

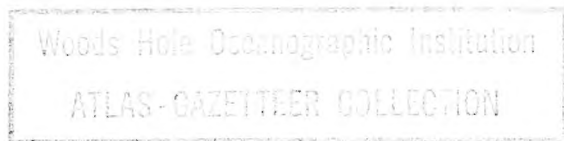
# NOAA Technical Memorandum NMFS



MAY 1990

## ICHTHYOPLANKTON AND STATION DATA FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 1984

Elizabeth G. Stevens  
Richard L. Charter  
H. Geoffrey Moser  
Cynthia A. Meyer



NOAA-TM-NMFS-SWFC-141

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

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1265-~~A~~  
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Shelf  
[series]  
1984

## NOAA Technical Memorandum NMFS

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NOAA-TM-NMFS-SWFC-141



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## ABSTRACT

This report provides ichthyoplankton and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises conducted off California and Baja California in 1984. It is the twenty-fourth report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 918 stations was occupied during 8 monthly multivessel cruises over the survey area, which extended from Pt. Reyes, California to Rosario Bay, Mexico, and seaward to several hundred miles. The data are listed in a series of 6 tables; the background, methodology, and information necessary for interpretation and quantitative analysis of the data are presented in an accompanying text. All pertinent station and tow data, including volumes of water strained and standard haul factors, are listed in the first table. Another key table lists, by station and month, standardized counts of each of the 135 larval fish categories identified from survey samples. This and previous and subsequent reports make the CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the computer data base.

## INTRODUCTION

This report, the twenty-fourth of a series, provides ichthyoplankton and associated station and tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) joint biological-oceanographic survey cruises conducted in 1984. 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 such fluctuations. CalCOFI, known as the California Cooperative Sardine Research Program from 1949 to 1953, was made up of representatives of the South Pacific Fisheries Investigations (SPFI) of the U.S. Fish and Wildlife Service [now the La Jolla Laboratory, National Marine Fisheries Service (NMFS)], the Scripps Institution of Oceanography (SIO), the California Department of Fish and Game (CDFG), the California Academy of Sciences (CAS) and the Hopkins Marine Station of Stanford University. The first three of these agencies supplied ships and personnel to conduct the sea surveys. NMFS processed the plankton samples and analyzed the ichthyoplankton from them. SIO processed and analyzed the hydrographic samples and measurements and also analyzed invertebrate groups from the plankton samples.

The boundaries, station placement, and sampling frequency for the CalCOFI survey area were based on the results of joint biological and oceanographic cruises conducted by NMFS and SIO during 1939-41. Those cruises were designed to collect sardine

eggs and larvae and associated hydrographic data over the entire areal and seasonal spawning range of the species. On these survey cruises, plankton tows were made to 70 m, a depth which encompassed the vertical distribution of sardine eggs and larvae. Wide-ranging joint biological and oceanographic survey cruises were resumed in 1949 with sardine as the focus; however, an increasing interest in other biological components resulted in the deepening of standard tows to 140 m in 1951. This marked the beginning of truly quantitative ichthyoplankton sampling on CalCOFI surveys.

Hydrographic data from 1984 CalCOFI surveys have been published by Scripps Institution of Oceanography (Univ. of Calif., SIO, 1984 a-d; 1985). All available original records for 1984 were subjected to an extensive verification and editing process to produce this CalCOFI ichthyoplankton data report. This, with previous (Ambrose et al., 1987a-c; 1988a-d; Sandknop et al., 1987a,b; 1988a-d; Stevens et al., 1987a-c; 1988a,b; Sumida et al., 1987a,b; 1988a-c) and subsequent reports, make the CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the computer data base. The data base is modified when errors are discovered and when composite taxa from the earlier years are reidentified. These reports are the fundamental reference documents against which subsequent changes in the data base can be compared.

#### **SAMPLING AREA AND PATTERN**

In 1984, the eight CalCOFI cruises occupied stations during portions of all months from January through July and during October. The total of 918 stations included in this data base was occupied on 8 cruises, with an average of 115 stations per cruise (range 70-158). The station pattern covered in 1984 began at line 60, Pt. Reyes, California, and extended south to line 110, Rosario Bay, Mexico. The entire pattern was covered on Cruises 8401, 8404, 8407, and 8410. Cruises 8402 and 8403 combined covered the whole area as did Cruises 8405 and 8406. The offshore extent of the coverage was to station 100 (ca. 200-300 miles offshore) on all cruises with two exceptions: on Cruise 8404 coverage of lines 60 through 73.3 extended only to station 70 (ca. 80-180 miles offshore) and on Cruise 8410 coverage of lines 63.3, 66.7, 70.0 and 76.7 ended with station 80 (ca. 120-220 miles offshore). (Figures 1-9, Table 1).

Beginning in 1981 we changed our designation of ordinal survey lines (those ending in "3" and "7") to an exact decimal notation. Thus, lines 63,67,73,77 etc. were changed to 63.3, 66.7, 73.3, 76.7 etc. to indicate accurately the spacing between cardinal lines (those ending with "0"). Scripps Institution of Oceanography continues to use the original designation for ordinal lines as

reflected in Figures 2-9 and in their data reports (Univ. of Calif., SIO, 1984a-d; 1985).<sup>1</sup>

Two vessels were employed on 1984 survey cruises: the *David Starr Jordan* of NMFS, and the *New Horizon* of SIO. Both vessels participated in Cruises 8401, 8404, 8407 and 8410. Cruises 8402 and 8406 were conducted on the *New Horizon* and Cruises 8403 and 8405 on the *David Starr Jordan*. (Univ. of Calif., SIO, 1984 a-d; 1985).

### SAMPLING GEAR AND METHODS

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

The standard tow in 1984 was an oblique haul to ca. 210 m depth (to 15 m from the bottom in shallow areas) designed to filter a constant amount of water per depth interval (ca. 2 m<sup>3</sup>/m of depth) over the vertical range of most ichthyoplankters. Hauls were made at a ship speed of 1.5-2.0 knots and were initiated by clamping the

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<sup>1</sup>CalCOFI lines (Figure 9) are arranged perpendicular to the coastline and extend from the Canadian border (line 10) to below Cape San Lucas, Baja California (line 157). Stations were established on the basis of a perpendicular to line 80 (off Pt. Conception) at a point designated as station 60. Stations were plotted seaward and shoreward from station 60 on each line. Cardinal CalCOFI lines (those ending in "0") are 120 miles apart and usually bracket two ordinal lines (ending in "3" or "7"), so that lines are 40 miles apart over most of the pattern. Cardinal stations are 40 miles apart and typically these are separated by a station number ending in "5" so that stations are 20 miles apart out to station 90 on most lines. Stations are placed at closer intervals near the coast and islands to accommodate these features (see Kramer et al., 1972, for further details).

net to the towing cable above the 34 kg terminal weight suspended below the surface. The net was lowered to ca. 210 m depth by paying out 300 m of wire over a 6 minute period (35 m of depth/min). After fishing at depth for 30 seconds, the net was retrieved at 20 m/min (14 m depth/min). The angle of stray of the towing cable was recorded every 30 seconds and maintained at 45° ( $\pm 3^\circ$ ) by adjusting the ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. Flowmeter readings were made at the beginning and end of each tow. Detailed descriptions of gear and methods are given by Kramer et al. (1972), and Smith and Richardson (1977).

### LABORATORY PROCEDURES

Laboratory processing began with the determination of a displacement volume for each sample (methods described in Staff, SPFI, 1953; and Kramer et al., 1972). Sorting involved the removal of ichthyoplankton from the sample and identification and separation of: eggs and larvae of Pacific sardine and northern anchovy; larvae of Pacific hake; and eggs of Pacific saury. Some samples were fractionated into aliquots using a Folsom plankton splitter (McEwen et al., 1954) prior to the sorting. Criteria for fractionating were: 1) samples taken at a distance greater than 200 nautical miles from shore were not fractionated, 2) samples taken closer than 200 miles from shore and containing 25 ml or less of plankton were not fractionated, and 3) samples taken closer than 200 miles from shore and containing more than 25 ml of plankton were fractionated to 50% of their original volume (J.R. Thrailkill, pers. comm.). Aliquot percentages for fractionated samples from 1984 are listed in Table 1 under the "Percent Sorted" column; 41% of the samples collected in 1984 were fractionated.

A "standard haul factor" (SHF) was calculated for each tow to make them comparable and allow estimations of areal abundance. This factor adjusts the number of eggs or larvae in a haul to the number in 10 m<sup>3</sup> of water strained per meter of depth fished. If the vertical distribution of the species has been encompassed, then the adjusted value is equivalent to the number under 10 m<sup>2</sup> of sea surface. The SHF is calculated for each haul by the formula:

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

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

V = total volume of water (m<sup>3</sup>) strained during the haul

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

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

a = area (m<sup>2</sup>) of the mouth of the net

p = length of column of water (m) needed to produce one revolution of the current meter.

Tow depth, volume of water strained, and standard haul factor are listed in Table 1 for each tow taken during 1984. Detailed descriptions of factors involved in calculating these values are presented in Ahlstrom (1948), Kramer et al. (1972), and Smith and Richardson (1977).

### IDENTIFICATION

Identification of ichthyoplankton species beyond those separated during the sorting process was done by a separate group of specialists. Ontogenetic stages of fishes are inherently difficult to identify, and this is further complicated by the large number and diversity of species which contribute to the ichthyoplankton of the California Current region. Most identifications were accomplished by establishing ontogenetic series on the basis of morphology, meristics, and pigmentation, and then identifying these series by relating them to known metamorphic, juvenile, or adult stages with overlapping features (Powles and Markle, 1984). A total of 135 taxa was identified for 1984: 90 to species, 22 to genus, 18 to family, and 5 to order or suborder. In 1981 four species of Sciaenidae were identified for the first time: *Cheilotrema saturnum*, *Genyonemus lineatus*, *Roncador stearnsii*, and *Seriphus politus*. Another sciaenid, *Atractoscion nobilis*, was identified for the first time in CalCOFI samples in 1984, as was the anotopterid, *Anotopterus pharao*. In 1984 all larvae of *Citharichthys* were identified to species, whereas in 1951-1953 and 1961-1981 only large specimens of *C. stigmaeus* were identified to species (Sumida et al., 1987a; Ambrose et al., 1988d).

Other identification caveats are as follows:

*Engraulis mordax* - some nearshore samples of small *E. mordax* may contain other anchovy genera which could not be differentiated.

*Bathylagus* spp. - includes small and/or disintegrated specimens of *Bathylagus* or *Leuroglossus stilbius*.

*Lampanyctus regalis* - underrepresented because of inability to differentiate small larvae (<5 mm) from those of other *Lampanyctus* species; counts may include other species of this large and complex genus.

*Lampanyctus ritteri* - comment for *L. regalis* applies to this species.

Blennioidei - this category includes members of northern stichaeioid families and true blennioids (other than *Hypsoblennius* spp.) in the southern part of the pattern.

#### COMPUTER ENTRY AND EDITING

Each taxon listed on the original identification sheets was given a 3-digit code based on the list of codes in Haight et al. (1979). Taxon codes and counts from these sheets were entered by cruise and station, along with pertinent station and tow data, into the VAX 11/780 computer at the University of California, San Diego, Computing Center. After entries were completed for the entire year, print-out listings of taxa and counts at each station were compared with the original data sheets to eliminate keypunch errors. Next, data in the file were cross-checked with data in an existing file that contained: station and tow data; numbers of eggs of sardine, anchovy, and saury; numbers of larvae of sardine, anchovy, hake, jack mackerel, and Pacific mackerel; total number of fish eggs; and total number of fish larvae.

Discrepancies in ichthyoplankton data in these two files were corrected by inspecting original records from the sorting laboratory, the original ichthyoplankton identification sheets, and the samples themselves. Station and tow data discrepancies between the two files were corrected by reviewing ships' logs and deck tow sheets, original records from the sorting laboratory, cruise announcements, publications, header information on the ichthyoplankton identification sheets, and station plots generated for each cruise. All station and tow data were checked by comparing these sources.

A listing of each taxon by station (Table 4) was the primary document for subsequent checks. Misidentifications found in geographic outlier checks and other misidentifications and data problems discovered in the course of examining archived samples resulted in several iterations of Table 4. Finally, totals in Table 4 were checked against annual summaries of incidence and abundance (Tables 2 and 3). Ecological analyses of the data were conducted concurrently with editing procedures and provided cross-checks that allowed correction of errors.

#### SPECIES SUMMARY

Larvae of northern anchovy (*Engraulis mordax*) represented 41.4% of all fish larvae taken on CalCOFI cruises during 1984 and were 2.5 times more abundant than the lightfish species, *Vinciguerria lucetia*, the next ranking taxon with 16.5% of the

total larvae; northern anchovy ranked second in frequency of occurrence while *V. lucetia* ranked third (Tables 2, 3). The myctophid *Protomyctophum crockeri* ranked first in frequency of occurrence but only ninth in abundance with 1.4% of the total larvae. Pacific hake, *Merluccius productus*, ranked third in abundance with 9.6% of total larvae, and 17th in incidence. *Sebastes* spp. ranked fourth in both abundance (5.0% of total larvae) and incidence. Fifth, sixth and seventh in numbers of larvae were a myctophid, *Stenobrachius leucopsarus* (4.3%), the deep-sea smelt *Leuroglossus stilbius* (4.0%), and another myctophid *Triphoturus mexicanus* (2.6%). These ranked 6th, 9th and 5th respectively in numbers of occurrences. The last three of the ten most abundant taxa were a deep-sea smelt *Bathylagus ochotensis* (1.9%), the myctophid *Protomyctophum crockeri* noted above (1.4%) and the bristlemouth *Cyclothone* spp. (1.1%). These ranked 7th, 1st and 8th in occurrence. The 10 most abundant taxa included 88% of all the larvae collected during CalCOFI cruises in 1984. The remaining 12% was distributed among 125 other taxa plus the disintegrated and unidentified categories. Of the top 10, 7 are midwater taxa, 2 are coastal demersal taxa, and 1 is a coastal pelagic species.

#### EXPLANATION OF TABLES

Table 1 - This table lists by cruise the pertinent station and tow data for 1984: the volume of water filtered and standard haul factor for each tow, the percent of sample sorted, and the total numbers of fish eggs and larvae. CalCOFI cruises are designated by four digits; the first two indicate the year and the second two the month. Within each cruise the data are listed in order of increasing line and station number (southerly and seaward directions); the order of station occupancy is shown on the station charts (Figures 2-8). Stations are designated by two groups of digits; the first set indicates the line and decimal fraction, and the second set indicates the station on the line. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. Methods for determining tow depth, volume of water strained, standard haul factor, and percent sorted were described in the methods section. The values for total fish eggs and larvae represent raw counts (unadjusted for percent sorted or standard haul factor). Ship codes are as follows: JD, David Starr Jordan; NH, New Horizon.

Table 2 - This table lists pooled occurrences of all larval fish taxa taken during 1984 in ranked order.

Table 3 - This table lists pooled counts of all larval fish taxa taken during 1984 in ranked order. Numbers are adjusted for percent sorted and standard haul factors.

Table 4 - This table gives numbers of fish larvae for each taxon, listed by station and calendar month in which the tow was taken. Counts are adjusted for percent of sample sorted and standard haul factor. Average values are given for stations occupied more than once during a month. See Table 1 for station and tow data and Table 6 for listing of stations with multiple occupancies during a month. Multiple occupancies occurred when a station was occupied more than once during a calendar month. The orders are listed in "phylogenetic" sequence modified from Nelson (1984). Subtaxa within each order are listed alphabetically. Page numbers for each taxon are given in the index at the end of the report.

Table 5 - This table is a summary of pooled occurrences of all larval fish taxa taken on CalCOFI surveys from 1972 to 1984. Taxa are listed in the same order as in Table 4.

Table 6 - List of stations with multiple occupancies in one month during 1984.

#### **ACKNOWLEDGMENTS**

David Ambrose, Elaine Sandknop and one of us (EGS) originally identified larvae from CalCOFI cruises in 1984. Amy E. Hays coded each larval fish taxon or type and entered it into the computer. Dorothy Roll designed the CalCOFI data acquisition system. Roy Allen helped with graphics and production of the report. Lorraine Prescott prepared the manuscript for printing. Paul Smith offered helpful suggestions throughout the project. Izadore Barrett, Director of the Southwest Fisheries Center, provided the support critical to the completion of the project. James Thrailkill planned CalCOFI surveys and supervised cruises, data handling, and plankton sorting from 1949 to 1986 and is largely responsible for the high quality of these operations. Without the vision and direction of Elbert Ahlstrom and Elton Sette and the dedicated efforts of the many people who collected, processed, and analyzed the samples, this data base would not exist.



## LITERATURE CITED

- Ahlstrom, E. H. 1948. A record of pilchard eggs and larvae collected during surveys made in 1939 to 1941. U.S. Wildl. Serv. SSRF-54, 82 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Methot. 1987a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1951. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 79, 196 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Methot. 1987b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries survey cruises in 1955. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 83, 185 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and C.R. Methot. 1987c. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1960. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 88, 253 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. 1988a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1963. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, No. 94, 209 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. 1988b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1967. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, No. 98, 103 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988c. Ichthyoplankton and station data for California Cooperative Fisheries Investigations survey cruises in 1975. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 110, 229 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988d. Ichthyoplankton and station data for California Cooperative Fisheries Investigations survey cruises in 1981. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 112, 170 p.
- Haight, C. A., H. G. Moser, and P. E. Smith. 1979. Data programs: CalCOFI. II. Fish eggs and larvae identification sheet. National Marine Fisheries Service, Southwest Fisheries Center, La Jolla, Admin. Rep. No. LJ-79-25.

- Kramer, D., M. Kalin, E. G. Stevens, J. R. Thrailkill, and J. R. Zweifel. 1972. Collecting and processing data on fish eggs and larvae in the California Current Region. NOAA Tech. Rep. NMFS Circ. 370, 38 p.
- McEwen, G. F., M. W. Johnson, and T.R. Folsom. 1954. A statistical analysis of the performance of the Folsom Plankton Sample Splitter, based on test observations. Arch. Meteor. Geophys. Bioklim. Ser. A, 7:502-527.
- McGowan, J. S. and D. M. Brown. 1966. A new opening-closing paired zooplankton net. SIO Ref. 66-23, 56 p.
- Nelson, J. S. 1984. Fishes of the world. John Wiley and Sons, N.Y., 523 p.
- Powles, H. and D. F. Markle. 1984. Identification of larvae, p. 31-33. In: Ontogeny and systematics of fishes. H. G. Moser, W. J. Richards, D. M. Cohen, M. P. Fahay, A. W. Kendall, Jr., and S. L. Richardson (eds.). Spec. Publ. No. 1. Am. Soc. Ichthyol. Herpetol., 760 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, and J. D. 1987a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1952. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 80, 207 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, and J. D. Ryan. 1987b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1958. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 86, 248 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988a. Ichthyoplankton and station data California Cooperative Oceanic Fisheries Investigations survey cruises in 1961. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 92, 167 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1964. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 95, 222 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988c. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1968. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 99, 112 p.

- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer and A. E. Hayes. 1988d. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1978. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 111, 216 p.
- Smith, P. E. and S. L. Richardson. 1977. Standard techniques for pelagic fish egg and larva surveys. FAO Fish. Tech. Pap. No. 175, 100 p.
- Staff, South Pacific Fishery Investigations. 1953. Zooplankton volumes off the Pacific Coast, 1952. U.S. Fish Wildl. Serv. SSRF- 100, 41 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1953. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 81, 186 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1956. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 84, 189 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987c. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1959. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 87, 273 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and L. R. Zins. 1988a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1965. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 96, 220 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and L. R. Zins. 1988b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1969. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 100, 265 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1987a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1954. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 82, 207 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1987b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey in 1957. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 85, 225 p.

- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988a. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1962. U.S. Dep. Commer., NOAA Tech. Memo, NMFS, SWFC, No. 93, 179 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1966. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 97, 287 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988c. Ichthyoplankton and station data for California Cooperative Fisheries Investigations survey cruises in 1972. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 109, 219 p.
- University of California, Scripps Institution of Oceanography. 1984a. Data report: physical, chemical and biological data, CalCOFI Cruise 8401. SIO Ref. 84-18.
- University of California, Scripps Institution of Oceanography. 1984b. Data report: physical, chemical and biological data, CalCOFI Cruises 8402-03. SIO Ref. 84-23.
- University of California, Scripps Institution of Oceanography. 1984c. Data report: physical, chemical and biological data, CalCOFI Cruises 8404, 8405, 8406. SIO Ref. 84-25.
- University of California, Scripps Institution of Oceanography. 1984d. Data report: physical, chemical and biological data, CalCOFI Cruise 8407. SIO Ref. 84-30.
- University of California, Scripps Institution of Oceanography. 1985. Data report: physical, chemical and biological data, CalCOFI Cruise 8410. SIO Ref. 85-1.

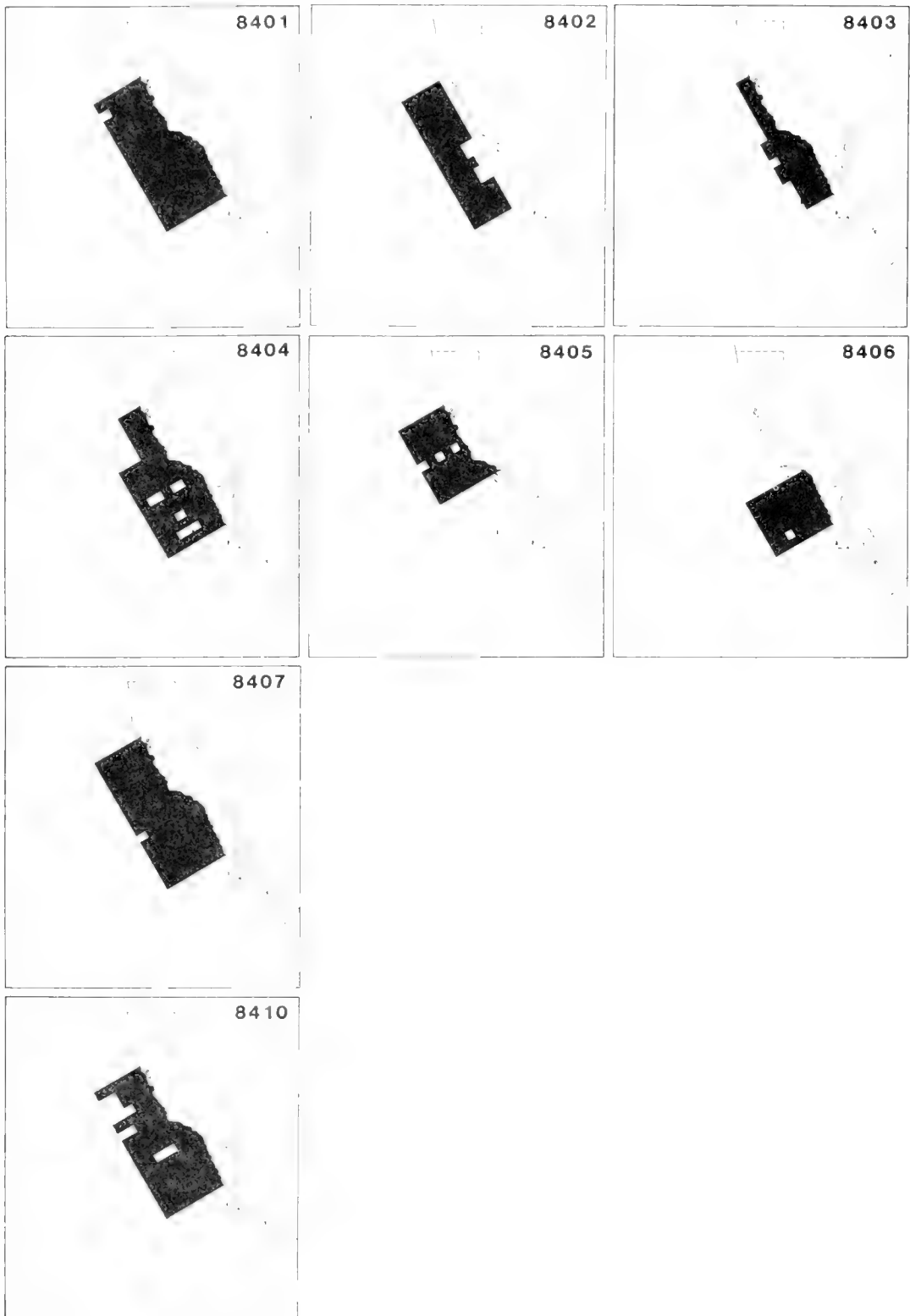


Figure 1. Composite arrangement of diagrammatic charts showing areas sampled on each CalCOFI cruise during 1984.

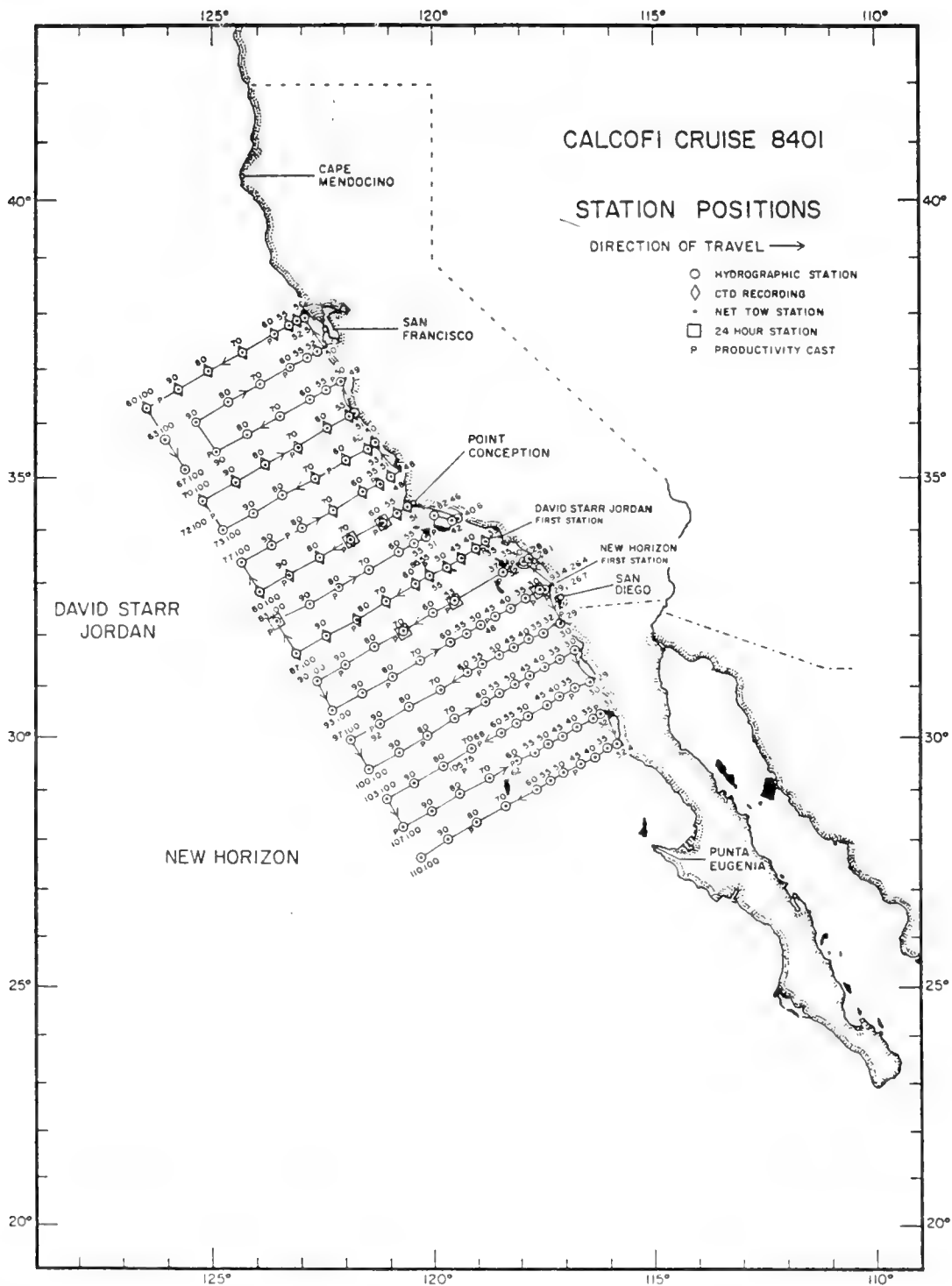


Figure 2. Station pattern for CalCOFI Cruise 8401 showing tracks for the *David Starr Jordan* and *New Horizon*. Symbols for station activities indicated in legend. Modified from chart in Univ. of Calif., SIO (1984a).

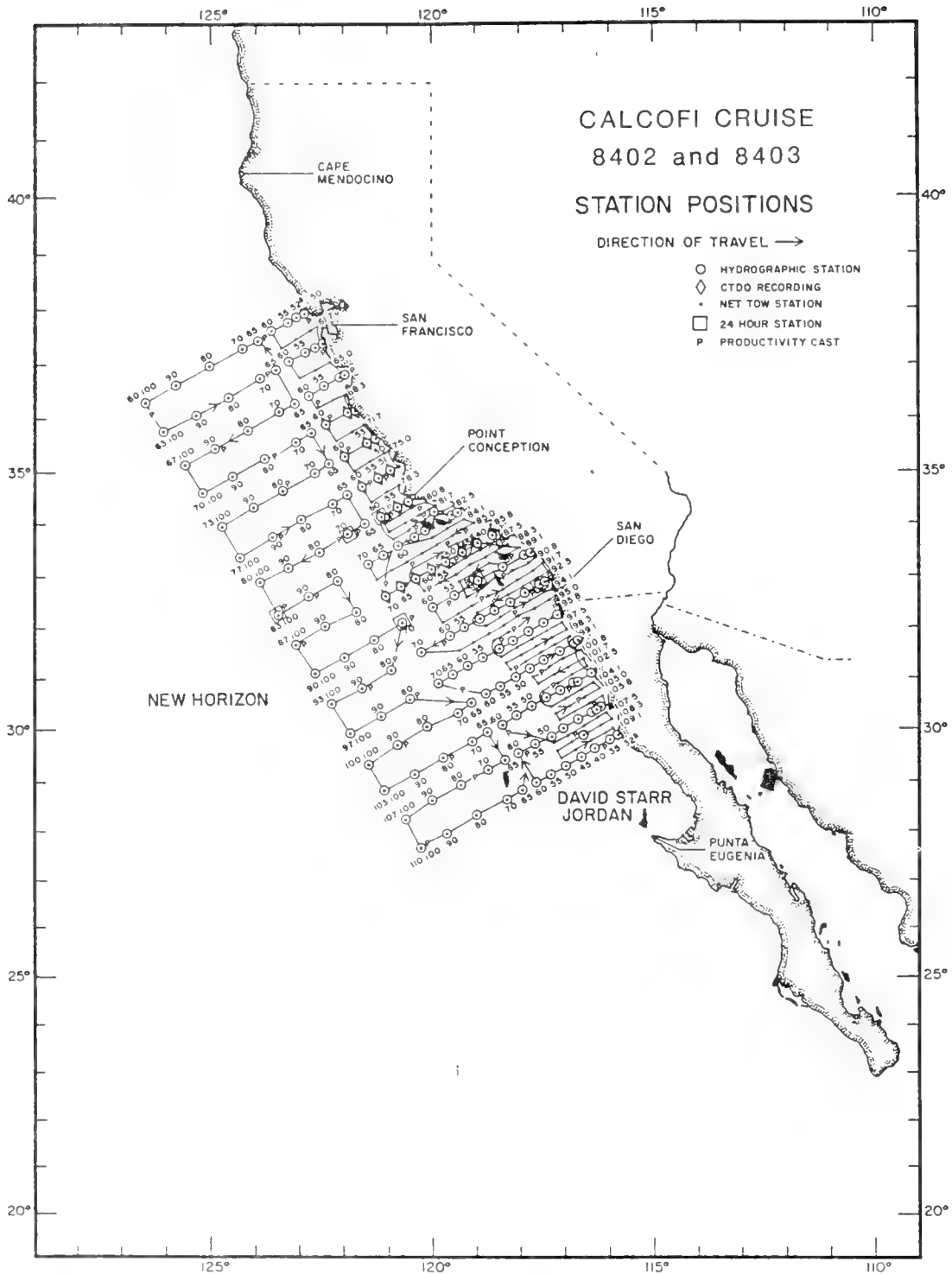


Figure 3. Station pattern for CalCOFI Cruise 8402 and 8403 showing tracks for the *New Horizon* (8402) and *David Starr Jordan* (8403). Symbols for station activities indicated in legend. Modified from chart in Univ. of Calif., SIO (1984b).

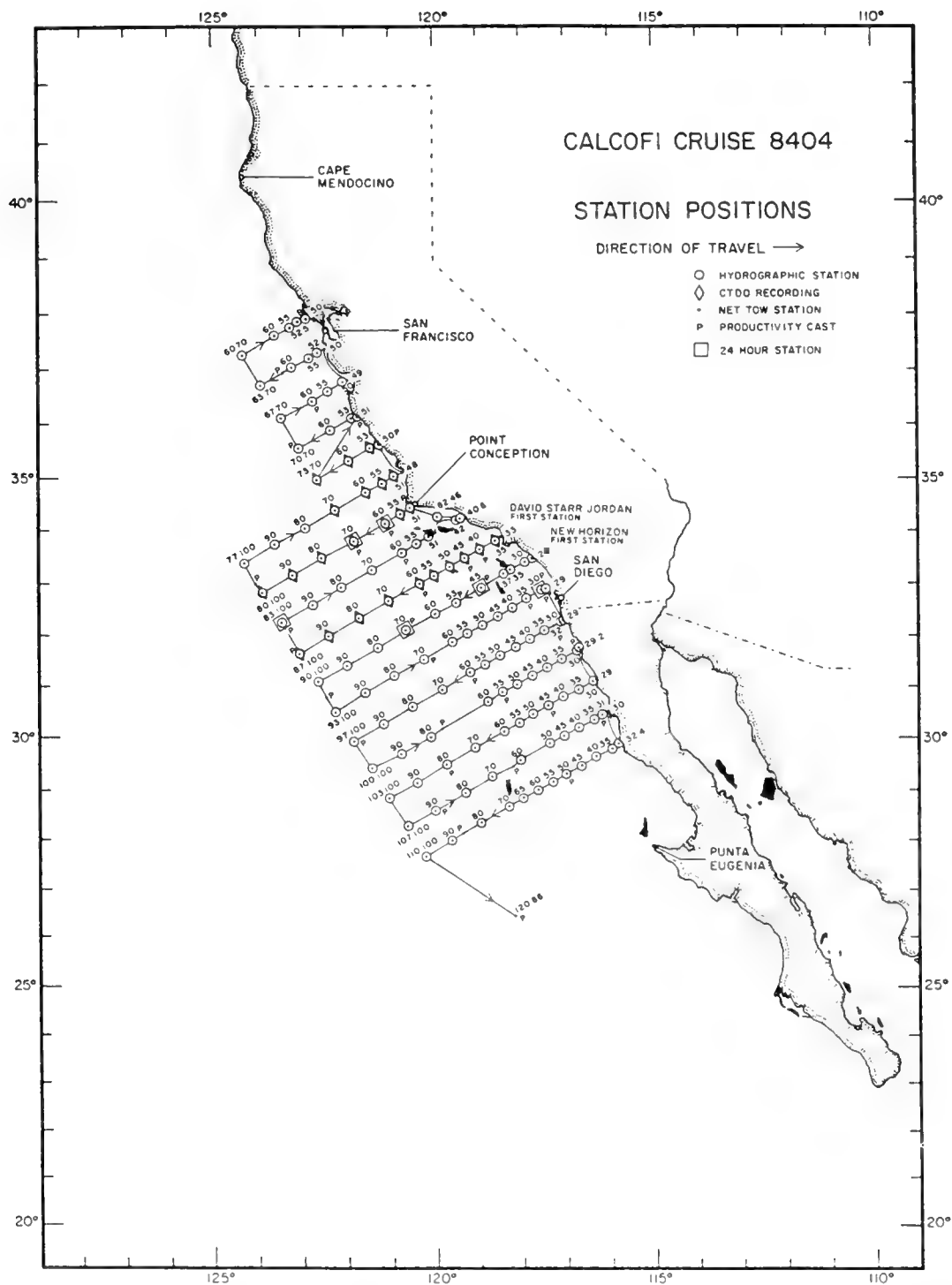


Figure 4. Station pattern for CalCOFI Cruise 8404 showing tracks for the *David Starr Jordan* and *New Horizon*. Symbols for station activities shown in legend. Modified from chart in Univ. of Calif., SIO (1984c).



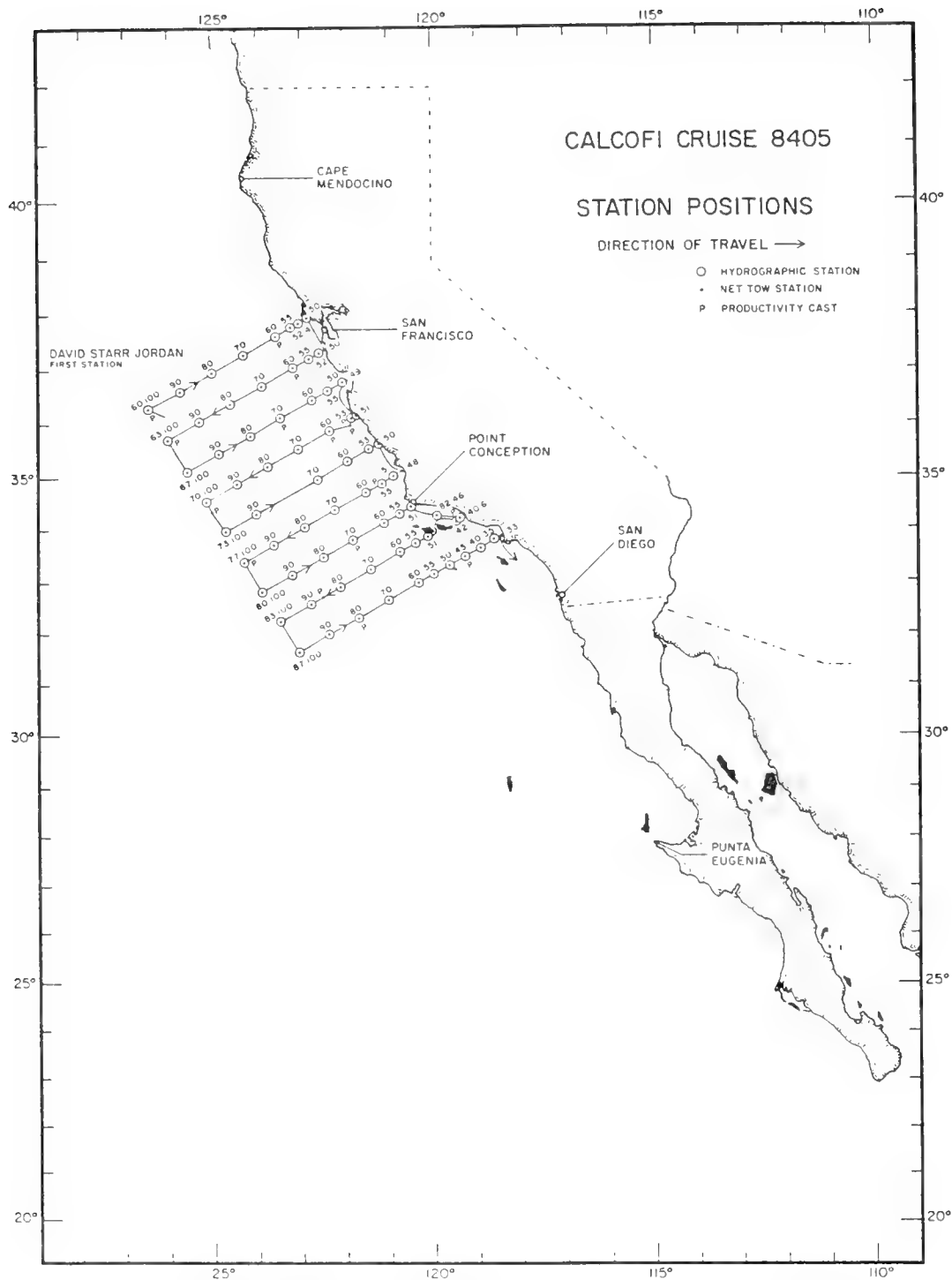


Figure 5. Station pattern for CalCOFI Cruise 8405 showing track for the *David Starr Jordan*. Symbols for station activities indicated on legend. Modified from Univ. of Calif., SIO (1984c).

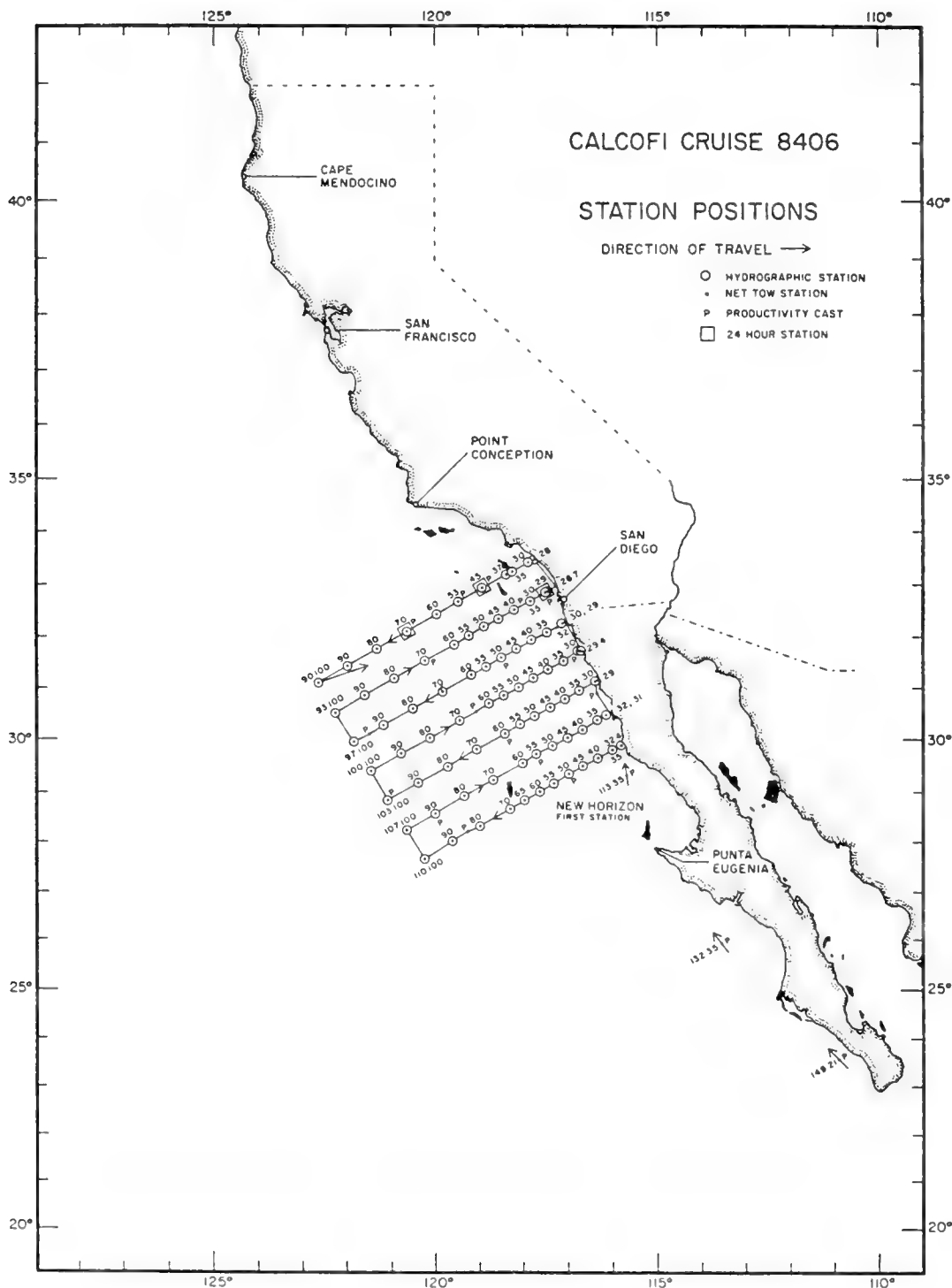


Figure 6. Station pattern for CalCOFI Cruise 8406 showing track for the *New Horizon*. Symbols for station activities indicated in legend. Modified from chart in Univ. of Calif., SIO (1984c).

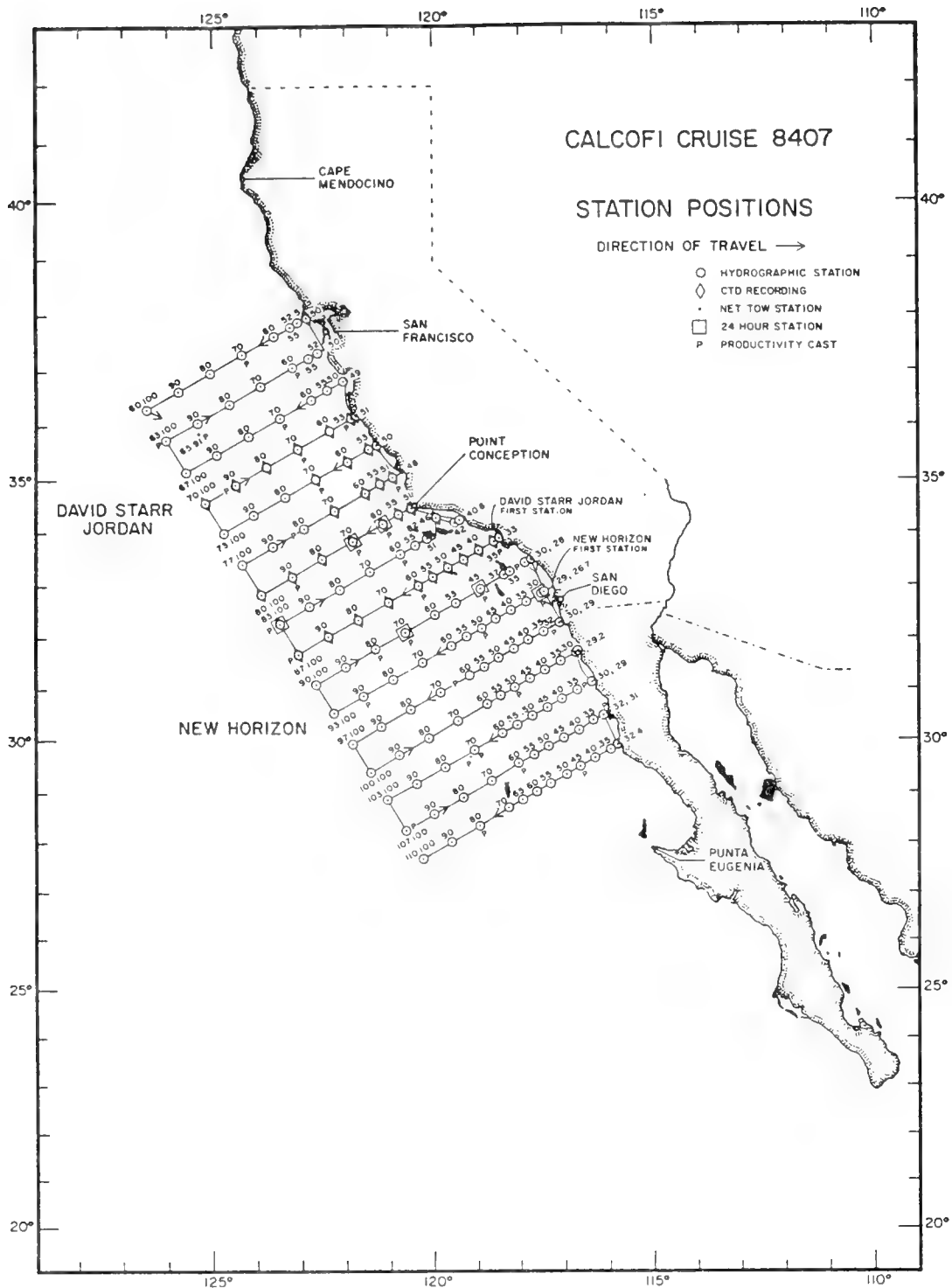


Figure 7. Station pattern for CalCOFI Cruise 8407 showing tracks for the *David Starr Jordan* and *New Horizon*. Symbols for station activities indicated in legend. Modified from chart in Univ. of Calif., SIO (1984d).

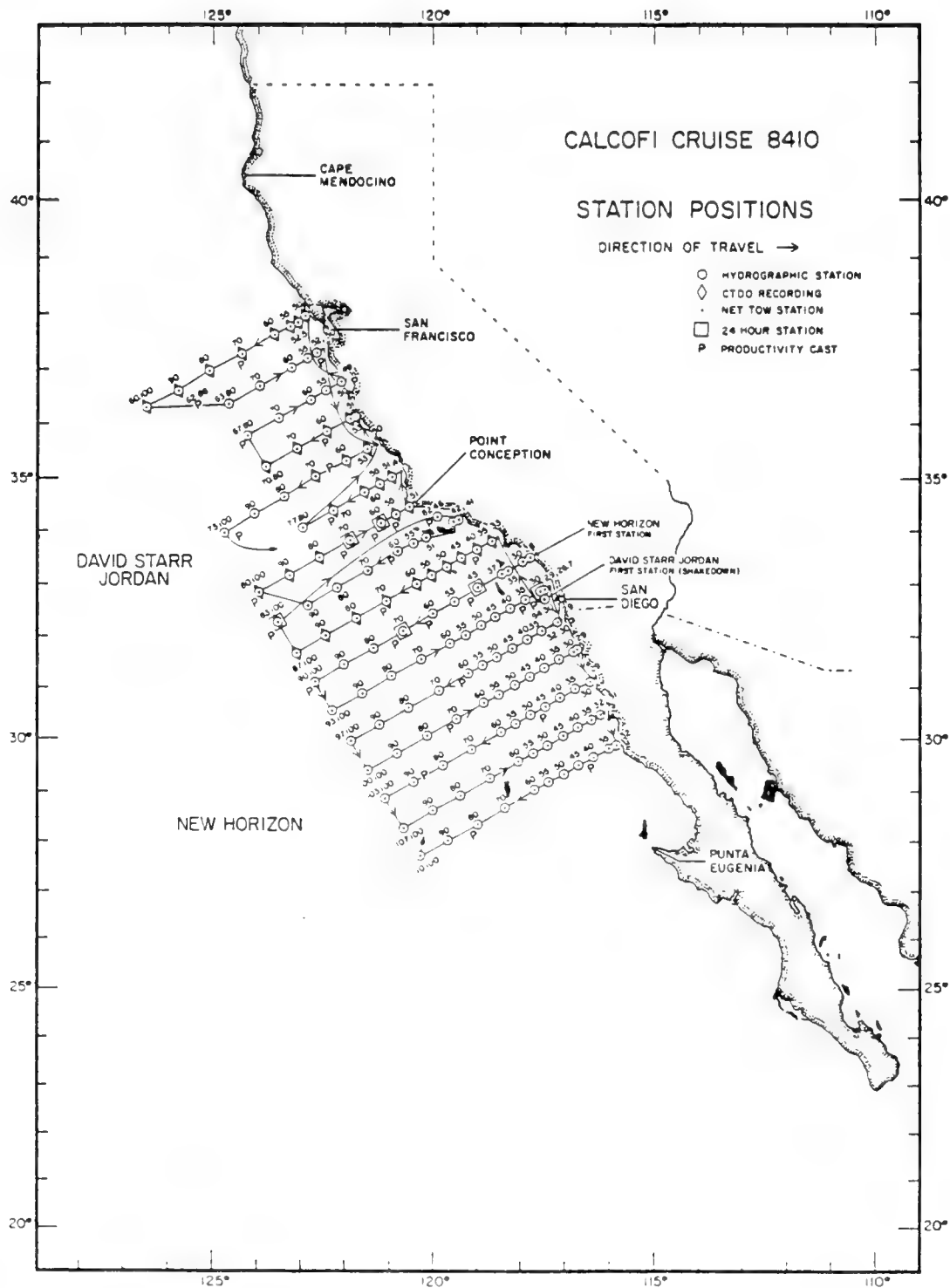


Figure 8. Station pattern for CalCOFI Cruise 8410 showing tracks for the *David Starr Jordan* and *New Horizon*. Symbols for station activities indicated in legend. Modified from chart in Univ. of Calif., SIO (1985).

