | - | - | 0.0 |

**Unidentified fish larvae**

| Station | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.0 50.0 | 0.0 | - | 1.4 | 0.0 | - | 0.0 | - | - | - | - | - | - |
| 80.0 70.0 | 0.0 | - | - | 0.0 | 1.0 | - | 0.0 | - | - | - | - | 0.0 |
| 86.7 33.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.7 | - | - | - | 0.0 | - |
| 86.7 80.0 | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.9 | - |
| 90.0 60.0 | 0.0 | 1.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | 0.0 | - |
| 96.7 29.0 | 0.0 | - | - | 0.0 | - | 1.1 | 0.0 | - | - | - | - | 0.0 |
| 103.3 29.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.7 | - | - | - | - | 0.0 |
| 106.7 45.0 | 0.0 | 0.0 | - | 0.0 | - | 1.0 | 0.0 | - | - | - | - | 0.0 |
| 110.0 32.4 | 0.0 | - | - | 1.0 | - | 0.0 | 0.0 | - | - | - | - | 0.0 |
| 133.3 35.0 | - | - | - | 0.0 | - | - | - | - | - | - | - | 1.1 |

PHYLOGENETIC INDEX TO TABLE 4

ALPHABETICAL INDEX TO TABLE 4

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