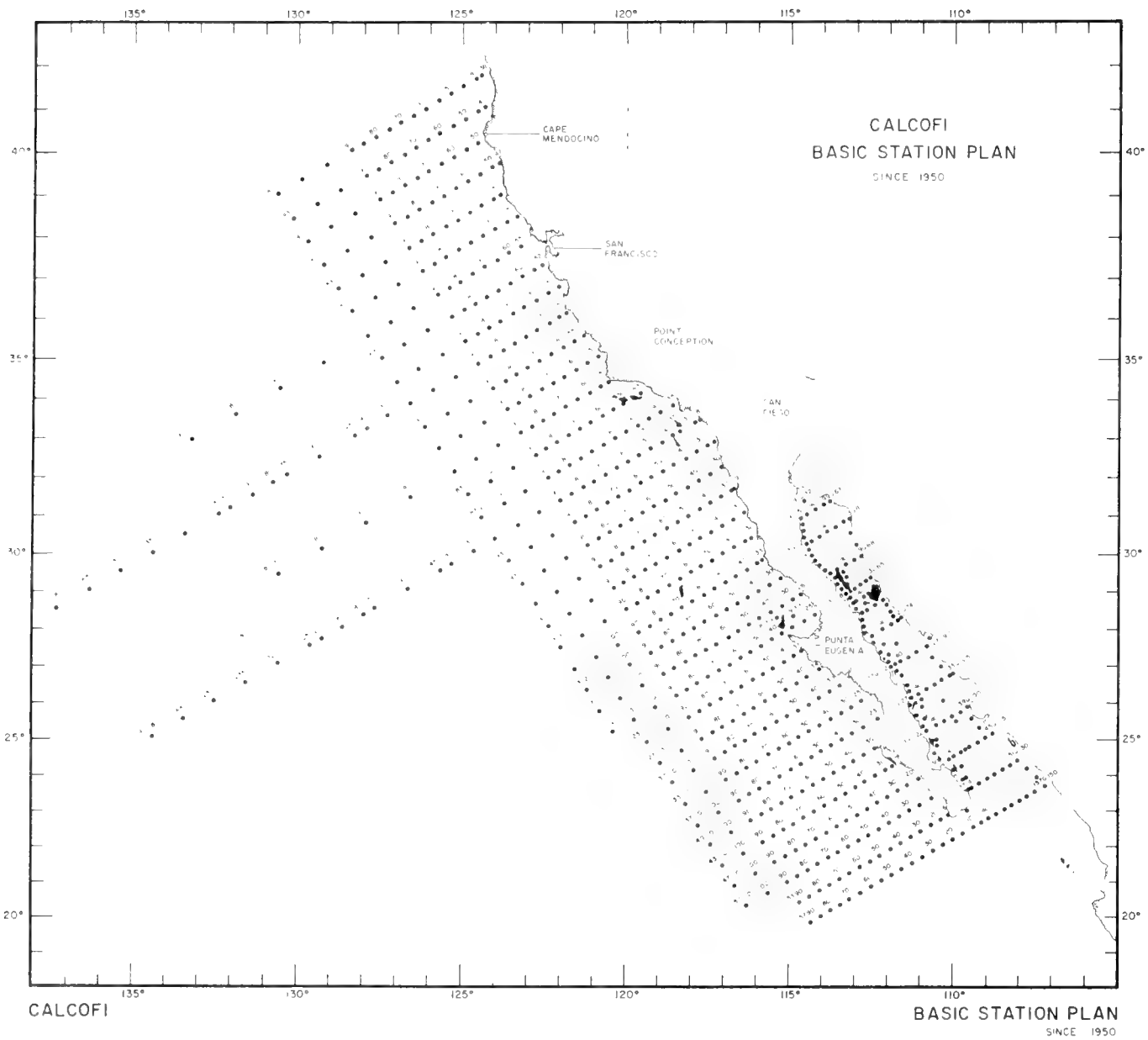


Figure 9. The basic station plan for CalCOFI cruises from 1950 to the present.

TABLE 1. Station and plankton tow data for CalCOFI cruises in 1984. Counts for fish eggs and larvae are not adjusted for standard haul factor or percent of sample sorted.

CalCOFI Cruise 8401

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
60.0	50.0	37 56.8	122 52.9	JD	84 01 23	0230	43	111	3.88	100.0	33	733
60.0	52.5	37 51.8	123 03.8	JD	84 01 23	0505	84	173	4.87	100.0	117	180
60.0	55.0	37 46.8	123 14.7	JD	84 01 23	0805	125	293	4.28	100.0	270	114
60.0	60.0	37 36.8	123 36.5	JD	84 01 23	1315	215	435	4.93	100.0	28	22
60.0	70.0	37 16.8	124 19.9	JD	84 01 23	2030	218	430	5.07	100.0	5	38
60.0	80.0	36 56.8	125 03.2	JD	84 01 24	0250	219	433	5.07	100.0	6	5
60.0	90.0	36 36.8	125 46.3	JD	84 01 24	0915	218	415	5.27	100.0	3	19
60.0	100.0	36 16.8	126 29.1	JD	84 01 24	1550	204	460	4.45	100.0	1	5
63.3	50.0	37 22.6	122 28.4	JD	84 01 22	2110	22	56	3.93	100.0	3	25
63.3	52.0	37 18.6	122 37.1	JD	84 01 22	1900	86	176	4.88	100.0	86	15
63.3	55.0	37 12.6	122 50.1	JD	84 01 22	1555	208	414	5.03	50.0	37	9
63.3	60.0	37 02.6	123 11.7	JD	84 01 22	1225	222	413	5.38	50.0	61	13
63.3	70.0	36 42.6	123 54.8	JD	84 01 22	0610	213	402	5.32	54.2	9	20
63.3	80.0	36 22.6	124 37.7	JD	84 01 22	0025	220	415	5.30	50.0	0	1
63.3	90.0	36 02.6	125 20.5	JD	84 01 21	1830	215	416	5.18	100.0	5	4
66.7	49.0	36 49.2	121 59.1	JD	84 01 20	0900	84	173	4.83	100.0	64	917
66.7	55.0	36 37.2	122 24.9	JD	84 01 20	1510	218	382	5.69	50.0	11	10
66.7	60.0	36 27.2	122 46.4	JD	84 01 20	1840	214	391	5.48	56.3	23	10
66.7	70.0	36 07.2	123 29.1	JD	84 01 21	0005	219	398	5.52	47.3	3	16
66.7	80.0	35 47.2	124 11.7	JD	84 01 21	0625	215	415	5.18	100.0	4	6
66.7	90.0	35 27.2	124 54.2	JD	84 01 21	1235	218	430	5.07	100.0	3	7
66.7	100.0	35 07.2	125 36.4	JD	84 01 25	0325	214	450	4.76	100.0	2	6
70.0	51.0	36 10.9	121 43.6	JD	84 01 20	0215	217	401	5.41	100.0	41	2
70.0	53.0	36 06.9	121 52.1	JD	84 01 19	2325	218	429	5.10	51.6	2	4
70.0	60.0	35 52.9	122 21.9	JD	84 01 19	1815	225	411	5.47	100.0	3	51
70.0	70.0	35 32.9	123 04.4	JD	84 01 19	1100	218	418	5.23	50.0	2	4
70.0	80.0	35 12.9	123 46.7	JD	84 01 19	0435	215	419	5.13	50.0	3	5
70.0	90.0	34 52.9	124 28.8	JD	84 01 18	2220	215	405	5.31	100.0	13	3
70.0	100.0	34 32.9	125 10.8	JD	84 01 18	1550	216	413	5.24	100.0	1	1

TABLE 1. (cont.)

## CALCOFI Cruise 8401

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
73.3	50.0	35 38.6	121 15.3	JD	84 01 16	2355	29	74	3.92	100.0	3	10
73.3	53.0	35 32.6	121 28.1	JD	84 01 17	0350	215	425	5.06	49.4	29	21
73.3	60.0	35 18.6	121 57.7	JD	84 01 17	0910	220	404	5.44	100.0	27	38
73.3	70.0	34 58.6	122 39.9	JD	84 01 17	1650	219	399	5.50	48.1	0	1
73.3	80.0	34 38.6	123 21.9	JD	84 01 17	2215	217	424	5.11	50.0	2	1
73.3	90.0	34 18.6	124 03.7	JD	84 01 18	0350	218	413	5.28	100.0	5	4
73.3	100.0	33 58.6	124 45.4	JD	84 01 18	0925	216	389	5.56	100.0	4	5
76.7	48.0	35 07.3	120 42.4	JD	84 01 16	1800	21	56	3.79	100.0	14	247
76.7	51.0	35 01.3	120 55.1	JD	84 01 16	1520	221	456	4.85	100.0	93	7
76.7	55.0	34 53.3	121 11.9	JD	84 01 16	1035	217	417	5.20	50.0	6	6
76.7	60.0	34 43.3	121 32.9	JD	84 01 16	0515	206	469	4.40	44.2	17	2
76.7	70.0	34 23.3	122 14.8	JD	84 01 15	2155	214	407	5.25	54.2	14	23
76.7	80.0	34 03.3	122 56.5	JD	84 01 15	1505	218	407	5.34	56.1	4	8
76.7	90.0	33 43.3	123 38.0	JD	84 01 15	0910	210	435	4.84	48.1	5	7
76.7	100.0	33 23.3	124 19.4	JD	84 01 15	0255	221	434	5.09	100.0	7	5
80.0	51.0	34 27.0	120 31.4	JD	84 01 11	2310	74	153	4.81	100.0	163	29
80.0	55.0	34 19.0	120 48.1	JD	84 01 12	0320	221	414	5.34	52.6	30	41
80.0	60.0	34 09.5	121 09.0	JD	84 01 12	0710	216	414	5.22	45.8	16	65
80.0	70.0	33 49.0	121 50.6	JD	84 01 13	0600	212	421	5.04	54.9	2	3
80.0	80.0	33 29.0	122 32.0	JD	84 01 14	0715	208	429	4.85	47.6	4	11
80.0	90.0	33 09.0	123 13.3	JD	84 01 14	1420	218	425	5.12	100.0	4	6
80.0	100.0	32 49.0	123 54.4	JD	84 01 14	2055	215	412	5.23	100.0	5	13
82.0	46.0	34 16.2	119 56.3	JD	84 01 10	1620	219	419	5.24	46.7	28	20
83.3	40.6	34 13.5	119 24.7	JD	84 01 10	2230	36	79	4.57	100.0	27	18
83.3	42.0	34 10.7	119 30.5	JD	84 01 10	2020	145	275	5.30	100.0	54	99
83.3	51.0	33 52.7	120 08.0	JD	84 01 10	0940	142	325	4.35	100.0	18	98
83.3	55.0	33 44.8	120 24.7	JD	84 01 10	0640	219	428	5.12	100.0	43	196
83.3	60.0	33 34.7	120 45.3	JD	84 01 10	0230	224	386	5.79	55.8	36	49
83.3	70.0	33 14.8	121 26.6	JD	84 01 09	2015	219	410	5.34	100.0	5	13
83.3	80.0	32 54.7	122 07.7	JD	84 01 09	1415	225	418	5.40	100.0	7	22
83.3	90.0	32 34.8	122 48.6	JD	84 01 09	0725	220	394	5.60	100.0	4	11

TABLE 1. (cont.)

## CalCOFI Cruise 8401

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
83.3	100.0	32 14.7	123 29.6	JD	84 01 08	0605	218	387	5.63	100.0	9	7
86.7	33.0	33 53.4	118 29.7	JD	84 01 05	0500	45	112	4.00	100.0	9	12
86.7	35.0	33 48.7	118 37.6	JD	84 01 05	0955	215	400	5.36	100.0	34	6
86.7	40.0	33 39.4	118 58.5	JD	84 01 05	1620	217	389	5.58	100.0	244	20
86.7	45.0	33 29.3	119 19.2	JD	84 01 05	2315	209	423	4.94	100.0	242	165
86.7	50.0	33 19.4	119 39.8	JD	84 01 06	0335	65	147	4.43	100.0	294	32
86.7	55.0	33 09.4	120 00.7	JD	84 01 06	0850	212	471	4.50	52.9	30	90
86.7	60.0	32 59.4	120 21.0	JD	84 01 06	2100	217	416	5.22	55.3	8	30
86.7	70.0	32 39.4	121 02.0	JD	84 01 07	0400	220	372	5.92	100.0	13	13
86.7	80.0	32 19.4	121 42.9	JD	84 01 07	1045	212	426	4.96	51.9	8	9
86.7	90.0	31 59.4	122 23.6	JD	84 01 07	1740	218	413	5.27	100.0	8	9
86.7	100.0	31 39.4	123 04.2	JD	84 01 08	0015	222	401	5.53	100.0	4	7
90.0	28.0	33 29.1	117 47.0	NH	84 01 05	0445	183	390	4.68	100.0	6	5
90.0	30.0	33 25.6	117 54.0	NH	84 01 05	0142	210	419	5.02	100.0	8	57
90.0	35.0	33 15.4	118 12.0	NH	84 01 04	2126	208	408	5.11	100.0	205	39
90.0	37.0	33 11.1	118 23.1	NH	84 01 05	1346	208	400	5.19	100.0	36	508
90.0	53.0	32 39.0	119 29.1	NH	84 01 05	2256	217	423	5.12	52.4	113	89
90.0	60.0	32 24.6	119 58.1	NH	84 01 06	2345	203	444	4.58	53.1	87	51
90.0	70.0	32 04.6	120 38.7	NH	84 01 07	0635	201	410	4.91	100.0	8	15
90.0	80.0	31 45.7	121 19.2	NH	84 01 08	0526	203	410	4.94	100.0	8	9
90.0	90.0	31 24.5	121 59.6	NH	84 01 08	1146	204	418	4.88	100.0	15	14
90.0	100.0	31 05.0	122 39.0	NH	84 01 08	1810	195	401	4.86	100.0	5	15
93.3	26.7	32 57.4	117 18.2	NH	84 01 12	0325	58	128	4.54	100.0	13	0
93.3	29.0	32 52.2	117 27.2	NH	84 01 12	0115	212	412	5.14	100.0	3	0
93.3	30.0	32 51.0	117 31.7	NH	84 01 11	0120	213	405	5.27	100.0	6	3
93.3	35.0	32 40.7	117 52.1	NH	84 01 10	2117	209	432	4.84	100.0	5	1
93.3	40.0	32 30.5	118 12.9	NH	84 01 10	1720	194	435	4.45	100.0	9	5
93.3	45.0	32 20.4	118 33.3	NH	84 01 10	1321	208	410	5.08	100.0	10	6
93.3	50.0	32 09.4	118 52.3	NH	84 01 10	0855	218	416	5.24	100.0	7	4
93.3	55.0	32 00.5	119 13.8	NH	84 01 10	0500	193	437	4.43	50.0	2	10
93.3	60.0	31 50.3	119 34.1	NH	84 01 10	0040	211	399	5.30	100.0	2	7



TABLE 1. (cont.)

## CalCOFI Cruise 8401

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
93.3	70.0	31 29.2	120 15.1	NH	84 01 09	1852	210	390	5.39	100.0	15	28
93.3	80.0	31 10.4	120 54.5	NH	84 01 09	1247	202	433	4.66	100.0	33	42
93.3	90.0	30 51.3	121 35.2	NH	84 01 09	0615	191	444	4.30	100.0	105	10
93.3	100.0	30 30.5	122 16.9	NH	84 01 08	2355	201	421	4.77	100.0	20	15
96.7	29.0	32 17.5	117 05.0	NH	84 01 12	1155	38	94	3.98	100.0	16	64
96.7	30.0	32 15.4	117 08.7	NH	84 01 12	1329	36	95	3.76	100.0	12	26
96.7	32.0	32 11.4	117 16.7	NH	84 01 12	1520	209	413	5.05	100.0	3	2
96.7	35.0	32 05.4	117 29.8	NH	84 01 12	1843	200	406	4.92	100.0	5	11
96.7	40.0	31 55.2	117 49.3	NH	84 01 12	2234	210	432	4.85	40.7	3	3
96.7	45.0	31 45.8	118 09.9	NH	84 01 13	0230	207	432	4.79	100.0	18	6
96.7	50.0	31 36.0	118 29.5	NH	84 01 13	0650	194	435	4.47	100.0	8	4
96.7	55.0	31 25.6	118 50.2	NH	84 01 13	1115	210	422	4.98	100.0	6	16
96.7	60.0	31 15.6	119 10.3	NH	84 01 13	1517	217	401	5.42	100.0	10	35
96.7	70.0	30 54.8	119 49.8	NH	84 01 13	2120	214	412	5.19	100.0	53	29
96.7	80.0	30 35.9	120 30.6	NH	84 01 14	0315	204	422	4.84	100.0	47	18
96.7	90.0	30 16.3	121 10.3	NH	84 01 14	0909	215	427	5.02	100.0	43	20
96.7	100.0	29 55.6	121 50.2	NH	84 01 14	1528	206	420	4.91	100.0	38	32
100.0	30.0	31 41.1	116 46.6	NH	84 01 16	2328	216	410	5.26	100.0	2	3
100.0	35.0	31 31.4	117 06.3	NH	84 01 16	1916	197	434	4.54	100.0	4	0
100.0	40.0	31 20.7	117 27.4	NH	84 01 16	1444	209	418	5.00	100.0	4	11
100.0	45.0	31 10.9	117 47.8	NH	84 01 16	1100	216	425	5.10	100.0	19	8
100.0	50.0	31 00.3	118 07.5	NH	84 01 16	0620	202	396	5.11	100.0	12	10
100.0	55.0	30 51.1	118 27.1	NH	84 01 16	0205	208	383	5.44	100.0	10	18
100.0	60.0	30 41.2	118 47.9	NH	84 01 15	2209	218	394	5.52	100.0	17	34
100.0	70.0	30 21.3	119 28.0	NH	84 01 15	1629	193	438	4.41	100.0	27	53
100.0	80.0	30 01.3	120 07.7	NH	84 01 15	0917	213	418	5.11	100.0	28	18
100.0	90.0	29 41.0	120 46.9	NH	84 01 15	0320	208	414	5.02	100.0	120	60
100.0	100.0	29 20.9	121 27.6	NH	84 01 14	2120	212	419	5.06	100.0	190	14
103.3	29.0	31 09.0	116 21.0	NH	84 01 17	0520	20	54	3.82	100.0	5	256
103.3	30.0	31 06.5	116 24.3	NH	84 01 17	0715	48	125	3.87	100.0	5	2

TABLE 1. (cont.)

## CalCOFI Cruise 8401

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
103.3	35.0	30 57.1	116 47.0	NH	84 01 17	1130	216	416	5.20	100.0	1	3
103.3	40.0	30 46.0	117 05.3	NH	84 01 17	1456	213	415	5.13	100.0	6	2
103.3	45.0	30 36.5	117 23.9	NH	84 01 17	1954	209	419	4.99	100.0	1	0
103.3	50.0	30 27.7	117 44.8	NH	84 01 17	2346	201	439	4.59	100.0	9	11
103.3	55.0	30 16.5	118 04.0	NH	84 01 18	0300	205	403	5.08	100.0	30	13
103.3	60.0	30 05.6	118 24.2	NH	84 01 18	0710	187	450	4.15	100.0	91	22
103.3	70.0	29 46.7	119 04.5	NH	84 01 18	1319	208	415	5.01	100.0	18	81
103.3	80.0	29 26.9	119 43.6	NH	84 01 18	1908	193	429	4.49	100.0	68	37
103.3	90.0	29 06.9	120 24.8	NH	84 01 19	0053	211	406	5.19	100.0	13	26
103.3	100.0	28 46.2	121 02.3	NH	84 01 19	0630	189	434	4.36	100.0	46	23
106.7	31.0	30 29.6	116 05.8	NH	84 01 21	1426	14	54	2.62	100.0	27	263
106.7	32.0	30 27.1	116 10.0	NH	84 01 21	1226	172	349	4.92	100.0	5	45
106.7	35.0	30 21.2	116 21.5	NH	84 01 21	0910	212	402	5.26	100.0	4	3
106.7	40.0	30 11.6	116 41.9	NH	84 01 21	0440	190	432	4.40	100.0	23	25
106.7	45.0	30 01.5	117 00.7	NH	84 01 21	0035	201	417	4.82	100.0	13	13
106.7	50.0	29 51.2	117 21.2	NH	84 01 20	2050	197	428	4.59	100.0	47	85
106.7	55.0	29 40.5	117 38.7	NH	84 01 20	1700	206	407	5.06	100.0	9	68
106.7	60.0	29 31.4	118 01.2	NH	84 01 20	1313	205	424	4.83	100.0	7	132
106.7	70.0	29 11.2	118 40.0	NH	84 01 20	0725	189	467	4.06	100.0	9	119
106.7	80.0	28 51.4	119 20.5	NH	84 01 20	0155	216	422	5.12	100.0	2	251
106.7	90.0	28 32.0	119 59.9	NH	84 01 19	1930	191	452	4.23	100.0	6	84
106.7	100.0	28 12.7	120 40.6	NH	84 01 19	1316	211	418	5.04	100.0	58	8
110.0	32.4	29 52.4	115 49.5	NH	84 01 21	2307	36	87	4.11	100.0	48	161
110.0	35.0	29 46.8	116 00.1	NH	84 01 22	0145	204	405	5.04	100.0	4	3
110.0	40.0	29 36.6	116 19.7	NH	84 01 22	0550	187	459	4.08	100.0	10	9
110.0	45.0	29 27.6	116 39.0	NH	84 01 22	0945	214	390	5.48	100.0	4	4
110.0	50.0	29 17.6	117 00.1	NH	84 01 22	1410	215	407	5.28	100.0	10	17
110.0	55.0	29 07.6	117 18.1	NH	84 01 22	1805	197	430	4.59	100.0	26	14
110.0	60.0	28 57.7	117 37.4	NH	84 01 22	2200	206	417	4.95	100.0	22	27
110.0	70.0	28 37.6	118 17.8	NH	84 01 23	0335	215	409	5.26	100.0	43	30

TABLE 1. (cont.)

## CalCOFI Cruise 8401

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
110.0	28 18.0	118 58.8	NH	84 01 23	0915	217	437	4.97	100.0	4	70
110.0	27 57.0	119 36.3	NH	84 01 23	1625	197	440	4.47	100.0	11	105
110.0	27 36.8	120 15.1	NH	84 01 23	2145	211	435	4.85	100.0	18	28

TABLE 1. (cont.)

## CalCOFI Cruise 8402

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
60.0	65.0	37 26.2	123 58.4	NH	84 02 09	1035	201	482	4.17	48.9	54	68
60.0	70.0	37 17.2	124 19.7	NH	84 02 09	1520	195	456	4.28	100.0	45	80
60.0	80.0	36 57.0	125 01.9	NH	84 02 09	2144	202	473	4.27	100.0	2	18
60.0	90.0	36 36.4	125 46.9	NH	84 02 10	0330	202	470	4.29	49.2	3	7
60.0	100.0	36 16.4	126 28.9	NH	84 02 10	0930	208	470	4.43	100.0	10	10
63.3	65.0	36 52.6	123 33.6	NH	84 02 11	1335	208	436	4.77	51.0	41	90
63.3	70.0	36 43.2	123 53.9	NH	84 02 11	0935	193	461	4.19	50.9	42	235
63.3	80.0	36 22.4	124 37.2	NH	84 02 11	0340	202	430	4.69	50.0	1	10
63.3	90.0	36 02.7	125 20.1	NH	84 02 10	2140	201	465	4.32	45.7	2	2
63.3	100.0	35 43.0	126 03.7	NH	84 02 10	1540	215	446	4.82	100.0	2	8
66.7	65.0	36 16.3	123 08.1	NH	84 02 11	1925	171	474	3.62	47.8	59	1158
66.7	70.0	36 07.3	123 29.3	NH	84 02 11	2310	196	415	4.73	48.6	48	37
66.7	80.0	35 47.3	124 11.5	NH	84 02 12	0500	198	449	4.41	100.0	12	13
66.7	90.0	35 26.8	124 54.8	NH	84 02 12	1045	204	441	4.63	100.0	8	3
66.7	100.0	35 06.9	125 35.9	NH	84 02 12	1635	193	439	4.40	100.0	7	15
70.0	65.0	35 42.6	122 43.2	NH	84 02 13	1950	186	490	3.80	100.0	860	914
70.0	70.0	35 32.5	123 04.8	NH	84 02 13	1545	190	467	4.06	53.8	176	4855
70.0	80.0	35 12.3	123 46.1	NH	84 02 13	0930	206	460	4.49	100.0	8	7
70.0	90.0	34 52.5	124 28.9	NH	84 02 13	0345	196	430	4.56	51.8	11	6
70.0	100.0	34 33.3	125 11.1	NH	84 02 12	2227	193	432	4.46	100.0	7	13
73.3	65.0	35 08.8	122 19.5	NH	84 02 14	0130	212	428	4.95	100.0	12	28
73.3	70.0	34 58.7	122 39.4	NH	84 02 14	0535	189	504	3.76	100.0	42	33
73.3	80.0	34 38.5	123 22.6	NH	84 02 14	1145	209	446	4.68	100.0	73	8
73.3	90.0	34 19.4	124 02.3	NH	84 02 14	1705	212	430	4.93	51.4	12	11
73.3	100.0	33 57.2	124 45.7	NH	84 02 14	2259	185	487	3.80	100.0	23	7
76.7	65.0	34 33.1	121 54.2	NH	84 02 16	0305	202	418	4.84	52.0	480	79
76.7	70.0	34 22.5	122 15.2	NH	84 02 15	2310	189	469	4.03	52.3	185	112
76.7	80.0	34 03.4	122 55.5	NH	84 02 15	1722	184	466	3.96	47.1	50	23
76.7	90.0	33 43.2	123 37.3	NH	84 02 15	1140	208	437	4.75	53.6	29	11

TABLE 1. (cont.)

## CalCOFI Cruise 8402

Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
76.7	100.0	33 23.2	124 20.4	NH	84 02 15	0525	187	470	3.97	100.0	22	2
80.0	65.0	33 59.2	121 29.7	NH	84 02 16	0840	196	441	4.45	100.0	65	152
80.0	70.0	33 49.9	121 51.0	NH	84 02 16	1205	205	428	4.80	47.6	116	77
80.0	80.0	33 29.3	122 32.4	NH	84 02 17	1640	175	476	3.69	51.5	3	4
80.0	90.0	33 09.4	123 13.8	NH	84 02 17	2238	197	440	4.48	53.0	16	5
80.0	100.0	32 50.3	123 55.2	NH	84 02 18	0445	179	454	3.95	100.0	8	7
83.3	80.0	32 53.9	122 07.9	NH	84 02 19	1830	216	395	5.46	100.0	11	13
83.3	90.0	32 35.5	122 48.5	NH	84 02 19	1255	201	422	4.75	100.0	17	27
83.3	100.0	32 14.4	123 28.6	NH	84 02 18	1202	194	438	4.42	100.0	20	25
86.7	80.0	32 19.4	121 42.8	NH	84 02 19	2352	215	392	5.47	52.6	78	10
86.7	90.0	31 59.7	122 24.2	NH	84 02 20	0525	194	468	4.15	100.0	7	8
86.7	100.0	31 39.3	123 04.4	NH	84 02 20	1050	208	439	4.75	100.0	13	14
90.0	70.0	32 04.7	120 38.1	NH	84 02 21	1205	215	434	4.96	48.1	157	18
90.0	80.0	31 45.1	121 19.8	NH	84 02 21	0420	207	415	5.00	100.0	14	15
90.0	90.0	31 24.9	121 59.6	NH	84 02 20	2256	205	428	4.80	100.0	11	18
90.0	100.0	31 05.8	122 39.6	NH	84 02 20	1650	212	427	4.97	100.0	19	34
93.3	80.0	31 11.2	120 56.1	NH	84 02 26	0635	220	279	7.89	100.0	81	26
93.3	90.0	30 49.4	121 35.1	NH	84 02 26	1235	218	421	5.19	100.0	12	48
93.3	100.0	30 30.2	122 15.9	NH	84 02 26	1755	194	507	3.83	100.0	21	74
96.7	80.0	30 35.7	120 29.8	NH	84 02 27	1230	211	484	4.36	100.0	35	48
96.7	90.0	30 15.3	121 11.3	NH	84 02 27	0630	185	518	3.57	100.0	42	60
100.0	65.0	29 55.9	121 50.5	NH	84 02 26	2355	209	435	4.81	100.0	38	83
100.0	70.0	30 30.7	119 06.7	NH	84 02 27	2028	212	437	4.86	51.5	28	6
100.0	80.0	30 19.9	119 26.3	NH	84 02 28	0025	208	405	5.14	100.0	40	44
100.0	90.0	30 02.4	120 07.7	NH	84 02 28	0610	193	466	4.14	100.0	44	269
100.0	100.0	29 40.8	120 47.8	NH	84 02 28	1218	204	441	4.64	100.0	55	177
103.3	65.0	29 57.1	121 26.6	NH	84 02 28	1745	192	515	3.73	100.0	35	109
103.3	70.0	29 46.5	118 44.2	NH	84 02 29	2225	206	395	5.23	100.0	45	34
103.3	80.0	29 26.9	119 04.5	NH	84 02 29	1813	206	460	4.48	100.0	26	46
103.3	80.0	29 26.9	119 42.8	NH	84 02 29	1220	213	447	4.77	100.0	17	419

TABLE 1. (cont.)

## CalCOFI Cruise 8402

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
103.3	29 06.9	120 22.7	NH	84 02 29	0600	211	474	4.45	100.0	27	18
103.3	28 47.0	121 03.6	NH	84 02 28	2350	220	397	5.55	100.0	22	91
106.7	29 21.8	118 20.7	NH	84 03 01	0410	201	473	4.25	100.0	15	149
106.7	29 10.8	118 40.8	NH	84 03 01	0828	208	472	4.41	100.0	5	57
106.7	28 51.6	119 19.7	NH	84 03 01	1432	212	451	4.71	100.0	11	93
106.7	28 31.8	120 00.0	NH	84 03 01	1955	203	493	4.12	100.0	30	35
106.7	28 11.0	120 37.9	NH	84 03 02	0255	206	410	5.03	100.0	45	84
110.0	28 47.5	117 57.9	NH	84 03 03	0935	214	446	4.80	100.0	8	71
110.0	28 36.4	118 19.0	NH	84 03 03	0440	206	504	4.09	100.0	5	205
110.0	28 16.8	118 58.3	NH	84 03 02	2200	206	491	4.18	100.0	4	49
110.0	27 56.4	119 37.8	NH	84 03 02	1545	193	479	4.04	100.0	28	70
110.0	27 36.6	120 14.8	NH	84 03 02	0845	215	463	4.66	100.0	24	16

TABLE 1. (cont.)

## CalCOFI Cruise 8403

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
												Tow Date
60.0	50.0	37 56.8	122 52.9	JD	84 02 09	1255	43	91	4.75	100.0	433	2285
60.0	52.5	37 51.8	123 03.8	JD	84 02 09	1510	86	168	5.09	100.0	229	206
60.0	55.0	37 46.8	123 14.7	JD	84 02 09	1845	122	228	5.38	100.0	255	9
60.0	60.0	37 36.8	123 36.5	JD	84 02 09	2325	213	441	4.83	54.7	45	36
63.3	50.0	37 22.6	122 28.4	JD	84 02 10	1121	29	61	4.69	100.0	411	3403
63.3	52.0	37 18.6	122 37.1	JD	84 02 10	1340	86	169	5.07	51.9	140	87
63.3	55.0	37 12.6	122 50.1	JD	84 02 10	1625	215	425	5.04	46.7	238	11
63.3	60.0	37 02.6	123 11.7	JD	84 02 10	2155	206	426	4.85	53.6	83	32
66.7	49.0	36 49.2	121 59.1	JD	84 02 11	1255	205	401	5.12	52.2	96	19
66.7	50.0	36 46.9	122 03.8	JD	84 02 11	1455	210	387	5.42	51.0	174	8
66.7	55.0	36 37.2	122 24.9	JD	84 02 12	0350	214	411	5.20	50.0	83	4
66.7	60.0	36 27.1	122 46.4	JD	84 02 12	0900	213	406	5.25	48.6	27	8
70.0	51.0	36 10.9	121 43.6	JD	84 02 13	0137	213	397	5.38	55.6	19	1
70.0	53.0	36 06.9	121 52.1	JD	84 02 13	0456	212	385	5.52	51.6	34	4
70.0	60.0	35 52.9	122 21.8	JD	84 02 13	1120	213	402	5.29	48.1	1400	550
73.3	50.0	35 38.6	121 15.2	JD	84 02 14	0138	28	78	3.56	53.6	92	1
73.3	53.0	35 32.6	121 28.1	JD	84 02 14	0515	211	437	4.84	50.9	37	8
73.3	60.0	35 18.5	121 57.8	JD	84 02 14	1200	215	421	5.11	100.0	111	60
76.7	48.0	35 07.3	120 42.4	JD	84 02 15	0325	21	60	3.47	100.0	55	1925
76.7	51.0	35 01.3	120 55.2	JD	84 02 15	0653	215	403	5.33	51.7	42	4
76.7	55.0	34 53.3	121 11.9	JD	84 02 15	1107	216	406	5.31	48.9	57	6
76.7	60.0	34 43.3	121 32.9	JD	84 02 15	1610	216	407	5.31	50.9	159	44
80.0	51.0	34 27.0	120 31.3	JD	84 02 16	0640	55	127	4.38	43.6	110	0
80.0	55.0	34 19.0	120 48.0	JD	84 02 16	1053	215	415	5.19	100.0	79	54
80.0	60.0	34 09.0	121 09.0	JD	84 02 20	2215	212	412	5.14	49.3	85	77
82.0	46.0	34 16.1	119 56.2	JD	84 02 19	1325	218	391	5.59	100.0	115	11
83.3	40.6	34 13.5	119 24.7	JD	84 02 19	2315	22	52	4.15	100.0	5	250
83.3	42.0	34 10.7	119 30.5	JD	84 02 20	0110	113	218	5.18	100.0	126	31
83.3	51.0	33 52.6	120 08.0	JD	84 02 20	0646	42	84	5.07	100.0	213	22
83.3	55.0	33 44.6	120 24.5	JD	84 02 20	1025	215	400	5.37	100.0	317	73

TABLE 1. (cont.)

## CalCOFI Cruise 8403

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
83.3	33 34.7	120 45.3	JD	84 02 20	1530	214	401	5.34	50.0	26	82
83.3	33 24.7	121 05.9	JD	84 02 24	0430	216	396	5.45	51.9	31	14
83.3	33 14.7	121 26.5	JD	84 02 24	0005	215	424	5.08	48.4	45	58
86.7	33 03.4	118 29.4	JD	84 02 27	0045	43	83	5.18	100.0	497	600
86.7	33 49.4	118 37.7	JD	84 02 27	0355	212	377	5.63	100.0	183	2202
86.7	33 39.4	118 58.5	JD	84 02 29	1720	212	400	5.30	100.0	196	308
86.7	33 29.4	119 19.1	JD	84 02 29	1120	210	398	5.26	100.0	1305	1139
86.7	33 19.4	119 39.8	JD	84 02 29	0535	56	130	4.27	100.0	871	8
86.7	33 09.4	120 00.3	JD	84 02 29	0035	217	382	5.69	49.2	194	172
86.7	32 59.4	120 21.0	JD	84 02 28	1720	213	386	5.53	50.0	174	134
86.7	32 49.3	120 41.5	JD	84 02 24	2140	216	444	4.86	48.4	104	96
86.7	32 39.4	121 02.0	JD	84 02 24	1530	215	416	5.18	100.0	10	9
90.0	33 29.0	117 46.2	JD	84 03 02	1940	56	118	4.77	100.0	409	961
90.0	33 25.0	117 54.3	JD	84 03 02	2310	207	409	5.07	47.6	457	795
90.0	33 11.2	118 23.4	JD	84 03 03	0504	212	390	5.44	100.0	141	271
90.0	32 55.1	118 56.1	JD	84 03 03	1222	210	390	5.37	100.0	554	1442
90.0	32 39.1	119 28.9	JD	84 03 04	1253	214	396	5.40	100.0	357	971
90.0	32 25.1	119 57.6	JD	84 03 04	1830	210	389	5.39	50.0	463	57
93.3	32 57.4	117 18.2	JD	84 03 07	1000	48	99	4.88	100.0	128	1
93.3	32 54.8	117 23.7	JD	84 03 08	0220	212	359	5.91	100.0	385	219
93.3	32 52.8	117 27.8	JD	84 03 08	0408	206	380	5.42	100.0	413	187
93.3	32 50.8	117 32.0	JD	84 03 07	1211	211	376	5.60	45.2	163	76
93.3	32 40.7	117 52.4	JD	84 03 08	1315	211	362	5.83	100.0	329	199
93.3	32 30.8	118 12.8	JD	84 03 08	1740	212	382	5.55	100.0	33	31
93.3	32 20.8	118 33.3	JD	84 03 09	0020	211	359	5.86	100.0	74	176
93.3	32 10.8	118 53.6	JD	84 03 09	0430	206	372	5.53	50.0	10	44
93.3	32 00.8	119 14.0	JD	84 03 09	0817	213	394	5.40	52.2	2	17
93.3	31 50.7	119 34.3	JD	84 03 09	1305	211	397	5.31	54.1	186	12
93.3	31 30.8	120 14.9	JD	84 03 09	1830	209	409	5.10	50.9	181	43
96.7	32 17.4	117 04.8	JD	84 03 13	1455	49	99	4.92	100.0	88	50



TABLE 1. (cont.)

## CALCOFI Cruise 8403

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
96.7	30.0	32 15.4	117 08.8	JD	84 03 13	1615	55	120	4.64	50.0	115	21
96.7	32.0	32 11.4	117 17.0	JD	84 03 13	1823	212	399	5.31	100.0	101	7
96.7	35.0	32 05.5	117 29.2	JD	84 03 13	2305	208	411	5.05	100.0	241	3
96.7	40.0	31 55.4	117 49.5	JD	84 03 14	0325	211	388	5.44	48.6	192	11
96.7	45.0	31 45.4	118 09.8	JD	84 03 14	0755	209	384	5.45	100.0	151	335
96.7	50.0	31 36.5	118 29.0	JD	84 03 14	1205	210	402	5.23	100.0	36	91
96.7	55.0	31 25.4	118 50.3	JD	84 03 14	1655	214	422	5.06	100.0	29	32
96.7	60.0	31 15.5	119 10.6	JD	84 03 14	2300	208	430	4.85	100.0	96	10
96.7	65.0	31 05.4	119 30.6	JD	84 03 15	0340	213	390	5.47	100.0	58	11
96.7	70.0	30 55.7	119 50.8	JD	84 03 15	0805	211	417	5.05	55.8	49	18
100.0	29.2	31 42.5	116 43.4	JD	84 03 16	2320	57	120	4.78	48.6	37	1
100.0	30.0	31 41.2	116 46.6	JD	84 03 16	2125	212	406	5.22	48.6	144	0
100.0	35.0	31 31.2	117 06.9	JD	84 03 16	1530	212	389	5.45	100.0	500	110
100.0	40.0	31 21.4	117 27.3	JD	84 03 16	1024	212	385	5.51	100.0	232	103
100.0	45.0	31 11.2	117 47.2	JD	84 03 16	0548	208	424	4.90	100.0	37	51
100.0	50.0	31 01.0	118 07.3	JD	84 03 16	0050	211	417	5.07	100.0	53	21
100.0	55.0	30 51.1	118 27.5	JD	84 03 15	2005	212	416	5.08	100.0	71	4
100.0	60.0	30 41.2	118 47.5	JD	84 03 15	1540	213	407	5.24	100.0	47	4
103.3	29.0	31 08.9	116 20.5	JD	84 03 17	0418	21	55	3.78	100.0	40	50
103.3	30.0	31 06.9	116 24.5	JD	84 03 17	0600	56	126	4.50	48.4	25	15
103.3	35.0	30 56.8	116 44.7	JD	84 03 17	1032	207	405	5.11	100.0	86	11
103.3	40.0	30 46.9	117 04.7	JD	84 03 17	1520	215	409	5.24	100.0	68	12
103.3	45.0	30 36.9	117 24.7	JD	84 03 17	2010	211	395	5.33	100.0	31	9
103.3	50.0	30 26.9	117 44.7	JD	84 03 18	0050	209	454	4.61	100.0	11	62
103.3	55.0	30 16.9	118 04.7	JD	84 03 18	0525	206	437	4.72	46.6	12	2
103.3	60.0	30 06.3	118 24.9	JD	84 03 18	1000	213	419	5.08	100.0	28	21
106.7	31.0	30 29.5	116 05.8	JD	84 03 22	1523	13	32	4.17	100.0	4	86
106.7	32.0	30 27.5	116 09.8	JD	84 03 22	1335	207	436	4.75	45.1	109	13
106.7	35.0	30 20.5	116 21.1	JD	84 03 22	1010	206	391	5.28	100.0	1174	17
106.7	40.0	30 11.5	116 41.6	JD	84 03 22	0545	211	411	5.13	100.0	25	27

TABLE 1. (cont.)

## CalCOFI Cruise 8403

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
106.7	45.0	30 01.2	117 01.5	JD	84 03 22	0057	211	483	4.36	100.0	64	24
106.7	50.0	29 50.8	117 19.4	JD	84 03 21	2110	213	386	5.52	100.0	61	64
106.7	55.0	29 41.5	117 41.4	JD	84 03 21	1700	216	389	5.55	100.0	14	72
106.7	60.0	29 31.5	118 01.3	JD	84 03 21	1305	213	392	5.44	100.0	18	18
110.0	32.5	29 52.2	115 49.2	JD	84 03 20	0917	49	100	4.92	48.0	21	4
110.0	35.0	29 47.1	115 59.7	JD	84 03 20	1206	211	405	5.21	100.0	137	27
110.0	40.0	29 37.2	116 19.7	JD	84 03 20	1635	210	403	5.20	100.0	12	4
110.0	45.0	29 27.2	116 39.5	JD	84 03 20	2015	212	391	5.42	100.0	57	5
110.0	50.0	29 17.4	116 59.3	JD	84 03 20	2355	211	408	5.18	100.0	53	21
110.0	55.0	29 07.2	117 19.0	JD	84 03 21	0330	215	430	5.01	100.0	17	1
110.0	60.0	28 57.2	117 38.7	JD	84 03 21	0715	210	416	5.06	100.0	3	20

TABLE 1. (cont.)

## CalCOFI Cruise 8404

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
60.0	50.0	37 56.7	122 53.0	JD	84 04 30	0955	35	80	4.38	100.0	2	24
60.0	52.5	37 51.8	123 03.8	JD	84 04 30	0815	77	170	4.54	100.0	15	12
60.0	55.0	37 46.8	123 14.7	JD	84 04 30	0635	105	203	5.20	100.0	29	20
60.0	60.0	37 36.8	123 36.5	JD	84 04 30	0325	207	409	5.06	50.0	120	13
60.0	70.0	37 16.7	124 19.7	JD	84 04 29	2145	212	382	5.55	51.4	44	7
63.3	52.0	37 18.6	122 37.1	JD	84 04 29	0305	80	163	4.91	100.0	4	3
63.3	55.0	37 12.4	122 50.1	JD	84 04 29	0545	207	418	4.96	50.0	3	5
63.3	60.0	37 02.6	123 11.7	JD	84 04 29	0930	214	374	5.73	52.6	3	1
63.3	70.0	36 42.6	123 54.8	JD	84 04 29	1525	210	365	5.74	50.9	18	10
66.7	49.0	36 49.2	121 59.1	JD	84 04 28	2045	83	168	4.92	48.8	2	3
66.7	50.0	36 47.2	122 03.4	JD	84 04 28	1935	199	386	5.15	49.1	5	1
66.7	55.0	36 37.2	122 24.9	JD	84 04 28	1635	208	390	5.34	49.3	3	7
66.7	60.0	36 27.2	122 46.4	JD	84 04 28	1300	214	357	5.98	51.6	8	2
66.7	70.0	36 07.2	123 29.1	JD	84 04 28	0640	214	370	5.78	51.1	18	7
70.0	51.0	36 10.9	121 43.6	JD	84 04 27	1310	210	379	5.54	52.6	3	5
70.0	53.0	36 06.9	121 52.1	JD	84 04 27	1520	208	398	5.22	53.3	8	4
70.0	60.0	35 52.9	122 22.0	JD	84 04 27	1925	207	342	6.06	49.5	10	8
70.0	70.0	35 32.8	123 04.3	JD	84 04 28	0040	215	393	5.47	51.4	16	13
73.3	50.0	35 38.6	121 15.5	JD	84 04 22	1220	35	79	4.49	50.0	1	3
73.3	53.0	35 32.6	121 28.1	JD	84 04 22	1602	213	397	5.35	51.1	17	17
73.3	60.0	35 18.6	121 57.9	JD	84 04 22	2250	219	394	5.55	53.6	32	11
73.3	70.0	34 58.6	122 39.9	JD	84 04 23	0510	205	402	5.10	50.2	18	54
76.7	48.0	35 07.3	120 42.4	JD	84 04 22	0630	21	59	3.50	100.0	17	176
76.7	51.0	35 01.3	120 55.1	JD	84 04 22	0415	213	415	5.13	51.6	10	18
76.7	55.0	34 53.2	121 11.8	JD	84 04 22	0045	216	410	5.27	52.1	16	18
76.7	60.0	34 43.4	121 33.0	JD	84 04 21	1945	206	426	4.85	50.3	106	29
76.7	70.0	34 23.2	122 14.9	JD	84 04 21	1225	207	419	4.94	49.7	23	28
76.7	80.0	34 03.2	122 56.4	JD	84 04 21	0525	212	403	5.25	48.0	25	80
76.7	90.0	33 43.3	123 38.2	JD	84 04 20	2250	213	430	4.96	100.0	26	6

TABLE 1. (cont.)

## CalCOFI Cruise 8404

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
76.7	100.0	33 23.3	124 19.4	JD	84 04 20	1640	211	443	4.75	100.0	18	28
80.0	51.0	34 27.0	120 33.4	JD	84 04 17	1152	61	147	4.17	50.0	3	1
80.0	55.0	34 19.0	120 48.1	JD	84 04 17	1500	215	413	5.22	100.0	33	13
80.0	60.0	34 09.2	121 09.0	JD	84 04 17	1850	211	415	5.08	52.4	33	15
80.0	70.0	33 49.0	121 50.6	JD	84 04 18	1825	202	382	5.28	52.0	25	14
80.0	80.0	33 29.0	122 32.0	JD	84 04 19	1955	214	457	4.68	50.0	16	12
80.0	90.0	33 09.0	123 13.3	JD	84 04 20	0220	210	422	4.96	100.0	11	29
80.0	100.0	32 49.0	123 54.4	JD	84 04 20	0855	213	423	5.03	100.0	17	26
82.0	46.0	34 16.3	119 56.5	JD	84 04 17	0620	211	400	5.28	100.0	34	11
83.3	40.6	34 13.5	119 24.7	JD	84 04 17	0222	28	66	4.27	100.0	357	1996
83.3	42.0	34 12.1	119 30.5	JD	84 04 17	0058	83	180	4.62	49.1	333	86
83.3	51.0	33 52.7	120 08.0	JD	84 04 16	1930	85	176	4.83	51.8	8	10
83.3	55.0	33 44.7	120 24.6	JD	84 04 16	1655	217	396	5.47	51.7	40	5
83.3	60.0	33 34.7	120 45.3	JD	84 04 16	1240	216	391	5.54	49.2	17	25
83.3	70.0	33 15.1	121 26.4	JD	84 04 16	0602	210	396	5.30	50.0	12	31
83.3	80.0	32 54.6	122 07.7	JD	84 04 16	0025	215	393	5.49	51.9	22	38
83.3	90.0	32 34.7	122 48.7	JD	84 04 15	1840	210	386	5.45	100.0	41	178
83.3	100.0	32 14.8	123 29.3	JD	84 04 14	1805	208	390	5.34	100.0	123	72
86.7	33.0	33 53.4	118 29.4	JD	84 04 10	0410	54	114	4.77	52.9	176	1364
86.7	35.0	33 49.4	118 38.0	JD	84 04 10	0700	206	397	5.20	50.0	257	96
86.7	40.0	33 39.5	118 58.4	JD	84 04 10	1330	216	398	5.42	51.4	125	17
86.7	45.0	33 29.4	119 19.3	JD	84 04 11	1130	214	427	5.01	47.8	294	110
86.7	50.0	33 19.4	119 39.8	JD	84 04 11	1505	72	152	4.72	52.9	95	12
86.7	55.0	33 09.5	120 00.5	JD	84 04 13	0710	214	405	5.28	52.6	147	53
86.7	60.0	32 59.4	120 21.2	JD	84 04 13	1145	210	410	5.13	49.0	150	37
86.7	70.0	32 39.4	121 02.1	JD	84 04 13	1730	213	382	5.56	51.7	19	11
86.7	80.0	32 19.5	121 42.9	JD	84 04 13	2335	210	401	5.24	52.6	22	39
86.7	90.0	31 59.4	122 23.6	JD	84 04 14	0548	212	411	5.15	50.9	18	37
86.7	100.0	31 39.4	123 04.2	JD	84 04 14	1215	212	400	5.32	100.0	26	90
90.0	28.0	33 29.0	117 46.9	NH	84 04 09	1530	179	459	3.89	100.0	16	24

TABLE 1. (cont.)

## CalCOFI Cruise 8404

Line	Station	Lat. (N)		Long. (W)	Ship	Tow Date	Time	Tow	Vol.	Stand-	Percent	Total	Total
		deg. min.	deg. min.										
				deg. min.	Code	yr. mo. day	(PST)	(m)	(cu. m)	Factor			
90.0	30.0	33 24.9	117 54.5	NH	84 04 09	1830	199	440	4.53	48.1	53	17	
90.0	35.0	33 15.1	118 15.2	NH	84 04 09	2220	212	422	5.04	50.0	122	35	
90.0	37.0	33 11.1	118 24.3	NH	84 04 10	0155	193	438	4.40	47.2	135	112	
90.0	45.0	32 55.1	118 56.2	NH	84 04 10	0615	195	467	4.18	50.0	134	0	
90.0	70.0	32 04.6	120 38.6	NH	84 04 12	1215	168	526	3.19	51.4	32	49	
90.0	100.0	31 04.6	122 39.4	NH	84 04 13	0835	214	438	4.88	100.0	98	108	
93.3	26.7	32 57.4	117 18.3	NH	84 04 16	1555	48	134	3.58	51.9	46	0	
93.3	29.0	32 52.7	117 28.0	NH	84 04 16	1825	214	415	5.15	100.0	422	17	
93.3	30.0	32 50.9	117 32.0	NH	84 04 15	1805	184	437	4.22	52.9	84	11	
93.3	35.0	32 40.9	117 52.6	NH	84 04 15	1240	195	422	4.61	100.0	44	129	
93.3	40.0	32 30.8	118 12.9	NH	84 04 15	0835	192	421	4.57	100.0	395	104	
93.3	45.0	32 20.8	118 33.4	NH	84 04 15	0430	206	407	5.06	48.3	151	99	
93.3	50.0	32 10.6	118 53.5	NH	84 04 15	0015	194	418	4.65	51.9	270	233	
93.3	55.0	32 00.9	119 13.5	NH	84 04 14	2000	208	430	4.84	46.7	23	27	
93.3	60.0	31 50.7	119 34.5	NH	84 04 14	1605	212	404	5.23	100.0	12	630	
93.3	70.0	31 31.0	120 19.9	NH	84 04 14	0944	207	456	4.53	100.0	5	48	
93.3	80.0	31 10.8	120 55.2	NH	84 04 14	0335	193	489	3.95	48.4	22	8	
93.3	90.0	30 50.8	121 35.5	NH	84 04 13	2110	212	430	4.92	100.0	12	14	
93.3	100.0	30 30.4	122 15.3	NH	84 04 13	1450	184	492	3.75	100.0	13	44	
96.7	29.0	32 17.4	117 04.8	NH	84 04 17	0640	43	101	4.26	48.5	12	17	
96.7	30.0	32 15.3	117 08.8	NH	84 04 17	0833	43	100	4.29	100.0	12	4	
96.7	32.0	32 11.4	117 17.0	NH	84 04 17	1027	210	428	4.90	100.0	492	7	
96.7	35.0	32 05.6	117 29.4	NH	84 04 17	1430	205	411	4.98	100.0	168	184	
96.7	40.0	31 55.3	117 49.8	NH	84 04 17	1850	211	437	4.82	100.0	84	20	
96.7	45.0	31 45.3	118 09.8	NH	84 04 17	2250	219	439	5.00	100.0	111	11	
96.7	50.0	31 35.4	118 30.4	NH	84 04 18	0315	203	443	4.57	100.0	22	55	
96.7	55.0	31 25.4	118 51.0	NH	84 04 18	0740	213	458	4.66	100.0	39	28	
96.7	60.0	31 15.8	119 10.5	NH	84 04 18	1054	215	457	4.71	100.0	28	42	
96.7	70.0	30 55.6	119 50.3	NH	84 04 18	1820	217	434	4.99	49.2	4	1	
96.7	80.0	30 35.3	120 30.7	NH	84 04 19	0025	191	445	4.30	52.1	11	6	

TABLE 1. (cont.)

## CALCOFI Cruise 8404

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
												Tow Date
96.7	90.0	30 15.4	121 10.8	NH	84 04 19	0640	222	413	5.37	100.0	19	68
96.7	100.0	29 56.0	121 50.3	NH	84 04 19	1255	208	437	4.77	100.0	18	130
100.0	29.2	31 42.5	116 43.4	NH	84 04 22	1050	85	174	4.86	51.7	7	9
100.0	30.0	31 41.1	116 46.6	NH	84 04 22	0850	208	430	4.83	46.2	6	3
100.0	35.0	31 31.3	117 07.1	NH	84 04 22	0450	197	439	4.50	100.0	173	11
100.0	40.0	31 21.2	117 27.1	NH	84 04 22	0015	211	406	5.19	51.4	18	8
100.0	45.0	31 11.4	117 47.0	NH	84 04 21	2005	209	444	4.71	100.0	16	10
100.0	50.0	31 01.3	118 07.2	NH	84 04 21	1600	210	434	4.83	100.0	27	178
100.0	55.0	30 51.1	118 27.1	NH	84 04 21	1025	205	445	4.61	100.0	26	1288
100.0	60.0	30 40.8	118 48.0	NH	84 04 21	0735	194	480	4.03	100.0	11	130
100.0	80.0	30 01.0	120 07.4	NH	84 04 20	0830	208	503	4.13	100.0	0	11
100.0	90.0	29 41.0	120 48.4	NH	84 04 20	0140	209	469	4.44	100.0	0	77
100.0	100.0	29 21.3	121 27.0	NH	84 04 19	1910	213	438	4.87	100.0	16	551
103.3	29.0	31 08.8	116 20.5	NH	84 04 22	1915	27	72	3.74	100.0	7	1
103.3	30.0	31 06.7	116 24.2	NH	84 04 22	2035	42	99	4.29	100.0	169	13
103.3	35.0	30 56.9	116 44.7	NH	84 04 23	0030	208	429	4.84	100.0	30	3
103.3	40.0	30 47.0	117 05.0	NH	84 04 23	0450	198	446	4.44	54.1	65	2
103.3	45.0	30 36.6	117 24.6	NH	84 04 23	0855	217	417	5.21	100.0	91	6
103.3	50.0	30 26.9	117 44.7	NH	84 04 23	1400	204	405	5.04	100.0	14	80
103.3	55.0	30 17.0	118 03.9	NH	84 04 23	1825	204	418	4.88	100.0	14	88
103.3	60.0	30 06.9	118 24.7	NH	84 04 23	2240	211	432	4.90	100.0	8	58
103.3	70.0	29 46.9	119 04.4	NH	84 04 24	0540	196	457	4.30	100.0	6	42
103.3	80.0	29 26.8	119 44.5	NH	84 04 24	1055	203	376	5.39	100.0	0	85
103.3	90.0	29 06.5	120 23.8	NH	84 04 24	1745	199	459	4.34	100.0	4	460
103.3	100.0	28 46.3	121 03.8	NH	84 04 24	2340	212	444	4.78	100.0	3	1254
106.7	31.0	30 29.6	116 05.8	NH	84 04 27	1335	15	59	2.48	100.0	0	400
106.7	32.0	30 27.5	116 10.5	NH	84 04 27	1120	212	421	5.03	100.0	20	20
106.7	35.0	30 21.3	116 21.7	NH	84 04 27	0755	213	418	5.10	100.0	25	5
106.7	40.0	30 11.2	116 42.0	NH	84 04 27	0335	202	430	4.69	100.0	25	5
106.7	45.0	30 01.0	117 01.8	NH	84 04 26	2315	213	453	4.70	100.0	22	16

TABLE 1. (cont.)

## CalCOFI Cruise 8404

Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code yr. mo. day	Tow Date mo. day (PST)	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
106.7	50.0	29 51.2	NH	84 04 26	1925	220	395	5.57	100.0	5	67
106.7	90.0	28 31.2	NH	84 04 25	1025	211	479	4.41	100.0	3	407
106.7	100.0	28 11.6	NH	84 04 25	0540	182	494	3.68	100.0	6	392
110.0	32.4	29 52.4	NH	84 04 27	1805	20	58	3.50	100.0	1	7
110.0	35.0	29 47.0	NH	84 04 27	2050	208	465	4.46	100.0	8	11
110.0	40.0	29 37.5	NH	84 04 28	0120	206	435	4.74	100.0	10	108
110.0	45.0	29 27.2	NH	84 04 28	0550	218	459	4.74	100.0	2	15
110.0	50.0	29 16.7	NH	84 04 28	1015	215	435	4.93	100.0	41	40
110.0	55.0	29 07.2	NH	84 04 28	1405	207	444	4.66	100.0	16	39
110.0	60.0	28 57.2	NH	84 04 28	1825	201	450	4.46	100.0	7	97
110.0	65.0	28 47.5	NH	84 04 28	2155	213	434	4.92	100.0	40	26
110.0	70.0	28 37.3	NH	84 04 29	0205	204	420	4.85	100.0	239	750
110.0	80.0	28 17.3	NH	84 04 29	0800	211	411	5.14	100.0	5	332
110.0	90.0	27 57.1	NH	84 04 29	1410	203	441	4.60	100.0	31	175
110.0	100.0	27 37.1	NH	84 04 29	1950	211	421	5.02	100.0	46	235

TABLE 1. (cont.)

CalCOFI Cruise 8405

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
60.0	50.0	37 56.8	122 52.9	JD	84 05 18	1900	42	101	4.16	100.0	3	2
60.0	52.5	37 51.5	123 04.5	JD	84 05 18	1700	84	178	4.70	47.1	17	6
60.0	55.0	37 47.3	123 14.9	JD	84 05 18	1510	83	167	5.00	48.5	14	2
60.0	70.0	37 16.8	124 20.2	JD	84 05 18	0510	208	401	5.17	50.6	7	9
60.0	80.0	36 56.8	125 03.2	JD	84 05 17	2330	208	415	5.02	50.0	45	36
60.0	90.0	36 36.8	125 46.2	JD	84 05 17	1810	206	433	4.76	100.0	7	7
60.0	100.0	36 17.2	126 29.3	JD	84 05 17	1300	210	429	4.91	100.0	7	6
63.3	50.0	37 22.6	122 28.4	JD	84 05 19	0425	27	64	4.21	100.0	0	2
63.3	52.0	37 18.6	122 37.1	JD	84 05 19	0550	84	163	5.14	50.0	3	1
63.3	55.0	37 12.7	122 50.0	JD	84 05 19	0810	212	391	5.43	50.2	13	6
63.3	60.0	37 02.6	123 11.7	JD	84 05 19	1323	206	362	5.69	49.4	8	3
63.3	70.0	36 42.5	123 54.7	JD	84 05 19	1845	215	360	5.97	49.9	17	8
63.3	80.0	36 22.6	124 37.8	JD	84 05 20	0030	209	369	5.67	51.9	16	18
63.3	90.0	36 02.5	125 20.7	JD	84 05 20	0600	212	392	5.41	51.1	8	11
63.3	100.0	35 42.6	126 03.1	JD	84 05 20	1115	211	408	5.17	52.3	15	7
66.7	49.0	36 49.2	121 59.1	JD	84 05 22	0420	70	118	5.95	48.9	2	0
66.7	50.0	36 47.1	122 03.7	JD	84 05 22	0250	167	319	5.26	51.4	3	1
66.7	55.0	36 37.2	122 25.0	JD	84 05 21	2230	217	402	5.40	52.8	18	2
66.7	60.0	36 27.2	122 46.4	JD	84 05 21	1840	210	406	5.18	49.1	18	0
66.7	70.0	36 07.1	123 29.0	JD	84 05 21	1245	210	371	5.67	52.9	16	134
66.7	80.0	35 47.2	124 11.7	JD	84 05 21	0550	209	397	5.26	47.7	21	57
66.7	90.0	35 27.1	124 54.1	JD	84 05 20	2300	214	431	4.97	100.0	13	21
66.7	100.0	35 07.3	125 36.4	JD	84 05 20	1720	213	425	5.01	100.0	21	47
70.0	51.0	36 10.7	121 43.8	JD	84 05 22	0950	214	404	5.29	51.1	4	4
70.0	53.0	36 06.9	121 51.9	JD	84 05 23	0535	210	370	5.66	50.2	4	2
70.0	60.0	35 52.8	122 21.7	JD	84 05 23	1015	214	397	5.39	50.7	9	5
70.0	70.0	35 32.9	123 04.5	JD	84 05 23	1640	207	372	5.56	49.4	23	10
70.0	80.0	35 12.8	123 46.6	JD	84 05 23	2200	202	434	4.65	50.0	7	10
70.0	90.0	34 52.9	124 28.6	JD	84 05 24	0345	210	415	5.06	50.7	15	11



TABLE 1. (cont.)

## CalCOFI Cruise 8405

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
70.0	100.0	34 32.8	125 10.6	JD	84 05 24	0915	212	463	4.57	100.0	7	9
73.3	50.0	35 38.5	121 15.5	JD	84 05 26	0130	23	55	4.18	49.1	7	0
73.3	53.0	35 32.7	121 28.2	JD	84 05 25	2230	206	406	5.07	49.4	15	8
73.3	70.0	34 58.4	122 39.8	JD	84 05 25	0935	209	431	4.85	50.9	2	2
73.3	90.0	34 18.5	124 03.5	JD	84 05 24	2240	200	463	4.31	48.8	8	4
76.7	48.0	35 07.3	120 42.4	JD	84 05 26	0630	21	54	3.87	48.7	3	3
76.7	51.0	35 01.4	120 55.3	JD	84 05 26	0845	212	411	5.16	49.5	12	1
76.7	55.0	34 53.4	121 11.7	JD	84 05 26	1235	215	414	5.19	52.0	9	0
76.7	60.0	34 43.2	121 32.9	JD	84 05 26	1645	212	374	5.67	50.0	4	12
76.7	70.0	34 23.2	122 14.7	JD	84 05 26	2155	203	455	4.45	49.8	10	3
76.7	80.0	34 03.3	122 56.6	JD	84 05 27	0300	211	385	5.49	50.4	19	16
76.7	90.0	33 43.3	123 38.1	JD	84 05 27	0800	206	427	4.83	51.2	10	223
76.7	100.0	33 23.4	124 19.4	JD	84 05 27	1425	207	417	4.98	46.4	21	252
80.0	51.0	34 26.9	120 31.4	JD	84 05 29	0015	64	126	5.08	48.4	8	0
80.0	55.0	34 19.0	120 48.1	JD	84 05 28	2110	211	403	5.23	52.7	28	22
80.0	60.0	34 09.0	121 09.0	JD	84 05 28	1750	210	380	5.53	50.0	25	0
80.0	70.0	33 48.9	121 50.6	JD	84 05 28	1235	206	403	5.11	48.8	16	2
80.0	80.0	33 28.9	122 31.9	JD	84 05 28	0700	210	392	5.36	50.3	1	19
80.0	90.0	33 08.9	123 13.3	JD	84 05 28	0150	200	418	4.80	49.4	12	10
80.0	100.0	32 49.1	123 54.5	JD	84 05 27	2005	212	394	5.39	47.9	20	25
82.0	46.0	34 16.1	119 56.3	JD	84 05 29	0450	211	401	5.26	46.8	13	23
83.3	40.6	34 13.5	119 24.8	JD	84 05 29	0830	27	66	4.17	100.0	13	759
83.3	42.0	34 10.5	119 30.0	JD	84 05 29	0955	141	261	5.42	100.0	11	156
83.3	51.0	33 52.7	120 08.0	JD	84 05 29	1530	77	153	5.06	46.7	7	180
83.3	55.0	33 44.7	120 24.7	JD	84 05 29	1825	206	395	5.21	100.0	11	6
83.3	60.0	33 34.7	120 45.2	JD	84 05 29	2145	208	391	5.32	50.8	17	0
83.3	70.0	33 14.7	121 26.5	JD	84 05 30	0325	210	375	5.59	51.2	14	10
83.3	80.0	32 54.6	122 07.8	JD	84 05 30	0850	209	399	5.24	50.0	5	14
83.3	90.0	32 34.6	122 48.6	JD	84 05 30	1410	206	401	5.13	49.3	9	7
83.3	100.0	32 14.7	123 29.5	JD	84 05 30	1910	211	378	5.59	52.9	26	12

TABLE 1. (cont.)

## CalCOFI Cruise 8405

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
86.7	33 53.3	118 29.3	JD	84 06 01	2040	43	84	5.13	51.5	16	20
86.7	33 49.4	118 37.7	JD	84 06 01	1825	210	403	5.22	47.1	10	23
86.7	33 39.4	118 58.5	JD	84 06 01	1435	205	395	5.20	100.0	12	3
86.7	33 29.0	119 19.0	JD	84 06 01	1045	206	397	5.20	53.8	4	13
86.7	33 19.6	119 39.8	JD	84 06 01	0750	62	137	4.53	100.0	9	2
86.7	33 09.6	120 00.4	JD	84 06 01	0445	210	408	5.15	100.0	4	1
86.7	32 59.4	120 21.0	JD	84 06 01	0040	211	392	5.38	49.7	44	116
86.7	32 39.4	121 02.0	JD	84 05 31	1905	209	391	5.33	49.4	15	14
86.7	32 19.4	121 42.9	JD	84 05 31	1330	209	412	5.08	49.7	12	14
86.7	31 59.4	122 23.6	JD	84 05 31	0715	212	396	5.35	51.3	13	25
86.7	31 39.4	123 04.2	JD	84 05 31	0135	211	406	5.21	52.1	40	8

TABLE 1. (cont.)

## CalCOFI Cruise 8406

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
90.0	28.0	33 28.7	NH	84 06 19	1945	49	104	4.74	50.0	66	849
90.0	30.0	30 24.9	NH	84 06 19	2150	214	418	5.12	50.8	16	1
90.0	35.0	33 14.8	NH	84 06 20	0135	210	426	4.94	49.1	2	1
90.0	37.0	33 11.0	NH	84 06 20	0355	216	429	5.04	51.1	6	1
90.0	45.0	32 55.2	NH	84 06 20	1200	208	417	4.99	49.1	33	28
90.0	53.0	32 39.0	NH	84 06 21	1155	209	446	4.70	48.9	4	1
90.0	60.0	32 25.1	NH	84 06 21	1615	220	444	4.96	53.3	4	10
90.0	70.0	32 05.0	NH	84 06 22	0010	191	465	4.11	50.0	17	78
90.0	80.0	32 44.8	NH	84 06 22	2200	211	423	4.99	49.3	15	13
90.0	90.0	31 25.1	NH	84 06 23	0310	213	421	5.06	49.2	8	8
90.0	100.0	31 05.3	NH	84 06 23	0815	213	404	5.28	51.7	14	66
93.3	26.7	32 57.2	NH	84 06 19	1520	50	121	4.18	51.9	10	81
93.3	29.0	32 52.0	NH	84 06 18	1940	212	392	5.40	51.0	1	4
93.3	30.0	32 50.9	NH	84 06 18	1800	209	408	5.12	48.3	2	42
93.3	35.0	32 40.6	NH	84 06 18	1145	209	428	4.90	100.0	10	7
93.3	40.0	32 30.7	NH	84 06 18	0740	201	447	4.49	100.0	11	3
93.3	45.0	32 20.8	NH	84 06 18	0355	210	419	5.02	51.4	6	2
93.3	50.0	32 10.9	NH	84 06 18	0015	205	455	4.49	53.2	10	2
93.3	55.0	32 01.0	NH	84 06 17	2045	211	439	4.80	51.0	9	4
93.3	60.0	31 50.4	NH	84 06 17	1710	217	403	5.40	50.5	28	97
93.3	70.0	31 31.1	NH	84 06 17	1200	200	437	4.57	52.3	15	54
93.3	80.0	31 10.9	NH	84 06 17	0610	214	436	4.92	50.6	6	155
93.3	90.0	30 50.9	NH	84 06 17	0055	203	432	4.69	48.8	9	289
93.3	100.0	30 30.2	NH	84 06 16	1930	214	433	4.95	51.6	10	14
96.7	29.0	32 17.4	NH	84 06 14	1740	43	86	4.99	50.6	7	17
96.7	30.0	32 15.4	NH	84 06 14	1835	52	103	5.04	53.1	9	70
96.7	32.0	32 10.9	NH	84 06 14	2000	205	438	4.69	51.4	1	7
96.7	35.0	32 05.1	NH	84 06 14	2240	199	456	4.37	100.0	6	3
96.7	40.0	31 55.4	NH	84 06 15	0205	206	465	4.42	48.6	12	0

TABLE 1. (cont.)

## CALCOFI Cruise 8406

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
96.7	45.0	31 45.3	118 10.5	NH	84 06 15	0525	207	424	4.87	100.0	8	4
96.7	50.0	31 35.2	118 30.7	NH	84 06 15	0850	210	446	4.72	100.0	3	3
96.7	55.0	31 25.2	118 50.4	NH	84 06 15	1225	208	440	4.72	100.0	13	11
96.7	60.0	31 15.4	119 10.5	NH	84 06 15	1550	219	439	4.99	100.0	6	4
96.7	70.0	30 55.2	119 50.7	NH	84 06 15	2155	211	408	5.18	53.2	17	58
96.7	80.0	30 35.2	120 31.2	NH	84 06 16	0305	206	437	4.70	51.5	20	62
96.7	90.0	30 15.3	121 11.0	NH	84 06 16	0830	212	439	4.82	100.0	18	109
96.7	100.0	29 55.7	121 50.9	NH	84 06 16	1405	205	425	4.82	48.6	9	170
100.0	29.2	31 42.5	116 44.0	NH	84 06 14	1230	151	311	4.87	100.0	9	30
100.0	30.0	31 41.1	116 46.7	NH	84 06 14	1105	214	417	5.13	100.0	17	1
100.0	35.0	31 31.3	117 06.9	NH	84 06 14	0710	208	429	4.84	100.0	1	1
100.0	40.0	31 21.3	117 27.1	NH	84 06 14	0315	203	465	4.38	100.0	3	2
100.0	45.0	31 11.3	117 47.1	NH	84 06 13	2340	210	441	4.75	100.0	9	11
100.0	50.0	31 00.7	118 07.0	NH	84 06 13	2015	211	428	4.93	100.0	18	6
100.0	55.0	30 51.2	118 27.2	NH	84 06 13	1650	211	433	4.87	100.0	6	14
100.0	60.0	30 41.3	118 47.5	NH	84 06 13	1325	210	434	4.85	100.0	2	60
100.0	70.0	30 21.2	119 27.0	NH	84 06 13	0800	210	420	5.01	100.0	49	153
100.0	80.0	30 01.2	120 07.4	NH	84 06 13	0230	210	427	4.92	100.0	85	999
100.0	90.0	29 41.4	120 47.0	NH	84 06 12	2105	206	447	4.61	100.0	73	1387
100.0	100.0	29 21.2	121 26.9	NH	84 06 12	1535	207	474	4.37	100.0	10	313
103.3	29.0	31 08.8	116 20.5	NH	84 06 10	1220	20	75	2.72	100.0	3	115
103.3	30.0	31 06.9	116 24.3	NH	84 06 10	1340	50	146	3.46	100.0	0	32
103.3	35.0	30 56.9	116 44.7	NH	84 06 10	1705	205	450	4.55	100.0	1	5
103.3	40.0	30 46.8	117 04.9	NH	84 06 10	2050	208	437	4.77	100.0	5	19
103.3	45.0	30 36.8	117 24.7	NH	84 06 11	0015	208	451	4.62	50.0	20	14
103.3	50.0	30 26.6	117 44.9	NH	84 06 11	0340	209	466	4.49	51.4	13	57
103.3	55.0	30 17.0	118 04.8	NH	84 06 11	0710	214	445	4.81	100.0	6	88
103.3	60.0	30 07.0	118 24.6	NH	84 06 11	1100	210	419	5.02	100.0	25	186
103.3	70.0	29 47.1	119 04.3	NH	84 06 11	1635	221	421	5.25	100.0	57	995
103.3	80.0	29 26.8	119 44.0	NH	84 06 11	2150	216	446	4.84	100.0	126	155

TABLE 1. (cont.)

## CalCOFI Cruise 8406

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
103.3	90.0	29 06.9	120 23.7	NH	84 06 12	0335	207	431	4.79	100.0	21	786
103.3	100.0	28 46.9	121 03.4	NH	84 06 12	0940	213	453	4.71	100.0	19	823
106.7	31.0	30 29.5	116 05.8	NH	84 06 10	0710	13	37	3.63	100.0	0	100
106.7	32.0	30 27.3	116 09.8	NH	84 06 10	0510	100	222	4.49	50.9	1	2
106.7	35.0	30 21.7	116 21.9	NH	84 06 10	0155	200	472	4.24	49.0	1	5
106.7	40.0	30 11.4	116 41.6	NH	84 06 09	2135	214	411	5.21	100.0	15	2
106.7	45.0	30 01.5	117 01.6	NH	84 06 09	1735	215	437	4.92	100.0	23	126
106.7	50.0	29 51.7	117 21.6	NH	84 06 09	1330	211	421	5.01	51.7	20	144
106.7	55.0	29 41.2	117 42.0	NH	84 06 09	0810	208	453	4.60	46.4	5	152
106.7	60.0	29 31.5	118 01.4	NH	84 06 09	0344	223	316	7.05	100.0	8	493
106.7	70.0	29 11.1	118 41.1	NH	84 06 08	2155	215	461	4.66	100.0	20	510
106.7	90.0	28 31.4	119 59.8	NH	84 06 08	0910	206	451	4.57	100.0	34	251
106.7	100.0	28 11.4	120 38.1	NH	84 06 08	0235	215	437	4.91	100.0	32	236
110.0	32.4	29 52.5	115 49.5	NH	84 06 05	1455	28	73	3.88	100.0	3	8
110.0	35.0	29 47.2	116 00.0	NH	84 06 05	1830	210	424	4.95	100.0	0	4
110.0	40.0	29 37.2	116 19.6	NH	84 06 05	2320	209	393	5.32	100.0	59	37
110.0	45.0	29 27.4	116 39.3	NH	84 06 06	0425	206	422	4.89	100.0	48	114
110.0	50.0	29 17.2	116 59.2	NH	84 06 06	0825	205	407	5.02	100.0	36	110
110.0	55.0	29 07.1	117 19.2	NH	84 06 06	1300	212	405	5.24	100.0	39	588
110.0	60.0	28 57.3	117 38.5	NH	84 06 06	1715	214	404	5.30	100.0	62	343
110.0	65.0	28 47.2	117 59.1	NH	84 06 06	2115	208	419	4.98	100.0	67	1096
110.0	70.0	28 37.0	118 17.5	NH	84 06 07	0150	216	388	5.56	100.0	7	1318
110.0	80.0	28 16.0	118 58.0	NH	84 06 07	0750	208	454	4.57	100.0	2	819
110.0	90.0	27 57.1	119 36.3	NH	84 06 07	1355	215	404	5.31	100.0	94	374
110.0	100.0	27 37.2	120 15.6	NH	84 06 07	2000	211	421	5.02	100.0	180	1047

TABLE 1. (cont.)

## CALCOFI Cruise 8407

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
60.0	50.0	37 56.6	JD	84 07 27	2140	36	75	4.90	50.0	3	36
60.0	52.5	37 51.8	JD	84 07 27	2330	71	141	5.08	51.3	10	50
60.0	55.0	37 46.8	JD	84 07 28	0125	105	269	3.90	47.4	41	13
60.0	60.0	37 36.8	JD	84 07 28	0510	213	428	4.98	48.5	4	4
60.0	70.0	37 16.8	JD	84 07 28	1020	208	404	5.15	52.1	9	0
60.0	80.0	36 57.0	JD	84 07 28	1605	209	400	5.21	51.7	3	0
60.0	90.0	36 36.8	JD	84 07 28	2305	213	410	5.19	48.9	23	11
60.0	100.0	36 17.0	JD	84 07 29	0440	211	410	5.15	51.1	33	23
63.3	50.0	37 22.6	JD	84 07 27	1640	29	63	4.57	52.6	4	80
63.3	52.0	37 18.6	JD	84 07 27	1520	78	156	5.01	50.0	11	122
63.3	55.0	37 12.6	JD	84 07 27	1255	214	388	5.52	47.5	36	153
63.3	60.0	37 02.6	JD	84 07 27	0920	214	395	5.41	50.0	0	5
63.3	70.0	36 42.6	JD	84 07 27	0350	219	391	5.61	50.3	20	2
63.3	80.0	36 22.6	JD	84 07 26	2130	217	399	5.43	50.3	7	3
63.3	90.0	36 02.6	JD	84 07 26	1545	215	415	5.19	55.8	4	2
63.3	100.0	35 42.6	JD	84 07 26	0945	211	410	5.14	100.0	8	17
66.7	49.0	36 49.2	JD	84 07 24	2035	213	381	5.59	50.6	40	110
66.7	50.0	36 47.2	JD	84 07 24	2300	199	372	5.36	50.0	31	75
66.7	55.0	36 37.2	JD	84 07 25	0240	212	410	5.17	52.8	7	2
66.7	60.0	36 27.2	JD	84 07 25	0620	199	395	5.04	52.1	2	1
66.7	70.0	36 07.2	JD	84 07 25	1138	210	388	5.41	49.7	5	0
66.7	80.0	35 47.1	JD	84 07 25	1708	216	364	5.94	49.2	14	0
66.7	90.0	35 27.2	JD	84 07 25	2220	211	373	5.66	45.5	8	5
66.7	100.0	35 07.3	JD	84 07 26	0405	212	402	5.29	100.0	27	18
70.0	51.0	36 10.6	JD	84 07 24	1520	205	395	5.20	50.7	5	4
70.0	53.0	36 06.8	JD	84 07 24	1215	213	410	5.18	100.0	8	3
70.0	60.0	35 52.9	JD	84 07 24	0800	215	370	5.81	52.1	2	3
70.0	70.0	35 32.9	JD	84 07 24	0150	203	390	5.22	49.7	12	5
70.0	80.0	35 12.8	JD	84 07 23	1957	210	398	5.27	50.7	11	1

TABLE 1. (cont.)

## CalCOFI Cruise 8407

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
70.0	90.0	34 52.7	124 29.0	JD	84 07 23	1430	205	5.01	46.7	4	8
70.0	100.0	34 32.8	125 10.9	JD	84 07 23	0825	212	5.50	50.6	3	2
73.3	50.0	35 38.6	121 15.3	JD	84 07 21	1910	35	4.73	50.0	5	11
73.3	53.0	35 32.6	121 28.1	JD	84 07 21	2215	214	5.24	50.6	3	3
73.3	60.0	35 18.6	121 57.7	JD	84 07 22	0400	209	5.23	51.0	4	0
73.3	70.0	34 58.6	122 39.9	JD	84 07 22	1005	208	5.19	52.1	4	3
73.3	80.0	34 38.6	123 21.9	JD	84 07 22	1545	210	5.32	48.8	11	6
73.3	90.0	34 18.6	124 03.7	JD	84 07 22	2050	211	5.30	50.7	6	1
73.3	100.0	33 58.5	124 45.4	JD	84 07 23	0205	211	5.20	51.3	10	4
76.7	48.0	35 07.3	120 42.4	JD	84 07 21	1400	28	4.79	50.0	6	122
76.7	51.0	35 01.3	120 55.1	JD	84 07 21	1145	213	5.38	51.8	21	0
76.7	55.0	34 53.5	121 11.9	JD	84 07 21	0755	211	5.39	49.2	28	1
76.7	60.0	34 43.3	121 33.0	JD	84 07 21	0300	214	5.48	50.6	21	0
76.7	70.0	34 23.4	122 14.8	JD	84 07 20	2025	218	5.70	48.3	11	2
76.7	80.0	34 03.1	122 56.7	JD	84 07 20	1403	207	5.31	52.0	5	2
76.7	90.0	33 43.3	123 38.0	JD	84 07 20	0745	209	5.20	51.8	3	1
76.7	100.0	33 23.1	124 19.4	JD	84 07 20	0145	214	5.32	51.4	9	4
80.0	51.0	34 27.0	120 31.4	JD	84 07 16	2028	66	4.76	50.0	29	13
80.0	55.0	34 19.0	120 48.1	JD	84 07 16	2340	210	5.54	51.9	16	28
80.0	60.0	34 09.1	121 08.9	JD	84 07 17	0405	210	5.44	52.5	2	0
80.0	70.0	33 49.0	121 50.6	JD	84 07 18	0430	208	5.00	51.7	11	5
80.0	80.0	33 29.0	122 32.0	JD	84 07 19	0735	214	5.71	51.1	8	2
80.0	90.0	33 09.0	123 13.1	JD	84 07 19	1414	209	5.48	50.0	5	7
80.0	100.0	32 49.0	123 54.5	JD	84 07 19	2018	209	5.07	49.1	13	8
82.0	46.0	34 16.2	119 56.3	JD	84 07 15	2230	214	5.84	52.7	32	16
83.3	40.6	34 13.5	119 24.7	JD	84 07 16	0650	28	4.46	100.0	118	394
83.3	42.0	34 10.7	119 30.6	JD	84 07 16	0510	141	5.49	50.0	42	57
83.3	51.0	33 52.7	120 08.0	JD	84 07 15	1740	92	5.01	100.0	37	131
83.3	55.0	33 44.6	120 24.7	JD	84 07 15	1437	209	5.25	49.2	5	0
83.3	60.0	33 34.7	120 45.3	JD	84 07 15	1040	215	5.36	48.3	3	1

TABLE 1. (cont.)

## CalCOFI Cruise 8407

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
83.3	70.0	33 15.0	121 26.8	JD	84 07 15	0520	210	398	5.27	50.0	12	6
83.3	80.0	32 54.7	122 07.7	JD	84 07 14	2300	205	410	5.00	48.2	3	1
83.3	90.0	32 34.7	122 48.7	JD	84 07 14	1745	211	398	5.31	50.7	10	3
83.3	100.0	32 14.7	123 29.5	JD	84 07 13	1815	214	410	5.21	52.6	7	10
86.7	33.0	33 53.4	118 29.8	JD	84 07 11	0755	42	92	4.60	52.1	29	58
86.7	35.0	33 49.4	118 37.7	JD	84 07 11	1135	213	398	5.35	100.0	24	21
86.7	40.0	33 39.6	118 58.3	JD	84 07 11	1655	212	383	5.53	100.0	12	49
86.7	45.0	33 29.4	119 19.1	JD	84 07 11	2045	214	397	5.38	48.1	1	1
86.7	50.0	33 19.6	119 39.7	JD	84 07 12	0030	51	104	4.95	52.9	14	406
86.7	55.0	33 09.5	120 00.5	JD	84 07 12	0525	210	420	5.00	49.1	12	2
86.7	60.0	32 59.4	120 21.0	JD	84 07 12	0915	217	377	5.75	52.4	6	4
86.7	70.0	32 39.4	121 01.7	JD	84 07 12	1540	217	417	5.21	52.1	14	5
86.7	80.0	32 19.4	121 42.9	JD	84 07 12	2138	216	397	5.43	51.1	5	4
86.7	90.0	31 59.5	122 23.3	JD	84 07 13	0440	211	407	5.18	100.0	19	10
86.7	100.0	31 39.4	123 04.2	JD	84 07 13	1030	215	417	5.16	100.0	8	6
90.0	28.0	33 28.7	117 46.7	NH	84 07 12	1450	214	404	5.29	100.0	12	35
90.0	30.0	33 25.1	117 54.3	NH	84 07 12	1300	211	393	5.36	100.0	14	5
90.0	35.0	33 15.0	118 14.9	NH	84 07 12	0905	204	416	4.90	100.0	15	8
90.0	37.0	33 11.1	118 23.2	NH	84 07 12	0455	201	395	5.09	100.0	8	96
90.0	45.0	32 55.1	118 56.1	NH	84 07 11	0650	202	410	4.93	100.0	4	3
90.0	53.0	32 39.1	119 28.7	NH	84 07 10	2255	203	432	4.70	46.5	4	0
90.0	60.0	32 25.6	119 57.6	NH	84 07 10	1825	200	443	4.52	100.0	36	4
90.0	70.0	32 05.3	120 38.3	NH	84 07 09	1805	205	426	4.81	48.5	2	0
90.0	80.0	31 45.4	121 18.7	NH	84 07 09	1015	214	426	5.03	51.5	3	3
90.0	90.0	31 25.0	121 59.7	NH	84 07 09	0330	213	429	4.96	49.6	14	54
93.3	26.7	32 57.5	117 18.4	NH	84 07 05	1410	57	116	4.91	100.0	9	180
93.3	29.0	32 52.7	117 28.1	NH	84 07 05	1655	207	427	4.85	100.0	10	4
93.3	30.0	32 50.9	117 32.0	NH	84 07 05	2306	212	386	5.50	100.0	13	9
93.3	35.0	32 40.5	117 52.6	NH	84 07 06	2210	202	412	4.91	48.0	11	1
93.3	40.0	32 30.6	118 13.0	NH	84 07 07	0205	195	402	4.84	51.1	3	0



TABLE 1. (cont.)

## CALCOFI Cruise 8407

Line	Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
93.3	45.0	32 21.2	118 33.1	NH	84 07 07	0620	183	450	4.07	100.0	9	1
93.3	50.0	32 11.0	118 53.5	NH	84 07 07	1020	207	439	4.72	100.0	4	6
93.3	55.0	32 00.8	119 14.2	NH	84 07 07	1400	210	418	5.03	100.0	24	9
93.3	60.0	31 50.8	119 34.4	NH	84 07 07	1705	214	408	5.25	100.0	17	3
93.3	70.0	31 30.8	120 14.8	NH	84 07 07	2225	211	402	5.25	48.1	8	47
93.3	80.0	31 10.8	120 55.2	NH	84 07 08	0335	212	410	5.16	50.6	21	85
93.3	90.0	30 50.9	121 35.3	NH	84 07 08	0930	214	409	5.23	48.6	4	62
93.3	100.0	30 31.0	122 15.7	NH	84 07 08	1530	215	400	5.38	49.6	2	32
96.7	29.0	32 17.4	117 04.8	NH	84 07 13	0645	43	102	4.25	100.0	5	40
96.7	30.0	32 15.2	117 09.1	NH	84 07 13	0825	52	108	4.79	100.0	4	669
96.7	32.0	32 11.5	117 17.1	NH	84 07 13	1015	210	432	4.85	100.0	5	2
96.7	35.0	32 05.6	117 29.2	NH	84 07 13	1320	207	423	4.90	100.0	12	1
96.7	40.0	31 55.5	117 49.4	NH	84 07 13	1655	213	424	5.03	100.0	10	6
96.7	45.0	31 45.6	118 09.8	NH	84 07 13	2020	207	431	4.80	46.9	15	93
96.7	50.0	31 35.4	118 30.5	NH	84 07 13	2345	205	417	4.92	53.1	29	240
96.7	55.0	31 25.2	118 50.5	NH	84 07 14	0325	211	408	5.18	100.0	11	140
96.7	60.0	31 15.4	119 10.7	NH	84 07 14	0735	205	418	4.91	47.8	3	154
96.7	70.0	30 55.5	119 50.8	NH	84 07 14	1345	209	401	5.20	50.0	13	100
96.7	80.0	30 35.4	120 30.8	NH	84 07 14	1915	215	404	5.32	48.5	3	925
96.7	90.0	30 15.4	121 11.0	NH	84 07 15	0040	202	402	5.04	51.4	6	560
96.7	100.0	29 55.2	121 50.4	NH	84 07 15	0650	209	416	5.02	100.0	166	3220
100.0	29.2	31 42.7	116 43.5	NH	84 07 18	0305	127	272	4.69	100.0	5	52
100.0	30.0	31 41.1	116 46.6	NH	84 07 18	0105	198	441	4.49	52.9	15	8
100.0	35.0	31 31.2	117 06.8	NH	84 07 17	2140	209	409	5.12	53.8	31	1
100.0	40.0	31 21.2	117 27.0	NH	84 07 17	1800	201	443	4.53	100.0	57	77
100.0	45.0	31 11.2	117 47.0	NH	84 07 17	1440	214	401	5.33	100.0	125	92
100.0	50.0	31 01.4	118 07.2	NH	84 07 17	1115	211	401	5.26	47.7	26	85
100.0	55.0	30 51.3	118 27.3	NH	84 07 16	1315	214	399	5.37	45.5	24	34
100.0	60.0	30 41.3	118 46.9	NH	84 07 16	0945	209	394	5.29	52.3	19	393
100.0	70.0	30 21.2	119 27.3	NH	84 07 16	0425	207	420	4.92	100.0	112	908

TABLE 1. (cont.)

## CalCOFI Cruise 8407

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
100.0	80.0	30 01.5	120 07.3	NH	84 07 15	2310	208	403	5.17	48.5	43	398
100.0	90.0	29 41.4	120 47.1	NH	84 07 15	1755	211	422	4.99	100.0	69	668
100.0	100.0	29 20.5	121 26.2	NH	84 07 15	1230	207	430	4.82	100.0	53	1564
103.3	29.0	31 08.7	116 20.6	NH	84 07 18	0745	29	60	4.86	100.0	34	243
103.3	30.0	31 07.0	116 24.3	NH	84 07 18	0935	50	97	5.20	100.0	10	61
103.3	35.0	30 57.0	116 44.6	NH	84 07 18	1335	210	417	5.04	100.0	9	8
103.3	40.0	30 47.1	117 04.5	NH	84 07 18	1645	215	386	5.58	100.0	24	2
103.3	45.0	30 36.6	117 24.5	NH	84 07 18	2000	213	404	5.27	100.0	100	38
103.3	50.0	30 26.8	117 44.8	NH	84 07 18	2315	210	389	5.40	51.4	35	199
103.3	55.0	30 16.9	118 04.9	NH	84 07 19	0235	210	418	5.03	100.0	85	114
103.3	60.0	30 07.0	118 24.6	NH	84 07 19	0635	211	396	5.32	100.0	59	169
103.3	70.0	29 47.0	119 04.4	NH	84 07 19	1205	203	436	4.65	100.0	18	674
103.3	80.0	29 26.9	119 44.1	NH	84 07 19	1715	204	430	4.74	100.0	37	369
103.3	90.0	29 06.9	120 23.6	NH	84 07 19	2235	202	428	4.71	100.0	77	94
103.3	100.0	28 47.0	121 03.2	NH	84 07 20	0345	205	423	4.85	100.0	157	655
106.7	31.0	30 29.5	116 05.7	NH	84 07 22	1035	15	38	3.90	100.0	7	81
106.7	32.0	30 27.0	116 09.7	NH	84 07 22	0840	145	311	4.68	54.8	1	2
106.7	35.0	30 21.2	116 22.0	NH	84 07 22	0605	202	402	5.04	100.0	38	10
106.7	40.0	30 11.3	116 41.9	NH	84 07 22	0220	200	443	4.51	52.6	46	137
106.7	45.0	30 01.1	117 01.6	NH	84 07 21	2230	209	418	4.99	50.0	97	132
106.7	50.0	29 51.3	117 21.5	NH	84 07 21	1805	207	393	5.27	51.6	59	52
106.7	55.0	29 41.8	117 41.4	NH	84 07 21	1420	211	410	5.14	100.0	53	430
106.7	60.0	29 31.5	118 01.5	NH	84 07 21	0925	212	417	5.08	100.0	134	246
106.7	70.0	29 11.0	118 41.1	NH	84 07 21	0240	215	412	5.22	100.0	229	203
106.7	80.0	28 50.7	119 20.1	NH	84 07 20	2100	206	434	4.75	100.0	151	316
106.7	90.0	28 32.0	119 59.5	NH	84 07 20	1525	213	420	5.07	100.0	36	121
106.7	100.0	28 11.4	120 38.5	NH	84 07 20	0935	210	433	4.85	100.0	250	820
110.0	32.4	29 52.4	115 49.5	NH	84 07 22	1455	36	87	4.15	51.1	1	0
110.0	35.0	29 47.1	115 59.6	NH	84 07 22	1740	219	383	5.72	100.0	83	4
110.0	40.0	29 37.3	116 19.7	NH	84 07 23	0635	198	437	4.53	100.0	20	30

TABLE 1. (cont.)

## CalCOFI Cruise 8407

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
110.0	45.0	29 27.4	NH	84 07 23	1015	209	420	4.99	100.0	71	339
110.0	50.0	29 17.2	NH	84 07 23	1355	208	405	5.13	100.0	95	76
110.0	55.0	29 07.3	NH	84 07 23	1905	215	413	5.20	48.6	30	52
110.0	60.0	28 57.6	NH	84 07 23	2315	215	405	5.30	100.0	74	65
110.0	65.0	28 47.0	NH	84 07 24	0245	215	400	5.37	100.0	277	154
110.0	70.0	28 37.2	NH	84 07 24	0620	202	422	4.79	100.0	33	106
110.0	80.0	28 17.4	NH	84 07 24	1205	215	398	5.41	100.0	31	8
110.0	90.0	27 57.2	NH	84 07 24	1645	196	420	4.66	100.0	46	446
110.0	100.0	27 37.2	NH	84 07 24	2210	213	418	5.11	100.0	127	205

TABLE 1. (cont.)

## CalCOFI Cruise 8410

Line Station	Lat.(N) deg. min.	Long.(W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
60.0	50.0	37 56.8	122 52.9	JD	84 10 18	1905	49	106	4.62	50.7	5	59
60.0	52.5	37 51.8	123 03.8	JD	84 10 18	2055	78	160	4.91	48.2	0	37
60.0	55.0	37 46.8	123 14.7	JD	84 10 18	2325	209	414	5.04	51.4	2	1
60.0	60.0	37 36.8	123 36.5	JD	84 10 19	0410	207	407	5.08	46.6	6	3
60.0	70.0	37 16.9	124 19.9	JD	84 10 19	1005	209	407	5.15	49.2	1	2
60.0	80.0	36 56.8	125 03.2	JD	84 10 19	1620	210	435	4.82	100.0	1	2
60.0	90.0	36 36.8	125 46.3	JD	84 10 19	2235	218	381	5.73	48.4	5	0
60.0	100.0	36 16.9	126 29.0	JD	84 10 20	0450	211	427	4.95	100.0	8	6
63.3	52.0	37 18.6	122 37.1	JD	84 10 21	0955	88	168	5.26	47.2	3	31
63.3	55.0	37 12.6	122 50.1	JD	84 10 21	0725	218	411	5.30	49.3	27	0
63.3	60.0	37 02.6	123 11.7	JD	84 10 21	0335	212	454	4.68	48.1	2	0
63.3	70.0	36 42.6	123 54.8	JD	84 10 20	2125	215	391	5.49	49.3	2	2
63.3	80.0	36 22.6	124 37.7	JD	84 10 20	1550	215	421	5.10	100.0	3	0
66.7	49.0	36 49.2	121 59.1	JD	84 10 18	0915	210	407	5.17	51.7	2	15
66.7	50.0	36 47.2	122 03.4	JD	84 10 18	0755	209	418	5.00	48.6	7	24
66.7	55.0	36 37.5	122 24.7	JD	84 10 18	0445	207	417	4.96	49.4	2	0
66.7	60.0	36 27.2	122 46.4	JD	84 10 18	0035	212	440	4.82	50.0	1	0
66.7	70.0	36 07.2	123 29.3	JD	84 10 17	1800	215	404	5.33	48.6	1	0
66.7	80.0	35 47.2	124 11.7	JD	84 10 17	1205	213	413	5.16	100.0	3	6
70.0	51.0	36 10.7	121 43.9	JD	84 10 16	0425	98	212	4.63	100.0	1	1
70.0	53.0	36 06.9	121 52.1	JD	84 10 16	0715	212	422	5.02	47.2	7	28
70.0	60.0	35 52.9	122 21.9	JD	84 10 16	1345	212	433	4.91	100.0	3	11
70.0	70.0	35 32.9	123 04.4	JD	84 10 16	2030	219	438	5.00	100.0	10	2
73.3	50.0	35 38.6	121 15.3	JD	84 10 22	0020	28	69	4.05	100.0	0	7
73.3	50.0	35 38.6	121 15.3	JD	84 10 15	2100	28	67	4.15	100.0	2	11
73.3	53.0	35 32.6	121 28.1	JD	84 10 22	0325	209	411	5.09	46.7	2	5
73.3	60.0	35 18.9	121 57.5	JD	84 10 22	0800	209	409	5.12	53.1	2	1
73.3	70.0	34 58.6	122 39.9	JD	84 10 22	1520	211	413	5.13	100.0	4	1
73.3	80.0	34 38.6	123 21.9	JD	84 10 22	2055	215	395	5.44	100.0	8	18

TABLE 1. (cont.)

## CALCOFI Cruise 8410

Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
73.3	90.0	34 18.6	124 03.7	JD	84 10 23	0240	216	408	5.29	100.0	11	7
73.3	100.0	33 58.6	124 45.4	JD	84 10 23	0805	221	430	5.13	100.0	8	4
76.7	48.0	35 07.3	120 42.4	JD	84 10 12	2005	27	63	4.35	100.0	3	144
76.7	51.0	35 01.3	120 55.1	JD	84 10 12	2235	210	430	4.88	50.0	3	56
76.7	55.0	34 53.3	121 11.9	JD	84 10 13	0225	213	391	5.44	100.0	8	1
76.7	60.0	34 43.4	121 32.8	JD	84 10 13	0650	216	419	5.15	100.0	3	2
76.7	70.0	34 23.3	122 14.8	JD	84 10 13	1345	211	415	5.07	100.0	3	2
76.7	80.0	34 03.3	122 56.5	JD	84 10 13	1935	216	423	5.09	100.0	10	0
80.0	51.0	34 27.0	120 31.4	JD	84 10 12	1425	70	159	4.40	100.0	0	49
80.0	55.0	34 19.0	120 48.1	JD	84 10 12	1025	214	418	5.13	50.0	2	0
80.0	60.0	34 09.0	121 09.0	JD	84 10 11	1110	209	415	5.02	100.0	6	0
80.0	70.0	33 49.0	121 50.6	JD	84 10 10	0530	212	425	4.99	53.7	3	2
80.0	80.0	33 29.0	122 32.0	JD	84 10 09	2230	215	430	4.99	50.0	6	2
80.0	90.0	33 09.0	123 13.3	JD	84 10 09	1615	209	421	4.95	100.0	1	8
80.0	100.0	32 49.3	123 54.4	JD	84 10 09	0915	211	432	4.88	100.0	5	35
82.0	46.0	34 16.2	119 56.5	JD	84 10 07	1245	221	379	5.83	100.0	10	1
83.3	40.6	34 13.5	119 24.7	JD	84 10 07	1640	27	69	3.90	100.0	32	62
83.3	42.0	34 10.7	119 30.5	JD	84 10 07	1900	158	300	5.27	100.0	5	21
83.3	51.0	33 52.6	120 08.0	JD	84 10 08	0034	96	217	4.45	100.0	21	85
83.3	55.0	33 44.6	120 24.4	JD	84 10 08	0435	210	421	4.99	51.4	10	1
83.3	60.0	33 34.7	120 45.3	JD	84 10 08	0827	213	393	5.41	100.0	8	2
83.3	70.0	33 14.7	121 26.6	JD	84 10 08	1420	215	393	5.47	100.0	4	14
83.3	80.0	32 54.7	122 07.6	JD	84 10 08	1955	213	421	5.06	47.4	5	1
83.3	90.0	32 34.7	122 48.7	JD	84 10 09	0123	216	412	5.24	100.0	3	64
83.3	100.0	32 14.7	123 29.5	JD	84 10 05	1100	216	412	5.23	100.0	1	37
86.7	33.0	33 53.2	118 29.7	JD	84 10 03	0140	52	102	5.11	100.0	57	55
86.7	35.0	33 49.5	118 37.6	JD	84 10 03	0510	210	406	5.17	100.0	15	3
86.7	40.0	33 39.5	118 58.4	JD	84 10 03	0935	213	389	5.48	100.0	9	0
86.7	45.0	33 29.4	119 19.2	JD	84 10 03	1435	220	406	5.41	100.0	2	1
86.7	50.0	33 19.2	119 39.6	JD	84 10 03	1820	71	147	4.84	100.0	13	10

TABLE 1. (cont.)

## CALCOFI Cruise 8410

Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
86.7	55.0	33 09.4	120 00.4	JD	84 10 03	2220	214	404	5.29	48.6	6	0
86.7	60.0	32 59.4	120 21.0	JD	84 10 04	0300	210	409	5.13	51.6	34	2
86.7	70.0	32 39.4	121 02.0	JD	84 10 04	0855	209	389	5.37	48.6	8	3
86.7	80.0	32 19.2	121 42.9	JD	84 10 04	1520	211	409	5.16	50.0	9	8
86.7	90.0	31 59.4	122 23.6	JD	84 10 04	2130	213	406	5.25	100.0	19	31
86.7	100.0	31 39.3	123 04.1	JD	84 10 05	0405	208	399	5.21	100.0	18	29
90.0	28.0	33 29.0	117 46.2	NH	84 10 18	1635	41	94	4.37	100.0	4	8
90.0	30.0	33 25.1	117 54.2	NH	84 10 18	1945	195	449	4.35	48.1	5	0
90.0	35.0	33 15.0	118 15.0	NH	84 10 18	2300	211	405	5.22	52.0	6	0
90.0	37.0	33 11.1	118 23.2	NH	84 10 19	0210	212	427	4.96	100.0	12	0
90.0	45.0	32 55.1	118 56.0	NH	84 10 19	0710	189	456	4.15	100.0	1	0
90.0	53.0	32 39.1	119 29.0	NH	84 10 20	0705	210	449	4.69	100.0	9	0
90.0	90.0	31 25.1	121 59.2	NH	84 10 22	0352	192	459	4.19	100.0	31	8
90.0	100.0	31 05.1	122 39.7	NH	84 10 22	0940	213	414	5.15	100.0	9	16
93.3	26.7	32 57.5	117 18.5	NH	84 10 25	1320	66	134	4.93	100.0	4	5
93.3	29.0	32 52.4	117 27.9	NH	84 10 25	1032	211	407	5.18	100.0	5	2
93.3	30.0	32 50.9	117 31.9	NH	84 10 24	1232	199	409	4.88	100.0	5	1
93.3	35.0	32 40.8	117 52.3	NH	84 10 24	0902	201	438	4.59	100.0	0	1
93.3	40.0	32 30.9	118 12.8	NH	84 10 24	0630	207	410	5.06	100.0	18	0
93.3	45.0	32 20.9	118 33.4	NH	84 10 24	0259	218	421	5.17	100.0	99	3
93.3	50.0	32 10.9	118 53.6	NH	84 10 23	2310	203	429	4.74	100.0	38	0
93.3	55.0	32 00.5	119 13.9	NH	84 10 23	1930	201	410	4.91	100.0	48	2
93.3	60.0	31 50.9	119 34.4	NH	84 10 23	1600	212	400	5.29	100.0	27	2
93.3	70.0	31 31.1	120 14.8	NH	84 10 23	0940	194	424	4.57	51.7	5	2
93.3	80.0	31 11.0	120 55.3	NH	84 10 23	0329	204	429	4.75	48.5	10	8
93.3	90.0	30 51.0	121 35.0	NH	84 10 22	2135	212	429	4.93	100.0	29	9
93.3	100.0	30 31.0	122 15.6	NH	84 10 22	1535	209	417	5.01	100.0	7	33
96.7	29.0	32 17.6	117 04.7	NH	84 10 26	1202	44	89	4.92	100.0	35	18
96.7	30.0	32 15.3	117 08.7	NH	84 10 26	1318	43	87	4.95	100.0	3	13
96.7	32.0	32 11.4	117 17.2	NH	84 10 26	1454	197	401	4.93	100.0	0	4

TABLE 1. (cont.)

## CalCOFI Cruise 8410

Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs	
												84
96.7	35.0	32 05.3	117 29.2	NH	84 10 26	1806	188	414	4.55	46.9	6	0
96.7	40.0	31 55.5	117 49.1	NH	84 10 26	2131	209	413	5.06	53.1	26	0
96.7	45.0	31 45.3	118 10.0	NH	84 10 27	0106	213	410	5.20	100.0	35	1
96.7	50.0	31 35.3	118 30.1	NH	84 10 27	0442	218	373	5.84	100.0	4	1
96.7	55.0	31 25.1	118 50.5	NH	84 10 27	0820	214	404	5.29	100.0	9	9
96.7	60.0	31 15.5	119 10.4	NH	84 10 27	1202	213	436	4.89	100.0	3	7
96.7	70.0	30 55.4	119 50.6	NH	84 10 27	1753	210	419	5.01	47.6	103	4
96.7	80.0	30 35.3	112 30.9	NH	84 10 27	2329	215	447	4.82	100.0	305	20
96.7	90.0	30 15.2	121 10.8	NH	84 10 28	0543	195	453	4.30	100.0	99	22
96.7	100.0	29 55.5	121 50.7	NH	84 10 28	1140	211	439	4.81	100.0	33	25
100.0	29.2	31 42.8	116 43.3	NH	84 10 30	1545	72	152	4.72	100.0	4	3
100.0	30.0	31 41.1	116 46.5	NH	84 10 30	1407	213	397	5.37	100.0	3	2
100.0	35.0	31 31.2	117 06.9	NH	84 10 30	1035	209	397	5.27	100.0	3	3
100.0	40.0	31 21.0	117 27.0	NH	84 10 30	0648	206	405	5.10	100.0	4	2
100.0	45.0	31 11.1	117 47.0	NH	84 10 30	0303	211	412	5.11	53.3	21	1
100.0	50.0	31 01.2	118 07.2	NH	84 10 29	2320	211	415	5.09	100.0	60	1
100.0	55.0	30 51.4	118 27.5	NH	84 10 29	1944	210	412	5.09	100.0	440	3
100.0	60.0	30 41.1	118 47.6	NH	84 10 29	1610	203	457	4.44	45.5	17	23
100.0	70.0	30 21.2	119 27.5	NH	84 10 29	1035	216	414	5.22	53.6	11	4
100.0	80.0	30 01.6	120 07.2	NH	84 10 29	0454	192	467	4.10	100.0	314	110
100.0	90.0	29 41.1	120 47.0	NH	84 10 28	2303	217	416	5.20	51.7	219	29
100.0	100.0	29 21.2	121 26.8	NH	84 10 28	1722	209	449	4.67	100.0	196	11
103.3	29.0	31 08.8	116 20.5	NH	84 10 30	2201	28	64	4.40	100.0	7	19
103.3	30.0	31 06.7	116 24.3	NH	84 10 30	2300	54	116	4.65	100.0	9	3
103.3	35.0	30 56.9	116 44.7	NH	84 10 31	0236	211	437	4.83	100.0	14	0
103.3	40.0	30 47.0	117 04.7	NH	84 10 31	0614	207	438	4.73	100.0	3	0
103.3	45.0	30 36.8	117 24.8	NH	84 10 31	0940	214	430	4.99	100.0	5	0
103.3	50.0	30 26.8	117 44.8	NH	84 10 31	1346	210	443	4.73	100.0	19	1
103.3	55.0	30 16.8	118 04.8	NH	84 10 31	1717	213	420	5.07	100.0	65	12
103.3	60.0	30 06.7	118 24.8	NH	84 10 31	2043	209	415	5.04	100.0	550	55

TABLE 1. (cont.)

## CalCOFI Cruise 8410

Line	Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow Date yr. mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
103.3	70.0	29 46.8	119 04.5	NH	84 11 01	0243	211	442	4.78	100.0	267	103
103.3	80.0	29 26.8	119 44.2	NH	84 11 01	0800	210	422	4.97	100.0	111	134
103.3	90.0	29 07.0	120 23.6	NH	84 11 01	1356	209	423	4.94	100.0	72	40
103.3	100.0	28 47.0	121 03.1	NH	84 11 01	1928	201	417	4.83	100.0	143	152
106.7	31.0	30 29.0	116 05.3	NH	84 11 03	2323	15	35	4.29	100.0	1	30
106.7	32.0	30 27.1	116 09.8	NH	84 11 03	2201	170	325	5.24	100.0	2	11
106.7	35.0	30 21.5	116 21.8	NH	84 11 03	1922	212	397	5.34	100.0	11	2
106.7	40.0	30 11.6	116 41.7	NH	84 11 03	1540	221	427	5.18	100.0	8	0
106.7	45.0	30 01.1	117 01.6	NH	84 11 03	1156	210	430	4.87	100.0	0	0
106.7	50.0	29 51.4	117 21.7	NH	84 11 03	0752	209	433	4.82	100.0	1	4
106.7	55.0	29 41.4	117 41.4	NH	84 11 03	0336	214	430	4.98	100.0	337	10
106.7	60.0	29 31.5	118 01.5	NH	84 11 02	2343	215	432	4.96	100.0	213	10
106.7	70.0	29 11.1	118 40.7	NH	84 11 02	1824	215	410	5.24	100.0	175	33
106.7	80.0	28 50.9	119 21.4	NH	84 11 02	1228	212	409	5.18	100.0	71	56
106.7	90.0	28 31.6	119 59.4	NH	84 11 02	0700	209	419	4.98	100.0	115	56
106.7	100.0	28 11.6	120 38.6	NH	84 11 02	0128	209	415	5.04	100.0	151	67
110.0	32.4	29 52.4	115 49.6	NH	84 11 04	0437	43	98	4.36	50.0	5	1
110.0	35.0	29 47.2	115 59.8	NH	84 11 04	0707	203	436	4.66	100.0	6	1
110.0	40.0	29 37.2	116 19.8	NH	84 11 04	1123	210	427	4.91	100.0	8	4
110.0	45.0	29 27.3	116 39.4	NH	84 11 04	1454	214	418	5.12	100.0	31	5
110.0	50.0	29 17.1	116 59.2	NH	84 11 04	1829	199	445	4.46	100.0	34	3
110.0	55.0	29 07.3	117 19.2	NH	84 11 04	2154	206	425	4.85	100.0	70	9
110.0	60.0	28 57.1	117 38.8	NH	84 11 05	0116	209	425	4.93	100.0	523	28
110.0	70.0	28 37.1	118 18.0	NH	84 11 05	0636	204	445	4.59	100.0	242	62
110.0	80.0	28 17.6	118 57.0	NH	84 11 05	1158	209	431	4.84	100.0	59	58
110.0	90.0	27 57.2	119 36.3	NH	84 11 05	1704	208	436	4.77	100.0	36	33
110.0	100.0	27 37.1	120 15.3	NH	84 11 05	2228	215	423	5.08	100.0	76	92



TABLE 2. Pooled occurrences of fish larvae taken during CalCOFI cruises in 1984.

Rank	Taxon	Occurrences
1	<i>Protomyctophum crockeri</i>	327
2	<i>Engraulis mordax</i>	314
3	<i>Vinciguerria lucetia</i>	287
4	<i>Sebastes</i> spp.	284
5	<i>Triphoturus mexicanus</i>	256
6	<i>Stenobranchius leucopsarus</i>	238
7	<i>Bathylagus ochotensis</i>	199
8	<i>Cyclothone</i> spp.	190
9	<i>Leuroglossus stilbius</i>	187
10	Disintegrated fish larva	168
11	<i>Symbolophorus californiensis</i>	140
12	Sternoptychidae	139
13	<i>Lampanyctus</i> spp.	135
14	<i>Lampanyctus ritteri</i>	134
15	<i>Diogenichthys atlanticus</i>	127
16	<i>Ceratoscopelus townsendi</i>	115
17	<i>Merluccius productus</i>	111
17	Myctophidae	111
19	<i>Diaphus</i> spp.	74
20	Unidentified fish larva	69
21	<i>Melamphaes</i> spp.	68
22	<i>Chauliodus macouni</i>	67
23	<i>Bathylagus wesethi</i>	64
24	<i>Lestidiops ringens</i>	61
24	<i>Diogenichthys laternatus</i>	61
26	<i>Trachurus symmetricus</i>	60
27	<i>Bathylagus pacificus</i>	46
28	<i>Citharichthys stigmaeus</i>	41
29	<i>Tarletonbeania crenularis</i>	40
30	<i>Sebastes paucispinis</i>	35
31	<i>Microstoma microstoma</i>	33
32	<i>Icichthys lockingtoni</i>	32
32	<i>Stomias atriventer</i>	32
34	<i>Diogenichthys</i> spp.	27
34	<i>Citharichthys sordidus</i>	27
36	<i>Bathylagus</i> spp.	26
37	<i>Tetragonurus cuvieri</i>	25
37	<i>Genyonemus lineatus</i>	25
39	<i>Idiacanthus antrostomus</i>	24
40	<i>Myctophum nitidulum</i>	22
41	Cottidae	21
42	Trachipteridae	20
43	<i>Hygophum reinhardtii</i>	19
43	Gobiidae	19
45	<i>Cololabis saira</i>	17
45	<i>Nansenia candida</i>	17
45	<i>Scomber japonicus</i>	17
45	<i>Electrona rissoi</i>	17
45	<i>Danaphos oculatus</i>	17

TABLE 2. (cont.)

Rank	Taxon	Occurrences
50	<i>Sardinops sagax</i>	16
50	<i>Parophrys vetulus</i>	16
52	<i>Lampanyctus regalis</i>	15
52	<i>Sebastolobus</i> spp.	15
52	Clinidae	15
55	<i>Argentina sialis</i>	14
55	<i>Oxyjulis californica</i>	14
55	<i>Gonichthys tenuiculus</i>	14
55	<i>Hypsoblennius</i> spp.	14
59	<i>Paralichthys californicus</i>	13
60	<i>Aristostomias scintillans</i>	12
60	<i>Lyopsetta exilis</i>	12
60	<i>Scopelogadus bispinosus</i>	12
60	<i>Bathylagus milleri</i>	12
60	<i>Notolepis risso</i>	12
65	<i>Rosenblattichthys volucris</i>	11
66	Paralepididae	10
66	<i>Notolychnus valdiviae</i>	10
66	<i>Scopelarchus</i> spp.	10
66	<i>Chromis punctipinnis</i>	10
66	<i>Hygophum atratum</i>	10
71	Chiasmodontidae	9
71	<i>Scopelosaurus</i> spp.	9
71	Exocoetidae	9
74	<i>Pleuronichthys verticalis</i>	8
74	<i>Ichthyococcus</i> spp.	8
74	<i>Microstomus pacificus</i>	8
74	<i>Glyptocephalus zachirus</i>	8
74	<i>Citharichthys</i> spp.	8
79	Ceratioidei	7
79	<i>Loweina rara</i>	7
79	<i>Lampadena urophaos</i>	7
79	Stomiiformes	7
79	<i>Poromitra</i> spp.	7
79	<i>Sebastes aurora</i>	7
85	<i>Notoscopelus resplendens</i>	6
85	Atherinidae	6
85	<i>Scorpaenichthys marmoratus</i>	6
85	<i>Zaniolepis</i> spp.	6
85	<i>Sebastes jordani</i>	6
90	Gonostomatidae	5
90	Serranidae	5
90	<i>Vinciguerria poweriae</i>	5
90	<i>Seriphus politus</i>	5
90	<i>Sphyraena argentea</i>	5
95	<i>Xystreurys liolepis</i>	4
95	<i>Hygophum</i> spp.	4
95	<i>Oxylebius pictus</i>	4
95	<i>Pleuronichthys ritteri</i>	4

TABLE 2. (cont.)

Rank	Taxon	Occurrences
99	<i>Brosmophycis marginata</i>	3
99	Macrouridae	3
99	<i>Pleuronichthys decurrens</i>	3
99	<i>Citharichthys xanthostigma</i>	3
99	<i>Semicossyphus pulcher</i>	3
99	<i>Hippoglossina stomata</i>	3
99	Anguilliformes	3
99	Agonidae	3
99	<i>Benthalbella dentata</i>	3
99	<i>Etrumeus acuminatus</i>	3
99	<i>Icosteus aenigmaticus</i>	3
110	Ophidiiformes	2
110	<i>Scopeloberyx robustus</i>	2
110	<i>Halichoeres</i> spp.	2
110	<i>Macroramphosus gracilis</i>	2
110	<i>Peprilus simillimus</i>	2
110	<i>Valenciennellus stellatus</i>	2
110	Blennioidei	2
110	Gobiesocidae	2
110	Gerreidae	2
110	<i>Pleuronichthys coenosus</i>	2
110	<i>Syngnathus</i> spp.	2
110	Gempylidae	2
110	<i>Sebastes macdonaldi</i>	2
123	<i>Bathophilus</i> spp.	1
123	<i>Psettichthys melanostictus</i>	1
123	<i>Bolinichthys</i> spp.	1
123	<i>Anotopterus pharao</i>	1
123	<i>Chilara taylori</i>	1
123	<i>Scorpaena</i> spp.	1
123	<i>Lepidopus xantusi</i>	1
123	<i>Tactostoma macropus</i>	1
123	<i>Hypsopsetta guttulata</i>	1
123	<i>Lepidopsetta bilineata</i>	1
123	Haemulidae	1
123	<i>Sebastes levis</i>	1
123	<i>Ophidion scrippsae</i>	1
123	<i>Atractoscion nobilis</i>	1
123	<i>Synodus</i> spp.	1

TABLE 3. Pooled numbers of fish larvae taken during CalCOFI cruises in 1984. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	<i>Engraulis mordax</i>	126817
2	<i>Vinciguerria lucetia</i>	50716
3	<i>Merluccius productus</i>	29328
4	<i>Sebastes</i> spp.	15316
5	<i>Stenobranchius leucopsarus</i>	13143
6	<i>Leuroglossus stilbius</i>	12343
7	<i>Triphoturus mexicanus</i>	8004
8	<i>Bathylagus ochotensis</i>	5687
9	<i>Protomyctophum crockeri</i>	4410
10	<i>Cyclothone</i> spp.	3307
11	<i>Diaphus</i> spp.	2316
12	Disintegrated fish larva	1968
13	<i>Trachurus symmetricus</i>	1849
14	<i>Lampanyctus ritteri</i>	1746
15	<i>Symbolophorus californiensis</i>	1733
16	<i>Ceratospopelus townsendi</i>	1731
17	<i>Lampanyctus</i> spp.	1572
18	Myctophidae	1525
19	Sternoptychidae	1425
20	<i>Sardinops sagax</i>	1273
21	<i>Diogenichthys laternatus</i>	1257
22	<i>Genyonemus lineatus</i>	1249
23	<i>Diogenichthys atlanticus</i>	1210
24	<i>Bathylagus wesethi</i>	1139
25	<i>Bathylagus pacificus</i>	838
26	Unidentified fish larva	704
27	<i>Scomber japonicus</i>	630
28	<i>Citharichthys stigmaeus</i>	576
29	<i>Chauliodus macouni</i>	573
30	<i>Tarletonbeania crenularis</i>	556
31	<i>Melamphaes</i> spp.	554
32	<i>Sebastes paucispinis</i>	545
33	<i>Lestidiops ringens</i>	541
34	<i>Bathylagus</i> spp.	491
35	<i>Oxyjulis californica</i>	486
36	<i>Parophrys vetulus</i>	415
37	<i>Citharichthys sordidus</i>	394
38	<i>Diogenichthys</i> spp.	372
39	<i>Icichthys lockingtoni</i>	360
40	Cottidae	355
41	<i>Tetragonurus cuvieri</i>	316
42	Gobiidae	314
43	<i>Nansenia candida</i>	305
44	<i>Stomias atriventer</i>	287
45	<i>Microstoma microstoma</i>	247
46	<i>Hypsoblennius</i> spp.	242
47	Clinidae	200

TABLE 3. (cont.)

Rank	Taxon	Count
48	<i>Danaphos oculatus</i>	187
49	Trachipteridae	186
50	<i>Chromis punctipinnis</i>	178
51	<i>Paralichthys californicus</i>	177
52	<i>Idiacanthus antrostomus</i>	165
53	<i>Lampanyctus regalis</i>	158
54	<i>Pleuronichthys verticalis</i>	147
55	<i>Electrona rissoi</i>	145
56	<i>Hygophum reinhardtii</i>	143
57	<i>Sebastolobus</i> spp.	138
58	<i>Sebastes jordani</i>	129
59	<i>Myctophum nitidulum</i>	122
60	<i>Cololabis saira</i>	115
61	<i>Bathylagus milleri</i>	114
62	<i>Citharichthys</i> spp.	113
63	<i>Lampadena urophaos</i>	112
63	<i>Microstomus pacificus</i>	112
65	<i>Lyopsetta exilis</i>	104
66	<i>Argentina sialis</i>	99
67	Gerreidae	97
68	<i>Notolepis risso</i>	96
69	<i>Gonichthys tenuiculus</i>	95
70	<i>Seriphus politus</i>	93
71	<i>Glyptocephalus zachirus</i>	81
71	<i>Aristostomias scintillans</i>	81
73	<i>Scopelogadus bispinosus</i>	80
74	<i>Notolychnus valdiviae</i>	75
75	Paralepididae	70
76	<i>Scopelarchus</i> spp.	69
77	Exocoetidae	68
78	Serranidae	64
79	<i>Scorpaenichthys marmoratus</i>	63
79	<i>Rosenblattichthys volucris</i>	63
81	<i>Sebastes aurora</i>	61
82	<i>Pleuronichthys ritteri</i>	58
83	Chiasmodontidae	57
84	Ceratioidei	55
84	<i>Hygophum atratum</i>	55
86	<i>Notoscopelus resplendens</i>	51
87	<i>Scopelosaurus</i> spp.	50
87	<i>Icosteus aenigmaticus</i>	50
89	<i>Poromitra</i> spp.	44
90	<i>Ichthyococcus</i> spp.	43
91	<i>Etrumeus acuminatus</i>	42
92	<i>Loweina rara</i>	41
92	Stomiiformes	41
94	<i>Sphyræna argentea</i>	36
95	<i>Semicossyphus pulcher</i>	35
95	<i>Zaniolepis</i> spp.	35

TABLE 3. (cont.)

Rank	Taxon	Count
97	<i>Xystreurys liolepis</i>	34
98	<i>Vinciguerria poweriae</i>	32
99	<i>Pleuronichthys decurrens</i>	31
99	Atherinidae	31
101	<i>Oxylebius pictus</i>	28
102	<i>Brosmophycis marginata</i>	26
103	Gonostomatidae	25
103	Blennioidei	25
105	Agonidae	24
106	<i>Hippoglossina stomata</i>	23
106	<i>Citharichthys xanthostigma</i>	23
106	<i>Syngnathus</i> spp.	23
109	<i>Valenciennellus stellatus</i>	22
110	Anguilliformes	21
110	<i>Sebastes macdonaldi</i>	21
110	<i>Pleuronichthys coenosus</i>	21
113	<i>Hygophum</i> spp.	20
113	<i>Tactostoma macropus</i>	20
113	<i>Peprilus simillimus</i>	20
116	<i>Benthalbella dentata</i>	18
116	Macrouridae	18
118	<i>Scopeloberyx robustus</i>	15
118	<i>Macroramphosus gracilis</i>	15
118	<i>Hypsopsetta guttulata</i>	15
121	<i>Synodus</i> spp.	14
121	Gempylidae	14
121	Gobiesocidae	14
124	Ophidiiformes	10
124	<i>Lepidopsetta bilineata</i>	10
124	<i>Scorpaena</i> spp.	10
127	<i>Atractoscion nobilis</i>	9
127	<i>Chilara taylori</i>	9
129	<i>Psettichthys melanostictus</i>	8
129	<i>Halichoeres</i> spp.	8
131	<i>Lepidopus xantusi</i>	5
131	<i>Bolinichthys</i> spp.	5
131	<i>Anotopterus pharao</i>	5
131	<i>Bathophilus</i> spp.	5
131	<i>Sebastes levis</i>	5
131	<i>Ophidion scrippsae</i>	5
137	Haemulidae	4
	Total	306549

TABLE 4. Numbers of fish larvae taken on stations occupied during CalCOFI cruises in 1984. Counts are adjusted for percent of sample sorted and standard haul factor (see text). Average number is given for stations occupied twice during a single month. Unoccupied stations are indicated by a dash.

Anguilliformes												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	60.0	5.4	0.0	0.0	-	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	0.0	0.0	-	10.8	0.0	-	-	0.0	-	-
110.0	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	5.1	-
Etrumeus acuminatus												
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	-	-	11.7	-	-
83.3	51.0	0.0	0.0	0.0	0.0	-	0.0	-	-	4.4	-	-
86.7	33.0	0.0	0.0	0.0	-	0.0	0.0	-	-	25.6	-	-
Sardinops sagax												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	4.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	51.0	0.0	-	0.0	0.0	-	38.1	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	77.6	-	-	0.0	-	-
83.3	40.6	0.0	-	0.0	4.2	-	93.7	-	-	39.0	-	-
83.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	9.7	-	-
86.7	33.0	0.0	-	0.0	-	10.0	0.0	-	-	0.0	-	-
90.0	28.0	-	438.8	0.0	-	265.4	0.0	-	-	0.0	-	-
90.0	30.0	-	191.7	0.0	-	40.3	0.0	-	-	0.0	-	-
90.0	35.0	-	-	0.0	-	0.0	24.5	-	-	0.0	-	-
93.3	30.0	-	12.4	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	29.0	-	0.0	0.0	-	0.0	19.4	-	-	0.0	-	-
106.7	31.0	-	0.0	0.0	-	0.0	3.9	-	-	0.0	-	-
Engraulis mordax												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	15.5	1676.8	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	52.5	0.0	198.5	0.0	0.0	-	19.8	-	-	0.0	-	-
60.0	55.0	8.6	26.9	0.0	0.0	-	181.0	-	-	0.0	-	-
60.0	60.0	0.0	8.8	0.0	0.0	-	0.0	-	-	10.9	-	-
60.0	70.0	0.0	0.0	0.0	0.0	-	9.9	-	-	0.0	-	-
60.0	80.0	0.0	0.0	0.0	0.0	-	10.1	-	-	0.0	-	-
63.3	50.0	0.0	1421.1	-	0.0	-	8.7	-	-	-	-	-
63.3	52.0	4.9	1094.1	0.0	0.0	-	60.1	-	-	22.3	-	-
63.3	55.0	261.6	1964.2	0.0	0.0	-	313.8	-	-	75.3	-	-
63.3	65.0	-	9.4	-	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	70.0	0.0	-	0.0	0.0	-	100.4	-	-	0.0	-	-
66.7	49.0	353.1	-	0.0	0.0	-	298.3	-	-	0.0	-	-
66.7	50.0	1020.2	-	0.0	0.0	-	139.4	-	-	30.9	-	-
66.7	55.0	124.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	10.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	51.0	29.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	53.0	32.1	-	0.0	0.0	-	5.2	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	0.0	-	21.0	-	-	5.0	-	-
73.3	50.0	3.9	-	0.0	17.0	-	0.0	-	-	0.0	-	-
73.3	53.0	38.0	-	0.0	41.1	-	0.0	-	-	0.0	-	-
73.3	60.0	5.1	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	0.0	-	-	10.1	-	-	0.0	-	-
76.7	48.0	145.7	-	3.5	0.0	-	0.0	-	-	0.0	-	-
76.7	51.0	237.1	-	0.0	93.8	-	10.4	-	-	8.7	-	-
76.7	55.0	249.8	-	20.2	69.9	-	11.0	-	-	9.8	-	-
76.7	60.0	39.8	-	9.6	0.0	-	43.3	-	-	0.0	-	-
76.7	65.0	632.9	-	-	-	-	-	-	-	0.0	-	-
76.7	70.0	77.1	-	0.0	0.0	-	47.2	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	9.4	-	0.0	-	-	0.0	-	-
80.0	51.0	745.5	-	16.7	52.5	-	76.2	-	-	0.0	-	-
80.0	55.0	203.0	-	41.8	9.9	-	42.7	-	-	0.0	-	-
80.0	60.0	34.2	-	96.9	132.7	-	10.4	-	-	0.0	-	-
80.0	65.0	111.2	-	-	-	-	-	-	-	0.0	-	-
80.0	70.0	484.0	-	10.2	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	8.5	-	0.0	0.0	-	11.0	-	-	0.0	-	-
82.0	46.0	134.2	-	95.0	78.7	-	66.5	-	-	0.0	-	-
83.3	40.6	118.8	-	1503.0	37.5	-	334.5	-	-	42.9	-	-
83.3	42.0	206.7	-	2907.5	21.7	-	252.5	-	-	0.0	-	-
83.3	51.0	56.5	-	74.1	54.2	-	25.1	-	-	35.6	-	-
83.3	55.0	938.0	-	9.3	0.0	-	10.7	-	-	0.0	-	-
83.3	60.0	644.4	-	11.3	0.0	-	11.1	-	-	0.0	-	-
83.3	65.0	53.4	-	-	0.0	-	-	-	-	0.0	-	-
83.3	70.0	10.5	-	0.0	10.9	-	0.0	-	-	0.0	-	-
83.3	80.0	230.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	10.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	4.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	35.0	2486.4	-	1388.6	-	119.5	114.8	-	-	0.0	-	-
86.7	33.0	182.2	-	2329.6	-	66.5	90.9	-	-	138.0	-	-
86.7	40.0	771.3	-	864.7	-	5.2	16.6	-	-	10.3	-	-
86.7	40.0	848.0	-	2578.4	-	0.0	0.0	-	-	0.0	-	-
86.7	45.0	5459.9	-	535.3	-	0.0	18.7	-	-	0.0	-	-
86.7	50.0	1147.4	-	1044.0	-	0.0	81.5	-	-	0.0	-	-
86.7	55.0	144.6	-	806.1	-	184.0	0.0	-	-	0.0	-	-
86.7	60.0	9.4	-	-	-	-	-	-	-	0.0	-	-
86.7	65.0	442.4	-	-	-	-	-	-	-	0.0	-	-
86.7	80.0	783.2	-	-	0.0	-	-	-	-	0.0	-	-
86.7	80.0	707.1	-	1354.7	0.0	-	10.6	-	-	0.0	-	-
90.0	28.0	-	-	50.6	-	0.0	26.5	-	-	0.0	-	-
90.0	30.0	-	-	433.2	-	20.2	53.6	-	-	0.0	-	-



TABLE 4. (cont.)

		<i>Engraulis mordax</i> (cont.)											
STATION		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	35.0	1011.8	-	-	1199.5	-	10.1	0.0	-	-	0.0	-	-
90.0	37.0	181.7	-	707.2	1118.6	-	0.0	5.1	-	-	0.0	-	-
90.0	45.0	-	-	2856.8	969.8	-	101.6	0.0	-	-	0.0	-	-
90.0	53.0	1074.8	-	1317.6	-	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	681.4	-	4538.4	-	-	0.0	0.0	-	-	-	-	-
90.0	70.0	9.8	1350.9	-	12.4	-	8.2	0.0	-	-	-	-	-
90.0	80.0	0.0	5.0	-	-	-	0.0	0.0	-	-	0.0	-	-
90.0	90.0	0.0	9.6	-	-	-	0.0	0.0	-	-	0.0	-	-
93.3	26.7	31.8	-	-	303.5	-	24.2	9.8	-	-	0.0	-	-
93.3	28.0	-	-	2009.4	-	-	-	-	-	-	-	-	-
93.3	29.0	0.0	-	2054.2	1957.0	-	10.6	4.8	-	-	0.0	-	-
93.3	30.0	21.1	-	1833.6	518.5	-	0.0	0.0	-	-	0.0	-	-
93.3	35.0	4.8	-	1661.5	142.9	-	0.0	0.0	-	-	0.0	-	-
93.3	40.0	0.0	-	88.8	1741.2	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	45.7	-	392.6	1424.8	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	36.7	-	11.1	2257.8	-	8.4	0.0	-	-	0.0	-	-
93.3	55.0	8.9	-	0.0	124.4	-	0.0	0.0	-	-	0.0	-	-
93.3	60.0	0.0	-	1609.7	26.1	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	560.2	1372.7	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	29.0	47.8	-	290.3	61.5	-	9.9	0.0	-	-	152.5	-	-
96.7	30.0	33.8	-	946.6	25.7	-	47.5	0.0	-	-	4.9	-	-
96.7	32.0	5.1	-	456.7	2288.3	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	4.9	-	1166.6	791.8	-	0.0	0.0	-	-	38.8	-	-
96.7	40.0	0.0	-	2003.6	347.0	-	27.3	0.0	-	-	0.0	-	-
96.7	45.0	33.5	-	790.3	530.0	-	19.5	0.0	-	-	0.0	-	-
96.7	50.0	4.5	-	26.1	96.0	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	5.0	-	40.5	18.6	-	4.7	0.0	-	-	0.0	-	-
96.7	60.0	0.0	-	339.5	33.0	-	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	-	202.4	-	-	-	-	-	-	-	-	-
96.7	70.0	0.0	-	172.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	8.7	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	29.2	-	-	334.4	18.8	-	0.0	0.0	-	-	0.0	-	-
100.0	30.0	0.0	-	1482.2	0.0	-	0.0	0.0	-	-	9.4	-	-
100.0	35.0	0.0	-	2594.2	706.5	-	5.1	0.0	-	-	0.0	-	-
100.0	40.0	5.0	-	1173.6	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	45.0	15.3	-	49.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	0.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	0.0	-	199.1	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	65.0	-	207.6	-	-	-	-	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	-	-	-	-	-	-	-
103.3	29.0	3.8	-	45.4	22.4	-	0.0	24.3	-	-	26.4	-	-
103.3	30.0	3.9	-	148.8	707.8	-	0.0	26.0	-	-	0.0	-	-
103.3	35.0	0.0	-	357.7	111.3	-	0.0	0.0	-	-	0.0	-	-
103.3	40.0	0.0	-	314.4	467.8	-	0.0	0.0	-	-	0.0	-	-
103.3	45.0	0.0	-	21.3	416.8	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Engraulis mordax</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	50.0	-	0.0	25.2	-	0.0	0.0	-	-	0.0	-	-
103.3	55.0	-	10.1	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	15.2	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	65.0	20.9	-	-	-	-	-	-	-	-	-	-
103.3	70.0	4.5	-	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	31.0	-	12.5	0.0	-	0.0	0.0	-	-	-	4.3	-
106.7	32.0	-	990.0	20.1	-	0.0	0.0	-	-	-	10.5	-
106.7	35.0	-	5977.0	51.0	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	-	0.0	4.7	-	5.2	0.0	-	-	-	0.0	-
106.7	45.0	-	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-
106.7	50.0	-	11.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	32.4	-	-	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	32.5	-	123.0	-	-	-	-	-	-	-	-	-
110.0	35.0	-	458.5	13.4	-	0.0	0.0	-	-	-	0.0	-
110.0	40.0	-	0.0	37.9	-	0.0	0.0	-	-	-	0.0	-
110.0	45.0	-	135.5	9.5	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	-	10.4	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	65.0	-	0.0	4.9	-	0.0	0.0	-	-	-	-	-

*Argentina sialis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
63.3	52.0	0.0	-	0.0	0.0	-	10.0	-	-	0.0	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
80.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	11.1	-	-	0.0	-	-
83.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
96.7	32.0	-	0.0	0.0	-	0.0	4.8	-	-	0.0	-	-
100.0	29.2	-	0.0	0.0	-	4.9	0.0	-	-	0.0	-	-
100.0	30.0	-	0.0	0.0	-	5.1	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	32.0	-	10.5	0.0	-	0.0	0.0	-	-	0.0	0.0	-
110.0	35.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-

*Microstoma microstoma*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	8.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	0.0	-	5.1	-	-	-	-	-
73.3	70.0	0.0	-	0.0	19.1	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	-	-	-	0.0	-	-	5.1	-	-
76.7	80.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Microstoma microstoma</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	90.0	0.0	-	5.0	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	4.8	0.0	-	0.0	-	-	-	-	-
80.0	60.0	11.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	60.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-
83.3	70.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	5.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	60.0	9.4	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	70.0	5.9	-	0.0	10.8	-	0.0	-	-	0.0	-	-
90.0	60.0	8.6	0.0	-	-	0.0	4.5	-	-	-	-	-
90.0	100.0	4.9	0.0	0.0	-	0.0	-	-	-	0.0	-	-
93.3	60.0	0.0	0.0	5.2	-	0.0	0.0	-	-	5.3	-	-
93.3	70.0	0.0	0.0	0.0	-	17.5	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	45.0	5.2	0.0	0.0	-	4.9	0.0	-	-	0.0	-	-
100.0	50.0	0.0	0.0	4.8	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	0.0	0.0	4.6	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	4.4	0.0	-	-	0.0	0.0	-	-	0.0	-	-
100.0	90.0	5.0	-	0.0	-	0.0	5.0	-	-	0.0	-	-
100.0	100.0	0.0	-	0.0	-	0.0	4.8	-	-	0.0	-	-
103.3	50.0	0.0	0.0	0.0	-	0.0	10.5	-	-	0.0	-	-
103.3	55.0	-	10.1	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	45.0	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	0.0

*Nansenia candida*

<i>Nansenia candida</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	70.0	8.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	-	80.3	-	0.0	-	-	0.0	-	-
63.3	65.0	9.4	-	-	-	-	-	-	-	-	-	-
63.3	80.0	0.0	-	-	32.8	-	0.0	-	-	0.0	-	-
63.3	90.0	0.0	-	-	10.6	-	0.0	-	-	-	-	-
63.3	100.0	0.0	-	-	9.9	-	0.0	-	-	-	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
66.7	70.0	9.7	-	0.0	10.7	-	0.0	-	-	0.0	-	-
66.7	100.0	0.0	-	-	10.0	-	0.0	-	-	-	-	-
70.0	70.0	0.0	-	21.3	0.0	-	0.0	-	-	0.0	-	-
76.7	60.0	0.0	-	9.6	0.0	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	-	21.9	21.8	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	0.0	21.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	10.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	10.1	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Bathylagus spp.*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	65.0	119.4	-	-	-	-	-	-	-	-	-	-
60.0	70.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
63.3	55.0	0.0	-	9.9	0.0	-	0.0	-	-	0.0	-	-
63.3	65.0	28.1	-	-	-	-	-	-	-	-	-	-
63.3	70.0	49.4	-	0.0	-	-	0.0	-	-	0.0	-	-
66.7	50.0	0.0	-	10.5	0.0	-	0.0	-	-	0.0	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
66.7	70.0	29.2	-	0.0	-	-	0.0	-	-	0.0	-	-
70.0	100.0	0.0	-	-	4.6	-	0.0	-	-	-	-	-
73.3	65.0	14.8	-	-	-	-	-	-	-	-	-	-
76.7	51.0	0.0	-	9.9	0.0	-	0.0	-	-	0.0	-	-
76.7	70.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	-	5.0	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	0.0	-	9.5	0.0	-	0.0	-	-	-	-	-
80.0	65.0	44.5	-	-	-	-	-	-	-	-	-	-
80.0	70.0	30.3	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	18.7	0.0	-	0.0	-	-	0.0	-	-
93.3	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	70.0	-	0.0	20.3	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	5.1	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	70.0	0.0	-	-	-	0.0	0.0	-	-	0.0	-	-
100.0	80.0	4.4	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	100.0	5.1	-	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	35.0	0.0	0.0	5.1	-	0.0	0.0	-	-	0.0	0.0	-

*Bathylagus milleri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	9.0	-	0.0	-	-	0.0	-	-	0.0	-	-
70.0	70.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
70.0	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	53.0	10.2	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	18.6	-	-	-	-	-	-	-	5.4	-	-
76.7	90.0	8.9	-	0.0	-	-	0.0	-	-	-	-	-
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	60.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

		<i>Bathylagus ochotensis</i>											
STATION		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	11.6	0.0	-	4.4	0.0	-	0.0	-	-	0.0	-	-
60.0	52.5	4.9	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	55.0	12.8	5.4	-	5.2	10.0	-	0.0	-	-	0.0	-	-
60.0	60.0	19.7	97.1	-	60.7	41.2	-	0.0	-	-	0.0	-	-
60.0	65.0	-	34.1	-	-	-	-	-	-	-	-	-	-
60.0	70.0	5.1	21.4	-	54.0	30.7	-	0.0	-	-	0.0	-	-
60.0	80.0	5.1	0.0	-	-	140.6	-	0.0	-	-	0.0	-	-
60.0	90.0	0.0	8.7	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	0.0	54.0	-	0.0	21.6	-	0.0	-	-	0.0	-	-
63.3	60.0	43.0	63.3	-	0.0	11.5	-	0.0	-	-	0.0	-	-
63.3	65.0	-	93.5	-	-	-	-	-	-	-	-	-	-
63.3	70.0	19.6	32.9	-	67.7	12.0	-	0.0	-	-	0.0	-	-
63.3	80.0	0.0	0.0	-	-	43.7	-	0.0	-	-	0.0	-	-
63.3	100.0	-	0.0	-	-	29.7	-	0.0	-	-	-	-	-
66.7	49.0	0.0	19.6	-	-	12.2	-	0.0	-	-	0.0	-	-
66.7	50.0	-	10.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	55.0	11.4	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	29.2	10.8	-	10.8	0.0	-	0.0	-	-	10.0	-	-
66.7	65.0	-	53.0	-	0.0	31.6	-	0.0	-	-	0.0	-	-
66.7	70.0	0.0	126.5	-	79.2	10.7	-	0.0	-	-	-	-	-
66.7	80.0	0.0	0.0	-	-	110.3	-	0.0	-	-	0.0	-	-
70.0	51.0	5.4	9.7	-	0.0	20.7	-	0.0	-	-	0.0	-	-
70.0	53.0	0.0	0.0	-	19.6	0.0	-	0.0	-	-	0.0	-	-
70.0	60.0	0.0	88.0	-	0.0	31.9	-	0.0	-	-	0.0	-	-
70.0	65.0	-	49.4	-	-	-	-	-	-	-	-	-	-
70.0	70.0	0.0	67.9	-	0.0	33.8	-	0.0	-	-	0.0	-	-
70.0	80.0	0.0	0.0	-	-	37.2	-	10.4	-	-	-	-	-
70.0	90.0	0.0	0.0	-	-	39.9	-	0.0	-	-	-	-	-
73.3	50.0	0.0	33.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	53.0	0.0	28.5	-	0.0	51.3	-	0.0	-	-	0.0	-	-
73.3	60.0	16.3	97.1	-	0.0	-	-	10.3	-	-	0.0	-	-
73.3	70.0	0.0	0.0	-	10.2	0.0	-	0.0	-	-	0.0	-	-
73.3	80.0	0.0	9.4	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	90.0	0.0	9.6	-	-	17.7	-	0.0	-	-	5.4	-	-
76.7	51.0	9.7	20.6	-	9.9	0.0	-	0.0	-	-	0.0	-	-
76.7	55.0	0.0	76.0	-	10.1	0.0	-	0.0	-	-	0.0	-	-
76.7	60.0	19.9	104.3	-	67.5	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	-	130.3	-	-	-	-	-	-	-	-	-	-
76.7	70.0	0.0	131.0	-	69.6	8.9	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	16.8	-	21.9	21.8	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	44.3	-	0.0	0.0	-	10.0	-	-	0.0	-	-
80.0	51.0	0.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-
80.0	55.0	0.0	140.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	60.0	0.0	208.5	-	0.0	11.1	-	0.0	-	-	0.0	-	-
80.0	65.0	-	13.3	-	-	-	-	-	-	-	-	-	-
80.0	70.0	0.0	100.8	-	81.2	52.4	-	19.3	-	-	0.0	-	-

TABLE 4. (cont.)

*Bathylagus ochotensis* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	80.0	0.0	-	18.7	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	8.5	-	0.0	9.7	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	30.2	0.0	-	10.3	-	-	0.0	-	-
82.0	46.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
83.3	60.0	0.0	-	22.5	52.4	-	0.0	-	-	0.0	-	-
83.3	65.0	10.5	-	-	-	-	-	-	-	-	-	-
83.3	70.0	21.0	-	31.8	32.8	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	63.5	31.4	-	0.0	-	-	0.0	-	-
83.3	90.0	9.5	-	10.9	10.4	-	0.0	-	-	0.0	-	-
86.7	35.0	5.6	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	0.0	5.2	0.0	0.0	-	-	0.0	-	-
86.7	50.0	8.5	-	17.8	0.0	0.0	0.0	-	-	0.0	-	-
86.7	55.0	92.5	-	10.0	0.0	0.0	0.0	-	-	0.0	-	-
86.7	60.0	188.0	-	31.4	21.6	0.0	11.0	-	-	0.0	-	-
86.7	65.0	10.0	-	-	-	-	-	-	-	-	-	-
86.7	70.0	10.4	-	21.5	21.6	-	10.0	-	-	0.0	-	-
86.7	80.0	0.0	-	49.8	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	41.7	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	19.1	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	30.0	-	10.7	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	37.0	-	10.9	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	45.0	-	43.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	60.0	-	97.0	-	0.0	0.0	9.0	-	-	-	-	-
90.0	70.0	0.0	-	6.2	57.5	0.0	0.0	-	-	-	-	-
90.0	80.0	0.0	-	-	20.2	0.0	0.0	-	-	-	-	-
90.0	90.0	0.0	-	-	10.3	0.0	10.0	-	-	-	-	-
90.0	100.0	0.0	-	0.0	10.2	0.0	-	-	-	0.0	-	-
93.3	28.0	-	17.7	-	-	-	-	-	-	-	-	-
93.3	29.0	-	5.4	10.3	0.0	0.0	0.0	-	-	0.0	-	-
93.3	30.0	-	0.0	16.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	35.0	-	0.0	4.6	0.0	0.0	0.0	-	-	0.0	-	-
93.3	50.0	-	0.0	9.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	60.0	-	9.8	5.2	0.0	0.0	0.0	-	-	0.0	-	-
93.3	70.0	-	20.0	4.5	26.2	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	49.0	9.7	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	19.7	0.0	0.0	0.0	-	-	0.0	-	-
96.7	32.0	-	0.0	29.4	0.0	0.0	0.0	-	-	0.0	-	-
96.7	35.0	-	0.0	14.9	4.4	0.0	0.0	-	-	0.0	-	-
96.7	40.0	-	11.2	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	50.0	-	5.2	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	55.0	-	5.1	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	16.4	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	70.0	-	72.4	20.3	9.7	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	16.5	9.1	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	4.8	0.0	9.8	-	-	0.0	-	-
96.7	100.0	0.0	-	0.0	0.0	0.0	10.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Bathylagus ochotensis* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	29.2	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	-
100.0	30.0	-	10.7	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	-	22.0	30.3	-	0.0	0.0	-	-	0.0	-	-
100.0	45.0	-	4.9	4.7	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	-	5.1	4.8	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	0.0	9.2	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	-	0.0	8.1	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	-	-	10.0	0.0	-	-	0.0	-	-
103.3	50.0	-	0.0	0.0	-	8.7	0.0	-	-	0.0	-	-
103.3	55.0	-	20.3	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	10.2	10.2	4.9	-	0.0	0.0	-	-	0.0	-	-
106.7	32.0	-	10.5	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	-	5.3	20.4	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	-	0.0	9.4	-	0.0	0.0	-	-	-	0.0	-
106.7	50.0	-	0.0	5.6	-	9.7	0.0	-	-	-	0.0	-
110.0	35.0	-	0.0	4.5	-	0.0	0.0	-	-	-	0.0	-

*Bathylagus pacificus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	35.3	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	65.0	59.7	-	-	-	-	-	-	-	-	-	-
60.0	70.0	0.0	-	32.4	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	10.8	-	9.9	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	27.1	-	0.0	10.6	-	0.0	-	-	-	-	-
63.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
66.7	49.0	9.8	-	0.0	0.0	-	0.0	-	-	-	-	-
66.7	50.0	31.9	-	10.5	10.2	-	0.0	-	-	0.0	-	-
66.7	55.0	10.4	-	0.0	20.5	-	0.0	-	-	0.0	-	-
66.7	60.0	43.2	-	46.4	10.5	-	0.0	-	-	0.0	-	-
66.7	70.0	0.0	-	0.0	10.7	-	0.0	-	-	0.0	-	-
70.0	51.0	9.7	-	21.1	0.0	-	0.0	-	-	0.0	-	-
70.0	53.0	10.7	-	0.0	22.5	-	0.0	-	-	0.0	-	-
70.0	70.0	22.6	-	0.0	33.8	-	0.0	-	-	0.0	-	-
73.3	53.0	9.5	-	10.5	0.0	-	0.0	-	-	0.0	-	-
73.3	60.0	5.1	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	70.0	0.0	-	20.3	0.0	-	0.0	-	-	0.0	-	-
73.3	90.0	9.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	60.0	20.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	70.0	7.7	-	9.9	0.0	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	9.4	-	0.0	-	-	-	-	-
80.0	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	60.0	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	65.0	8.9	-	0.0	0.0	-	-	-	-	-	-	-
80.0	70.0	10.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Bathylagus pacificus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	100.0	0.0	-	10.1	0.0	-	0.0	-	-	0.0	-	-
83.3	60.0	0.0	-	11.3	0.0	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	10.4	-	0.0	-	-	0.0	-	-
86.7	60.0	55.3	-	41.9	0.0	0.0	0.0	-	-	0.0	-	-
93.3	29.0	-	0.0	20.6	0.0	0.0	0.0	-	-	0.0	-	-
103.3	45.0	0.0	0.0	0.0	-	9.2	0.0	-	-	0.0	-	-
<i>Bathylagus wesethi</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	100.0	0.0	-	-	0.0	-	5.3	-	-	-	-	-
70.0	100.0	0.0	-	-	4.6	-	0.0	-	-	-	-	-
73.3	90.0	0.0	-	-	0.0	-	0.0	-	-	5.3	-	-
80.0	90.0	0.0	-	0.0	9.7	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	-	10.7	0.0	-	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	0.0	-	10.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	-	0.0	10.0	-	-	0.0	-	-
90.0	100.0	0.0	-	4.9	-	0.0	-	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	10.6	-	-
93.3	70.0	0.0	0.0	0.0	-	0.0	10.9	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
96.7	35.0	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-
96.7	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	10.4	-	-
96.7	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-
96.7	100.0	0.0	-	0.0	-	0.0	0.0	-	-	4.8	-	-
100.0	35.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	0.0	0.0	0.0	-	4.4	28.6	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	0.0	27.2	-	-	0.0	-	-
100.0	50.0	0.0	0.0	0.0	-	0.0	58.6	-	-	0.0	-	-
100.0	55.0	0.0	0.0	0.0	-	0.0	22.1	-	-	0.0	-	-
100.0	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	70.0	0.0	0.0	0.0	-	10.0	20.2	-	-	9.8	-	-
100.0	80.0	0.0	-	0.0	-	10.0	0.0	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	0.0	32.0	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	13.8	0.0	-	-	20.1	-	-
100.0	100.0	0.0	-	0.0	-	10.0	0.0	-	-	4.7	-	-
103.3	45.0	0.0	0.0	0.0	-	18.5	36.9	-	-	0.0	-	-
103.3	50.0	0.0	0.0	0.0	-	26.2	73.5	-	-	0.0	-	-
103.3	55.0	0.0	0.0	4.9	-	0.0	0.0	-	-	10.1	-	-
103.3	60.0	0.0	0.0	0.0	-	5.0	0.0	-	-	5.0	-	-
103.3	65.0	10.5	0.0	0.0	-	-	-	-	-	-	0.0	-
103.3	70.0	0.0	-	0.0	-	15.8	0.0	-	-	-	9.9	-
103.3	90.0	0.0	-	0.0	-	0.0	4.7	-	-	-	-	-



TABLE 4. (cont.)

<i>Bathylagus wesethi</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
106.7	35.0	-	0.0	0.0	-	0.0	5.0	-	-	-	0.0	-
106.7	40.0	-	0.0	0.0	-	0.0	42.9	-	-	-	0.0	-
106.7	45.0	-	4.4	0.0	-	9.8	89.8	-	-	-	0.0	-
106.7	50.0	-	0.0	0.0	-	9.7	10.2	-	-	-	0.0	-
106.7	55.0	-	0.0	-	-	0.0	5.1	-	-	-	0.0	-
106.7	60.0	-	0.0	-	-	0.0	20.3	-	-	-	0.0	-
106.7	90.0	-	0.0	0.0	-	0.0	0.0	-	-	-	5.0	-
110.0	40.0	-	0.0	0.0	-	10.6	0.0	-	-	-	0.0	-
110.0	45.0	-	0.0	0.0	-	9.8	124.7	-	-	-	0.0	-
110.0	50.0	-	0.0	0.0	-	5.0	107.7	-	-	-	0.0	-
110.0	55.0	-	0.0	0.0	-	10.5	10.7	-	-	-	4.8	-
110.0	60.0	-	0.0	0.0	-	5.3	0.0	-	-	-	0.0	-
110.0	70.0	-	0.0	4.8	-	0.0	0.0	-	-	-	27.5	-
110.0	100.0	-	0.0	0.0	-	0.0	5.1	-	-	-	0.0	-

*Leuroglossus stilbius*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	-	9.1	0.0	-	0.0	-	-	0.0	-	-
60.0	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
63.3	60.0	0.0	-	0.0	11.5	-	0.0	-	-	0.0	-	-
63.3	80.0	0.0	-	-	10.9	-	0.0	-	-	0.0	-	-
66.7	49.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
66.7	55.0	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	0.0	-	11.6	0.0	-	0.0	-	-	0.0	-	-
66.7	70.0	0.0	-	11.3	0.0	-	10.9	-	-	0.0	-	-
66.7	100.0	0.0	-	-	0.0	-	5.3	-	-	0.0	-	-
70.0	51.0	29.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	53.0	107.0	-	9.8	0.0	-	0.0	-	-	0.0	-	-
70.0	60.0	33.0	-	24.5	0.0	-	0.0	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	11.3	-	10.5	-	-	0.0	-	-
70.0	100.0	0.0	-	-	0.0	-	10.9	-	-	0.0	-	-
73.3	50.0	19.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	53.0	85.6	-	41.9	20.5	-	10.4	-	-	0.0	-	-
73.3	60.0	0.0	-	41.4	-	-	0.0	-	-	0.0	-	-
73.3	70.0	0.0	-	20.3	0.0	-	0.0	-	-	0.0	-	-
73.3	90.0	0.0	-	-	8.8	-	0.0	-	-	0.0	-	-
76.7	51.0	92.8	-	29.8	20.8	-	10.4	-	-	0.0	-	-
76.7	55.0	86.9	-	60.7	10.0	-	11.0	-	-	0.0	-	-
76.7	60.0	104.3	-	86.8	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	55.8	-	-	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	9.9	17.9	-	11.8	-	-	0.0	-	-
76.7	80.0	0.0	-	0.0	65.4	-	0.0	-	-	0.0	-	-
76.7	90.0	8.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	55.0	93.4	-	83.5	109.2	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Leuroglossus stilbius* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	68.4	125.1	135.7	33.2	-	0.0	-	-	0.0	-	-
80.0	65.0	13.3	13.3	-	-	-	-	-	-	-	-	-
80.0	70.0	20.2	20.2	20.3	10.5	-	0.0	-	-	0.0	-	-
82.0	46.0	202.0	363.4	63.4	11.2	-	0.0	-	-	0.0	-	-
83.3	40.6	0.0	4.2	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	5.3	10.4	65.9	10.8	-	0.0	-	-	0.0	-	-
83.3	51.0	4.3	5.1	0.0	10.8	-	0.0	-	-	0.0	-	-
83.3	55.0	15.4	424.2	275.1	15.6	-	0.0	-	-	0.0	-	-
83.3	60.0	0.0	170.9	56.3	31.4	-	11.1	-	-	0.0	-	-
83.3	65.0	-	10.5	-	-	-	-	-	-	-	-	-
83.3	70.0	0.0	42.0	42.4	32.8	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	67.6	176.8	-	11.1	0.0	-	-	0.0	-	-
86.7	40.0	0.0	132.5	94.9	-	15.6	0.0	-	-	0.0	-	-
86.7	45.0	0.0	920.5	366.8	-	0.0	0.0	-	-	0.0	-	-
86.7	50.0	0.0	512.4	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	55.0	0.0	994.6	331.3	-	5.2	0.0	-	-	0.0	-	-
86.7	60.0	9.4	906.9	450.2	-	75.8	0.0	-	-	0.0	-	-
86.7	65.0	-	30.1	-	-	-	0.0	-	-	-	-	-
86.7	70.0	0.0	0.0	43.0	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	0.0	0.0	20.4	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	19.1	3.9	-	0.0	5.3	-	-	0.0	-	-
90.0	30.0	5.0	213.0	47.1	-	20.2	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	0.0	-	10.1	0.0	-	-	0.0	-	-
90.0	37.0	0.0	21.8	46.6	-	0.0	0.0	-	-	0.0	-	-
90.0	45.0	0.0	37.6	92.0	-	20.3	4.9	-	-	0.0	-	-
90.0	53.0	0.0	399.6	-	-	28.8	0.0	-	-	0.0	-	-
90.0	60.0	0.0	129.4	124.1	-	0.0	45.2	-	-	0.0	-	-
90.0	70.0	0.0	-	-	-	0.0	0.0	-	-	-	-	-
90.0	80.0	0.0	20.6	-	-	20.2	0.0	-	-	-	-	-
90.0	100.0	0.0	10.0	-	-	10.2	0.0	-	-	-	-	-
90.0	100.0	0.0	0.0	0.0	-	-	-	-	-	0.0	-	-
93.3	28.0	-	153.7	-	-	-	-	-	-	-	-	-
93.3	29.0	0.0	32.5	82.4	-	0.0	0.0	-	-	0.0	-	-
93.3	30.0	0.0	61.9	95.7	-	10.6	0.0	-	-	0.0	-	-
93.3	35.0	0.0	134.1	9.2	-	0.0	0.0	-	-	0.0	-	-
93.3	40.0	0.0	5.6	13.7	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	0.0	0.0	10.5	-	19.5	0.0	-	-	0.0	-	-
93.3	50.0	0.0	11.1	35.8	-	0.0	0.0	-	-	0.0	-	-
93.3	55.0	0.0	0.0	0.0	-	9.4	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	32.1	0.0	-	-	0.0	-	-
93.3	70.0	5.4	160.3	4.5	-	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	114.3	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.0	10.8	-	-	0.0	-	-
96.7	32.0	0.0	10.6	24.5	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	0.0	0.0	14.9	-	4.4	0.0	-	-	0.0	-	-
96.7	40.0	0.0	89.5	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	45.0	4.8	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Leuroglossus stilbius</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	50.0	-	0.0	0.0	-	0.0	9.3	-	-	0.0	-	-
96.7	55.0	-	0.0	14.0	-	4.7	0.0	-	-	0.0	-	-
96.7	60.0	-	9.7	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	27.3	-	-	-	-	-	-	-	-	-
96.7	70.0	-	81.5	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	29.2	-	0.0	9.4	-	4.9	0.0	-	-	0.0	-	-
100.0	30.0	-	32.2	41.8	-	0.0	0.0	-	-	0.0	-	-
100.0	35.0	-	54.5	18.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	-	27.6	10.1	-	0.0	0.0	-	-	0.0	-	-
100.0	45.0	-	14.7	14.1	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	-	0.0	4.8	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	0.0	4.6	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	-	0.0	4.0	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	0.0	0.0	0.0	-	4.9	0.0	-	-	0.0	-	-
103.3	35.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	40.0	-	0.0	8.2	-	0.0	0.0	-	-	0.0	-	-
103.3	45.0	-	0.0	15.6	-	0.0	0.0	-	-	0.0	-	-
103.3	55.0	-	20.3	9.8	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	15.2	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	32.0	-	52.7	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	-	42.2	5.1	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	-	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-
110.0	35.0	-	26.1	0.0	-	0.0	0.0	-	-	-	0.0	-

## Stomiiformes

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	90.0	-	0.0	-	0.0	-	0.0	-	-	5.3	-	-
96.7	55.0	-	0.0	0.0	-	4.7	0.0	-	-	0.0	-	-
100.0	45.0	10.2	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	35.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	70.0	-	0.0	-	-	0.0	0.0	-	-	-	5.2	-
110.0	65.0	-	0.0	0.0	-	0.0	5.4	-	-	-	-	-

## Gonostomatidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	70.0	-	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	-	0.0	-	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	4.8	-	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Cyclothone spp.*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	0.0	0.0	-	0.0	-	-	10.3	-	-	0.0	-	-
60.0	0.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	0.0	-	5.1	-	-	-	-	-
66.7	100.0	0.0	-	-	10.0	-	10.6	-	-	-	-	-
70.0	80.0	0.0	-	-	0.0	-	10.4	-	-	-	-	-
70.0	90.0	8.8	-	-	0.0	-	0.0	-	-	-	-	-
70.0	100.0	0.0	-	-	4.6	-	0.0	-	-	-	-	-
73.3	80.0	0.0	-	-	-	-	0.0	-	-	5.4	-	-
73.3	90.0	5.3	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	-	0.0	-	0.0	-	-	5.1	-	-
76.7	80.0	0.0	-	-	0.0	-	0.0	-	-	10.2	-	-
76.7	100.0	7.6	-	-	0.0	-	0.0	-	-	-	-	-
80.0	70.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	-	0.0	-	9.7	-	-	0.0	-	-
80.0	100.0	8.5	-	-	0.0	-	0.0	-	-	0.0	-	-
83.3	60.0	0.0	-	-	0.0	-	11.2	-	-	0.0	-	-
83.3	80.0	10.4	-	-	45.0	-	0.0	-	-	0.0	-	-
83.3	80.0	5.4	-	-	0.0	-	0.0	-	-	5.4	-	-
83.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
86.7	70.0	19.0	-	-	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	-	21.1	0.0	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	-	0.0	-	0.0	-	-	9.9	-	-
86.7	100.0	23.8	-	-	0.0	-	0.0	-	-	0.0	-	-
90.0	35.0	-	-	-	-	-	0.0	-	-	15.6	-	-
90.0	80.0	10.0	0.0	-	-	-	0.0	-	-	20.1	-	-
90.0	90.0	19.5	-	-	-	-	0.0	-	-	5.0	-	-
90.0	100.0	19.9	-	-	-	-	0.0	-	-	-	-	-
93.3	30.0	-	-	-	-	-	0.0	-	-	10.3	-	-
93.3	35.0	-	0.0	-	-	-	0.0	-	-	4.9	-	-
93.3	40.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
93.3	45.0	-	0.0	-	-	-	0.0	-	-	5.1	-	-
93.3	55.0	-	0.0	-	-	-	0.0	-	-	5.2	-	-
93.3	80.0	7.9	0.0	-	-	-	0.0	-	-	24.5	-	-
93.3	90.0	20.8	-	-	-	-	20.4	-	-	9.8	-	-
93.3	100.0	3.8	-	-	-	-	0.0	-	-	0.0	-	-
96.7	45.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
96.7	50.0	-	10.5	-	-	-	0.0	-	-	0.0	-	-
96.7	55.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
96.7	60.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
96.7	70.0	-	0.0	-	-	-	0.0	-	-	0.0	-	-
96.7	80.0	17.4	-	-	-	-	0.0	-	-	21.1	-	-
96.7	90.0	14.3	-	-	-	-	0.0	-	-	0.0	-	-
96.7	100.0	33.7	-	-	-	-	10.0	-	-	30.1	-	-

TABLE 4. (cont.)

STATION	<i>Cyclothone</i> spp. (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	35.0	4.5	0.0	0.0	--	0.0	0.0	--	--	0.0	--	--
100.0	45.0	25.5	0.0	0.0	--	0.0	21.3	--	--	0.0	--	--
100.0	50.0	5.1	25.4	4.8	--	0.0	11.0	--	--	10.2	--	--
100.0	55.0	0.0	15.2	0.0	--	0.0	0.0	--	--	15.3	--	--
100.0	65.0	9.4	--	--	--	5.0	4.9	--	--	0.0	--	--
100.0	70.0	15.4	--	--	--	14.8	0.0	--	--	16.4	--	--
100.0	80.0	15.3	--	--	--	13.8	0.0	--	--	80.5	--	--
100.0	90.0	35.1	--	--	--	0.0	4.8	--	--	56.0	--	--
100.0	100.0	35.4	14.9	--	--	0.0	5.6	--	--	0.0	--	--
103.3	40.0	0.0	0.0	0.0	--	0.0	9.2	--	--	0.0	--	--
103.3	45.0	0.0	16.0	0.0	--	0.0	10.5	--	--	0.0	--	--
103.3	50.0	9.2	0.0	0.0	--	0.0	5.0	--	--	10.1	--	--
103.3	55.0	10.2	0.0	0.0	--	0.0	0.0	--	--	126.0	--	--
103.3	60.0	45.7	0.0	0.0	--	5.0	0.0	--	--	--	--	--
103.3	65.0	--	36.6	--	--	--	--	--	--	--	--	--
103.3	70.0	5.0	13.4	--	--	10.5	0.0	--	--	--	76.5	--
103.3	80.0	44.9	0.0	0.0	--	14.5	0.0	--	--	--	14.9	--
103.3	90.0	0.0	0.0	0.0	--	4.8	0.0	--	--	--	39.5	--
103.3	100.0	13.1	0.0	0.0	--	0.0	0.0	--	--	--	19.3	--
106.7	35.0	0.0	0.0	0.0	--	0.0	5.0	--	--	--	10.7	--
106.7	40.0	17.6	5.1	0.0	--	5.2	0.0	--	--	--	5.2	--
106.7	45.0	0.0	21.8	0.0	--	14.8	59.9	--	--	--	0.0	--
106.7	50.0	23.0	60.7	0.0	--	0.0	0.0	--	--	--	0.0	--
106.7	55.0	5.1	5.6	0.0	--	0.0	5.1	--	--	--	14.9	--
106.7	60.0	0.0	21.8	0.0	--	0.0	15.2	--	--	--	9.9	--
106.7	65.0	--	12.8	--	--	--	--	--	--	--	--	--
106.7	70.0	4.1	0.0	0.0	--	0.0	26.1	--	--	--	31.4	--
106.7	80.0	0.0	0.0	0.0	--	0.0	33.3	--	--	--	41.4	--
106.7	90.0	0.0	4.1	0.0	--	0.0	0.0	--	--	--	54.8	--
106.7	100.0	15.1	15.1	0.0	--	4.9	4.8	--	--	--	70.6	--
110.0	35.0	0.0	0.0	0.0	--	0.0	11.4	--	--	--	0.0	--
110.0	40.0	4.1	10.4	0.0	--	5.3	0.0	--	--	--	0.0	--
110.0	45.0	0.0	27.1	0.0	--	4.9	5.1	--	--	--	4.5	--
110.0	50.0	5.3	25.9	0.0	--	5.2	0.0	--	--	--	14.6	--
110.0	60.0	0.0	0.0	0.0	--	5.3	0.0	--	--	--	93.7	--
110.0	65.0	--	0.0	0.0	--	0.0	10.7	--	--	--	--	--
110.0	70.0	5.3	0.0	0.0	--	5.6	0.0	--	--	--	18.4	--
110.0	80.0	0.0	0.0	0.0	--	0.0	5.4	--	--	--	19.4	--
110.0	90.0	4.5	0.0	0.0	--	0.0	0.0	--	--	--	14.3	--
110.0	100.0	0.0	4.7	0.0	--	5.0	10.2	--	--	--	40.6	--

TABLE 4. (cont..)

*Danaphos oculatus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	100.0	0.0	-	-	0.0	-	20.2	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	16.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	65.0	10.5	-	-	-	-	-	-	-	-	-	-
83.3	80.0	5.5	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	4.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	10.1	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
100.0	35.0	0.0	0.0	4.5	0.0	0.0	0.0	-	-	0.0	-	-
100.0	50.0	-	15.2	0.0	0.0	-	0.0	-	-	0.0	-	-
100.0	55.0	-	20.3	0.0	0.0	-	0.0	-	-	0.0	-	-
100.0	60.0	-	5.2	0.0	0.0	-	0.0	-	-	0.0	-	-
100.0	70.0	15.4	-	-	0.0	-	0.0	-	-	0.0	-	-
103.3	55.0	-	0.0	19.5	-	9.6	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	45.0	-	4.4	0.0	-	0.0	0.0	-	-	10.1	-	-
											0.0	-

*Ichthyococcus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
70.0	65.0	-	3.8	-	-	-	-	-	-	-	-	-
100.0	55.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	45.0	-	4.4	0.0	-	0.0	10.0	-	-	-	0.0	-
106.7	60.0	-	5.4	-	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	-	0.0	4.9	-	0.0	0.0	-	-	-	0.0	-
110.0	55.0	-	5.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	90.0	4.5	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-

*Valenciennellus stellatus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	70.0	0.0	-	11.3	0.0	-	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	10.7	0.0	-	-	0.0	-	-

*Vinciguerria lucetia*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	100.0	0.0	-	-	0.0	-	0.0	-	-	14.8	-	-
66.7	80.0	5.2	-	-	0.0	-	0.0	-	-	0.0	-	-
70.0	90.0	5.3	-	-	0.0	-	0.0	-	-	-	-	-
73.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.1	-	-
73.3	80.0	10.2	-	-	-	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	-	-	-	0.0	-	-	20.5	-	-

TABLE 4. (cont.)

*Vinciguerria lucetia* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	55.0	0.0	-	0.0	0.0	-	0.0	-	-	5.4	-	-
76.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	15.3	-	-
80.0	80.0	0.0	-	0.0	0.0	-	0.0	-	-	20.0	-	-
80.0	100.0	0.0	-	0.0	11.3	-	0.0	-	-	4.9	-	-
82.0	46.0	0.0	-	0.0	0.0	-	0.0	-	-	11.7	-	-
83.3	42.0	0.0	-	0.0	0.0	-	0.0	-	-	5.3	-	-
83.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	16.2	-	-
83.3	90.0	0.0	-	5.4	0.0	-	10.5	-	-	5.2	-	-
83.3	100.0	0.0	-	128.2	190.2	-	29.7	-	-	0.0	-	-
86.7	40.0	5.3	-	0.0	0.0	0.0	0.0	-	-	43.8	-	-
86.7	55.0	0.0	-	0.0	0.0	0.0	0.0	-	-	65.3	-	-
86.7	60.0	0.0	-	0.0	0.0	0.0	0.0	-	-	238.6	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	44.2	-	-
86.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	51.6	-	-
86.7	90.0	4.2	-	0.0	0.0	-	36.3	-	-	5.3	-	-
86.7	100.0	0.0	-	5.3	250.0	-	0.0	-	-	20.8	-	-
90.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	27.1	-	-
90.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	40.2	-	-
90.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	34.7	-	-
90.0	60.0	8.6	0.0	0.0	0.0	0.0	0.0	-	-	4.7	-	-
90.0	90.0	0.0	0.0	-	-	-	0.0	-	-	-	-	-
90.0	100.0	0.0	-	-	-	-	0.0	-	-	58.7	-	-
93.3	26.7	0.0	0.0	0.0	0.0	0.0	0.0	-	-	30.9	-	-
93.3	29.0	15.4	0.0	0.0	0.0	0.0	0.0	-	-	14.8	-	-
93.3	30.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	20.7	-	-
93.3	40.0	4.4	0.0	0.0	0.0	0.0	0.0	-	-	19.5	-	-
93.3	45.0	0.0	5.9	0.0	0.0	0.0	0.0	-	-	65.8	-	-
93.3	50.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	470.5	-	-
93.3	55.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	165.9	-	-
93.3	60.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	171.8	-	-
93.3	70.0	10.8	0.0	0.0	0.0	0.0	0.0	-	-	111.1	-	-
93.3	80.0	46.6	0.0	0.0	0.0	0.0	0.0	-	-	17.7	-	-
93.3	90.0	339.7	0.0	0.0	0.0	0.0	20.4	-	-	78.4	-	-
93.3	100.0	28.6	0.0	30.0	0.0	0.0	0.0	-	-	98.6	-	-
96.7	35.0	26.8	-	0.0	0.0	0.0	0.0	-	-	10.0	-	-
96.7	40.0	4.9	0.0	0.0	0.0	0.0	0.0	-	-	19.4	-	-
96.7	45.0	11.9	0.0	0.0	0.0	0.0	0.0	-	-	209.6	-	-
96.7	50.0	0.0	15.7	0.0	0.0	0.0	0.0	-	-	140.4	-	-
96.7	55.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	5.8	-	-
96.7	60.0	16.3	0.0	0.0	0.0	0.0	0.0	-	-	37.0	-	-
96.7	70.0	119.4	0.0	0.0	0.0	0.0	20.5	-	-	0.0	-	-
96.7	80.0	130.7	0.0	0.0	0.0	0.0	62.4	-	-	1052.5	-	-
96.7	90.0	165.7	4.4	0.0	0.0	0.0	11.0	-	-	1436.4	-	-
96.7	100.0	39.3	78.5	43.0	0.0	0.0	29.4	-	-	356.9	-	-
100.0	30.0	134.7	134.7	57.2	0.0	0.0	773.1	-	-	134.7	-	-
			0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	<i>Vinciguerria lucetia</i> (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	35.0	-	0.0	0.0	-	0.0	57.1	-	-	5.3	-	-
100.0	40.0	-	0.0	0.0	-	0.0	72.5	-	-	10.2	-	-
100.0	45.0	-	0.0	0.0	-	0.0	346.4	-	-	153.4	-	-
100.0	50.0	-	20.3	0.0	-	0.0	121.3	-	-	264.7	-	-
100.0	55.0	-	30.5	0.0	-	0.0	70.8	-	-	2193.8	-	-
100.0	60.0	-	0.0	0.0	-	0.0	30.3	-	-	136.6	-	-
100.0	70.0	46.3	-	-	50.1	477.2	-	-	-	48.7	-	-
100.0	80.0	111.8	-	-	226.3	362.4	-	-	-	1217.7	-	-
100.0	90.0	143.8	-	-	207.5	329.3	-	-	-	1941.2	-	-
100.0	100.0	100.7	-	-	17.5	231.4	-	-	-	639.8	-	-
103.3	35.0	-	0.0	0.0	0.0	0.0	0.0	-	-	38.6	-	-
103.3	40.0	-	0.0	0.0	0.0	16.7	-	-	-	4.7	-	-
103.3	45.0	-	0.0	0.0	0.0	195.0	-	-	-	20.0	-	-
103.3	50.0	-	0.0	0.0	0.0	115.6	-	-	-	37.8	-	-
103.3	55.0	-	0.0	0.0	0.0	246.5	-	-	-	258.6	-	-
103.3	60.0	-	0.0	4.9	35.1	234.1	-	-	-	2273.0	-	-
103.3	65.0	36.6	-	-	-	-	-	-	-	-	-	-
103.3	70.0	17.9	-	-	152.3	69.8	-	-	-	984.7	-	-
103.3	80.0	52.5	-	-	532.4	151.7	-	-	-	407.5	-	-
103.3	90.0	111.2	-	-	43.1	339.1	-	-	-	202.5	-	-
103.3	100.0	116.6	-	-	70.7	717.8	-	-	-	400.9	-	-
106.7	35.0	-	0.0	0.0	0.0	5.0	-	-	-	37.4	-	-
106.7	40.0	-	51.3	4.7	0.0	51.4	-	-	-	5.2	-	-
106.7	45.0	-	74.1	18.8	29.5	528.9	-	-	-	0.0	-	-
106.7	50.0	-	99.4	0.0	48.5	306.4	-	-	-	4.8	-	-
106.7	55.0	-	33.3	0.0	29.7	210.7	-	-	-	1658.3	-	-
106.7	60.0	-	16.3	-	42.3	472.4	-	-	-	1041.6	-	-
106.7	65.0	-	38.3	-	-	-	-	-	-	-	-	-
106.7	70.0	-	13.2	-	79.2	1096.2	-	-	-	759.8	-	-
106.7	80.0	-	42.4	-	-	631.8	-	-	-	222.7	-	-
106.7	90.0	-	111.2	0.0	109.7	126.8	-	-	-	244.0	-	-
106.7	100.0	-	191.1	3.7	127.7	1154.3	-	-	-	554.4	-	-
110.0	35.0	-	0.0	0.0	0.0	0.0	-	-	-	4.7	-	-
110.0	40.0	-	15.6	0.0	133.0	13.6	-	-	-	34.4	-	-
110.0	45.0	-	27.1	0.0	112.5	134.7	-	-	-	133.1	-	-
110.0	50.0	-	98.4	83.8	55.2	148.8	-	-	-	107.0	-	-
110.0	55.0	-	25.1	41.9	120.5	246.1	-	-	-	237.6	-	-
110.0	60.0	-	0.0	13.4	222.6	243.8	-	-	-	2356.5	-	-
110.0	65.0	-	38.4	19.7	244.0	907.5	-	-	-	-	-	-
110.0	70.0	-	20.5	999.1	5.6	52.7	-	-	-	1009.8	-	-
110.0	80.0	-	12.5	5.1	4.6	48.7	-	-	-	208.1	-	-
110.0	90.0	-	88.9	142.6	403.6	116.5	-	-	-	109.7	-	-
110.0	100.0	-	83.9	225.9	863.4	470.1	-	-	-	259.1	-	-



TABLE 4. (cont.)

*Vinciguerria poweriae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	100.0	4.0	-	0.0	0.0	-	0.0	-	-	-	-	-
90.0	90.0	4.8	-	-	0.0	0.0	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	14.6	-	0.0	-	-	-	0.0	-	-
103.3	60.0	-	0.0	4.9	-	0.0	0.0	-	-	0.0	-	-
110.0	90.0	-	4.0	0.0	-	0.0	0.0	-	-	-	0.0	-

*Sternoptychidae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	90.0	0.0	-	-	0.0	-	21.2	-	-	0.0	-	-
63.3	65.0	9.4	-	-	-	-	-	-	-	-	-	-
66.7	50.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
66.7	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	70.0	0.0	-	0.0	21.4	-	10.9	-	-	0.0	-	-
66.7	90.0	0.0	-	-	29.8	-	0.0	-	-	-	-	-
66.7	100.0	0.0	-	-	5.0	-	10.6	-	-	-	-	-
70.0	60.0	22.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	80.0	0.0	-	-	0.0	-	10.4	-	-	0.0	-	-
73.3	53.0	0.0	-	10.5	0.0	-	0.0	-	-	0.0	-	-
73.3	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	65.0	4.9	-	-	-	-	0.0	-	-	15.9	-	-
73.3	90.0	0.0	-	0.0	0.0	-	0.0	-	-	10.9	-	-
76.7	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	60.0	10.4	-	9.6	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	9.3	-	-	-	-	-	-	-	-	-	-
76.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	0.0	-	0.0	10.7	-	0.0	-	-	-	-	-
80.0	55.0	5.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	60.0	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	0.0	-	-	4.9	-	-
83.3	60.0	0.0	-	0.0	11.3	-	0.0	-	-	0.0	-	-
83.3	65.0	21.0	-	0.0	20.9	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	22.1	-	10.7	0.0	-	0.0	-	-	0.0	-	-
86.7	45.0	5.3	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	65.0	10.0	-	-	-	-	-	-	-	-	-	-
86.7	70.0	0.0	-	10.8	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	30.4	10.4	-	5.2	-	-	0.0	-	-
86.7	90.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
90.0	60.0	-	0.0	-	-	0.0	4.5	-	-	-	-	-
90.0	80.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-
93.3	28.0	-	5.9	-	-	-	-	-	-	-	-	-
93.3	29.0	-	0.0	20.6	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

## Sternoptychidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	30.0	0.0	12.4	0.0	-	0.0	5.5	-	-	0.0	-	-
93.3	40.0	0.0	5.6	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	0.0	10.5	-	-	15.9	-	-
93.3	70.0	0.0	0.0	0.0	-	8.7	0.0	-	-	0.0	-	-
93.3	80.0	7.9	-	0.0	-	0.0	20.4	-	-	0.0	-	-
93.3	90.0	5.2	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	32.0	0.0	0.0	14.7	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	0.0	0.0	0.0	-	4.4	0.0	-	-	0.0	-	-
96.7	50.0	0.0	5.2	0.0	-	0.0	0.0	-	-	5.8	-	-
96.7	55.0	0.0	5.1	9.3	-	4.7	0.0	-	-	5.3	-	-
96.7	60.0	5.4	0.0	14.1	-	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	27.3	-	-	-	-	-	-	-	-	-
96.7	70.0	5.2	27.2	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	4.8	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	16.1	0.0	-	4.8	0.0	-	-	0.0	-	-
100.0	35.0	0.0	0.0	4.5	-	0.0	19.0	-	-	0.0	-	-
100.0	45.0	0.0	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	0.0	5.1	4.8	-	0.0	11.0	-	-	5.1	-	-
100.0	55.0	5.4	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	60.0	11.0	15.7	0.0	-	0.0	0.0	-	-	9.8	-	-
100.0	70.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	9.8	0.0	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	0.0	0.0	-	-	10.1	-	-
103.3	45.0	0.0	5.3	0.0	-	9.2	0.0	-	-	0.0	-	-
103.3	50.0	4.6	0.0	15.1	-	17.5	0.0	-	-	4.7	-	-
103.3	55.0	0.0	0.0	9.8	-	9.6	0.0	-	-	5.1	-	-
103.3	60.0	0.0	0.0	4.9	-	10.0	0.0	-	-	20.2	-	-
103.3	65.0	-	-	-	-	-	-	-	-	-	-	-
103.3	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	-
103.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	-	5.0	-
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.9	-
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.8	-
106.7	32.0	0.0	10.5	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	0.0	4.5	0.0	-	8.7	0.0	-	-	-	0.0	-
106.7	40.0	0.0	0.0	5.1	-	0.0	0.0	-	-	-	5.2	-
106.7	45.0	0.0	13.1	28.1	-	4.9	10.0	-	-	-	0.0	-
106.7	50.0	0.0	11.0	14.1	-	0.0	10.2	-	-	-	0.0	-
106.7	70.0	8.1	0.0	0.0	-	9.1	0.0	-	-	-	5.0	-
106.7	90.0	25.2	0.0	0.0	-	4.9	0.0	-	-	-	5.0	-
110.0	35.0	0.0	10.4	8.9	-	0.0	0.0	-	-	-	0.0	-
110.0	40.0	0.0	0.0	0.0	-	5.3	0.0	-	-	-	0.0	-
110.0	45.0	0.0	10.8	0.0	-	14.7	5.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	14.8	-	5.0	15.4	-	-	-	0.0	-
110.0	55.0	4.6	5.0	0.0	-	0.0	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

Sternoptychidae (cont.)												
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	0.0	-	-	-	4.9	-
110.0	70.0	0.0	0.0	9.7	-	0.0	0.0	-	-	-	4.6	-
110.0	80.0	0.0	4.2	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	100.0	0.0	4.7	0.0	-	0.0	0.0	-	-	-	0.0	-
<i>Chauliodus macouni</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	60.0	8.8	-	0.0	-	-	10.3	-	-	0.0	-	-
60.0	90.0	0.0	-	-	0.0	-	0.0	-	-	11.8	-	-
63.3	90.0	0.0	-	-	10.6	-	0.0	-	-	-	-	-
66.7	60.0	10.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	70.0	9.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	100.0	4.8	-	0.0	0.0	-	10.6	-	-	-	-	-
70.0	70.0	0.0	-	0.0	11.3	-	0.0	-	-	0.0	-	-
70.0	80.0	0.0	-	0.0	0.0	-	10.4	-	-	-	-	-
73.3	53.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	100.0	5.6	-	0.0	-	-	10.1	-	-	0.0	-	-
76.7	70.0	7.7	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	60.0	0.0	-	0.0	-	-	10.4	-	-	0.0	-	-
80.0	70.0	0.0	-	0.0	11.1	-	19.3	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	0.0	-	-	5.8	-	-
83.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	60.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	70.0	10.4	-	0.0	10.9	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	0.0	-	10.4	-	-	0.0	-	-
83.3	100.0	0.0	-	0.0	0.0	-	10.5	-	-	0.0	-	-
86.7	55.0	0.0	-	10.0	-	0.0	0.0	-	-	0.0	-	-
86.7	60.0	9.4	-	10.5	-	10.8	0.0	-	-	0.0	-	-
86.7	80.0	9.6	-	0.0	0.0	-	10.6	-	-	0.0	-	-
86.7	90.0	0.0	-	20.2	0.0	-	0.0	-	-	5.3	-	-
86.7	100.0	0.0	-	5.3	0.0	-	5.2	-	-	0.0	-	-
90.0	35.0	0.0	-	10.1	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	8.6	0.0	-	-	0.0	4.5	-	-	-	-	-
90.0	80.0	0.0	0.0	-	-	0.0	0.0	-	-	0.0	-	-
93.3	35.0	5.0	0.0	0.0	-	4.9	0.0	-	-	0.0	-	-
93.3	40.0	0.0	0.0	0.0	-	0.0	9.5	-	-	0.0	-	-
93.3	50.0	0.0	11.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	55.0	0.0	0.0	10.4	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	0.0	0.0	-	0.0	10.9	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	9.6	0.0	-	-	4.9	-	-
93.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	5.0	-	-

TABLE 4. (cont.)

*Chauliodus macouni* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	32.0	-	0.0	4.9	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	-	0.0	0.0	-	0.0	9.8	-	-	0.0	-	-
96.7	50.0	-	0.0	0.0	-	0.0	0.0	-	-	5.8	-	-
96.7	80.0	0.0	-	8.3	-	18.3	0.0	-	-	0.0	-	-
96.7	100.0	0.0	-	0.0	-	0.0	5.0	-	-	0.0	-	-
100.0	50.0	-	0.0	4.8	-	9.9	0.0	-	-	0.0	-	-
100.0	60.0	-	0.0	0.0	-	0.0	10.1	-	-	0.0	-	-
103.3	40.0	-	0.0	0.0	-	4.8	0.0	-	-	0.0	-	-
106.7	40.0	-	5.1	4.7	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	-	4.4	-	-	0.0	0.0	-	-	-	0.0	-
110.0	40.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	45.0	-	5.4	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	-	0.0	4.9	-	0.0	0.0	-	-	-	0.0	-

*Idiacanthus antrostomus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	100.0	0.0	-	-	0.0	-	0.0	-	-	9.9	-	-
66.7	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
70.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	90.0	0.0	-	0.0	-	-	0.0	-	-	-	-	-
73.3	60.0	0.0	-	0.0	-	-	0.0	-	-	9.6	-	-
73.3	90.0	0.0	-	-	-	-	0.0	-	-	10.6	-	-
76.7	100.0	0.0	-	-	-	-	0.0	-	-	5.1	-	-
80.0	80.0	0.0	-	0.0	0.0	-	0.0	-	-	10.0	-	-
83.3	100.0	0.0	-	0.0	10.6	-	0.0	-	-	0.0	-	-
90.0	53.0	-	0.0	-	0.0	0.0	0.0	-	-	4.7	-	-
93.3	40.0	-	0.0	0.0	0.0	0.0	0.0	-	-	5.1	-	-
93.3	45.0	-	0.0	0.0	-	9.6	0.0	-	-	5.2	-	-
93.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	-	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	55.0	-	0.0	0.0	-	0.0	0.0	-	-	10.2	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	8.2	-	-
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	40.0	-	0.0	0.0	-	0.0	4.8	-	-	-	5.2	-
106.7	100.0	-	0.0	0.0	-	0.0	0.0	-	-	-	5.0	-
110.0	55.0	-	0.0	0.0	-	0.0	0.0	-	-	-	4.8	-
110.0	60.0	-	0.0	0.0	-	0.0	0.0	-	-	-	9.9	-
110.0	65.0	-	0.0	0.0	-	0.0	5.4	-	-	-	4.6	-
110.0	70.0	-	0.0	0.0	-	0.0	0.0	-	-	-	-	-

TABLE 4. (cont.)

*Aristostomias scintillans*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
83.3	100.0	0.0	-	21.4	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	10.0	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	100.0	4.8	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	4.7	0.0	0.0	0.0	-	-	0.0	0.0	-
110.0	55.0	-	4.7	0.0	0.0	0.0	0.0	-	-	-	0.0	-
110.0	100.0	0.0	-	0.0	0.0	0.0	0.0	-	-	-	0.0	-

*Bathophilus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
106.7	45.0	-	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-

*Tactostoma macropus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	70.0	0.0	-	0.0	0.0	-	19.8	-	-	0.0	-	-

*Stomias atriventer*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	100.0	0.0	-	0.0	10.6	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	-	22.2	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	5.2	-	-	0.0	-	-
90.0	30.0	0.0	10.7	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	9.3	-	0.0	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	-	-
93.3	100.0	4.8	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	32.0	0.0	-	9.8	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	0.0	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
96.7	90.0	5.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	35.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	0.0	5.5	0.0	0.0	0.0	9.5	-	-	0.0	-	-
100.0	50.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	55.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	70.0	8.8	-	0.0	0.0	0.0	4.9	-	-	0.0	-	-
100.0	90.0	10.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	45.0	0.0	0.0	0.0	0.0	0.0	5.3	-	-	0.0	-	-
103.3	55.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	60.0	37.4	5.1	0.0	-	0.0	10.6	-	-	0.0	-	-

TABLE 4. (cont.)

*Stomias atriventer* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	65.0	5.2	-	0.0	-	0.0	0.0	-	-	-	-	-
103.3	70.0	9.0	-	0.0	-	0.0	0.0	-	-	-	4.8	-
103.3	80.0	4.8	-	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	-	10.6	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	50.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-

*Anotopterus pharao*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	100.0	-	4.7	0.0	-	0.0	0.0	-	-	-	0.0	-

## Paralepididae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
70.0	65.0	3.8	-	-	-	-	0.0	-	-	-	-	-
73.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	5.4	-	-
86.7	55.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
90.0	45.0	-	5.4	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	40.0	-	11.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	45.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	70.0	-	0.0	-	-	0.0	0.0	-	-	0.0	5.2	-

*Lestidiops ringens*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	70.0	8.6	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
63.3	65.0	9.4	-	-	-	-	-	-	-	-	-	-
63.3	70.0	24.7	-	0.0	-	-	0.0	-	-	0.0	-	-
63.3	80.0	0.0	-	0.0	-	-	0.0	-	-	5.1	-	-
66.7	100.0	0.0	-	0.0	-	-	5.3	-	-	-	-	-
70.0	65.0	11.4	-	-	-	-	-	-	-	-	-	-
70.0	70.0	15.1	-	10.6	-	-	0.0	-	-	0.0	-	-
70.0	90.0	8.8	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	60.0	0.0	-	0.0	-	-	10.3	-	-	0.0	-	-
73.3	70.0	0.0	-	20.3	-	-	0.0	-	-	0.0	-	-
73.3	80.0	0.0	-	-	-	-	10.9	-	-	0.0	-	-
73.3	90.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
76.7	70.0	15.4	-	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Lestidiops ringens</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	80.0	0.0	-	0.0	10.9	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
83.3	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	0.0	-	10.6	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	10.4	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	10.4	-	-
90.0	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	-	-
93.3	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.2	-	-
93.3	55.0	0.0	0.0	0.0	-	0.0	0.0	-	-	4.7	-	-
93.3	55.0	0.0	0.0	0.0	-	0.0	0.0	-	-	9.8	-	-
93.3	70.0	0.0	0.0	0.0	-	8.7	0.0	-	-	8.8	-	-
96.7	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	20.8	-	-
96.7	90.0	0.0	-	0.0	-	4.8	0.0	-	-	8.6	-	-
100.0	30.0	0.0	0.0	0.0	-	5.1	0.0	-	-	0.0	-	-
100.0	35.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.3	-	-
100.0	40.0	0.0	0.0	0.0	-	0.0	4.5	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	0.0	5.3	-	-	19.2	-	-
100.0	50.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	55.0	0.0	15.2	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	0.0	-	5.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	10.7	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	4.6	0.0	-	-	0.0	-	-
103.3	45.0	0.0	0.0	0.0	-	0.0	21.1	-	-	0.0	-	-
103.3	55.0	0.0	0.0	0.0	-	0.0	10.5	-	-	0.0	-	-
103.3	55.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
103.3	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	32.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	0.0	0.0	0.0	-	0.0	17.1	-	-	-	0.0	-
106.7	50.0	0.0	11.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	0.0	4.4	0.0	-	4.7	0.0	-	-	-	0.0	-
110.0	35.0	0.0	0.0	4.5	-	0.0	0.0	-	-	-	0.0	-
110.0	40.0	0.0	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	9.9	-	0.0	15.4	-	-	-	0.0	-
110.0	55.0	0.0	5.0	0.0	-	0.0	0.0	-	-	-	0.0	-

*Notolepis risso*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	80.0	0.0	-	-	10.9	-	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	10.8	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	10.1	0.0	-	0.0	-	-	0.0	-	-
90.0	100.0	4.9	-	0.0	-	0.0	-	-	-	0.0	-	-
93.3	100.0	4.8	-	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Notolepis risso* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	55.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
100.0	90.0	0.0	-	0.0	-	4.6	0.0	-	-	0.0	-	-
106.7	40.0	0.0	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-
106.7	60.0	-	10.9	-	-	0.0	0.0	-	-	-	0.0	-
106.7	100.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	14.8	-	0.0	0.0	-	-	-	0.0	-

*Scopelosaurus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	100.0	0.0	-	-	4.9	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	0.0	0.0	-	5.1	-	-	5.1	-	-
86.7	70.0	0.0	-	0.0	0.0	-	10.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	5.2	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	0.0	-	0.0	-	-	5.2	-	-
93.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	4.5	-
110.0	50.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	4.8	-
110.0	55.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-	-

*Benthalbella dentata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	40.0	-	0.0	0.0	-	4.5	0.0	-	-	0.0	-	-
96.7	70.0	-	9.1	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	40.0	-	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-

*Rosenblattichthys volucris*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	90.0	0.0	-	-	-	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	-	0.0	10.2	-	-	0.0	-	-
96.7	35.0	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-
100.0	70.0	0.0	-	-	-	0.0	0.0	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	0.0	0.0	-	-	10.1	-	-
103.3	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	0.0	-	0.0	0.0	-	-	5.0	-	-
110.0	60.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	80.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	4.8	-



TABLE 4. (cont.)

*Scopelarchus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	70.0	9.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	4.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	5.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	-	-
93.3	80.0	4.7	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	4.9	-	9.6	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-

## Myctophidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	100.0	4.4	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	9.9	-	5.1	-	-	0.0	-	-
66.7	80.0	4.4	-	-	11.0	-	0.0	-	-	0.0	-	-
66.7	100.0	4.4	-	-	0.0	-	0.0	-	-	-	-	-
70.0	80.0	0.0	-	-	9.3	-	0.0	-	-	-	-	-
73.3	60.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	55.0	0.0	-	0.0	0.0	-	32.9	-	-	0.0	-	-
76.7	100.0	0.0	-	19.0	0.0	-	0.0	-	-	0.0	-	-
80.0	51.0	0.0	-	0.0	0.0	-	9.5	-	-	0.0	-	-
80.0	55.0	0.0	-	15.7	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	5.0	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	0.0	-	-	4.9	-	-
82.0	46.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	19.0	-	27.3	0.0	-	0.0	-	-	10.5	-	-
83.3	100.0	17.7	-	10.7	0.0	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	10.4	-	0.0	0.0	-	-	0.0	-	-
86.7	45.0	0.0	-	0.0	-	0.0	11.2	-	-	0.0	-	-
86.7	60.0	0.0	-	0.0	-	0.0	11.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	0.0	-	16.1	-	-	10.3	-	-
90.0	35.0	0.0	0.0	10.1	-	0.0	0.0	-	-	0.0	-	-
90.0	37.0	0.0	5.4	0.0	-	0.0	5.1	-	-	0.0	-	-
90.0	45.0	0.0	0.0	8.4	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	0.0	0.0	0.0	-	0.0	36.2	-	-	-	-	-
90.0	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	-	-
90.0	80.0	0.0	-	-	-	0.0	0.0	-	-	-	-	-
90.0	90.0	19.8	-	-	-	0.0	0.0	-	-	-	-	-
90.0	26.7	4.9	-	-	-	0.0	0.0	-	-	0.0	-	-
93.3	29.0	0.0	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-
93.3	40.0	0.0	11.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	10.3	-	-

TABLE 4. (cont.)

STATION	Myctophidae (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	55.0	0.0	0.0	0.0	-	9.4	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	0.0	5.3	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.6	0.0	-	-	0.0	-	-
93.3	100.0	4.8	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	0.0	0.0	0.0	-	4.4	0.0	-	-	0.0	-	-
96.7	50.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.8	-	-
96.7	55.0	0.0	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	60.0	0.0	0.0	14.1	-	5.0	0.0	-	-	0.0	-	-
96.7	65.0	-	5.5	-	-	-	-	-	-	-	-	-
96.7	70.0	0.0	0.0	-	-	19.5	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	0.0	0.0	-	-	4.3	-	-
96.7	100.0	0.0	-	9.5	-	19.8	0.0	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	4.8	5.3	-	-	0.0	-	-
100.0	50.0	0.0	10.1	0.0	-	39.4	0.0	-	-	5.1	-	-
100.0	55.0	5.4	5.1	0.0	-	9.7	0.0	-	-	0.0	-	-
100.0	60.0	0.0	0.0	4.0	-	4.8	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	19.7	0.0	-	-	4.1	-	-
100.0	90.0	0.0	-	0.0	-	23.1	5.0	-	-	0.0	-	-
100.0	100.0	0.0	-	34.1	-	4.4	0.0	-	-	0.0	-	-
103.3	35.0	0.0	0.0	0.0	-	0.0	5.0	-	-	0.0	-	-
103.3	45.0	0.0	26.6	0.0	-	9.2	5.3	-	-	0.0	-	-
103.3	50.0	0.0	0.0	0.0	-	8.7	10.5	-	-	0.0	-	-
103.3	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.0	-	-
103.3	70.0	0.0	-	4.3	-	0.0	0.0	-	-	-	-	0.0
103.3	80.0	4.5	-	0.0	-	0.0	4.7	-	-	0.0	-	0.0
103.3	90.0	0.0	-	0.0	-	14.4	0.0	-	-	0.0	-	0.0
103.3	100.0	4.4	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0
106.7	40.0	0.0	16.6	0.0	-	5.2	8.6	-	-	0.0	-	0.0
106.7	50.0	0.0	5.6	5.6	-	0.0	0.0	-	-	0.0	-	0.0
106.7	60.0	0.0	0.0	-	-	0.0	0.0	-	-	0.0	-	0.0
106.7	65.0	-	4.3	-	-	-	5.1	-	-	-	-	0.0
106.7	80.0	0.0	0.0	-	-	-	-	-	-	-	-	10.4
106.7	90.0	0.0	0.0	0.0	-	18.3	5.1	-	-	0.0	-	0.0
106.7	100.0	0.0	0.0	0.0	-	0.0	0.0	-	-	10.1	-	0.0
110.0	40.0	0.0	0.0	0.0	-	10.6	0.0	-	-	-	-	0.0
110.0	45.0	0.0	0.0	0.0	-	19.6	0.0	-	-	-	-	0.0
110.0	50.0	0.0	0.0	0.0	-	5.0	0.0	-	-	-	-	0.0
110.0	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-	0.0
110.0	65.0	-	0.0	0.0	-	14.9	5.3	-	-	-	-	-
110.0	70.0	0.0	0.0	0.0	-	11.1	33.5	-	-	-	-	0.0
110.0	80.0	0.0	0.0	0.0	-	0.0	10.8	-	-	-	-	0.0
110.0	90.0	0.0	0.0	0.0	-	5.3	4.7	-	-	-	-	0.0
110.0	100.0	0.0	0.0	0.0	-	0.0	51.1	-	-	-	-	0.0

TABLE 4. (cont.)

*Bolinichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
106.7	90.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	5.0	-
<i>Ceratoscopelus townsendi</i>												
60.0	90.0	0.0	-	-	9.5	-	0.0	-	-	-	-	-
60.0	100.0	0.0	-	-	9.8	-	0.0	-	-	0.0	-	-
66.7	90.0	0.0	-	-	14.9	-	12.4	-	-	0.0	-	-
66.7	100.0	0.0	-	-	30.1	-	10.6	-	-	-	-	-
70.0	80.0	0.0	-	-	0.0	-	10.4	-	-	0.0	-	-
73.3	80.0	0.0	-	-	0.0	-	21.8	-	-	0.0	-	-
73.3	90.0	0.0	-	-	0.0	-	10.5	-	-	5.3	-	-
73.3	100.0	0.0	-	-	-	-	10.1	-	-	5.1	-	-
76.7	100.0	0.0	-	-	32.2	-	0.0	-	-	-	-	-
80.0	100.0	0.0	-	-	67.5	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	-	0.0	-	20.9	-	-	0.0	-	-
83.3	100.0	0.0	-	-	21.1	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	-	0.0	-	10.6	-	-	0.0	-	-
86.7	90.0	0.0	-	-	0.0	-	5.2	-	-	0.0	-	-
86.7	100.0	0.0	-	-	40.0	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
93.3	80.0	4.7	-	-	63.4	-	10.2	-	-	0.0	-	-
93.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
96.7	70.0	9.5	0.0	-	-	-	0.0	-	-	0.0	-	-
96.7	80.0	15.6	-	-	-	-	0.0	-	-	0.0	-	-
96.7	90.0	14.5	-	-	-	-	0.0	-	-	28.9	-	-
96.7	100.0	5.0	-	-	-	-	0.0	-	-	4.3	-	-
96.7	100.0	24.5	-	-	-	-	15.1	-	-	4.8	-	-
100.0	45.0	0.0	0.0	-	-	-	21.3	-	-	0.0	-	-
100.0	50.0	5.1	0.0	-	-	-	0.0	-	-	0.0	-	-
100.0	55.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
100.0	60.0	5.5	5.1	-	-	-	0.0	-	-	0.0	-	-
100.0	70.0	22.0	5.2	-	-	-	10.1	-	-	0.0	-	-
100.0	80.0	20.6	-	-	-	-	0.0	-	-	29.2	-	-
100.0	80.0	0.0	-	-	-	-	0.0	-	-	4.1	-	-
100.0	90.0	5.1	0.0	0.0	-	-	0.0	-	-	30.2	-	-
100.0	90.0	4.6	4.9	-	-	-	0.0	-	-	37.4	-	-
100.0	100.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
103.3	50.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	55.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	60.0	12.5	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	70.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	80.0	4.5	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	90.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
103.3	100.0	0.0	0.0	-	-	-	0.0	-	-	0.0	-	-
											62.1	
											14.9	
											9.9	
											4.8	

TABLE 4. (cont.)

*Ceratoscopelus townsendi* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
106.7 40.0	8.8	-	0.0	0.0	-	0.0	17.1	-	-	-	0.0	-
106.7 45.0	4.8	-	21.8	0.0	-	0.0	20.0	-	-	-	0.0	-
106.7 50.0	0.0	-	16.6	0.0	-	9.7	0.0	-	-	-	0.0	-
106.7 55.0	5.1	-	5.6	-	-	0.0	20.6	-	-	-	0.0	-
106.7 60.0	4.8	-	10.9	-	-	0.0	0.0	-	-	-	0.0	-
106.7 70.0	0.0	-	0.0	-	-	0.0	20.9	-	-	-	10.5	-
106.7 90.0	0.0	-	4.1	0.0	-	0.0	5.1	-	-	-	14.9	-
106.7 100.0	10.1	-	15.1	11.0	-	0.0	19.4	-	-	-	30.2	-
110.0 50.0	0.0	-	5.2	0.0	-	0.0	5.1	-	-	-	0.0	-
110.0 60.0	0.0	-	5.1	0.0	-	0.0	5.3	-	-	-	4.9	-
110.0 65.0	-	-	0.0	4.9	-	0.0	0.0	-	-	-	-	-
110.0 70.0	5.3	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0 80.0	0.0	-	0.0	0.0	-	0.0	0.0	-	-	-	9.7	-
110.0 90.0	8.9	-	8.1	0.0	-	0.0	0.0	-	-	-	14.3	-
110.0 100.0	19.4	-	9.3	0.0	-	0.0	0.0	-	-	-	25.4	-

*Diaphus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0 70.0	0.0	0.0	-	0.0	0.0	-	19.8	-	-	0.0	-	-
60.0 90.0	0.0	0.0	-	-	0.0	-	148.6	-	-	0.0	-	-
60.0 100.0	0.0	0.0	-	-	0.0	-	231.8	-	-	0.0	-	-
63.3 60.0	0.0	0.0	-	0.0	69.1	-	0.0	-	-	0.0	-	-
63.3 70.0	0.0	0.0	-	0.0	119.6	-	44.6	-	-	0.0	-	-
63.3 80.0	0.0	0.0	-	-	21.8	-	54.0	-	-	0.0	-	-
63.3 90.0	0.0	0.0	-	-	21.2	-	18.6	-	-	0.0	-	-
63.3 100.0	-	0.0	-	-	59.3	-	5.1	-	-	-	-	-
66.7 49.0	0.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
66.7 55.0	0.0	0.0	-	0.0	51.1	-	0.0	-	-	0.0	-	-
66.7 60.0	0.0	0.0	-	0.0	73.8	-	0.0	-	-	0.0	-	-
66.7 70.0	0.0	0.0	-	0.0	42.9	-	0.0	-	-	0.0	-	-
66.7 80.0	0.0	0.0	-	-	55.1	-	120.7	-	-	0.0	-	-
66.7 90.0	0.0	0.0	-	-	0.0	-	24.9	-	-	-	-	-
66.7 100.0	0.0	0.0	-	-	0.0	-	15.9	-	-	-	-	-
70.0 51.0	0.0	0.0	-	0.0	10.4	-	0.0	-	-	0.0	-	-
70.0 53.0	0.0	0.0	-	0.0	22.5	-	0.0	-	-	0.0	-	-
70.0 60.0	0.0	0.0	-	0.0	53.2	-	0.0	-	-	0.0	-	-
70.0 70.0	0.0	0.0	-	0.0	90.0	-	31.5	-	-	0.0	-	-
70.0 80.0	0.0	0.0	-	-	18.6	-	31.2	-	-	-	-	-
70.0 90.0	5.3	0.0	-	-	49.9	-	10.7	-	-	-	-	-
70.0 100.0	0.0	0.0	-	-	0.0	-	10.9	-	-	-	-	-
73.3 80.0	0.0	0.0	-	-	-	-	32.7	-	-	0.0	-	-
73.3 90.0	0.0	0.0	-	-	0.0	-	20.9	-	-	0.0	-	-
73.3 100.0	0.0	0.0	-	-	-	-	10.1	-	-	0.0	-	-
76.7 60.0	0.0	0.0	-	0.0	11.3	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Diaphus spp. (cont.)*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	70.0	0.0	-	0.0	0.0	-	11.8	-	-	0.0	-	-
76.7	80.0	0.0	-	0.0	10.9	-	20.4	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	37.7	-	10.0	-	-	-	-	-
76.7	100.0	0.0	-	0.0	0.0	-	20.7	-	-	-	-	-
80.0	70.0	0.0	-	0.0	20.9	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	0.0	0.0	-	22.3	-	-	10.0	-	-
80.0	90.0	0.0	-	0.0	0.0	-	21.9	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	72.3	-	-	0.0	-	-
83.3	70.0	0.0	-	0.0	0.0	-	42.2	-	-	0.0	-	-
83.3	80.0	0.0	-	0.0	0.0	-	10.4	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	31.2	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	-	5.3	0.0	-	9.9	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	10.8	-	90.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	20.4	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	10.4	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	0.0	0.0	0.0	-	5.2	-	-	5.2	-	-
90.0	45.0	-	0.0	8.4	0.0	0.0	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	-	20.2	19.5	-	-	-	-	-
90.0	90.0	0.0	-	-	-	9.4	30.0	-	-	0.0	-	-
93.3	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.0	10.8	-	-	0.0	-	-
93.3	100.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	8.3	-	27.4	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	4.8	0.0	-	-	0.0	-	-
100.0	30.0	-	0.0	0.0	-	0.0	8.5	-	-	0.0	-	-
100.0	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	9.8	-	4.9	0.0	-	-	0.0	-	-
106.7	45.0	-	0.0	0.0	-	4.6	0.0	-	-	-	0.0	-
106.7	90.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	35.0	-	0.0	4.5	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	-	0.0	0.0	-	0.0	5.1	-	-	-	0.0	-

*Lampadena urophaos*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	46.7	-	-
103.3	60.0	-	0.0	0.0	-	0.0	0.0	-	-	5.0	-	-
103.3	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.8	-
103.3	90.0	0.0	-	0.0	-	4.8	0.0	-	-	-	0.0	-
106.7	70.0	-	0.0	-	-	0.0	0.0	-	-	-	5.2	-
106.7	90.0	-	0.0	0.0	-	0.0	0.0	-	-	-	39.8	-
110.0	90.0	-	0.0	0.0	-	5.3	0.0	-	-	-	0.0	-

TABLE 4. (cont.)

STATION	<i>Lampanyctus</i> spp.											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	40.5	-	-	0.0	-	-	0.0	-	-
60.0	65.0	8.5	-	-	-	-	0.0	-	-	0.0	-	-
60.0	90.0	8.7	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	100.0	4.4	-	0.0	-	-	10.1	-	-	0.0	-	-
63.3	65.0	18.7	-	-	-	-	-	-	-	-	-	-
63.3	70.0	8.2	-	0.0	-	-	11.2	-	-	0.0	-	-
63.3	90.0	0.0	-	0.0	-	-	9.3	-	-	-	-	-
63.3	100.0	0.0	-	0.0	-	-	5.1	-	-	-	-	-
66.7	65.0	22.7	-	-	-	-	-	-	-	-	-	-
66.7	70.0	9.7	-	0.0	-	-	0.0	-	-	0.0	-	-
66.7	80.0	4.4	-	0.0	-	-	0.0	-	-	0.0	-	-
66.7	90.0	9.3	-	0.0	-	-	0.0	-	-	-	-	-
66.7	100.0	4.8	-	25.1	-	-	0.0	-	-	-	-	-
70.0	60.0	11.0	-	0.0	-	-	0.0	-	-	0.0	-	-
70.0	65.0	7.6	-	-	-	-	-	-	-	-	-	-
70.0	70.0	15.1	-	0.0	-	-	0.0	-	-	0.0	-	-
70.0	80.0	9.0	-	0.0	-	-	0.0	-	-	-	-	-
70.0	90.0	8.8	-	0.0	-	-	0.0	-	-	-	-	-
70.0	100.0	4.5	-	0.0	-	-	0.0	-	-	-	-	-
73.3	53.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	70.0	11.3	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	80.0	9.4	-	-	-	-	0.0	-	-	5.1	-	-
73.3	90.0	28.8	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3	100.0	38.0	-	20.9	-	-	0.0	-	-	0.0	-	-
76.7	60.0	20.9	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	70.0	7.7	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	90.0	17.7	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	100.0	4.0	-	5.0	-	-	0.0	-	-	5.1	-	-
80.0	90.0	8.5	-	9.5	-	-	0.0	-	-	-	-	-
80.0	100.0	4.0	-	19.8	-	-	0.0	-	-	0.0	-	-
83.3	51.0	5.1	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	65.0	10.5	-	-	-	-	-	-	-	-	-	-
83.3	80.0	5.5	-	0.0	-	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	5.4	-	-	0.0	-	-	0.0	-	-
83.3	100.0	17.7	-	26.7	-	-	0.0	-	-	0.0	-	-
86.7	45.0	31.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	0.0	-	-	21.9	-	-	0.0	-	-
86.7	70.0	10.4	-	0.0	-	-	10.0	-	-	0.0	-	-
86.7	80.0	0.0	-	10.0	-	-	0.0	-	-	0.0	-	-
86.7	90.0	16.6	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	100.0	19.0	-	21.3	-	-	0.0	-	-	0.0	-	-
90.0	35.0	-	-	10.1	-	-	0.0	-	-	0.0	-	-
90.0	45.0	-	-	0.0	-	-	0.0	-	-	4.9	-	-
90.0	60.0	10.8	-	-	-	-	0.0	-	-	0.0	-	-
90.0	80.0	5.0	-	-	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Lampanyctus</i> spp. (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	100.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	28.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	40.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	45.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	50.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	60.0	0.0	19.6	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0
93.3	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	80.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	100.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0
96.7	32.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	35.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	40.0	0.0	11.2	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	45.0	0.0	5.4	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	50.0	4.5	26.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	55.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	90.0	0.0	21.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	100.0	0.0	10.7	5.4	0.0	14.5	0.0	0.0	0.0	0.0	0.0	0.0
96.7	100.0	0.0	4.8	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
100.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	30.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	35.0	0.0	5.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	45.0	10.2	29.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	50.0	0.0	50.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	55.0	0.0	20.3	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	60.0	16.6	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
100.0	65.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	70.0	4.4	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	80.0	10.2	8.3	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
100.0	90.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	100.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	40.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	45.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	55.0	25.4	0.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
103.3	60.0	0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
103.3	70.0	5.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	80.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	35.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	50.0	0.0	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	55.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	55.0	0.0	13.1	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
106.7	90.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	100.0	5.0	4.1	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0
106.7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	32.5	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 4. (cont.)

*Lampanyctus spp.* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	45.0	0.0	5.4	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	0.0	25.9	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	60.0	0.0	5.1	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	100.0	0.0	0.0	0.0	-	5.0	0.0	-	-	-	0.0	-

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	90.0	0.0	-	-	10.6	-	0.0	-	-	-	-	-
63.3	100.0	0.0	-	-	9.9	-	0.0	-	-	-	-	-
66.7	80.0	0.0	-	-	33.1	-	0.0	-	-	0.0	-	-
70.0	90.0	0.0	-	-	20.0	-	0.0	-	-	-	-	-
73.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	0.0	0.0	-	0.0	-	-	10.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	0.0	-	-	5.3	-	-
86.7	50.0	0.0	-	0.0	0.0	0.0	0.0	-	-	4.8	-	-
86.7	80.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	5.2	-	-	0.0	-	-
90.0	53.0	0.0	0.0	-	0.0	0.0	10.1	-	-	0.0	-	-
90.0	90.0	0.0	-	-	0.0	0.0	10.0	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	-	-	5.0	0.0	-	-	0.0	-	-
103.3	45.0	0.0	0.0	0.0	-	9.2	0.0	-	-	0.0	-	-

*Lampanyctus regalis**Lampanyctus ritteri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	4.9	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	70.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	-	10.2	-	0.0	-	-	0.0	-	-
60.0	90.0	10.5	-	-	80.3	-	0.0	-	-	0.0	-	-
60.0	100.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	10.8	-	0.0	9.8	-	40.3	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	80.0	0.0	-	0.0	0.0	-	11.2	-	-	0.0	-	-
63.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	9.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	80.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
66.7	90.0	0.0	-	-	0.0	-	12.1	-	-	0.0	-	-
66.7	100.0	5.1	-	-	0.0	-	49.8	-	-	-	-	-
70.0	65.0	0.0	-	-	0.0	-	37.0	-	-	-	-	-
70.0	70.0	0.0	-	0.0	-	-	-	-	-	-	-	-
70.0	80.0	0.0	-	0.0	0.0	-	21.0	-	-	0.0	-	-
70.0	90.0	5.3	-	-	0.0	-	10.4	-	-	-	-	-
70.0	90.0	8.8	-	-	0.0	-	32.2	-	-	-	-	-



TABLE 4. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	50.0	6.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	53.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	60.0	0.0	-	20.7	-	-	0.0	-	-	0.0	-	-
73.3	70.0	7.5	-	0.0	0.0	-	0.0	-	-	5.1	-	-
73.3	80.0	10.2	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	90.0	5.3	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	-	0.0	-	50.7	-	-	0.0	-	-
76.7	70.0	0.0	-	9.9	0.0	-	11.8	-	-	0.0	-	-
76.7	80.0	0.0	-	0.0	21.8	-	0.0	-	-	0.0	-	-
76.7	100.0	0.0	-	0.0	32.2	-	41.4	-	-	0.0	-	-
80.0	60.0	10.4	-	0.0	0.0	-	0.0	-	-	-	-	-
80.0	70.0	0.0	-	10.2	0.0	-	9.7	-	-	0.0	-	-
80.0	80.0	0.0	-	18.7	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	22.5	-	0.0	-	-	0.0	-	-
82.0	46.0	11.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	4.4	-	-
83.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	70.0	0.0	-	0.0	10.9	-	10.5	-	-	0.0	-	-
83.3	80.0	0.0	-	31.7	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	5.6	-	32.7	20.8	-	41.9	-	-	10.7	-	-
83.3	100.0	0.0	-	0.0	0.0	-	19.8	-	-	0.0	-	-
86.7	40.0	5.3	-	0.0	-	5.2	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	9.6	-	49.8	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	5.3	-	30.4	0.0	-	15.5	-	-	0.0	-	-
86.7	100.0	0.0	-	0.0	30.0	-	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	0.0	-	9.9	0.0	-	-	0.0	-	-
90.0	60.0	10.3	-	0.0	-	0.0	0.0	-	-	-	-	-
90.0	70.0	0.0	-	-	-	10.1	0.0	-	-	-	-	-
90.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	-	-	-
90.0	100.0	4.9	-	0.0	-	0.0	-	-	-	0.0	-	-
93.3	30.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	40.0	-	0.0	4.6	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	-	5.9	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	-	0.0	0.0	-	0.0	0.0	-	-	4.7	-	-
93.3	55.0	-	0.0	20.7	-	0.0	0.0	-	-	0.0	-	-
93.3	60.0	-	0.0	5.2	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	10.8	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	-	9.7	30.6	-	-	0.0	-	-
93.3	90.0	0.0	-	4.9	-	0.0	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
96.7	30.0	-	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-
96.7	32.0	-	0.0	0.0	-	0.0	4.8	-	-	0.0	-	-
96.7	35.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	-	0.0	0.0	-	0.0	0.0	-	-	9.5	-	-

TABLE 4. (cont.)

<i>Lampanyctus ritteri</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	45.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	50.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	60.0	5.4	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	70.0	5.2	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	80.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
100.0	40.0	0.0	0.0	20.2	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0
100.0	50.0	5.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	55.0	0.0	5.1	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	60.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	70.0	4.4	10.3	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	80.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	90.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	35.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
103.3	40.0	5.1	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	40.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	55.0	5.1	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	65.0	36.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	80.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	100.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	35.0	0.0	0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	40.0	4.4	5.1	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	50.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	55.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	32.5	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	45.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

<i>Notolychnus valdiviae</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	100.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.7	90.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.7	100.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
100.0	100.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0
103.3	60.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.0	14.8	0.0
110.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0

<i>Notoscopelus resplendens</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	80.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 4. (cont.)

*Notoscolopelus resplendens* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	100.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	9.8	0.0	0.0	-	-	-	0.0	-	-
100.0	70.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-
106.7	45.0	0.0	0.0	4.7	0.0	0.0	0.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	4.5	-

*Stenobranchius leucopsarus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	0.0	-	0.0	0.0	-	19.6	-	-	0.0	-	-
60.0	52.5	61.1	-	13.6	0.0	-	0.0	-	-	0.0	-	-
60.0	55.0	96.8	-	145.6	61.9	-	16.5	-	-	0.0	-	-
60.0	60.0	44.1	-	840.0	-	-	0.0	-	-	0.0	-	-
60.0	65.0	119.4	-	-	-	-	-	-	-	-	-	-
60.0	70.0	21.4	-	205.2	20.4	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	90.4	90.4	-	0.0	-	-	0.0	-	-
60.0	90.0	0.0	-	4.8	-	-	0.0	-	-	0.0	-	-
60.0	100.0	0.0	-	17.7	4.9	-	0.0	-	-	0.0	-	-
63.3	50.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	52.0	28.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	19.5	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	86.3	-	0.0	10.8	-	0.0	-	-	0.0	-	-
63.3	60.0	244.3	-	10.9	0.0	-	0.0	-	-	0.0	-	-
63.3	65.0	74.1	-	33.8	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	74.1	-	-	9.9	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	49.0	137.3	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	50.0	255.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	55.0	468.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
66.7	60.0	97.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	65.0	75.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	70.0	77.9	-	79.2	21.4	-	0.0	-	-	0.0	-	-
66.7	90.0	4.6	-	0.0	0.0	-	0.0	-	-	-	-	-
66.7	100.0	22.0	-	0.0	0.0	-	0.0	-	-	-	-	-
70.0	51.0	38.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	53.0	160.5	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	60.0	285.9	-	85.7	0.0	-	0.0	-	-	0.0	-	-
70.0	65.0	38.0	-	-	-	-	-	-	-	-	-	-
70.0	70.0	75.5	-	21.3	0.0	-	0.0	-	-	0.0	-	-
70.0	90.0	8.8	-	0.0	0.0	-	0.0	-	-	-	-	-
70.0	100.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
73.3	50.0	205.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	53.0	81.9	-	73.3	10.3	-	0.0	-	-	0.0	-	-
73.3	60.0	112.4	-	103.5	-	-	10.3	-	-	0.0	-	-
73.3	65.0	4.9	-	-	-	-	-	-	-	-	-	-
73.3	70.0	94.0	-	50.8	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	<i>Stenobrachius leucopsarus</i> (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	80.0	276.1	-	-	-	-	0.0	-	-	0.0	-	-
73.3	90.0	19.2	-	-	-	-	0.0	-	-	0.0	-	-
73.3	100.0	3.8	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	48.0	10.4	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	51.0	41.2	-	39.8	-	-	0.0	-	-	0.0	-	-
76.7	55.0	152.0	-	40.5	-	-	0.0	-	-	0.0	-	-
76.7	60.0	344.3	-	578.5	-	-	21.7	-	-	0.0	-	-
76.7	65.0	186.2	-	-	-	-	-	-	-	-	-	-
76.7	70.0	231.2	-	59.6	-	-	0.0	-	-	0.0	-	-
76.7	80.0	176.6	-	32.8	-	-	0.0	-	-	0.0	-	-
76.7	90.0	53.2	-	0.0	-	-	0.0	-	-	-	-	-
80.0	51.0	20.1	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	55.0	72.7	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	60.0	146.0	-	77.6	-	-	0.0	-	-	0.0	-	-
80.0	70.0	121.0	-	91.4	-	-	0.0	-	-	0.0	-	-
80.0	80.0	14.3	-	9.4	-	-	0.0	-	-	0.0	-	-
80.0	90.0	84.5	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	100.0	15.8	-	20.1	-	-	0.0	-	-	0.0	-	-
82.0	46.0	61.5	-	10.6	-	-	0.0	-	-	0.0	-	-
83.3	40.6	0.0	-	4.3	-	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	-	112.9	-	-	0.0	-	-	0.0	-	-
83.3	51.0	0.0	-	37.3	-	-	10.0	-	-	0.0	-	-
83.3	55.0	37.6	-	42.3	-	-	0.0	-	-	0.0	-	-
83.3	60.0	32.0	-	78.8	-	-	0.0	-	-	0.0	-	-
83.3	65.0	115.5	-	-	-	-	-	-	-	-	-	-
83.3	70.0	94.5	-	10.6	-	-	10.5	-	-	0.0	-	-
83.3	80.0	16.4	-	21.2	-	-	0.0	-	-	0.0	-	-
83.3	100.0	26.5	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	33.0	36.3	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	35.0	73.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	40.0	10.6	-	21.1	-	-	5.3	-	-	0.0	-	-
86.7	45.0	126.2	-	73.4	-	-	0.0	-	-	0.0	-	-
86.7	50.0	51.2	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	55.0	69.4	-	0.0	-	-	20.4	-	-	0.0	-	-
86.7	60.0	254.4	-	0.0	-	-	11.0	-	-	0.0	-	-
86.7	65.0	80.3	-	136.1	-	-	-	-	-	-	-	-
86.7	70.0	5.2	-	43.0	-	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	59.8	-	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	30.4	-	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	-	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	28.6	0.0	-	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	21.3	0.0	-	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	0.0	0.0	-	-	9.8	-	-	0.0	-	-
90.0	37.0	0.0	0.0	9.3	-	-	0.0	-	-	0.0	-	-
90.0	45.0	0.0	43.2	0.0	-	-	0.0	-	-	0.0	-	-
90.0	53.0	0.0	0.0	0.0	-	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

Stenobranchius leucopsarus (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	60.0	0.0	118.6	-	-	0.0	0.0	-	-	-	-	-
90.0	70.0	113.4	-	31.0	41.1	0.0	0.0	-	-	-	-	-
90.0	80.0	10.0	-	-	20.2	0.0	0.0	-	-	-	-	-
90.0	90.0	4.8	-	-	0.0	0.0	0.0	-	0.0	0.0	-	-
90.0	100.0	5.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	26.7	-	9.8	6.9	0.0	0.0	0.0	-	-	-	-	-
93.3	28.0	-	23.6	-	-	-	-	-	-	-	-	-
93.3	29.0	-	37.9	41.2	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	30.0	-	12.4	16.0	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	35.0	-	46.6	9.2	0.0	20.5	0.0	-	0.0	0.0	-	-
93.3	40.0	4.4	0.0	13.7	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	45.0	0.0	5.9	62.9	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	50.0	-	33.2	44.8	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	55.0	-	10.3	0.0	37.6	5.0	5.3	-	0.0	0.0	-	-
93.3	60.0	-	176.7	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	70.0	-	100.2	9.1	0.0	0.0	0.0	-	0.0	0.0	-	-
93.3	80.0	39.5	-	8.2	0.0	40.8	0.0	-	0.0	0.0	-	-
96.7	32.0	-	5.3	24.5	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	40.0	-	11.2	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	50.0	-	5.2	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	55.0	-	15.2	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	60.0	-	53.3	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	65.0	-	16.4	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
96.7	70.0	10.4	54.3	-	-	9.7	0.0	-	0.0	0.0	-	-
96.7	80.0	0.0	-	0.0	45.6	0.0	0.0	-	0.0	0.0	-	-
96.7	100.0	0.0	21.8	0.0	9.9	0.0	0.0	-	0.0	0.0	-	-
100.0	30.0	0.0	-	20.9	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	40.0	0.0	10.9	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	45.0	0.0	11.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	50.0	0.0	14.7	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	55.0	0.0	0.0	0.0	4.9	0.0	0.0	-	0.0	0.0	-	-
100.0	65.0	0.0	15.2	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
100.0	65.0	9.4	-	-	-	-	-	-	-	-	-	-
103.3	35.0	-	0.0	19.4	4.6	0.0	0.0	-	0.0	0.0	-	-
103.3	40.0	-	0.0	24.6	0.0	0.0	0.0	-	0.0	0.0	-	-
103.3	45.0	-	10.1	9.8	0.0	0.0	0.0	-	0.0	0.0	-	-
103.3	60.0	4.2	20.3	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
103.3	65.0	-	-	-	-	-	-	-	-	-	-	-
106.7	40.0	5.2	0.0	0.0	10.4	0.0	0.0	-	-	-	0.0	-
106.7	50.0	-	11.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-

## Triphoturus mexicanus

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	60.0	0.0	-	0.0	0.0	-	19.3	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	<i>Tripoturus mexicanus</i> (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
70.0	60.0	0.0	-	0.0	0.0	-	11.2	-	-	0.0	-	0.0
73.3	100.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0
76.7	55.0	0.0	-	0.0	-	-	11.0	-	-	16.3	-	16.3
76.7	60.0	0.0	-	0.0	-	-	21.7	-	-	15.5	-	15.5
80.0	60.0	0.0	-	0.0	-	-	0.0	-	-	15.1	-	15.1
80.0	70.0	0.0	-	0.0	-	-	9.7	-	-	9.3	-	9.3
82.0	46.0	0.0	-	0.0	-	-	11.1	-	-	11.7	-	11.7
83.3	40.6	0.0	-	4.3	-	-	4.5	-	-	3.9	-	3.9
83.3	42.0	0.0	-	0.0	-	-	32.9	-	-	10.5	-	10.5
83.3	51.0	0.0	-	0.0	-	-	55.1	-	-	4.4	-	4.4
83.3	55.0	0.0	-	0.0	-	-	32.0	-	-	48.5	-	48.5
83.3	60.0	0.0	-	0.0	-	-	0.0	-	-	10.8	-	10.8
83.3	70.0	0.0	-	0.0	-	-	0.0	-	-	21.9	-	21.9
83.3	80.0	0.0	-	0.0	-	-	10.5	-	-	21.4	-	21.4
83.3	100.0	0.0	-	5.3	10.6	-	0.0	-	-	0.0	-	0.0
86.7	33.0	0.0	-	0.0	0.0	0.0	0.0	-	-	15.3	-	15.3
86.7	35.0	0.0	-	0.0	11.1	26.0	5.3	-	-	15.5	-	15.5
86.7	40.0	0.0	-	0.0	0.0	0.0	16.6	-	-	0.0	-	0.0
86.7	45.0	0.0	-	0.0	0.0	0.0	0.0	-	-	5.4	-	5.4
86.7	50.0	0.0	-	0.0	0.0	0.0	0.0	-	-	4.8	-	4.8
86.7	55.0	0.0	-	0.0	0.0	0.0	20.4	-	-	0.0	-	0.0
86.7	60.0	0.0	-	0.0	0.0	0.0	11.0	-	-	19.9	-	19.9
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	15.8	-	15.8
90.0	28.0	0.0	-	0.0	0.0	-	0.0	-	-	5.2	-	5.2
90.0	30.0	0.0	0.0	0.0	9.5	20.2	31.7	-	-	0.0	-	0.0
90.0	37.0	0.0	10.7	0.0	20.2	0.0	0.0	-	-	0.0	-	0.0
90.0	45.0	0.0	0.0	0.0	39.5	15.3	15.3	-	-	0.0	-	0.0
90.0	53.0	0.0	0.0	0.0	30.5	4.9	4.9	-	-	0.0	-	0.0
90.0	60.0	0.0	0.0	0.0	0.0	30.3	30.3	-	-	0.0	-	0.0
93.3	26.7	0.0	0.0	0.0	0.0	45.2	45.2	-	-	0.0	-	0.0
93.3	28.0	0.0	0.0	0.0	0.0	24.5	24.5	-	-	0.0	-	0.0
93.3	29.0	0.0	5.9	20.6	-	-	-	-	-	5.2	-	5.2
93.3	30.0	0.0	10.8	0.0	0.0	0.0	38.8	-	-	0.0	-	0.0
93.3	35.0	0.0	0.0	0.0	0.0	60.5	60.5	-	-	0.0	-	0.0
93.3	40.0	0.0	0.0	0.0	9.8	71.6	71.6	-	-	0.0	-	0.0
93.3	45.0	0.0	0.0	0.0	35.9	18.9	18.9	-	-	5.1	-	5.1
93.3	50.0	0.0	5.9	0.0	9.8	32.6	32.6	-	-	0.0	-	0.0
93.3	55.0	0.0	11.1	0.0	59.1	14.2	14.2	-	-	0.0	-	0.0
93.3	60.0	0.0	0.0	41.5	0.0	105.6	105.6	-	-	9.8	-	9.8
93.3	70.0	0.0	0.0	5.2	0.0	42.0	42.0	-	-	0.0	-	0.0
93.3	80.0	0.0	0.0	0.0	17.5	21.8	21.8	-	-	0.0	-	0.0
93.3	90.0	0.0	0.0	0.0	0.0	40.8	40.8	-	-	0.0	-	0.0
93.3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0
96.7	29.0	0.0	0.0	0.0	0.0	0.0	17.0	-	-	0.0	-	0.0
96.7	30.0	0.0	0.0	0.0	0.0	0.0	19.2	-	-	0.0	-	0.0

TABLE 4. (cont.)

*Triphoturus mexicanus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	32.0	0.0	5.3	0.0	-	0.0	9.7	-	-	0.0	-	-
96.7	35.0	0.0	25.3	10.0	4.4	4.4	14.7	-	-	0.0	-	-
96.7	40.0	0.0	0.0	0.0	81.9	25.2	25.2	-	-	9.5	-	-
96.7	45.0	0.0	10.9	0.0	4.9	122.8	4.9	-	-	0.0	-	-
96.7	50.0	0.0	20.9	0.0	9.4	250.2	9.4	-	-	0.0	-	-
96.7	55.0	0.0	10.1	0.0	5.0	41.4	41.4	-	-	0.0	-	-
96.7	60.0	0.0	4.8	14.1	-	0.0	-	-	-	-	-	-
96.7	65.0	-	10.9	-	-	41.6	-	-	-	0.0	-	-
96.7	70.0	4.4	0.0	0.0	18.3	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	21.5	4.8	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	0.0	14.3	0.0	0.0	0.0	-	-	0.0	-	-
96.7	100.0	0.0	9.8	0.0	19.5	4.7	4.7	-	-	0.0	-	-
100.0	29.2	-	0.0	0.0	66.7	50.9	50.9	-	-	5.4	-	-
100.0	30.0	0.0	0.0	0.0	4.8	142.8	142.8	-	-	5.3	-	-
100.0	35.0	0.0	5.4	18.0	4.4	104.2	104.2	-	-	10.2	-	-
100.0	40.0	0.0	0.0	80.8	9.5	143.9	143.9	-	-	0.0	-	-
100.0	45.0	0.0	19.6	33.0	19.7	33.1	33.1	-	-	0.0	-	-
100.0	50.0	0.0	71.0	67.6	0.0	82.6	82.6	-	-	0.0	-	-
100.0	55.0	0.0	35.6	13.8	0.0	101.1	101.1	-	-	0.0	-	-
100.0	60.0	5.5	5.2	0.0	35.1	59.0	59.0	-	-	0.0	-	-
100.0	70.0	0.0	-	0.0	4.9	21.3	21.3	-	-	4.1	-	-
100.0	80.0	0.0	-	0.0	4.6	0.0	0.0	-	-	10.1	-	-
100.0	90.0	0.0	0.0	0.0	8.7	0.0	0.0	-	-	37.4	-	-
100.0	100.0	0.0	0.0	0.0	0.0	5.2	5.2	-	-	4.7	-	-
103.3	30.0	0.0	0.0	0.0	0.0	30.2	30.2	-	-	0.0	-	-
103.3	35.0	0.0	0.0	0.0	0.0	106.0	106.0	-	-	0.0	-	-
103.3	40.0	0.0	15.7	0.0	9.2	226.6	226.6	-	-	0.0	-	-
103.3	45.0	0.0	5.3	15.6	0.0	73.5	73.5	-	-	0.0	-	-
103.3	50.0	0.0	0.0	15.1	9.6	115.7	115.7	-	-	18.9	-	-
103.3	55.0	0.0	0.0	0.0	10.0	26.6	26.6	-	-	0.0	-	-
103.3	60.0	0.0	0.0	0.0	73.5	14.0	14.0	-	-	66.9	-	-
103.3	70.0	0.0	-	0.0	19.4	19.0	19.0	-	-	5.0	-	-
103.3	80.0	0.0	-	0.0	14.4	18.8	18.8	-	-	24.7	-	-
103.3	90.0	0.0	-	0.0	14.1	38.8	38.8	-	-	19.3	-	-
103.3	100.0	0.0	-	0.0	0.0	8.5	8.5	-	-	0.0	-	-
106.7	32.0	0.0	21.1	0.0	0.0	146.2	146.2	-	-	5.3	-	-
106.7	35.0	0.0	42.2	25.5	0.0	222.9	222.9	-	-	5.2	-	-
106.7	40.0	0.0	30.8	18.8	20.8	129.7	129.7	-	-	0.0	-	-
106.7	45.0	0.0	39.2	14.1	19.7	143.0	143.0	-	-	0.0	-	-
106.7	50.0	0.0	38.6	5.6	58.1	25.7	25.7	-	-	5.0	-	-
106.7	55.0	0.0	16.7	-	7.1	61.0	61.0	-	-	0.0	-	-
106.7	60.0	0.0	4.3	-	-	-	-	-	-	-	-	-
106.7	65.0	0.0	0.0	-	-	4.7	4.7	-	-	0.0	-	-
106.7	70.0	0.0	0.0	-	-	47.5	47.5	-	-	0.0	-	-
106.7	80.0	0.0	0.0	0.0	-	40.6	40.6	-	-	34.9	-	-
106.7	90.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-	-

TABLE 4. (cont.)

*Triphoturus mexicanus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
106.7	100.0	-	0.0	0.0	-	0.0	19.4	-	-	-	15.1	-
110.0	32.4	-	0.0	0.0	-	3.9	0.0	-	-	-	0.0	-
110.0	35.0	-	0.0	0.0	-	0.0	91.5	-	-	-	4.7	-
110.0	40.0	-	10.4	0.0	-	26.6	58.9	-	-	-	4.9	-
110.0	45.0	-	70.5	0.0	-	19.6	69.9	-	-	-	5.1	-
110.0	50.0	-	62.2	24.6	-	50.2	87.2	-	-	-	26.8	-
110.0	55.0	-	20.0	9.3	-	57.6	64.2	-	-	-	29.1	-
110.0	60.0	-	0.0	8.9	-	42.4	95.4	-	-	-	29.6	-
110.0	65.0	-	0.0	147.6	-	64.7	112.8	-	-	-	-	-
110.0	70.0	-	0.0	67.9	-	16.7	71.8	-	-	-	32.1	-
110.0	80.0	-	0.0	15.4	-	0.0	75.7	-	-	-	0.0	-
110.0	90.0	-	8.1	0.0	-	42.5	37.3	-	-	-	0.0	-
110.0	100.0	-	0.0	0.0	-	5.0	61.3	-	-	-	0.0	-

*Diogenichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	90.0	0.0	-	-	5.0	-	0.0	-	-	-	-	-
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	5.3	-	-
93.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	45.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	-	0.0	0.0	-	0.0	0.0	-	-	5.3	-	-
96.7	90.0	0.0	-	0.0	-	0.0	0.0	-	-	4.3	-	-
96.7	100.0	0.0	-	0.0	-	0.0	10.7	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	10.1	-	-
100.0	90.0	0.0	-	0.0	-	0.0	0.0	-	-	65.4	-	-
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	40.0	-	0.0	0.0	-	0.0	0.0	-	-	-	-	-
103.3	100.0	0.0	0.0	0.0	-	0.0	4.8	-	-	-	0.0	-
106.7	31.0	-	0.0	0.0	-	0.0	3.9	-	-	-	0.0	-
106.7	40.0	-	0.0	0.0	-	0.0	8.6	-	-	-	0.0	-
106.7	50.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	55.0	-	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	-	0.0	-	-	0.0	20.9	-	-	-	0.0	-
106.7	80.0	-	0.0	-	-	0.0	4.8	-	-	-	0.0	-
110.0	35.0	-	0.0	0.0	-	0.0	5.7	-	-	-	0.0	-
110.0	45.0	-	0.0	0.0	-	9.8	10.0	-	-	-	0.0	-
110.0	50.0	-	0.0	0.0	-	0.0	20.5	-	-	-	0.0	-
110.0	60.0	-	0.0	0.0	-	0.0	37.1	-	-	-	0.0	-
110.0	65.0	-	0.0	0.0	-	0.0	75.2	-	-	-	-	-
110.0	70.0	-	0.0	4.8	-	0.0	0.0	-	-	-	0.0	-
110.0	100.0	-	0.0	0.0	-	0.0	15.3	-	-	-	0.0	-



TABLE 4. (cont.)

*Diogenichthys atlanticus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	5.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	100.0	0.0	-	-	0.0	-	0.0	-	-	4.9	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
66.7	90.0	4.6	-	-	0.0	-	0.0	-	-	-	-	-
66.7	100.0	0.0	-	-	5.0	-	0.0	-	-	-	-	-
70.0	90.0	26.4	-	-	10.0	-	0.0	-	-	-	-	-
70.0	100.0	0.0	-	-	9.1	-	0.0	-	-	0.0	-	-
73.3	53.0	0.0	-	0.0	0.0	-	0.0	-	-	5.3	-	-
73.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	100.0	15.2	-	-	-	-	0.0	-	-	-	-	-
76.7	90.0	0.0	-	5.0	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	0.0	10.7	-	0.0	-	-	0.0	-	-
80.0	90.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	80.0	10.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	-	16.0	0.0	-	0.0	-	-	0.0	-	-
86.7	45.0	0.0	-	0.0	-	0.0	0.0	-	-	5.5	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.4	-	-
86.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	10.0	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	20.2	0.0	-	0.0	-	-	0.0	-	-
90.0	30.0	0.0	0.0	21.3	0.0	-	5.2	-	-	15.6	-	-
90.0	37.0	-	0.0	0.0	-	0.0	0.0	-	-	9.0	-	-
90.0	80.0	5.0	-	-	-	0.0	0.0	-	-	5.0	-	-
90.0	90.0	0.0	-	-	-	0.0	0.0	-	-	-	-	-
90.0	100.0	9.7	-	-	-	0.0	0.0	-	-	-	-	-
93.3	40.0	-	0.0	4.9	-	0.0	-	-	-	0.0	-	-
93.3	45.0	-	0.0	4.6	-	0.0	0.0	-	-	5.2	-	-
93.3	55.0	-	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
93.3	60.0	-	0.0	0.0	-	9.4	0.0	-	-	4.9	-	-
93.3	70.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	4.3	0.0	4.9	-	0.0	0.0	-	-	8.8	-	-
93.3	100.0	14.3	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	3.8	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	-	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-
96.7	45.0	-	0.0	0.0	-	0.0	0.0	-	-	9.5	-	-
96.7	50.0	-	5.2	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	60.0	-	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
96.7	70.0	36.3	0.0	0.0	-	29.2	0.0	-	-	0.0	-	-
96.7	80.0	4.8	-	8.3	-	4.8	21.9	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	100.0	14.7	0.0	0.0	-	0.0	0.0	-	-	4.8	-	-
100.0	29.2	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

<i>Diogenichthys atlanticus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	19.2	-	-
100.0	60.0	0.0	5.2	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	5.1	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	20.5	-	-
100.0	90.0	0.0	-	0.0	-	0.0	0.0	-	-	20.1	-	-
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	9.3	-	-
103.3	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.0	-	-
103.3	50.0	0.0	0.0	0.0	-	0.0	0.0	-	-	9.5	-	-
103.3	55.0	5.1	10.1	0.0	-	0.0	0.0	-	-	35.5	-	-
103.3	60.0	0.0	5.1	9.8	-	20.1	0.0	-	-	10.1	-	-
103.3	65.0	10.5	-	-	-	-	-	-	-	-	19.1	-
103.3	70.0	4.5	-	0.0	-	15.8	0.0	-	-	-	5.0	-
103.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.9	-
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	19.3	-
103.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	-	10.4	-
106.7	40.0	0.0	5.1	4.7	-	0.0	0.0	-	-	-	0.0	-
106.7	45.0	4.8	4.4	18.8	-	4.9	20.0	-	-	-	0.0	-
106.7	50.0	4.6	0.0	5.6	-	0.0	0.0	-	-	-	0.0	-
106.7	60.0	0.0	5.4	-	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	0.0	0.0	-	-	4.7	0.0	-	-	-	5.2	-
106.7	80.0	0.0	0.0	-	-	-	0.0	-	-	-	5.0	-
106.7	90.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	10.1	-
106.7	100.0	5.0	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	35.0	0.0	0.0	0.0	-	0.0	5.7	-	-	-	0.0	-
110.0	40.0	0.0	0.0	4.7	-	10.6	0.0	-	-	-	5.1	-
110.0	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	24.6	-	0.0	5.1	-	-	-	9.7	-
110.0	55.0	9.2	5.1	4.7	-	0.0	0.0	-	-	-	14.8	-
110.0	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	4.6	-
110.0	70.0	0.0	0.0	4.8	-	0.0	0.0	-	-	-	9.5	-
110.0	90.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-	-

<i>Diogenichthys laternatus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	80.0	4.7	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	90.0	5.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	100.0	4.9	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	5.1	0.0	0.0	-	0.0	0.0	-	-	10.2	-	-
100.0	70.0	22.0	-	-	-	0.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	90.0	15.1	-	0.0	-	0.0	0.0	-	-	20.1	-	-
100.0	100.0	5.1	-	0.0	-	0.0	0.0	-	-	4.7	-	-
103.3	50.0	4.6	0.0	0.0	-	0.0	10.5	-	-	0.0	-	-
103.3	50.0	7.5	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	50.0	-	-	0.0	-	0.0	0.0	-	-	-	-	-

TABLE 4. (cont.)

*Diogenichthys laternatus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	55.0	0.0	0.0	0.0	-	0.0	30.2	-	-	5.1	-	-
103.3	60.0	4.2	0.0	0.0	-	0.0	0.0	-	-	115.9	-	-
103.3	65.0	-	-	-	-	-	-	-	-	-	-	-
103.3	70.0	5.2	-	0.0	-	0.0	0.0	-	-	-	28.7	-
103.3	80.0	4.5	-	0.0	-	4.8	0.0	-	-	-	79.5	-
103.3	80.0	0.0	-	0.0	-	4.8	0.0	-	-	-	34.6	-
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	193.2	-
103.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	-	5.3	-
106.7	35.0	0.0	0.0	0.0	-	0.0	5.0	-	-	-	0.0	-
106.7	40.0	4.4	5.1	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	45.0	4.8	4.4	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	60.0	-	5.4	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	-	0.0	-	-	0.0	0.0	-	-	-	68.1	-
106.7	80.0	-	0.0	-	-	0.0	0.0	-	-	-	10.4	-
106.7	90.0	-	0.0	-	-	4.6	0.0	-	-	-	134.5	-
106.7	100.0	-	0.0	-	-	0.0	0.0	-	-	-	55.4	-
110.0	35.0	-	0.0	-	-	0.0	0.0	-	-	-	9.3	-
110.0	40.0	-	5.2	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	45.0	-	0.0	-	-	0.0	0.0	-	-	-	0.0	-
110.0	50.0	11.0	10.4	0.0	-	5.0	10.3	-	-	-	0.0	-
110.0	55.0	0.0	0.0	4.7	-	0.0	0.0	-	-	-	14.6	-
110.0	60.0	0.0	0.0	0.0	-	21.2	0.0	-	-	-	14.8	-
110.0	65.0	-	0.0	9.8	-	0.0	0.0	-	-	-	4.6	-
110.0	70.0	-	0.0	9.7	-	0.0	0.0	-	-	-	19.4	-
110.0	80.0	-	0.0	0.0	-	0.0	16.2	-	-	-	14.3	-
110.0	90.0	-	0.0	0.0	-	37.2	32.6	-	-	-	40.6	-
110.0	100.0	-	0.0	0.0	-	0.0	0.0	-	-	-	-	-

*Electrona rissoi*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	100.0	0.0	-	-	5.0	-	0.0	-	-	-	-	-
70.0	80.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
80.0	90.0	11.9	-	0.0	19.4	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	4.8	-	10.1	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	0.0	10.0	-	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	0.0	-	0.0	0.0	-	-	-	-	-
90.0	90.0	0.0	-	-	-	0.0	10.0	-	-	0.0	-	-
90.0	100.0	0.0	-	4.9	-	0.0	-	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	4.7	-	9.8	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	0.0	-	9.1	0.0	-	-	0.0	-	-
96.7	100.0	4.9	-	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Electrona rissoi* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	70.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	60.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Gonichthys tenuiculus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
103.3	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
106.7	50.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0	4.8	0.0
106.7	90.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	55.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	60.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0
110.0	65.0	0.0	0.0	0.0	0.0	5.0	5.4	0.0	0.0	0.0	0.0	0.0
110.0	70.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	80.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0
110.0	90.0	0.0	4.0	0.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0	0.0
110.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0

*Hygophum* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	100.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
103.3	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0
110.0	65.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Hygophum atratum</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	60.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
103.3	80.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0
103.3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0
106.7	50.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.7	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
110.0	40.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
110.0	50.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	55.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	80.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 4. (cont.)

*Hygophum reinhardtii*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
70.0	90.0	5.3	0.0	0.0	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	4.0	0.0	0.0	-	0.0	-	-	-	-	-
80.0	90.0	0.0	0.0	5.0	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	0.0	5.4	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	0.0	16.0	0.0	-	0.0	-	-	0.0	-	-
93.3	90.0	4.3	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	55.0	0.0	0.0	0.0	0.0	4.7	0.0	-	-	0.0	-	-
96.7	80.0	0.0	8.7	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	100.0	19.6	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	70.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	4.8	-
106.7	70.0	0.0	0.0	0.0	0.0	0.0	5.1	-	-	-	10.5	-
106.7	90.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	5.0	-
106.7	100.0	10.1	0.0	0.0	0.0	0.0	0.0	-	-	-	5.1	-
110.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	9.9	-
110.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-
110.0	70.0	0.0	0.0	4.8	0.0	0.0	0.0	-	-	-	0.0	-
110.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	5.1	-

*Loweina rara*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	0.0	0.0	10.3	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	0.0	5.3	0.0	-	0.0	-	-	0.0	-	-
93.3	70.0	5.4	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	70.0	5.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-
106.7	35.0	0.0	5.3	0.0	0.0	0.0	0.0	-	-	-	0.0	-
106.7	45.0	0.0	4.4	0.0	0.0	0.0	0.0	-	-	-	0.0	-
106.7	70.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	5.2	-

*Myctophum nitidulum*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	100.0	0.0	0.0	5.3	0.0	-	0.0	-	-	0.0	-	-
90.0	90.0	4.9	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	45.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	5.2	-	-
93.3	70.0	5.4	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
93.3	80.0	4.7	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	3.6	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	100.0	4.9	4.8	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	90.0	10.0	4.6	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	100.0	5.1	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	60.0	8.3	0.0	0.0	0.0	0.0	0.0	-	-	10.1	-	-
103.3	80.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	5.0	-

TABLE 4. (cont.)

<i>Myctophum nitidulum</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.9	-
103.3	100.0	4.4	-	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	0.0	5.3	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	90.0	-	0.0	0.0	-	0.0	0.0	-	-	-	5.0	-
106.7	100.0	-	5.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	4.9	-
110.0	70.0	5.3	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
<i>Protomyctophum crockeri</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	12.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	60.0	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
60.0	65.0	25.6	-	-	-	-	-	-	-	-	-	-
60.0	70.0	5.1	-	10.8	0.0	-	0.0	-	-	10.5	-	-
60.0	80.0	10.1	-	-	30.1	-	0.0	-	-	0.0	-	-
60.0	90.0	0.0	-	-	9.5	-	0.0	-	-	0.0	-	-
60.0	100.0	0.0	-	-	0.0	-	10.1	-	-	9.9	-	-
63.3	55.0	0.0	-	0.0	43.3	-	0.0	-	-	10.8	-	-
63.3	60.0	32.3	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	65.0	-	-	-	-	-	-	-	-	-	-	-
63.3	70.0	49.1	-	0.0	0.0	-	0.0	-	-	11.1	-	-
63.3	80.0	0.0	-	-	0.0	-	10.8	-	-	0.0	-	-
63.3	90.0	15.5	-	-	0.0	-	0.0	-	-	-	-	-
66.7	50.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	55.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
66.7	60.0	29.2	-	34.8	0.0	-	0.0	-	-	0.0	-	-
66.7	65.0	-	-	-	-	-	-	-	-	-	-	-
66.7	70.0	23.3	-	0.0	10.7	-	0.0	-	-	0.0	-	-
66.7	80.0	10.4	-	-	0.0	-	24.1	-	-	0.0	-	-
66.7	90.0	0.0	-	-	0.0	-	12.4	-	-	0.0	-	-
66.7	100.0	0.0	-	-	10.0	-	5.3	-	-	-	-	-
70.0	51.0	5.4	-	0.0	0.0	-	0.0	-	-	4.6	-	-
70.0	60.0	5.5	-	12.2	0.0	-	0.0	-	-	0.0	-	-
70.0	65.0	-	-	-	-	-	-	-	-	-	-	-
70.0	70.0	20.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	80.0	10.3	-	0.0	0.0	-	20.8	-	-	-	-	-
70.0	90.0	5.3	-	-	20.0	-	0.0	-	-	-	-	-
70.0	100.0	0.0	-	-	0.0	-	10.9	-	-	-	-	-
73.3	50.0	0.0	-	0.0	0.0	-	0.0	-	-	4.2	-	-
73.3	53.0	10.2	-	0.0	0.0	-	10.4	-	-	0.0	-	-
73.3	60.0	21.8	-	0.0	20.5	-	10.3	-	-	9.6	-	-
73.3	65.0	-	-	-	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.1	-	-
73.3	80.0	0.0	-	-	-	-	10.9	-	-	21.8	-	-

TABLE 4. (cont.)

		<i>Protomyctophum crockeri</i> (cont.)											
STATION		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	90.0	0.0	0.0	-	-	0.0	-	20.9	-	-	0.0	-	-
73.3	100.0	0.0	3.8	-	-	0.0	-	0.0	-	-	0.0	-	-
76.7	55.0	0.0	0.0	-	10.1	0.0	-	21.9	-	-	10.9	-	-
76.7	60.0	0.0	0.0	-	0.0	0.0	-	10.8	-	-	-	-	-
76.7	65.0	-	18.6	-	-	-	-	-	-	-	-	-	-
76.7	70.0	0.0	15.4	-	9.9	0.0	-	0.0	-	-	10.1	-	-
76.7	80.0	0.0	0.0	-	0.0	10.9	-	0.0	-	-	20.4	-	-
76.7	90.0	0.0	0.0	-	19.8	9.4	-	0.0	-	-	-	-	-
76.7	100.0	20.4	19.9	-	0.0	0.0	-	0.0	-	-	-	-	-
80.0	55.0	0.0	0.0	-	0.0	0.0	-	10.7	-	-	20.5	-	-
80.0	70.0	0.0	0.0	-	0.0	0.0	-	0.0	-	-	18.6	-	-
80.0	80.0	40.8	7.2	-	9.4	10.7	-	11.2	-	-	10.0	-	-
80.0	90.0	0.0	0.0	-	5.0	29.1	-	0.0	-	-	4.9	-	-
80.0	100.0	5.2	11.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
82.0	46.0	0.0	0.0	-	0.0	0.0	-	11.1	-	-	0.0	-	-
83.3	40.6	0.0	0.0	-	0.0	4.2	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	0.0	-	9.4	0.0	-	0.0	-	-	0.0	-	-
83.3	55.0	0.0	0.0	-	0.0	5.2	-	0.0	-	-	0.0	-	-
83.3	65.0	-	10.5	-	-	-	-	-	-	-	-	-	-
83.3	70.0	10.7	0.0	-	21.2	10.9	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	5.5	-	10.6	0.0	-	0.0	-	-	10.7	-	-
83.3	90.0	5.6	0.0	-	5.4	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	0.0	0.0	-	5.3	10.6	-	0.0	-	-	5.2	-	-
86.7	35.0	0.0	0.0	-	10.4	0.0	0.0	0.0	0.0	-	0.0	-	-
86.7	40.0	0.0	5.3	-	0.0	-	0.0	5.5	-	-	0.0	-	-
86.7	60.0	9.4	0.0	-	31.4	-	0.0	0.0	-	-	9.9	-	-
86.7	70.0	11.8	15.5	-	0.0	10.8	-	0.0	-	-	0.0	-	-
86.7	80.0	28.7	0.0	-	0.0	20.4	-	0.0	-	-	0.0	-	-
86.7	90.0	10.5	8.3	-	0.0	20.9	-	0.0	-	-	15.8	-	-
90.0	30.0	5.0	-	53.3	0.0	-	10.1	0.0	-	-	9.0	-	-
90.0	35.0	0.0	-	5.4	0.0	-	0.0	4.9	-	-	0.0	-	-
90.0	37.0	5.2	-	10.7	55.9	-	0.0	5.1	-	-	0.0	-	-
90.0	45.0	-	-	-	8.4	-	0.0	4.9	-	-	14.9	-	-
90.0	70.0	0.0	20.6	-	12.4	-	0.0	9.9	-	-	0.0	-	-
90.0	80.0	4.9	10.0	-	-	-	20.2	0.0	-	-	-	-	-
90.0	90.0	14.6	0.0	-	0.0	-	0.0	0.0	-	-	8.4	-	-
90.0	100.0	0.0	9.9	-	0.0	-	0.0	-	-	-	0.0	-	-
93.3	26.7	4.5	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	28.0	-	-	5.9	-	-	-	-	-	-	-	-	-
93.3	29.0	0.0	-	5.4	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	30.0	5.3	-	24.8	16.0	-	0.0	0.0	-	-	0.0	-	-
93.3	35.0	9.7	-	0.0	18.4	-	29.4	10.2	-	-	0.0	-	-
93.3	40.0	0.0	-	0.0	0.0	-	4.5	0.0	-	-	0.0	-	-
93.3	45.0	0.0	-	5.9	0.0	-	19.5	4.1	-	-	0.0	-	-
93.3	50.0	0.0	-	0.0	9.0	-	16.9	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	0.0	10.4	-	0.0	10.1	-	-	4.9	-	-

TABLE 4. (cont.)

STATION	<i>Protomyctophum crockeri</i> (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	60.0	0.0	0.0	5.2	-	0.0	10.5	-	-	0.0	-	-
93.3	70.0	26.9	20.0	0.0	-	8.7	0.0	-	-	0.0	-	-
93.3	80.0	15.8	-	8.2	-	19.4	10.2	-	-	9.8	-	-
93.3	90.0	17.2	-	9.8	-	9.6	0.0	-	-	34.5	-	-
93.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	5.0	-	-
96.7	32.0	5.1	37.2	9.8	-	9.1	0.0	-	-	0.0	-	-
96.7	35.0	4.9	5.1	5.0	-	4.4	4.9	-	-	0.0	-	-
96.7	40.0	11.9	0.0	14.5	-	0.0	15.1	-	-	9.5	-	-
96.7	45.0	9.6	0.0	15.0	-	9.7	20.5	-	-	0.0	-	-
96.7	50.0	17.9	5.2	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	14.9	15.2	0.0	-	9.4	5.2	-	-	0.0	-	-
96.7	60.0	5.4	14.6	18.8	-	0.0	10.3	-	-	0.0	-	-
96.7	70.0	46.7	0.0	0.0	-	19.5	0.0	-	-	0.0	-	-
96.7	80.0	29.0	13.1	8.3	-	9.1	0.0	-	-	0.0	-	-
96.7	90.0	10.0	10.7	5.4	-	0.0	0.0	-	-	0.0	-	-
96.7	100.0	14.7	0.0	4.8	-	0.0	0.0	-	-	0.0	-	-
100.0	29.2	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	-
100.0	35.0	-	0.0	13.5	-	0.0	19.0	-	-	0.0	-	-
100.0	40.0	-	0.0	30.3	-	0.0	13.6	-	-	0.0	-	-
100.0	45.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	50.0	10.2	29.4	4.8	-	23.8	0.0	-	-	0.0	-	-
100.0	55.0	5.4	20.3	0.0	-	14.8	0.0	-	-	0.0	-	-
100.0	60.0	11.0	5.1	0.0	-	4.9	11.8	-	-	0.0	-	-
100.0	65.0	-	10.5	20.2	-	0.0	20.2	-	-	0.0	-	-
100.0	70.0	4.4	-	-	-	0.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	90.0	10.0	-	0.0	-	0.0	0.0	-	-	10.1	-	-
100.0	100.0	10.1	4.6	4.9	-	0.0	0.0	-	-	4.7	-	-
103.3	40.0	10.3	-	24.6	-	14.3	5.6	-	-	0.0	-	-
103.3	45.0	0.0	16.0	5.2	-	46.2	5.3	-	-	0.0	-	-
103.3	50.0	-	0.0	5.0	-	26.2	0.0	-	-	14.2	-	-
103.3	55.0	15.2	10.1	0.0	-	0.0	5.0	-	-	0.0	-	-
103.3	60.0	24.9	20.3	0.0	-	5.0	5.3	-	-	5.0	-	-
103.3	65.0	-	-	-	-	-	-	-	-	-	-	-
103.3	70.0	15.0	10.5	0.0	-	5.3	0.0	-	-	0.0	0.0	-
103.3	80.0	0.0	4.5	0.0	-	9.7	0.0	-	-	9.9	9.9	-
103.3	90.0	10.4	0.0	0.0	-	4.8	0.0	-	-	9.7	9.7	-
103.3	100.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	0.0	-
106.7	32.0	4.9	0.0	5.0	-	0.0	0.0	-	-	0.0	0.0	-
106.7	35.0	0.0	21.1	0.0	-	0.0	0.0	-	-	0.0	0.0	-
106.7	40.0	0.0	5.1	4.7	-	20.8	8.6	-	-	0.0	0.0	-
106.7	45.0	9.6	21.8	4.7	-	0.0	39.9	-	-	0.0	0.0	-
106.7	50.0	9.2	22.1	0.0	-	19.4	40.9	-	-	0.0	0.0	-
106.7	60.0	0.0	0.0	-	-	0.0	5.1	-	-	0.0	0.0	-
106.7	70.0	0.0	0.0	-	-	0.0	5.2	-	-	0.0	0.0	-
110.0	35.0	-	5.2	0.0	-	0.0	0.0	-	-	-	9.3	-



TABLE 4. (cont.)

*Protomyctophum crockeri* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	40.0	12.2	0.0	0.0	-	0.0	18.1	-	-	-	0.0	-
110.0	45.0	11.0	10.8	0.0	-	0.0	0.0	-	-	-	5.1	-
110.0	50.0	10.6	15.5	0.0	-	0.0	0.0	-	-	-	4.5	-
110.0	55.0	23.0	5.0	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	60.0	0.0	0.0	0.0	-	5.3	0.0	-	-	-	0.0	-
110.0	70.0	0.0	0.0	19.4	-	0.0	0.0	-	-	-	4.6	-
110.0	100.0	9.7	0.0	0.0	-	0.0	0.0	-	-	-	5.1	-

*Symbolophorus californiensis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	90.0	0.0	-	-	9.5	-	0.0	-	-	0.0	-	-
60.0	100.0	0.0	-	-	0.0	-	10.1	-	-	0.0	-	-
63.3	80.0	0.0	-	-	10.9	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	9.9	-	0.0	-	-	0.0	-	-
66.7	80.0	0.0	-	-	11.0	-	0.0	-	-	-	-	-
66.7	90.0	0.0	-	-	14.9	-	0.0	-	-	-	-	-
66.7	100.0	0.0	-	-	0.0	-	5.3	-	-	-	-	-
70.0	90.0	5.3	-	-	0.0	-	0.0	-	-	5.3	-	-
73.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
73.3	100.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
83.3	70.0	0.0	-	-	29.1	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-
83.3	100.0	5.6	-	-	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	-	0.0	-	9.9	-	-	0.0	-	-
86.7	100.0	0.0	-	-	10.4	-	20.7	-	-	0.0	-	-
90.0	60.0	0.0	-	-	0.0	-	10.3	-	-	0.0	-	-
90.0	70.0	0.0	-	-	0.0	-	4.5	-	-	5.2	-	-
90.0	80.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
90.0	90.0	4.9	-	-	-	-	0.0	-	-	-	-	-
93.3	35.0	0.0	-	-	-	-	10.0	-	-	0.0	-	-
93.3	40.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	-	-	-	0.0	-	-	4.7	-	-
93.3	60.0	0.0	-	-	-	-	0.0	-	-	4.9	-	-
93.3	70.0	0.0	-	-	-	-	5.3	-	-	0.0	-	-
93.3	80.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
93.3	90.0	18.6	-	-	-	-	10.2	-	-	0.0	-	-
93.3	100.0	34.4	-	-	-	-	0.0	-	-	0.0	-	-
96.7	32.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
96.7	40.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
96.7	45.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
96.7	50.0	0.0	-	-	-	-	0.0	-	-	5.2	-	-

TABLE 4. (cont..)

*Symbolophorus californiensis* (cont..)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	55.0	-	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
96.7	60.0	-	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	5.5	-	-	-	-	-	-	-	-	-
96.7	70.0	-	0.0	0.0	-	-	20.8	-	-	0.0	-	-
96.7	80.0	0.0	-	8.3	-	18.3	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	19.8	0.0	-	-	0.0	-	-
96.7	100.0	0.0	-	0.0	-	5.1	8.5	-	-	0.0	-	-
100.0	30.0	-	0.0	-	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	-	16.5	10.1	-	0.0	4.5	-	-	0.0	-	-
100.0	45.0	-	9.8	-	-	0.0	0.0	-	-	9.6	-	-
100.0	50.0	-	15.2	9.7	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	157.5	4.6	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	-	0.0	4.0	-	0.0	0.0	-	-	0.0	-	-
100.0	65.0	9.4	-	-	-	-	-	-	-	-	-	-
100.0	70.0	8.8	-	-	-	25.1	0.0	-	-	0.0	-	-
100.0	80.0	15.3	-	0.0	-	4.9	0.0	-	-	0.0	-	-
100.0	90.0	10.0	-	0.0	-	4.4	0.0	-	-	0.0	-	-
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	35.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	45.0	-	26.6	15.6	-	9.2	5.3	-	-	0.0	-	-
103.3	50.0	-	0.0	10.1	-	0.0	10.5	-	-	0.0	-	-
103.3	55.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	0.0	-	10.0	0.0	-	-	5.0	-	-
103.3	65.0	31.4	-	-	-	-	-	-	-	-	-	-
103.3	70.0	13.4	-	0.0	-	10.5	0.0	-	-	-	4.8	-
103.3	80.0	26.9	-	0.0	-	0.0	0.0	-	-	-	0.0	-
103.3	90.0	5.2	-	0.0	-	0.0	0.0	-	-	-	0.0	-
103.3	100.0	13.1	-	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	32.0	-	31.6	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	-	10.6	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	-	0.0	4.7	-	0.0	8.6	-	-	-	5.2	-
106.7	45.0	4.8	13.1	0.0	-	4.9	39.9	-	-	-	0.0	-
106.7	50.0	23.0	22.1	0.0	-	9.7	10.2	-	-	-	0.0	-
106.7	60.0	14.5	0.0	-	-	0.0	0.0	-	-	-	0.0	-
106.7	65.0	-	4.3	-	-	-	-	-	-	-	-	-
106.7	70.0	8.1	0.0	-	-	0.0	0.0	-	-	-	0.0	-
106.7	90.0	4.2	0.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	100.0	10.1	0.0	0.0	-	0.0	9.7	-	-	-	0.0	-
110.0	32.5	-	10.3	-	-	-	-	-	-	-	-	-
110.0	35.0	-	0.0	0.0	-	0.0	11.4	-	-	-	0.0	-
110.0	40.0	4.1	0.0	0.0	-	10.6	0.0	-	-	-	0.0	-
110.0	45.0	0.0	0.0	0.0	-	0.0	5.0	-	-	-	0.0	-
110.0	50.0	5.3	20.7	14.8	-	5.0	61.6	-	-	-	0.0	-
110.0	55.0	13.8	15.0	0.0	-	0.0	0.0	-	-	-	14.6	-
110.0	60.0	9.9	0.0	0.0	-	0.0	0.0	-	-	-	9.9	-

TABLE 4. (cont.)

*Tarletonbeania crenularis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	-	13.6	0.0	-	0.0	-	-	0.0	-	-
60.0	55.0	0.0	-	0.0	20.6	-	0.0	-	-	0.0	-	-
60.0	60.0	17.7	-	101.2	-	-	0.0	-	-	0.0	-	-
60.0	70.0	0.0	-	10.8	0.0	-	9.9	-	-	0.0	-	-
60.0	90.0	0.0	-	-	0.0	-	21.2	-	-	11.8	-	-
63.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	10.8	-	-
63.3	60.0	9.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	12.0	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	0.0	-	5.1	-	-	-	-	-
66.7	50.0	0.0	-	10.5	0.0	-	0.0	-	-	10.3	-	-
66.7	60.0	0.0	-	0.0	21.1	-	0.0	-	-	0.0	-	-
66.7	70.0	0.0	-	0.0	10.7	-	0.0	-	-	0.0	-	-
66.7	80.0	0.0	-	-	0.0	-	0.0	-	-	5.2	-	-
70.0	51.0	5.4	-	0.0	10.4	-	0.0	-	-	0.0	-	-
70.0	60.0	0.0	-	0.0	0.0	-	5.2	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	0.0	-	11.2	-	-	0.0	-	-
73.3	53.0	22.6	-	0.0	33.8	-	0.0	-	-	0.0	-	-
73.3	60.0	0.0	-	10.5	0.0	-	10.4	-	-	0.0	-	-
73.3	70.0	0.0	-	10.4	-	-	0.0	-	-	0.0	-	-
76.7	60.0	20.9	-	0.0	0.0	-	10.0	-	-	0.0	-	-
76.7	90.0	17.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	0.0	-	0.0	0.0	-	10.4	-	-	-	-	-
80.0	55.0	5.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	55.0	5.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	70.0	0.0	-	0.0	10.9	-	0.0	-	-	0.0	-	-
86.7	50.0	4.3	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	4.5	-	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	0.0	10.3	-	0.0	-	-	0.0	-	-
			-	0.0	9.1	-	0.0	-	-	0.0	-	-

*Synodus spp.*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	30.0	-	0.0	0.0	-	0.0	0.0	-	-	14.0	-	-

*Merluccius productus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	131.6	-	-	0.0	-	-	0.0	-	-
60.0	70.0	68.5	-	140.4	0.0	-	0.0	-	-	0.0	-	-
63.3	65.0	37.4	-	-	-	-	-	-	-	-	-	-
63.3	70.0	41.2	-	101.5	23.9	-	0.0	-	-	0.0	-	-
63.3	100.0	0.0	-	-	9.9	-	0.0	-	-	-	-	-
66.7	49.0	127.5	-	10.1	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	<i>Merluccius productus</i> (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	50.0	95.6	-	10.5	0.0	-	0.0	-	-	-	-	0.0
66.7	55.0	52.0	-	0.0	10.2	-	0.0	-	-	-	-	0.0
66.7	60.0	10.8	-	0.0	10.5	-	0.0	-	-	-	-	0.0
66.7	65.0	189.3	-	-	-	-	-	-	-	-	-	-
66.7	70.0	87.6	-	0.0	0.0	-	0.0	-	-	-	-	0.0
70.0	51.0	38.7	-	0.0	0.0	-	0.0	-	-	-	-	0.0
70.0	60.0	14847.2	-	0.0	0.0	-	0.0	-	-	-	-	0.0
70.0	65.0	3040.0	-	-	-	-	-	-	-	-	-	-
70.0	70.0	1101.8	-	95.8	0.0	-	0.0	-	-	-	-	0.0
73.3	53.0	47.5	-	0.0	0.0	-	0.0	-	-	-	-	0.0
73.3	60.0	311.7	-	113.9	-	-	0.0	-	-	-	-	0.0
73.3	65.0	19.8	-	-	-	-	-	-	-	-	-	-
73.3	70.0	0.0	-	10.2	0.0	-	0.0	-	-	-	-	0.0
73.3	80.0	28.1	-	-	-	-	0.0	-	-	-	-	0.0
73.3	90.0	38.4	-	-	26.5	-	0.0	-	-	-	-	0.0
76.7	48.0	13.9	-	0.0	0.0	-	0.0	-	-	-	-	0.0
76.7	51.0	20.6	-	0.0	0.0	-	0.0	-	-	-	-	0.0
76.7	55.0	21.7	-	10.1	0.0	-	0.0	-	-	-	-	0.0
76.7	60.0	980.6	-	173.6	0.0	-	0.0	-	-	-	-	0.0
76.7	65.0	3332.2	-	-	-	-	-	-	-	-	-	-
76.7	70.0	909.3	-	19.9	8.9	-	0.0	-	-	-	-	0.0
76.7	80.0	193.4	-	142.2	0.0	-	0.0	-	-	-	-	0.0
76.7	90.0	97.5	-	39.7	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	4.8	0.0	-	0.0	-	-	-	-	-
80.0	51.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	0.0
80.0	55.0	10.4	-	0.0	0.0	-	0.0	-	-	-	-	0.0
80.0	60.0	10.4	-	0.0	9.9	-	0.0	-	-	-	-	0.0
80.0	65.0	48.9	-	0.0	0.0	-	0.0	-	-	-	-	0.0
80.0	70.0	363.0	-	30.5	0.0	-	0.0	-	-	-	-	0.0
80.0	80.0	0.0	-	18.7	0.0	-	0.0	-	-	-	-	0.0
80.0	100.0	0.0	-	10.1	0.0	-	0.0	-	-	-	-	0.0
83.3	55.0	488.7	-	0.0	0.0	-	0.0	-	-	-	-	0.0
83.3	60.0	10.7	-	11.3	0.0	-	0.0	-	-	-	-	0.0
83.3	65.0	94.5	-	-	-	-	-	-	-	-	-	-
83.3	70.0	63.0	-	0.0	0.0	-	0.0	-	-	-	-	0.0
83.3	80.0	0.0	-	10.6	0.0	-	0.0	-	-	-	-	0.0
86.7	35.0	16.9	-	20.8	-	0.0	0.0	-	-	-	-	0.0
86.7	40.0	0.0	-	10.5	-	0.0	0.0	-	-	-	-	0.0
86.7	45.0	210.4	-	21.0	-	0.0	0.0	-	-	-	-	0.0
86.7	50.0	17.1	-	0.0	-	0.0	0.0	-	-	-	-	0.0
86.7	55.0	57.8	-	0.0	-	0.0	0.0	-	-	-	-	0.0
86.7	60.0	22.1	-	0.0	-	21.6	0.0	-	-	-	-	0.0
86.7	65.0	40.2	-	-	-	-	-	-	-	-	-	-
86.7	70.0	0.0	-	43.0	10.8	-	0.0	-	-	-	-	0.0
86.7	80.0	0.0	-	0.0	10.2	-	0.0	-	-	-	-	0.0
86.7	90.0	0.0	-	0.0	10.4	-	0.0	-	-	-	-	0.0

TABLE 4. (cont.)

<i>Merluccius productus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	28.0	0.0	4.8	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	37.0	0.0	0.0	9.3	-	0.0	0.0	-	-	0.0	-	-
90.0	45.0	-	5.4	16.7	-	0.0	0.0	-	-	0.0	-	-
90.0	53.0	-	21.6	-	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	-	32.3	-	-	0.0	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	0.0	-	8.2	0.0	-	-	-	-	-
93.3	40.0	0.0	0.0	13.7	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	0.0	0.0	10.5	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	0.0	0.0	26.9	-	0.0	0.0	-	-	0.0	-	-
93.3	60.0	0.0	9.8	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	100.2	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	29.0	0.0	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-
96.7	32.0	0.0	0.0	4.9	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	0.0	0.0	4.8	-	0.0	0.0	-	-	0.0	-	-
96.7	50.0	0.0	10.5	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	0.0	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	60.0	0.0	29.1	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	65.0	-	5.5	-	-	-	-	-	-	-	-	-
96.7	70.0	0.0	18.1	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	35.0	0.0	32.7	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	0.0	5.5	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	40.0	0.0	5.2	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	55.0	0.0	20.3	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	0.0	10.2	0.0	-	0.0	0.0	-	-	0.0	-	-
110.0	35.0	0.0	5.2	0.0	-	0.0	0.0	-	-	-	0.0	-

## Macrouridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	-	4.5	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	3.8	-	0.0	0.0	-	-	0.0	-	-

## Ophidiiformes

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	40.0	0.0	-	0.0	-	5.2	0.0	-	-	0.0	-	-
93.3	29.0	0.0	0.0	5.2	-	0.0	0.0	-	-	0.0	-	-

*Brosmophycis marginata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	52.0	0.0	0.0	0.0	0.0	-	10.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Brosomphycis marginata* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	60.0	0.0	0.0	0.0	0.0	5.2	10.8	-	-	0.0	-	-
106.7	40.0	0.0	0.0	0.0	-	-	0.0	-	-	-	0.0	-

*Chilara taylori*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	30.0	-	9.3	0.0	-	0.0	0.0	-	-	0.0	-	-

*Ophidion scrippsae*

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	-	-	5.1	-	-

## Ceratioidei

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	22.1	-	-
93.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	4.9	-	-
96.7	60.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	0.0	-	0.0	0.0	-	-	4.8	-	-
96.7	100.0	0.0	-	0.0	-	0.0	0.0	-	-	4.8	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	8.2	-	-
106.7	80.0	0.0	0.0	-	-	-	0.0	-	-	-	5.2	-

## Gobiesocidae

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	9.7	-	-	0.0	-	-
103.3	30.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-

## Exocoetidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	35.0	-	0.0	0.0	-	0.0	10.2	-	-	0.0	-	-
96.7	50.0	-	0.0	0.0	-	0.0	9.3	-	-	0.0	-	-
100.0	35.0	0.0	0.0	0.0	-	0.0	9.5	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	4.8	0.0	-	-	0.0	-	-
106.7	35.0	0.0	0.0	0.0	-	0.0	5.0	-	-	-	0.0	-
106.7	40.0	0.0	0.0	0.0	-	0.0	8.6	-	-	-	0.0	-
106.7	45.0	0.0	0.0	0.0	-	0.0	10.0	-	-	-	0.0	-
110.0	35.0	0.0	0.0	0.0	-	0.0	5.7	-	-	-	0.0	-

TABLE 4. (cont.)

## Exocoetidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	90.0	-	0.0	0.0	-	0.0	4.7	-	-	-	0.0	-

<i>Cololabis saira</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	100.0	4.4	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	65.0	18.7	-	-	-	-	-	-	-	-	-	-
63.3	100.0	9.6	-	0.0	-	-	0.0	-	-	-	-	-
66.7	70.0	9.7	-	0.0	-	-	0.0	-	-	0.0	-	-
66.7	100.0	4.4	-	0.0	-	-	0.0	-	-	-	-	-
-	65.0	3.8	-	-	-	-	-	-	-	-	-	-
70.0	100.0	8.9	-	0.0	-	-	0.0	-	-	-	-	-
73.3	100.0	3.8	-	0.0	-	-	0.0	-	-	0.0	-	-
76.7	100.0	4.0	-	0.0	-	-	0.0	-	-	-	-	-
83.3	80.0	5.5	-	0.0	-	-	0.0	-	-	0.0	-	-
90.0	90.0	10.3	-	0.0	-	0.0	0.0	-	-	-	-	-
93.3	100.0	4.8	-	-	-	0.0	0.0	-	-	0.0	-	-
96.7	60.0	0.0	-	3.8	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	-	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
103.3	45.0	-	0.0	4.6	-	0.0	0.0	-	-	0.0	-	-
103.3	90.0	4.4	-	0.0	-	9.2	0.0	-	-	0.0	-	-
-	-	-	-	0.0	-	0.0	0.0	-	-	-	0.0	-

## Atherinidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	48.0	6.9	-	7.0	0.0	-	0.0	-	-	0.0	-	-
83.3	55.0	5.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
103.3	29.0	-	3.8	0.0	-	0.0	0.0	-	-	0.0	-	-
110.0	32.4	-	-	0.0	-	0.0	0.0	-	-	-	0.0	-

<i>Trachipteridae</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	90.0	0.0	-	-	0.0	-	10.6	-	-	0.0	-	-
63.3	90.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
66.7	70.0	19.5	-	0.0	-	-	0.0	-	-	0.0	-	-
66.7	80.0	0.0	-	0.0	-	-	12.1	-	-	0.0	-	-
70.0	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
70.0	65.0	11.0	-	0.0	-	-	-	-	-	-	-	-
70.0	90.0	7.6	-	-	-	-	0.0	-	-	-	-	-
70.0	100.0	8.8	-	0.0	-	-	0.0	-	-	-	-	-
73.3	60.0	4.5	-	0.0	-	-	0.0	-	-	0.0	-	-
-	-	5.1	-	0.0	-	-	0.0	-	-	-	-	-

TABLE 4. (cont.)

## Trachipteridae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
73.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	5.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	0.0	0.0	9.8	-	-	-	-	-
90.0	90.0	0.0	-	-	-	0.0	10.0	-	-	0.0	-	-
93.3	55.0	0.0	10.3	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	10.7	0.0	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	5.2	0.0	-	9.6	0.0	-	-	0.0	-	-
96.7	50.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-

*Melamphaes* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	70.0	0.0	-	10.8	0.0	-	0.0	-	-	0.0	-	-
60.0	100.0	8.9	-	-	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	0.0	-	9.9	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	90.0	0.0	-	-	0.0	-	9.3	-	-	-	-	-
66.7	65.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
66.7	80.0	4.4	-	-	0.0	-	5.3	-	-	0.0	-	-
66.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	60.0	11.0	-	-	0.0	-	-	-	-	-	-	-
70.0	65.0	3.8	-	-	-	-	-	-	-	5.0	-	-
70.0	70.0	7.5	-	0.0	0.0	-	0.0	-	-	-	-	-
70.0	100.0	0.0	-	-	4.6	-	0.0	-	-	0.0	-	-
73.3	70.0	0.0	-	10.2	0.0	-	0.0	-	-	0.0	-	-
73.3	80.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
73.3	90.0	0.0	-	-	0.0	-	0.0	-	-	5.3	-	-
73.3	100.0	0.0	-	-	-	-	10.1	-	-	0.0	-	-
76.7	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	18.6	-	-	-	-	-	-	-	-	-	-
76.7	70.0	7.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	80.0	8.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	100.0	4.0	-	0.0	10.7	-	10.4	-	-	-	-	-
80.0	70.0	10.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	0.0	19.4	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	11.3	-	11.0	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	5.4	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	16.4	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	0.0	-	5.2	-	-	0.0	-	-
90.0	70.0	0.0	-	6.2	0.0	0.0	0.0	-	-	0.0	-	-



TABLE 4. (cont.)

*Melamphaes* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	90.0	0.0	4.8	-	5.9	0.0	10.0	-	-	0.0	-	-
93.3	28.0	-	0.0	0.0	0.0	0.0	0.0	-	-	5.2	-	-
93.3	45.0	-	0.0	5.2	0.0	0.0	5.3	-	-	0.0	-	-
93.3	60.0	-	0.0	0.0	0.0	0.0	10.9	-	-	8.8	-	-
93.3	70.0	-	0.0	0.0	0.0	9.7	0.0	-	-	0.0	-	-
93.3	80.0	0.0	0.0	0.0	0.0	9.6	0.0	-	-	0.0	-	-
93.3	90.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	32.0	-	5.3	0.0	0.0	4.7	0.0	-	-	0.0	-	-
96.7	55.0	-	0.0	0.0	0.0	5.0	0.0	-	-	0.0	-	-
96.7	60.0	-	0.0	8.3	0.0	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	0.0	0.0	0.0	4.8	0.0	-	-	0.0	-	-
100.0	40.0	-	0.0	0.0	0.0	0.0	4.5	-	-	0.0	-	-
100.0	50.0	-	0.0	4.0	0.0	0.0	22.1	-	-	0.0	-	-
100.0	60.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	5.1	-	0.0	0.0	0.0	-	-	0.0	-	-
100.0	80.0	-	0.0	0.0	0.0	19.7	0.0	-	-	0.0	-	-
103.3	55.0	-	10.1	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	5.1	0.0	0.0	5.0	0.0	-	-	0.0	-	-
103.3	80.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	10.1	-	-
106.7	70.0	-	0.0	0.0	0.0	0.0	10.4	-	-	-	5.0	-
106.7	90.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	10.0	-
110.0	40.0	4.1	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-
110.0	45.0	0.0	5.4	0.0	0.0	0.0	0.0	-	-	-	0.0	-
110.0	50.0	-	0.0	0.0	0.0	5.0	0.0	-	-	-	0.0	-
110.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	4.8	-

*Poromitra* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	100.0	0.0	-	-	5.0	-	0.0	-	-	-	-	-
90.0	90.0	0.0	-	-	-	0.0	10.0	-	-	0.0	-	-
90.0	100.0	0.0	-	4.9	-	0.0	-	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	-	5.0	0.0	0.0	-	-	0.0	-	-
103.3	40.0	-	0.0	0.0	4.8	0.0	0.0	-	-	0.0	-	-
106.7	40.0	-	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-

*Scopeloberyx robustus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	100.0	0.0	0.0	5.3	0.0	-	0.0	-	-	0.0	-	-
96.7	70.0	0.0	-	0.0	-	9.7	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Scopelogadus bispinosus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	100.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
93.3	40.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	5.1	-	-
96.7	90.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	9.8	-	-
100.0	90.0	0.0	-	0.0	0.0	0.0	0.0	-	-	20.1	-	-
100.0	100.0	0.0	-	4.9	0.0	0.0	0.0	-	-	0.0	-	-
103.3	60.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	5.0	-	-
103.3	90.0	0.0	-	0.0	0.0	0.0	0.0	-	-	-	4.9	-
106.7	35.0	0.0	5.3	0.0	0.0	0.0	0.0	-	-	-	0.0	-
110.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	4.8	-
110.0	90.0	4.5	0.0	0.0	0.0	0.0	0.0	-	-	-	4.8	-

*Macroramphosus gracilis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	80.0	5.0	-	0.0	0.0	0.0	0.0	-	-	-	9.7	-

*Syngnathus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	33.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
96.7	29.0	0.0	0.0	17.6	-	0.0	0.0	-	-	0.0	-	-

## Agonidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	0.0	-	0.0	11.1	-	0.0	-	-	0.0	-	-
86.7	33.0	0.0	-	0.0	-	0.0	8.8	-	-	0.0	-	-
103.3	29.0	0.0	3.8	0.0	-	0.0	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	8.3	-	0.0	-	-	0.0	-	-
60.0	52.5	0.0	5.1	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	52.0	0.0	0.0	0.0	10.3	-	0.0	-	-	0.0	-	-
73.3	50.0	0.0	-	0.0	8.5	-	0.0	-	-	0.0	-	-
76.7	48.0	0.0	0.0	7.0	0.0	-	0.0	-	-	0.0	-	-
80.0	55.0	0.0	0.0	0.0	0.0	-	21.3	-	-	0.0	-	-
82.0	46.0	0.0	0.0	0.0	0.0	-	11.1	-	-	0.0	-	-
83.3	51.0	0.0	10.1	28.0	0.0	-	0.0	-	-	4.4	-	-
83.3	55.0	0.0	5.4	0.0	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

## Cottidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
86.7	33.0	0.0	-	54.1	-	0.0	26.5	-	-	46.0	-	-
86.7	40.0	0.0	-	0.0	-	0.0	16.6	-	-	0.0	-	-
86.7	50.0	0.0	-	0.0	-	4.5	37.4	-	-	0.0	-	-
93.3	26.7	0.0	0.0	0.0	-	8.1	0.0	-	-	0.0	-	-
96.7	29.0	-	0.0	8.8	-	29.6	0.0	-	-	0.0	-	-
103.3	29.0	0.0	0.0	3.7	-	0.0	0.0	-	-	0.0	-	-

*Scorpaenichthys marmoratus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	49.0	9.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	53.0	21.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	50.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	65.0	4.4	-	-	-	-	-	-	-	-	-	-
80.0	70.0	10.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	30.0	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	-

*Oxylebius pictus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	5.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	33.0	0.0	-	9.0	-	0.0	0.0	-	-	0.0	-	-
110.0	32.4	-	-	0.0	-	3.9	0.0	-	-	-	0.0	-

*Zaniolepis* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	49.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	51.0	5.1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	35.0	11.3	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	50.0	4.4	-	0.0	-	0.0	0.0	-	-	0.0	-	-
110.0	35.0	-	5.2	0.0	-	0.0	0.0	-	-	-	0.0	-

*Scorpaena* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	45.0	-	0.0	10.5	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

## Sebastes spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	19.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	535.7	651.5	-	27.2	0.0	-	0.0	-	-	0.0	-	-
60.0	988.7	1232.0	-	0.0	149.7	-	82.3	-	-	9.8	-	-
60.0	69.0	150.1	-	0.0	10.3	-	20.5	-	-	54.5	-	-
60.0	65.0	85.3	-	-	-	-	-	-	-	-	-	-
60.0	70.0	21.4	-	0.0	0.0	-	29.7	-	-	0.0	-	-
60.0	80.0	0.0	-	-	0.0	-	10.1	-	-	0.0	-	-
60.0	90.0	8.7	-	-	0.0	-	21.2	-	-	0.0	-	-
60.0	100.0	0.0	-	-	0.0	-	10.1	-	-	0.0	-	-
60.0	100.0	9.4	-	-	0.0	-	0.0	-	-	-	-	-
63.3	50.0	68.4	-	19.6	20.6	-	10.0	-	-	0.0	-	-
63.3	52.0	410.1	-	0.0	64.9	-	23.2	-	-	21.5	-	-
63.3	55.0	334.8	-	21.8	0.0	-	0.0	-	-	0.0	-	-
63.3	60.0	37.4	-	-	-	-	-	-	-	-	-	-
63.3	70.0	41.2	-	0.0	35.9	-	11.2	-	-	0.0	-	-
63.3	80.0	0.0	-	0.0	10.9	-	10.8	-	-	5.1	-	-
66.7	49.0	274.6	-	0.0	12.2	-	55.2	-	-	10.0	-	-
66.7	50.0	297.6	-	10.5	10.2	-	193.0	-	-	20.6	-	-
66.7	55.0	166.4	-	0.0	61.4	-	68.5	-	-	10.0	-	-
66.7	60.0	75.6	-	0.0	21.1	-	0.0	-	-	0.0	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
66.7	70.0	29.2	-	22.6	21.4	-	0.0	-	-	0.0	-	-
66.7	90.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
70.0	51.0	29.0	-	10.5	0.0	-	41.0	-	-	0.0	-	-
70.0	53.0	32.1	-	49.0	0.0	-	25.9	-	-	74.4	-	-
70.0	60.0	77.0	-	0.0	10.6	-	0.0	-	-	4.9	-	-
70.0	65.0	30.4	-	-	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	0.0	33.8	-	10.5	-	-	0.0	-	-
70.0	70.0	312.2	-	9.0	0.0	-	9.5	-	-	0.0	-	-
73.3	50.0	0.0	-	41.4	-	-	0.0	-	-	0.0	-	-
73.3	60.0	0.0	-	30.5	0.0	-	19.9	-	-	0.0	-	-
73.3	70.0	0.0	-	-	-	-	21.8	-	-	0.0	-	-
73.3	80.0	0.0	-	-	0.0	-	10.5	-	-	0.0	-	-
73.3	90.0	0.0	-	0.0	0.0	-	9.6	-	-	0.0	-	-
76.7	48.0	6.9	-	0.0	15.9	-	135.0	-	-	0.0	-	-
76.7	51.0	92.2	-	9.9	10.4	-	65.7	-	-	0.0	-	-
76.7	55.0	21.7	-	10.1	0.0	-	54.2	-	-	0.0	-	-
76.7	60.0	0.0	-	57.9	0.0	-	-	-	-	-	-	-
76.7	65.0	37.2	-	-	-	-	-	-	-	-	-	-
76.7	70.0	7.7	-	9.9	0.0	-	47.2	-	-	0.0	-	-
76.7	80.0	0.0	-	0.0	21.8	-	20.4	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	28.3	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	9.5	10.5	-	9.5	-	-	0.0	-	-
80.0	51.0	20.1	-	8.3	10.5	-	0.0	-	-	0.0	-	-
80.0	55.0	10.4	-	5.2	119.1	-	0.0	-	-	0.0	-	-
80.0	60.0	41.7	-	9.7	33.2	-	0.0	-	-	5.0	-	-
80.0	65.0	40.0	-	-	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

		Sebastes spp. (cont.)											
STATION		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	0.0	20.2	-	10.2	31.4	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	0.0	-	0.0	0.0	-	31.0	-	-	0.0	-	-
82.0	46.0	11.2	39.1	-	0.0	33.7	-	22.2	-	-	29.1	-	-
83.3	40.6	4.6	0.0	-	4.3	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	68.9	25.9	-	28.2	16.3	-	54.9	-	-	0.0	-	-
83.3	51.0	8.7	76.1	-	0.0	10.8	-	55.1	-	-	0.0	-	-
83.3	55.0	87.0	75.2	-	21.2	31.3	-	10.7	-	-	29.1	-	-
83.3	60.0	0.0	10.7	-	0.0	10.5	-	11.1	-	-	0.0	-	-
83.3	70.0	0.0	0.0	-	0.0	0.0	-	31.6	-	-	0.0	-	-
83.3	80.0	0.0	0.0	-	0.0	0.0	-	10.4	-	-	0.0	-	-
86.7	33.0	8.0	31.1	-	27.1	-	19.9	0.0	-	-	0.0	-	-
86.7	35.0	0.0	33.8	-	93.6	-	0.0	10.7	-	-	46.5	-	-
86.7	40.0	11.2	26.5	-	295.3	-	0.0	11.1	-	-	0.0	-	-
86.7	45.0	34.6	99.9	-	41.9	-	19.3	0.0	-	-	0.0	-	-
86.7	50.0	106.3	734.4	-	240.9	-	31.7	0.0	-	-	24.2	-	-
86.7	55.0	0.0	0.0	-	80.3	-	10.3	0.0	-	-	0.0	-	-
86.7	60.0	0.0	44.2	-	62.8	-	75.8	0.0	-	-	0.0	-	-
86.7	65.0	-	60.2	-	-	-	-	-	-	-	-	-	-
86.7	70.0	0.0	0.0	-	0.0	32.4	-	10.0	-	-	0.0	-	-
86.7	80.0	0.0	104.0	-	10.0	0.0	-	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	38.2	7.8	-	0.0	0.0	-	-	17.5	-	-
90.0	30.0	0.0	-	85.2	9.4	-	0.0	0.0	-	-	0.0	-	-
90.0	35.0	25.6	-	-	0.0	-	40.7	0.0	-	-	0.0	-	-
90.0	45.0	-	-	0.0	16.7	-	9.6	0.0	-	-	4.2	-	-
90.0	53.0	9.8	-	135.0	-	-	0.0	0.0	-	-	-	-	-
90.0	60.0	8.6	-	53.9	-	-	8.2	4.5	-	-	-	-	-
90.0	70.0	0.0	30.9	-	0.0	-	61.7	0.0	-	-	0.0	-	-
90.0	80.0	0.0	0.0	-	0.0	-	10.2	20.0	-	-	0.0	-	-
90.0	100.0	0.0	0.0	-	6.9	-	0.0	0.0	-	-	0.0	-	-
93.3	26.7	18.2	-	78.1	-	-	-	-	-	-	-	-	-
93.3	28.0	-	-	41.4	-	-	-	-	-	-	-	-	-
93.3	29.0	0.0	-	75.9	0.0	-	-	4.8	-	-	0.0	-	-
93.3	30.0	0.0	-	24.8	8.0	-	10.6	0.0	-	-	0.0	-	-
93.3	35.0	0.0	-	75.8	18.4	-	0.0	0.0	-	-	0.0	-	-
93.3	40.0	26.7	-	50.0	9.1	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	5.1	-	0.0	52.4	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	0.0	-	0.0	26.9	-	0.0	0.0	-	-	0.0	-	-
93.3	55.0	0.0	-	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-
93.3	70.0	0.0	-	10.0	0.0	-	26.2	0.0	-	-	0.0	-	-
96.7	29.0	4.0	-	9.8	8.8	-	0.0	0.0	-	-	0.0	-	-
96.7	30.0	7.5	-	65.0	25.7	-	0.0	0.0	-	-	0.0	-	-
96.7	32.0	5.1	-	5.3	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	0.0	-	11.2	28.9	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	0.0	-	35.4	111.8	-	4.7	0.0	-	-	0.0	-	-
96.7	60.0	0.0	-	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
96.7	70.0	0.0	-	9.1	0.0	-	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.
100.0	29.2	-	9.8	0.0	-	4.9	0.0	-	-	4.7	-	-
100.0	30.0	-	21.5	0.0	-	0.0	0.0	-	-	10.7	-	-
100.0	35.0	0.0	5.4	9.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	0.0	5.5	0.0	-	4.4	0.0	-	-	0.0	-	-
100.0	45.0	0.0	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
100.0	55.0	0.0	0.0	4.6	-	0.0	0.0	-	-	0.0	-	-
103.3	29.0	-	90.7	0.0	-	2.7	0.0	-	-	0.0	-	-
103.3	30.0	-	83.7	17.2	-	0.0	10.4	-	-	9.3	-	-
103.3	35.0	-	66.4	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	40.0	-	5.2	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	45.0	-	5.3	5.2	-	9.2	0.0	-	-	0.0	-	-
106.7	31.0	-	4.2	0.0	-	0.0	0.0	-	-	0.0	0.0	-
106.7	32.0	-	21.1	75.5	-	0.0	0.0	-	-	-	0.0	-
106.7	35.0	-	37.0	0.0	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	-	0.0	0.0	-	5.2	0.0	-	-	-	0.0	-
110.0	32.4	-	-	3.5	-	0.0	0.0	-	-	-	8.7	-
110.0	32.5	-	30.8	-	-	-	-	-	-	-	0.0	-
110.0	35.0	-	187.6	0.0	-	0.0	0.0	-	-	-	0.0	-
110.0	40.0	-	5.2	0.0	-	0.0	0.0	-	-	-	0.0	-

*Sebastes aurora*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	80.0	0.0	-	-	0.0	-	10.1	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-
80.0	70.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	10.4	-	0.0	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	0.0	0.0	0.0	-	0.0	4.7	-	-	0.0	-	-
96.7	100.0	0.0	-	0.0	-	9.9	0.0	-	-	0.0	-	-

*Sebastes jordani*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-
86.7	40.0	0.0	-	21.1	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	8.6	0.0	-	-	0.0	0.0	-	-	-	-	-
103.3	35.0	0.0	0.0	4.8	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Sebastes levis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7 60.0	0.0	-	4.8	0.0	-	0.0	0.0	-	-	0.0	-	-

*Sebastes macdonaldi*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7 60.0	0.0	-	0.0	0.0	-	5.0	0.0	-	-	0.0	-	-
110.0 40.0	0.0	-	15.6	0.0	-	0.0	0.0	-	-	-	0.0	-

*Sebastes paucispinis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0 55.0	4.3	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3 60.0	0.0	9.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3 65.0	-	18.7	-	-	-	-	-	-	-	-	-	-
66.7 50.0	-	85.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7 55.0	0.0	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7 60.0	0.0	21.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7 80.0	0.0	0.0	-	-	11.0	-	0.0	-	-	0.0	-	-
73.3 60.0	0.0	5.1	-	0.0	-	-	0.0	-	-	0.0	-	-
73.3 90.0	0.0	0.0	-	-	8.8	-	0.0	-	-	0.0	-	-
76.7 51.0	0.0	10.3	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7 55.0	0.0	10.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7 60.0	0.0	20.9	-	9.6	0.0	-	0.0	-	-	0.0	-	-
76.7 65.0	-	18.6	-	-	-	-	-	-	-	-	-	-
80.0 60.0	22.8	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
82.0 46.0	0.0	11.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3 55.0	0.0	5.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3 60.0	41.5	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3 65.0	-	21.0	-	-	-	-	-	-	-	-	-	-
83.3 70.0	0.0	10.5	-	0.0	10.9	-	0.0	-	-	0.0	-	-
86.7 35.0	0.0	11.3	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7 40.0	27.9	0.0	-	10.5	-	0.0	0.0	-	-	0.0	-	-
86.7 45.0	0.0	10.5	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7 50.0	17.7	8.5	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7 65.0	-	10.0	-	-	-	-	-	-	-	-	-	-
90.0 28.0	0.0	-	9.5	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0 53.0	0.0	-	5.4	-	-	0.0	0.0	-	-	0.0	-	-
90.0 60.0	8.6	-	0.0	-	-	0.0	0.0	-	-	-	-	-
90.0 70.0	0.0	30.9	-	0.0	-	0.0	0.0	-	-	-	-	-
93.3 70.0	0.0	-	10.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7 35.0	0.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7 40.0	0.0	-	11.2	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Sebastes* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	80.0	0.0	-	-	10.0	-	0.0	-	-	0.0	-	-
63.3	80.0	0.0	-	-	10.9	-	0.0	-	-	0.0	-	-
63.3	90.0	0.0	-	-	10.6	-	0.0	-	-	-	-	-
66.7	70.0	0.0	-	0.0	10.7	-	0.0	-	-	0.0	-	-
66.7	80.0	0.0	-	-	0.0	-	0.0	-	-	5.2	-	-
70.0	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.0	-	-
76.7	70.0	0.0	-	9.9	8.9	-	0.0	-	-	0.0	-	-
76.7	80.0	0.0	-	10.9	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	0.0	20.8	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	5.3	-	-
90.0	70.0	0.0	-	0.0	0.0	-	9.9	-	-	-	-	-
96.7	35.0	0.0	0.0	0.0	0.0	-	9.8	-	-	0.0	-	-
96.7	55.0	0.0	0.0	0.0	0.0	-	5.2	-	-	0.0	-	-
100.0	70.0	0.0	-	-	5.0	-	0.0	-	-	0.0	-	-

## Blennioidei

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	0.0	-	4.4	0.0	-	0.0	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-

*Hypsoblennius* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	40.6	0.0	-	0.0	8.3	-	4.5	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
86.7	33.0	0.0	-	0.0	-	0.0	0.0	-	-	35.8	-	-
86.7	35.0	0.0	-	0.0	-	0.0	5.3	-	-	0.0	-	-
90.0	28.0	0.0	0.0	0.0	-	56.9	0.0	-	-	0.0	-	-
90.0	30.0	0.0	0.0	0.0	-	40.3	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
93.3	26.7	0.0	0.0	0.0	-	32.2	0.0	-	-	0.0	-	-
93.3	30.0	0.0	0.0	0.0	-	0.0	5.5	-	-	0.0	-	-
96.7	29.0	0.0	0.0	0.0	-	19.7	0.0	-	-	0.0	-	-
103.3	29.0	0.0	3.8	0.0	-	0.0	0.0	-	-	4.4	-	-
106.7	32.0	0.0	0.0	0.0	-	8.8	0.0	-	-	-	0.0	-

## Clinidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	50.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
73.3	50.0	0.0	-	0.0	34.1	-	0.0	-	-	0.0	-	-
76.7	48.0	0.0	-	21.0	0.0	-	0.0	-	-	0.0	-	-



TABLE 4. (cont.)

## Clinidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	51.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.7	50.0	0.0	0.0	26.8	0.0	0.0	0.0	0.0	0.0	19.4	0.0	0.0
96.7	29.0	0.0	4.9	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.7	30.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	29.0	0.0	3.8	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	30.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	32.4	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	32.5	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Gobiidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	18.2	0.0	0.0
60.0	52.5	0.0	0.0	0.0	0.0	0.0	29.7	0.0	0.0	0.0	0.0	0.0
73.3	50.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0
76.7	55.0	0.0	0.0	0.0	0.0	0.0	21.9	0.0	0.0	0.0	0.0	0.0
83.3	40.6	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0
83.3	42.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
83.3	51.0	0.0	5.1	0.0	0.0	0.0	5.0	0.0	0.0	22.3	0.0	0.0
86.7	33.0	0.0	0.0	63.1	0.0	0.0	17.7	0.0	0.0	0.0	0.0	0.0
86.7	35.0	0.0	5.6	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.3	30.0	0.0	0.0	37.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.3	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
110.0	32.4	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	26.2	0.0

*Icosteus aenigmaticus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	49.0	0.0	0.0	0.0	0.0	0.0	33.1	0.0	0.0	0.0	0.0	0.0
66.7	65.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Halichoeres* spp.

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	4.5	0.0	0.0	0.0	0.0	0.0
106.7	31.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0

*Oxyjulis californica*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	48.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0

TABLE 4. (cont.)

*Oxyjulis californica* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	55.0	0.0	-	0.0	0.0	-	65.7	-	-	0.0	-	-
76.7	60.0	0.0	-	0.0	0.0	-	21.7	-	-	0.0	-	-
80.0	51.0	0.0	-	0.0	0.0	-	57.1	-	-	0.0	-	-
80.0	55.0	0.0	-	0.0	0.0	-	42.7	-	-	0.0	-	-
80.0	70.0	0.0	-	0.0	0.0	-	19.3	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	99.7	-	-	0.0	-	-
83.3	40.6	0.0	-	4.3	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	54.9	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	0.0	-	0.0	0.0	-	-	5.2	-	-
90.0	35.0	0.0	-	0.0	-	0.0	4.9	-	-	4.8	-	-
90.0	45.0	-	0.0	0.0	-	91.5	0.0	-	-	0.0	-	-
96.7	35.0	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-

*Semicossyphus pulcher*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	0.0	-	0.0	0.0	-	19.0	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	11.1	-	-	0.0	-	-
103.3	29.0	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-

*Chromis punctipinnis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
82.0	46.0	0.0	-	0.0	0.0	-	22.2	-	-	0.0	-	-
90.0	35.0	-	-	0.0	-	0.0	24.5	-	-	0.0	-	-
96.7	29.0	-	0.0	0.0	-	0.0	4.3	-	-	0.0	-	-
96.7	32.0	-	0.0	0.0	-	0.0	4.8	-	-	0.0	-	-
96.7	40.0	-	0.0	0.0	-	0.0	5.0	-	-	0.0	-	-
100.0	29.2	-	0.0	0.0	-	0.0	14.1	-	-	0.0	-	-
100.0	30.0	-	0.0	0.0	-	0.0	59.4	-	-	0.0	-	-
106.7	31.0	-	0.0	0.0	-	0.0	7.8	-	-	-	0.0	-
106.7	35.0	-	0.0	0.0	-	0.0	20.2	-	-	-	0.0	-
110.0	40.0	-	0.0	0.0	-	16.0	0.0	-	-	-	0.0	-

*Trachurus symmetricus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	80.0	0.0	-	-	21.8	-	0.0	-	-	0.0	-	-
76.7	100.0	0.0	0.0	0.0	128.8	-	0.0	-	-	-	-	-
80.0	100.0	0.0	-	0.0	11.3	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	21.2	0.0	-	0.0	-	-	0.0	-	-
83.3	90.0	0.0	-	5.4	0.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	100.0	0.0	-	160.2	0.0	-	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	10.8	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	10.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	10.5	-	-
86.7	100.0	0.0	-	0.0	40.0	-	0.0	-	-	0.0	-	-
90.0	45.0	0.0	0.0	0.0	-	10.2	0.0	-	-	0.0	-	-
90.0	70.0	0.0	-	0.0	-	112.3	-	-	-	0.0	-	-
90.0	100.0	0.0	-	331.8	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	0.0	9.0	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	0.0	0.0	-	8.7	32.7	-	-	0.0	-	-
93.3	80.0	0.0	-	0.0	-	9.7	0.0	-	-	0.0	-	-
93.3	100.0	0.0	-	3.8	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	45.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	70.0	0.0	0.0	0.0	-	19.5	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	-	-
100.0	35.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	0.0	0.0	0.0	-	0.0	9.5	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	0.0	9.1	-	-	0.0	-	-
100.0	50.0	0.0	5.1	0.0	-	0.0	42.6	-	-	0.0	-	-
100.0	55.0	0.0	4.8	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	0.0	64.5	-	0.0	59.0	-	-	0.0	-	-
100.0	80.0	0.0	-	-	-	70.1	0.0	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	68.9	0.0	-	-	0.0	-	-
100.0	100.0	0.0	-	0.0	-	36.9	0.0	-	-	0.0	-	-
103.3	45.0	0.0	-	0.0	-	4.4	0.0	-	-	0.0	-	-
103.3	50.0	0.0	0.0	0.0	-	9.2	0.0	-	-	0.0	-	-
103.3	55.0	0.0	0.0	0.0	-	8.7	31.5	-	-	0.0	-	-
103.3	60.0	0.0	0.0	9.8	-	0.0	0.0	-	-	0.0	-	-
103.3	70.0	0.0	0.0	0.0	-	15.1	21.3	-	-	0.0	-	-
103.3	80.0	0.0	-	0.0	-	15.8	0.0	-	-	0.0	-	-
103.3	90.0	0.0	-	0.0	-	9.7	0.0	-	-	0.0	-	-
106.7	40.0	0.0	5.1	4.3	-	0.0	0.0	-	-	0.0	-	-
106.7	45.0	0.0	21.8	4.7	-	0.0	0.0	-	-	0.0	-	-
106.7	50.0	0.0	0.0	0.0	-	9.8	0.0	-	-	0.0	-	-
106.7	55.0	0.0	0.0	0.0	-	9.9	30.6	-	-	0.0	-	-
106.7	60.0	0.0	0.0	-	-	9.9	0.0	-	-	0.0	-	-
106.7	70.0	0.0	0.0	-	-	0.0	96.5	-	-	0.0	-	-
106.7	90.0	0.0	0.0	8.8	-	0.0	0.0	-	-	0.0	-	-
110.0	40.0	0.0	0.0	0.0	-	47.9	0.0	-	-	0.0	-	-
110.0	45.0	0.0	0.0	0.0	-	39.1	0.0	-	-	0.0	-	-
110.0	50.0	0.0	0.0	4.9	-	20.1	0.0	-	-	0.0	-	-
110.0	55.0	0.0	0.0	9.3	-	0.0	0.0	-	-	0.0	-	-
110.0	60.0	0.0	0.0	0.0	-	26.5	0.0	-	-	0.0	-	-
110.0	80.0	0.0	0.0	0.0	-	4.6	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

## Gerreidae

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	92.3	-	-	0.0	-	-
103.3	35.0	0.0	0.0	0.0	-	0.0	5.0	-	-	0.0	-	-

## Haemulidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	40.6	0.0	-	0.0	0.0	-	4.5	-	-	0.0	-	-

*Atractoscion nobilis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	28.0	0.0	0.0	0.0	-	9.5	0.0	-	-	0.0	-	-

*Genyonemus lineatus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	66.0	-	0.0	0.0	-	0.0	-	-	18.2	-	-
60.0	52.5	0.0	-	0.0	0.0	-	29.7	-	-	0.0	-	-
63.3	50.0	7.9	-	0.0	0.0	-	0.0	-	-	-	-	-
63.3	52.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	49.0	0.0	-	0.0	0.0	-	0.0	-	-	10.0	-	-
66.7	50.0	31.9	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	48.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	51.0	4.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	33.0	0.0	-	9.0	-	0.0	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	28.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	30.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	60.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	29.0	11.9	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	30.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
106.7	31.0	5.2	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-
110.0	32.4	4.1	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-

*Seriphus politus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	50.0	0.0	-	-	0.0	-	8.7	-	-	-	-	-
86.7	33.0	0.0	-	0.0	-	0.0	17.7	-	-	5.1	-	-
90.0	28.0	0.0	0.0	0.0	-	56.9	0.0	-	-	0.0	-	-
93.3	26.7	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-

TABLE 4. (cont.)

## Serranidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	40.6	0.0	-	0.0	0.0	-	8.9	-	-	3.9	-	-
86.7	33.0	0.0	-	0.0	-	0.0	0.0	-	-	5.1	-	-
90.0	28.0	0.0	0.0	0.0	-	37.9	0.0	-	-	0.0	-	-
93.3	26.7	0.0	0.0	0.0	-	8.1	0.0	-	-	0.0	-	-

Gempylidae												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	100.0	0.0	-	9.8	-	0.0	-	-	-	0.0	-	-
100.0	100.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-

<i>Scomber japonicus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	70.0	0.0	-	0.0	0.0	-	11.2	-	-	0.0	-	-
76.7	100.0	0.0	-	0.0	0.0	-	10.4	-	-	0.0	-	-
80.0	90.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
83.3	40.6	0.0	-	0.0	0.0	-	44.6	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	4.4	-	-
86.7	80.0	0.0	-	0.0	0.0	-	10.6	-	-	0.0	-	-
90.0	28.0	0.0	0.0	0.0	-	132.7	0.0	-	-	0.0	-	-
90.0	45.0	0.0	0.0	0.0	-	20.3	0.0	-	-	0.0	-	-
90.0	80.0	0.0	-	-	-	20.2	0.0	-	-	0.0	-	-
93.3	60.0	0.0	0.0	0.0	-	245.9	0.0	-	-	0.0	-	-
96.7	29.0	0.0	0.0	0.0	-	9.9	0.0	-	-	0.0	-	-
96.7	30.0	0.0	0.0	0.0	-	38.0	0.0	-	-	0.0	-	-
100.0	55.0	0.0	0.0	0.0	-	0.0	35.4	-	-	0.0	-	-
106.7	31.0	0.0	0.0	0.0	-	0.0	3.9	-	-	0.0	0.0	-
106.7	60.0	0.0	0.0	-	-	0.0	5.1	-	-	-	0.0	-
110.0	40.0	0.0	0.0	0.0	-	21.3	0.0	-	-	-	0.0	-
110.0	50.0	0.0	0.0	0.0	-	5.0	0.0	-	-	-	0.0	-

*Lepidopus xantusi*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	50.0	-	0.0	0.0	-	5.0	0.0	-	-	-	0.0	-

*Sphyræna argentea*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	40.6	0.0	-	0.0	0.0	-	13.4	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	11.0	-	-

TABLE 4. (cont.)

*Sphyaena argentea* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.3	29.0	-	0.0	0.0	-	2.7	4.9	-	-	0.0	-	-
106.7	31.0	-	0.0	0.0	-	0.0	3.9	-	-	-	0.0	-

*Icichthys lockingtoni*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	65.0	8.5	-	-	-	-	-	-	-	-	-	-
60.0	70.0	4.3	-	10.8	0.0	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	-	0.0	0.0	-	0.0	-	-	4.8	-	-
63.3	65.0	9.4	-	-	-	-	-	-	-	-	-	-
63.3	70.0	8.2	-	0.0	0.0	33.5	0.0	-	-	0.0	-	-
63.3	90.0	0.0	-	10.6	0.0	0.0	0.0	-	-	0.0	-	-
66.7	70.0	0.0	-	0.0	0.0	21.8	0.0	-	-	0.0	-	-
70.0	65.0	3.8	-	-	-	-	-	-	-	-	-	-
70.0	80.0	4.5	-	0.0	0.0	0.0	0.0	-	-	-	-	-
70.0	90.0	0.0	-	10.0	0.0	0.0	0.0	-	-	-	-	-
73.3	60.0	5.1	-	-	-	-	0.0	-	-	0.0	-	-
73.3	70.0	0.0	-	0.0	0.0	10.2	10.0	-	-	0.0	-	-
76.7	80.0	0.0	-	10.9	0.0	10.2	10.0	-	-	0.0	-	-
76.7	90.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
82.0	46.0	5.6	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-
83.3	55.0	0.0	-	0.0	0.0	0.0	0.0	-	-	9.7	-	-
83.3	60.0	0.0	-	0.0	0.0	0.0	0.0	-	-	10.8	-	-
83.3	70.0	0.0	-	0.0	0.0	10.9	10.5	-	-	0.0	-	-
83.3	100.0	0.0	-	5.3	0.0	0.0	0.0	-	-	0.0	-	-
86.7	70.0	0.0	-	0.0	21.6	0.0	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	20.4	0.0	0.0	-	-	31.0	-	-
90.0	80.0	0.0	-	0.0	10.4	0.0	0.0	-	-	0.0	-	-
90.0	90.0	0.0	-	-	-	10.1	0.0	-	-	-	-	-
93.3	100.0	0.0	-	0.0	-	0.0	10.8	-	-	0.0	-	-
100.0	45.0	-	0.0	0.0	-	0.0	10.8	-	-	0.0	-	-

*Peprilus similimus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	50.0	0.0	-	-	0.0	-	8.7	-	-	-	-	-
63.3	55.0	0.0	-	0.0	0.0	-	11.6	-	-	0.0	-	-

*Tetragonurus cuvieri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	100.0	0.0	-	-	0.0	-	5.3	-	-	-	-	-

TABLE 4. (cont.)

*Tetragonurus cuvieri* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
70.0	70.0	0.0	-	0.0	0.0	-	10.5	-	-	0.0	-	-
73.3	60.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	9.4	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	0.0	-	-	4.9	-	-
83.3	80.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
86.7	60.0	0.0	-	0.0	0.0	0.0	0.0	-	-	39.8	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	0.0	-	0.0	-	-	36.8	-	-
90.0	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.2	-	-
90.0	90.0	0.0	-	-	-	0.0	0.0	-	-	-	-	-
93.3	100.0	0.0	-	3.8	-	0.0	0.0	-	-	46.1	-	-
96.7	45.0	4.8	0.0	0.0	0.0	0.0	0.0	-	-	15.0	-	-
96.7	70.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
96.7	90.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	9.8	-	-
96.7	90.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	10.5	-	-
100.0	45.0	0.0	0.0	0.0	0.0	0.0	5.3	-	-	4.3	-	-
100.0	50.0	0.0	0.0	0.0	0.0	0.0	11.0	-	-	0.0	-	-
100.0	55.0	0.0	0.0	0.0	0.0	0.0	11.8	-	-	0.0	-	-
100.0	70.0	0.0	0.0	0.0	0.0	0.0	10.7	-	-	29.2	-	-
100.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	-
103.3	60.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	5.0	-	-
110.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	9.7	-

*Chiasmodontidae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	100.0	0.0	-	5.3	0.0	-	0.0	-	-	0.0	-	-
96.7	90.0	0.0	-	0.0	-	0.0	0.0	-	-	4.3	-	-
100.0	50.0	0.0	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	60.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	80.0	4.5	0.0	0.0	-	0.0	0.0	-	-	0.0	0.0	-
103.3	100.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	4.8	-
106.7	60.0	0.0	5.4	-	-	0.0	0.0	-	-	-	0.0	-
110.0	60.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	9.9	-

*Citharichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	32.9	-	-	0.0	-	-
63.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	43.0	-	-
73.3	50.0	0.0	-	0.0	0.0	-	9.5	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	0.0	0.0	5.3	-	-	0.0	-	-
93.3	26.7	4.5	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Citharichthys* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	30.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	35.0	-	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	30.0	-	0.0	0.0	-	0.0	0.0	-	-	9.3	-	-

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	0.0	-	-	9.8	-	-
60.0	80.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	90.0	0.0	-	0.0	0.0	-	0.0	-	-	35.5	-	-
63.3	50.0	4.7	-	0.0	-	-	0.0	-	-	-	-	-
63.3	55.0	0.0	-	0.0	-	-	23.2	-	-	43.0	-	-
63.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	9.7	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	-	-	-
66.7	70.0	0.0	-	0.0	0.0	-	10.9	-	-	0.0	-	-
70.0	53.0	0.0	-	0.0	0.0	-	5.2	-	-	0.0	-	-
70.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	4.9	-	-
70.0	65.0	3.8	-	-	-	-	-	-	-	-	-	-
70.0	70.0	0.0	-	0.0	0.0	-	0.0	-	-	35.0	-	-
73.3	50.0	0.0	-	0.0	0.0	-	18.9	-	-	0.0	-	-
76.7	48.0	0.0	-	0.0	0.0	-	19.2	-	-	0.0	-	-
76.7	51.0	0.0	-	0.0	0.0	-	51.9	-	-	0.0	-	-
76.7	55.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
76.7	70.0	7.7	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	22.0	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	10.0	-	-	0.0	-	-
83.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	80.0	0.0	-	0.0	0.0	-	0.0	-	-	10.7	-	-
93.3	29.0	-	0.0	10.3	-	0.0	0.0	-	-	0.0	-	-
100.0	29.2	-	0.0	0.0	-	0.0	0.0	-	-	4.7	-	-

*Citharichthys sordidus**Citharichthys stigmæus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	16.5	-	-	0.0	-	-
60.0	90.0	0.0	-	0.0	0.0	-	10.6	-	-	0.0	-	-
63.3	52.0	0.0	-	0.0	0.0	-	10.0	-	-	0.0	-	-
63.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	86.0	-	-
63.3	60.0	0.0	-	0.0	0.0	-	0.0	-	-	9.7	-	-
63.3	70.0	0.0	-	0.0	0.0	-	0.0	-	-	11.1	-	-
63.3	80.0	0.0	-	0.0	0.0	-	0.0	-	-	5.1	-	-
66.7	50.0	10.6	-	0.0	0.0	-	0.0	-	-	10.3	-	-
66.7	55.0	10.4	-	0.0	0.0	-	0.0	-	-	0.0	-	-



TABLE 4. (cont.)

*Citharichthys stigmaeus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
66.7	60.0	0.0	-	0.0	0.0	-	0.0	-	-	9.6	-	-
66.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	11.0	-	-
66.7	80.0	0.0	-	0.0	0.0	-	0.0	-	-	5.2	-	-
70.0	51.0	0.0	-	0.0	0.0	-	10.3	-	-	0.0	-	-
70.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	4.9	-	-
73.3	53.0	0.0	-	0.0	0.0	-	0.0	-	-	10.9	-	-
76.7	51.0	0.0	-	0.0	0.0	-	10.4	-	-	19.5	-	-
76.7	55.0	0.0	-	0.0	0.0	-	54.8	-	-	0.0	-	-
76.7	60.0	0.0	-	0.0	11.3	-	43.3	-	-	0.0	-	-
76.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	5.1	-	-
80.0	51.0	0.0	-	0.0	0.0	-	47.6	-	-	0.0	-	-
80.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	10.0	-	-
80.0	80.0	0.0	-	0.0	0.0	-	11.2	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	0.0	-	11.1	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	11.0	-	-	5.3	-	-
83.3	51.0	0.0	-	0.0	0.0	-	10.0	-	-	4.4	-	-
83.3	70.0	0.0	-	0.0	0.0	-	10.5	-	-	0.0	-	-
86.7	33.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	0.0	-	-	0.0	-	-	4.8	-	-
86.7	70.0	0.0	-	0.0	0.0	-	0.0	-	-	11.0	-	-
90.0	30.0	0.0	10.7	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	35.0	0.0	-	0.0	0.0	-	4.9	-	-	0.0	-	-
96.7	50.0	0.0	16.4	4.6	-	-	0.0	-	-	0.0	-	-
100.0	35.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-

*Citharichthys xanthostigma*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	26.7	-	0.0	0.0	-	8.1	0.0	-	-	0.0	-	-
96.7	35.0	-	5.1	0.0	-	0.0	0.0	-	-	0.0	-	-
110.0	32.5	-	10.3	-	-	-	-	-	-	-	-	-

*Hippoglossina stomata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	4.4	-	-
86.7	33.0	0.0	-	0.0	-	10.0	0.0	-	-	0.0	-	-
110.0	32.4	0.0	-	0.0	-	0.0	0.0	-	-	-	8.7	-

TABLE 4. (cont.)

*Paralichthys californicus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	0.0	0.0	-	0.0	0.0	-	0.0	-	-	9.1	-	-
63.3	50.0	56.3	-	0.0	0.0	-	0.0	-	-	-	-	-
63.3	52.0	9.8	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	48.0	0.0	-	10.5	0.0	-	9.6	-	-	0.0	-	-
83.3	40.6	0.0	-	4.3	0.0	-	0.0	-	-	0.0	-	-
86.7	35.0	5.6	-	0.0	0.0	-	5.3	-	-	0.0	-	-
86.7	50.0	0.0	-	8.9	0.0	-	0.0	-	-	0.0	-	-
96.7	29.0	-	34.4	0.0	0.0	-	0.0	-	-	0.0	-	-
96.7	30.0	-	9.3	0.0	0.0	-	0.0	-	-	0.0	-	-
103.3	30.0	-	0.0	0.0	-	0.0	10.4	-	-	0.0	-	-

*Xystreureys liolepis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	48.0	0.0	-	3.5	0.0	-	0.0	-	-	0.0	-	-
83.3	40.6	0.0	-	0.0	0.0	-	0.0	-	-	15.6	-	-
86.7	33.0	0.0	-	0.0	-	0.0	0.0	-	-	5.1	-	-
96.7	29.0	-	0.0	0.0	-	0.0	0.0	-	-	9.8	-	-

*Glyptocephalus zachirus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	60.0	9.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	11.3	-	0.0	-	-	0.0	-	-
73.3	53.0	0.0	-	10.5	10.3	-	0.0	-	-	0.0	-	-
76.7	60.0	0.0	-	9.6	0.0	-	0.0	-	-	0.0	-	-
76.7	70.0	0.0	-	9.9	0.0	-	0.0	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-

*Hypsopsetta guttulata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
96.7	29.0	0.0	14.8	0.0	-	0.0	0.0	-	-	0.0	-	-

*Lepidopsetta bilineata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	0.0	0.0	10.0	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

*Lyopsetta exilis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	55.0	0.0	-	0.0	0.0	-	8.2	-	-	0.0	-	-
60.0	60.0	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
66.7	55.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
66.7	60.0	0.0	-	0.0	10.5	-	0.0	-	-	0.0	-	-
70.0	51.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	0.0	-	10.5	-	-	0.0	-	-
76.7	48.0	0.0	-	3.5	0.0	-	0.0	-	-	0.0	-	-
76.7	60.0	0.0	-	9.6	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	-	9.4	0.0	-	0.0	-	-	0.0	-	-
83.3	55.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
86.7	35.0	10.7	-	0.0	-	-	0.0	-	-	0.0	-	-
93.3	45.0	5.6	0.0	10.5	-	0.0	0.0	-	-	0.0	-	-
		-										

*Microstomus pacificus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	60.0	0.0	-	10.1	-	-	0.0	-	-	0.0	-	-
70.0	70.0	0.0	-	0.0	0.0	-	10.5	-	-	0.0	-	-
73.3	90.0	0.0	-	-	8.8	-	0.0	-	-	0.0	-	-
80.0	80.0	0.0	-	0.0	0.0	-	22.3	-	-	0.0	-	-
80.0	100.0	0.0	-	0.0	0.0	-	20.7	-	-	0.0	-	-
86.7	80.0	0.0	-	0.0	10.2	-	0.0	-	-	0.0	-	-
86.7	90.0	0.0	-	0.0	10.4	-	0.0	-	-	0.0	-	-
90.0	60.0	0.0	0.0	-	-	18.6	0.0	-	-	0.0	-	-

*Parophrys vetulus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	76.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	52.5	168.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	50.0	14.1	-	-	0.0	-	8.7	-	-	-	-	-
63.3	52.0	0.0	-	0.0	0.0	-	10.0	-	-	11.1	-	-
63.3	55.0	0.0	-	0.0	0.0	-	34.9	-	-	0.0	-	-
63.3	60.0	9.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	49.0	0.0	-	10.1	0.0	-	11.0	-	-	0.0	-	-
70.0	70.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
93.3	29.0	-	5.4	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	30.0	-	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-

*Pleuronichthys coenosus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	0.0	0.0	0.0	10.5	-	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	70.0	0.0	0.0	0.0	10.8	-	0.0	-	-	0.0	-	-

*Pleuronichthys decurrens*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	55.0	0.0	10.8	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	60.0	9.7	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	70.0	0.0	10.5	0.0	0.0	-	0.0	-	-	0.0	-	-

*Pleuronichthys ritteri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	48.0	0.0	0.0	0.0	0.0	-	9.6	-	-	0.0	-	-
86.7	33.0	0.0	0.0	0.0	-	0.0	0.0	-	-	5.1	-	-
90.0	28.0	0.0	0.0	0.0	-	37.9	0.0	-	-	0.0	-	-
96.7	29.0	0.0	0.0	0.0	-	0.0	0.0	-	-	4.9	-	-

*Pleuronichthys verticalis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	52.5	0.0	0.0	0.0	0.0	-	19.8	-	-	0.0	-	-
76.7	48.0	0.0	0.0	0.0	0.0	-	0.0	-	-	4.3	-	-
83.3	40.6	0.0	0.0	0.0	0.0	-	4.5	-	-	7.8	-	-
86.7	33.0	0.0	0.0	0.0	-	0.0	70.6	-	-	0.0	-	-
90.0	28.0	0.0	19.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	29.0	0.0	10.8	0.0	-	0.0	0.0	-	-	0.0	-	-
110.0	32.5	-	10.3	-	-	-	-	-	-	-	-	-

*Psettichthys melanostictus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
76.7	48.0	0.0	0.0	0.0	7.9	-	0.0	-	-	0.0	-	-

## Disintegrated fish larva

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	50.0	3.9	28.5	0.0	4.2	-	0.0	-	-	0.0	-	-
60.0	55.0	12.8	5.4	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	60.0	4.9	8.8	0.0	-	-	0.0	-	-	0.0	-	-
60.0	70.0	15.2	4.3	0.0	0.0	-	0.0	-	-	0.0	-	-
60.0	80.0	0.0	0.0	-	20.1	-	0.0	-	-	0.0	-	-

TABLE 4. (cont.)

## Disintegrated fish larva (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
60.0	90.0	0.0	-	-	0.0	-	10.6	-	-	0.0	-	-
60.0	100.0	0.0	-	-	4.9	-	0.0	-	-	0.0	-	-
63.3	52.0	19.5	-	0.0	0.0	-	0.0	-	-	0.0	-	-
63.3	55.0	0.0	-	0.0	0.0	-	11.6	-	-	0.0	-	-
63.3	90.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
66.7	49.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
66.7	55.0	0.0	-	21.7	10.2	-	0.0	-	-	0.0	-	-
66.7	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
66.7	65.0	7.6	-	-	-	-	-	-	-	0.0	-	-
66.7	80.0	17.6	-	-	0.0	-	0.0	-	-	-	-	-
66.7	90.0	0.0	-	-	0.0	-	0.0	-	-	-	-	-
66.7	100.0	0.0	-	-	0.0	-	10.6	-	-	-	-	-
70.0	60.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
70.0	65.0	22.8	-	-	-	-	-	-	-	-	-	-
70.0	80.0	4.5	-	-	0.0	-	0.0	-	-	-	-	-
70.0	100.0	4.5	-	0.0	4.6	-	0.0	-	-	-	-	-
73.3	53.0	9.9	-	0.0	0.0	-	0.0	-	-	10.9	-	-
73.3	65.0	9.9	-	-	-	-	-	-	-	-	-	-
73.3	70.0	22.6	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	80.0	4.7	-	-	-	-	10.9	-	-	0.0	-	-
73.3	100.0	0.0	-	-	-	-	0.0	-	-	0.0	-	-
76.7	48.0	3.5	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	80.0	25.2	-	39.7	0.0	-	0.0	-	-	0.0	-	-
76.7	90.0	0.0	-	-	0.0	-	10.7	-	-	0.0	-	-
80.0	55.0	0.0	-	-	0.0	-	9.7	-	-	0.0	-	-
80.0	70.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	90.0	0.0	-	5.0	0.0	-	0.0	-	-	0.0	-	-
80.0	100.0	0.0	-	5.0	45.0	-	0.0	-	-	4.9	-	-
82.0	46.0	11.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	5.4	-	0.0	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	0.0	-	-	4.4	-	-
83.3	55.0	0.0	-	10.6	0.0	-	0.0	-	-	0.0	-	-
83.3	65.0	10.5	-	-	0.0	-	-	-	-	-	-	-
83.3	70.0	0.0	-	0.0	10.9	-	0.0	-	-	0.0	-	-
83.3	90.0	9.5	-	0.0	0.0	-	20.9	-	-	0.0	-	-
86.7	33.0	5.2	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	8.9	-	0.0	74.9	-	-	0.0	-	-
86.7	60.0	0.0	-	0.0	-	0.0	0.0	-	-	19.9	-	-
86.7	65.0	20.1	-	-	-	-	-	-	-	-	-	-
86.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
90.0	28.0	-	0.0	0.0	-	9.5	0.0	-	-	0.0	-	-
90.0	35.0	-	10.9	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	37.0	-	0.0	0.0	-	9.9	0.0	-	-	0.0	-	-
90.0	45.0	-	0.0	0.0	-	10.2	0.0	-	-	0.0	-	-
90.0	53.0	-	0.0	-	-	0.0	0.0	-	-	28.1	-	-
90.0	60.0	-	0.0	-	-	18.6	4.5	-	-	-	-	-

TABLE 4. (cont.)

Disintegrated fish larva (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	70.0	4.9	0.0	0.0	-	0.0	0.0	-	-	-	-	-
90.0	80.0	4.9	0.0	-	-	0.0	0.0	-	-	-	-	-
90.0	90.0	0.0	0.0	-	-	0.0	10.0	-	-	16.8	-	-
93.3	26.7	0.0	0.0	0.0	-	0.0	4.9	-	-	0.0	-	-
93.3	40.0	4.4	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	45.0	0.0	5.9	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	50.0	0.0	11.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	5.4	10.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	40.0	0.0	0.0	0.0	-	0.0	5.0	-	-	0.0	-	-
96.7	45.0	0.0	0.0	0.0	-	0.0	10.2	-	-	5.2	-	-
96.7	50.0	0.0	10.5	0.0	-	4.7	0.0	-	-	0.0	-	-
96.7	55.0	0.0	10.1	0.0	-	4.7	0.0	-	-	0.0	-	-
96.7	60.0	5.4	4.8	0.0	-	10.0	0.0	-	-	0.0	-	-
96.7	70.0	5.2	0.0	0.0	-	0.0	10.4	-	-	0.0	-	-
96.7	80.0	4.8	0.0	0.0	-	0.0	19.6	-	-	0.0	-	-
96.7	90.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	100.0	4.9	0.0	0.0	-	0.0	0.0	-	-	4.3	-	-
100.0	29.2	-	-	0.0	-	0.0	0.0	-	-	4.8	-	-
100.0	40.0	0.0	9.8	0.0	-	0.0	4.7	-	-	0.0	-	-
100.0	45.0	0.0	0.0	0.0	-	0.0	4.5	-	-	0.0	-	-
100.0	50.0	0.0	9.8	0.0	-	0.0	5.3	-	-	0.0	-	-
100.0	55.0	5.4	10.1	9.7	-	0.0	55.1	-	-	0.0	-	-
100.0	70.0	0.0	10.2	0.0	-	14.6	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	4.9	-	-	0.0	-	-
100.0	90.0	0.0	-	0.0	-	34.4	0.0	-	-	0.0	-	-
100.0	95.0	4.6	-	0.0	-	13.8	0.0	-	-	20.1	-	-
103.3	35.0	0.0	-	4.8	-	0.0	0.0	-	-	29.0	-	-
103.3	40.0	-	0.0	0.0	-	0.0	0.0	-	-	9.5	-	-
103.3	45.0	0.0	42.6	0.0	-	0.0	10.5	-	-	0.0	-	-
103.3	50.0	0.0	50.7	0.0	-	9.2	0.0	-	-	4.7	-	-
103.3	55.0	0.0	20.3	0.0	-	0.0	10.1	-	-	0.0	-	-
103.3	60.0	-	-	0.0	-	0.0	0.0	-	-	5.0	-	-
103.3	70.0	5.0	-	0.0	-	0.0	0.0	-	-	9.6	0.0	-
103.3	80.0	0.0	-	0.0	-	4.8	0.0	-	-	0.0	0.0	-
103.3	90.0	0.0	-	0.0	-	9.6	0.0	-	-	0.0	0.0	-
103.3	100.0	13.1	-	4.8	-	4.7	0.0	-	-	0.0	0.0	-
106.7	35.0	0.0	15.8	0.0	-	0.0	0.0	-	-	-	-	-
106.7	45.0	0.0	13.1	9.4	-	0.0	10.0	-	-	-	-	-
106.7	50.0	-	5.5	5.6	-	9.7	40.9	-	-	-	-	-
106.7	55.0	-	0.0	-	-	0.0	0.0	-	-	-	-	-
106.7	60.0	-	0.0	-	-	0.0	0.0	-	-	-	-	-
106.7	70.0	4.1	4.7	-	-	0.0	0.0	-	-	-	-	-
106.7	80.0	0.0	0.0	-	-	4.6	0.0	-	-	-	-	-
106.7	90.0	0.0	0.0	4.4	-	19.6	0.0	-	-	-	-	-
106.7	100.0	0.0	0.0	7.4	-	10.0	0.0	-	-	-	-	-
110.0	35.0	0.0	15.6	0.0	-	10.6	0.0	-	-	-	-	-
110.0	40.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-	-

TABLE 4. (cont.)

Disintegrated fish larva (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	45.0	-	5.4	0.0	-	4.9	0.0	-	-	-	0.0	-
110.0	50.0	-	0.0	0.0	-	10.0	0.0	-	-	-	0.0	-
110.0	60.0	-	0.0	8.9	-	0.0	0.0	-	-	-	0.0	-
110.0	65.0	-	0.0	0.0	-	0.0	37.6	-	-	-	-	-
110.0	90.0	-	0.0	0.0	-	5.3	9.3	-	-	-	0.0	-
110.0	100.0	-	0.0	0.0	-	30.1	35.8	-	-	-	0.0	-
Unidentified fish larva												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
63.3	100.0	0.0	-	-	0.0	-	5.1	-	-	-	-	-
66.7	49.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
73.3	53.0	10.2	-	0.0	0.0	-	0.0	-	-	0.0	-	-
73.3	80.0	0.0	-	-	-	-	10.9	-	-	0.0	-	-
76.7	48.0	0.0	-	3.5	0.0	-	0.0	-	-	0.0	-	-
76.7	51.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
76.7	65.0	9.3	-	9.9	0.0	-	-	-	-	0.0	-	-
76.7	70.0	0.0	-	23.8	0.0	-	0.0	-	-	-	-	-
76.7	100.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-
80.0	51.0	0.0	-	0.0	0.0	-	19.0	-	-	0.0	-	-
80.0	55.0	0.0	-	26.1	0.0	-	42.7	-	-	0.0	-	-
80.0	60.0	0.0	-	0.0	33.2	-	0.0	-	-	0.0	-	-
80.0	65.0	4.4	-	-	-	-	-	-	-	-	-	-
80.0	80.0	0.0	-	46.8	0.0	-	11.2	-	-	0.0	-	-
80.0	90.0	0.0	-	9.9	0.0	-	0.0	-	-	0.0	-	-
82.0	46.0	0.0	-	0.0	11.2	-	0.0	-	-	0.0	-	-
83.3	40.6	0.0	-	0.0	0.0	-	4.5	-	-	0.0	-	-
83.3	42.0	0.0	-	0.0	0.0	-	11.0	-	-	0.0	-	-
83.3	51.0	0.0	-	0.0	0.0	-	15.0	-	-	0.0	-	-
83.3	100.0	0.0	-	16.0	0.0	-	0.0	-	-	0.0	-	-
86.7	33.0	0.0	-	36.1	-	0.0	0.0	-	-	0.0	-	-
86.7	35.0	0.0	-	10.4	-	0.0	0.0	-	-	0.0	-	-
86.7	50.0	0.0	-	8.9	-	0.0	0.0	-	-	0.0	-	-
86.7	60.0	11.1	-	0.0	-	0.0	0.0	-	-	0.0	-	-
86.7	100.0	0.0	-	5.3	0.0	-	0.0	-	-	5.2	-	-
90.0	28.0	0.0	0.0	0.0	-	9.5	0.0	-	-	0.0	-	-
90.0	30.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-
90.0	37.0	-	5.4	0.0	-	0.0	5.4	-	-	0.0	-	-
90.0	53.0	-	5.4	0.0	-	0.0	10.2	-	-	0.0	-	-
90.0	70.0	0.0	-	6.2	-	0.0	0.0	-	-	0.0	-	-
90.0	100.0	0.0	-	4.9	-	0.0	-	-	-	0.0	-	-
93.3	50.0	0.0	11.1	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	70.0	0.0	10.0	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	80.0	4.7	-	0.0	-	0.0	0.0	-	-	0.0	-	-
93.3	90.0	0.0	-	0.0	-	0.0	10.8	-	-	0.0	-	-

TABLE 4. (cont.)

STATION	Unidentified fish larva (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.3	100.0	0.0	-	3.8	-	0.0	0.0	-	-	0.0	-	-
96.7	55.0	0.0	0.0	9.3	-	4.7	0.0	-	-	0.0	-	-
96.7	60.0	0.0	0.0	14.1	-	0.0	0.0	-	-	0.0	-	-
96.7	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
96.7	100.0	0.0	-	0.0	-	4.9	5.0	-	-	0.0	-	-
100.0	29.2	-	0.0	9.4	-	0.0	0.0	-	-	0.0	-	-
100.0	40.0	5.0	11.0	0.0	-	0.0	0.0	-	-	0.0	-	-
100.0	45.0	0.0	0.0	4.7	-	0.0	0.0	-	-	0.0	-	-
100.0	70.0	0.0	-	-	-	5.0	0.0	-	-	0.0	-	-
100.0	80.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-
103.3	29.0	0.0	0.0	0.0	-	0.0	9.7	-	-	0.0	-	-
103.3	45.0	0.0	0.0	0.0	-	0.0	5.3	-	-	0.0	-	-
103.3	50.0	0.0	0.0	0.0	-	17.5	0.0	-	-	0.0	-	-
103.3	55.0	0.0	0.0	0.0	-	0.0	5.0	-	-	0.0	-	-
103.3	60.0	0.0	0.0	0.0	-	0.0	5.3	-	-	0.0	-	-
103.3	80.0	0.0	-	0.0	-	4.8	0.0	-	-	0.0	0.0	-
103.3	90.0	0.0	-	0.0	-	0.0	0.0	-	-	-	4.9	-
103.3	100.0	0.0	-	0.0	-	0.0	0.0	-	-	-	9.7	-
106.7	35.0	0.0	5.3	5.1	-	0.0	0.0	-	-	-	0.0	-
106.7	40.0	0.0	0.0	4.7	-	0.0	0.0	-	-	-	0.0	-
106.7	70.0	0.0	0.0	-	-	0.0	0.0	-	-	-	5.2	-
106.7	80.0	0.0	0.0	-	-	0.0	0.0	-	-	-	15.5	-
106.7	100.0	5.0	0.0	0.0	-	0.0	4.8	-	-	-	0.0	-



TABLE 5. Summary of pooled occurrences of all larval fish taxa taken on CalCOFI surveys from 1972 to 1984. Data for 1974, 1977, and 1980 represent single cruises that are part of surveys in 1975, 1978, and 1981, respectively. Taxa are listed in the same order as Table 4.

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Albula vulpes</i>	1	-	-	-	-	-	-	-
Anguilliformes	26	2	8	-	3	-	-	3
<i>Etrumeus acuminatus</i>	4	-	15	-	9	-	-	3
<i>Opisthonema</i> spp.	-	-	1	-	1	-	-	-
<i>Sardinops sagax</i>	27	11	51	8	46	13	28	16
<i>Engraulis mordax</i>	548	155	842	47	454	47	417	314
<i>Argentina sialis</i>	54	6	59	7	30	13	45	14
<i>Microstoma microstoma</i>	33	8	40	3	45	6	31	33
<i>Nansenia candida</i>	44	-	26	-	25	-	18	17
<i>Nansenia crassa</i>	39	8	17	1	19	3	13	-
<i>Bathylagus</i> spp.	121	1	41	3	47	1	49	26
<i>Bathylagus longirostris</i>	1	-	-	-	5	-	-	-
<i>Bathylagus milleri</i>	13	5	13	-	8	4	2	12
<i>Bathylagus ochotensis</i>	345	13	273	29	387	13	244	199
<i>Bathylagus pacificus</i>	99	1	39	-	45	1	38	46
<i>Bathylagus wesethi</i>	164	15	156	20	298	11	127	64
<i>Leuroglossus stilbius</i>	387	52	363	28	218	22	298	187
<i>Bathylachnops exilis</i>	1	-	-	-	-	-	-	-
<i>Dolichopteryx longipes</i>	1	-	-	-	-	-	-	-
<i>Macropinna microstoma</i>	-	1	1	-	-	-	-	-
Osmeridae	5	-	-	-	1	-	-	-
Stomiiformes	8	1	1	-	5	-	3	7
Gonostomatidae	7	10	12	1	23	7	23	5
<i>Cyclothone</i> spp.	130	30	165	20	325	38	162	190
<i>Danaphos oculatus</i>	51	6	49	2	73	3	17	17
<i>Diplophos taenia</i>	47	-	1	-	2	-	-	-
<i>Gonostoma</i> spp.	-	-	-	-	2	-	1	-
<i>Ichthyococcus</i> spp.	7	1	8	2	40	4	18	8
<i>Valenciennellus stellatus</i>	8	-	1	-	3	1	1	2
<i>Vinciguerria lucetia</i>	271	48	164	40	379	65	222	287
<i>Vinciguerria poweriae</i>	1	-	-	-	30	-	-	5
Sternoptychidae	217	63	218	40	371	33	150	139

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Chauliodus macouni</i>	123	10	78	11	126	12	55	67
<i>Idiacanthus antrostomus</i>	25	18	30	8	67	3	9	24
<i>Aristostomias scintillans</i>	5	-	2	-	22	-	8	12
<i>Bathophilus</i> spp.	11	-	-	-	16	-	-	1
<i>Eustomias</i> spp.	1	-	-	-	1	-	-	-
<i>Photonectes</i> spp.	-	-	1	-	6	-	2	-
<i>Tactostoma macropus</i>	5	-	-	-	7	-	5	1
<i>Stomias atriventer</i>	117	9	59	6	110	11	77	32
<i>Myctophiformes</i>	2	-	-	-	-	-	-	-
<i>Anopterus pharao</i>	-	-	-	-	-	-	-	1
Evermannellidae	1	-	-	-	-	-	1	-
Paralepididae	32	5	17	-	16	-	9	10
<i>Lestidiops ringens</i>	82	16	39	11	63	11	58	61
<i>Notolepis risso</i>	10	-	5	1	17	-	5	12
<i>Stemonosudis macrura</i>	2	-	-	-	1	-	-	-
<i>Sudis atrox</i>	-	-	-	-	5	-	-	-
<i>Aulopus</i> spp.	6	-	-	-	1	1	-	-
<i>Scopelosaurus</i> spp.	11	1	10	-	23	1	9	9
Scopelarchidae	-	-	2	-	3	-	2	-
<i>Benthalbella</i> spp.	-	-	-	-	3	-	-	-
<i>Benthalbella dentata</i>	6	-	3	-	11	-	4	3
<i>Rosenblattichthys volucris</i>	15	7	23	2	21	2	7	11
<i>Scopelarchoides nicholsi</i>	16	-	2	-	1	-	-	-
<i>Scopelarchus</i> spp.	24	-	19	3	32	3	11	10
Myctophidae	123	12	80	6	154	17	159	111
<i>Bolinichthys</i> spp.	11	-	-	-	2	-	-	1
<i>Ceratoscopus townsendi</i>	68	5	66	5	212	18	80	115
<i>Diaphus</i> spp.	107	-	70	-	141	2	25	74
<i>Lampadena urophaos</i>	14	2	5	-	19	1	5	7
<i>Lampanyctus</i> spp.	281	35	151	16	269	32	168	135
<i>Lampanyctus regalis</i>	25	1	29	-	63	-	14	15
<i>Lampanyctus ritteri</i>	187	11	149	8	147	16	81	134
<i>Notolichnus valdiviae</i>	7	-	13	-	31	-	2	10
<i>Notoscopelus resplendens</i>	9	-	6	-	58	-	8	6

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Parvilux ingens</i>	-	-	-	-	2	-	-	-
<i>Stenobranchius leucopsarus</i>	356	29	351	11	300	18	264	238
<i>Taaningichthys minimus</i>	-	-	-	-	1	-	-	-
<i>Triphoturus mexicanus</i>	218	38	342	7	330	13	237	256
<i>Triphoturus nigrescens</i>	-	-	-	-	2	-	-	-
<i>Benthoosema pterota</i>	6	-	3	-	-	-	-	-
<i>Centrobranchus</i> spp.	-	-	-	-	6	-	-	-
<i>Diogenichthys</i> spp.	-	6	15	3	24	2	18	27
<i>Diogenichthys atlanticus</i>	68	22	141	14	191	19	60	127
<i>Diogenichthys laternatus</i>	201	29	114	22	168	34	56	61
<i>Electrona rissoi</i>	15	-	7	-	20	-	6	17
<i>Gonichthys tenuiculus</i>	49	9	14	1	44	5	8	14
<i>Hygophum</i> spp.	2	-	-	-	5	-	7	4
<i>Hygophum atratum</i>	120	6	16	1	47	-	10	10
<i>Hygophum reinhardtii</i>	12	-	9	1	29	2	2	19
<i>Loweina rara</i>	2	-	3	1	9	-	3	7
<i>Myctophum aurolaternatum</i>	21	-	-	-	-	-	-	-
<i>Myctophum nitidulum</i>	13	6	22	5	65	4	13	22
<i>Protomyctophum crockeri</i>	388	62	299	39	361	87	344	327
<i>Protomyctophum thompsoni</i>	14	-	-	-	-	-	-	-
<i>Symbolophorus californiensis</i>	100	14	120	6	179	11	91	140
<i>Tarletonbeania crenularis</i>	377	26	215	-	76	17	72	40
<i>Synodus</i> spp.	11	7	41	7	14	12	7	1
<i>Bregmaceros</i> spp.	37	-	-	-	-	-	-	-
Gadidae	1	-	-	-	-	-	-	-
<i>Gadus macrocephalus</i>	-	-	-	-	-	-	1	-
<i>Microgadus proximus</i>	4	-	-	-	-	-	-	-
Merlucciidae	1	-	-	-	-	-	-	-
<i>Merluccius productus</i>	304	16	279	14	222	21	177	111
Moridae	14	-	-	-	1	-	-	-
<i>Physiculus</i> spp.	1	-	-	-	-	-	1	-
Macrouridae	18	-	3	-	6	-	4	3
Ophidiiformes	9	-	15	-	18	-	19	2
<i>Brosomphycis marginata</i>	7	-	5	-	11	-	5	3

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
Carapidae	2	-	-	-	-	-	-	-
<i>Chilara taylori</i>	3	-	17	-	4	-	-	1
<i>Ophidion scrippsae</i>	7	6	18	-	6	-	1	1
<i>Porichthys</i> spp.	-	-	-	-	1	-	-	-
Antennariidae	1	-	-	-	-	-	-	-
Ceratioidei	6	1	11	-	4	1	-	7
Lophiidae	1	-	-	-	-	-	-	-
Gobiesocidae	2	-	10	-	3	-	-	2
Exocoetidae	-	-	1	-	1	-	3	9
Hemiramphidae	-	-	-	-	-	-	1	-
<i>Oxyporhamphus micropterus</i>	1	-	-	-	-	-	-	-
<i>Cololabis saira</i>	31	1	7	-	10	3	7	17
Atherinidae	3	3	7	-	13	1	3	6
Trachipteridae	56	7	18	2	10	1	5	20
Eutaeniophoridae	2	-	-	-	2	-	-	-
<i>Melamphaes</i> spp.	219	9	130	9	181	9	79	68
<i>Poromitra</i> spp.	15	-	18	2	42	2	21	7
<i>Scopeloberyx robustus</i>	-	-	-	-	5	-	-	2
<i>Scopelogadus bispinosus</i>	21	4	5	3	19	-	4	12
<i>Macroramphosus gracilis</i>	1	3	-	-	3	2	4	2
<i>Syngnathus</i> spp.	2	3	8	-	6	-	4	2
Agonidae	17	1	11	-	1	2	7	3
<i>Anoplopoma fimbria</i>	1	-	1	-	-	-	-	-
Cottidae	28	5	44	2	17	2	23	21
<i>Scorpaenichthys marmoratus</i>	13	3	15	-	6	3	-	6
Cyclopteridae	14	1	13	-	3	-	7	-
Hexagrammidae	16	-	1	-	2	1	-	-
<i>Ophiodon elongatus</i>	-	-	1	-	-	-	1	-
<i>Oxylebius pictus</i>	3	-	4	-	-	-	6	4
<i>Zaniolepis</i> spp.	6	2	23	4	11	3	5	6
Scorpaenidae	2	-	-	-	-	-	-	-
<i>Scorpaena</i> spp.	3	-	11	-	8	-	6	1
<i>Sebastes</i> spp.	509	94	560	30	429	52	379	284
<i>Sebastes aurora</i>	18	-	13	2	29	2	20	7

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Sebastes jordani</i>	90	1	42	-	47	1	22	6
<i>Sebastes levis</i>	13	-	17	-	8	-	5	1
<i>Sebastes macdonaldi</i>	15	-	21	-	17	-	8	2
<i>Sebastes paucispinis</i>	140	10	73	11	48	7	48	35
<i>Sebastolobus</i> spp.	65	1	23	-	32	1	19	15
<i>Prionotus</i> spp.	6	-	12	-	7	-	3	-
Bleennioidei	9	1	4	-	-	-	8	2
Bathymasteridae	1	-	-	-	-	-	-	-
<i>Hypsoblennius</i> spp.	16	6	82	-	50	2	19	14
Clinidae	30	9	67	2	23	3	17	15
Gobiidae	88	26	121	10	73	6	38	19
Microdesmidae	1	-	-	-	-	-	-	-
<i>Icosteus aenigmaticus</i>	12	-	1	-	2	-	3	3
Labridae	10	-	-	-	-	-	-	-
<i>Halichoeres</i> spp.	9	-	26	-	21	-	7	2
<i>Oxyjulis californica</i>	21	-	23	1	56	1	33	14
<i>Semicossyphus pulcher</i>	-	-	8	-	4	-	3	3
Pomacentridae	2	-	-	-	-	-	-	-
<i>Chromis punctipinnis</i>	2	-	22	1	14	-	16	10
<i>Hypsypops rubicundus</i>	-	-	3	-	-	-	1	-
<i>Mugil</i> spp.	2	-	-	-	1	-	-	-
<i>Howella brodiei</i>	2	-	1	-	9	-	-	-
<i>Brama</i> spp.	7	-	3	-	7	-	-	-
Carangidae	4	-	10	-	8	-	1	-
<i>Seriola lalandi</i>	1	-	5	-	7	-	1	-
<i>Trachurus symmetricus</i>	116	-	119	1	137	1	87	60
<i>Caristius macropus</i>	-	-	-	-	2	-	-	-
<i>Coryphaena hippurus</i>	6	1	4	-	2	-	3	-
Gerreidae	1	-	5	-	3	-	3	2
Haemulidae	1	-	8	-	12	-	2	1
<i>Girella nigricans</i>	-	-	1	1	3	-	2	-
<i>Medialuna californiensis</i>	2	-	3	-	1	-	-	-
<i>Caulolatilus princeps</i>	1	-	2	-	2	-	2	-
Sciaenidae	63	58	260	16	111	-	7	-

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Atractoscion nobilis</i>	-	-	-	-	-	-	-	1
<i>Cheilotrema saturnum</i>	-	-	-	-	-	-	2	-
<i>Genyonemus lineatus</i>	-	-	-	-	-	15	64	25
<i>Roncador stearnsii</i>	-	-	-	-	-	-	1	-
<i>Serriphus politus</i>	-	-	-	-	-	-	26	5
Serranidae	21	-	55	1	32	1	26	5
Polynemidae	-	-	1	-	-	-	-	-
Gempylidae	15	-	-	-	12	-	1	2
Scombridae	-	-	1	-	1	-	-	-
<i>Auxis</i> spp.	4	-	-	-	2	-	-	-
<i>Euthynnus</i> spp.	-	-	-	-	1	-	-	-
<i>Sarda chiliensis</i>	4	-	3	-	-	-	1	-
<i>Scomber japonicus</i>	3	-	8	-	61	-	86	17
<i>Thunnus albacares</i>	2	-	-	-	-	-	-	-
<i>Lepidopus xantusi</i>	7	1	10	1	11	-	8	1
<i>Sphyræna argentea</i>	-	-	9	-	5	-	14	5
<i>Icichthys lockingtoni</i>	140	6	46	2	73	-	22	32
<i>Cubiceps caeruleus</i>	-	-	-	-	1	-	-	-
<i>Cubiceps pauciradiatus</i>	12	-	-	-	-	-	-	-
<i>Psenes pellucidus</i>	5	-	-	-	6	-	-	-
<i>Psenes sio</i>	5	-	-	-	-	-	-	-
<i>Peprilus simillimus</i>	11	6	54	3	65	-	31	2
<i>Tetragonurus cuvieri</i>	13	8	15	2	24	6	8	25
Chiasmodontidae	15	5	11	4	38	2	20	9
Uranoscopidae	1	-	-	-	-	-	-	-
Pleuronectiformes	8	-	-	-	2	-	-	-
Bothidae	1	-	-	-	-	-	-	-
<i>Bothus</i> spp.	8	-	-	-	-	-	-	-
<i>Citharichthys</i> spp.	227	96	357	27	297	60	153	8
<i>Citharichthys sordidus</i>	-	-	-	-	-	-	-	27
<i>Citharichthys stigmaeus</i>	92	33	133	20	131	24	63	41
<i>Citharichthys xanthostigma</i>	-	-	-	-	-	-	-	3
<i>Cyclopsetta</i> spp.	1	-	-	-	-	-	-	-
<i>Hippoglossina</i> spp.	-	-	-	-	1	-	-	-

TABLE 5. (cont.)

NAME	1972	1974	1975	1977	1978	1980	1981	1984
<i>Hippoglossina stomata</i>	17	8	36	1	21	-	6	3
<i>Paralichthys californicus</i>	37	25	106	4	47	2	58	13
<i>Syacium ovale</i>	5	-	-	-	-	-	-	-
<i>Xystreurus liolepis</i>	5	4	12	1	5	-	3	4
<i>Glyptocephalus zachirus</i>	15	-	4	-	22	-	24	8
<i>Hypsopsetta guttulata</i>	1	5	8	2	7	1	2	1
<i>Isopsetta isolepis</i>	3	-	-	-	1	-	-	-
<i>Lepidopsetta bilineata</i>	3	-	3	-	1	-	-	1
<i>Lyopsetta exilis</i>	54	-	20	-	41	2	57	12
<i>Microstomus pacificus</i>	17	1	9	-	28	-	14	8
<i>Parophrys vetulus</i>	53	6	50	1	20	-	38	16
<i>Platichthys stellatus</i>	6	-	1	-	7	-	2	-
<i>Pleuronichthys</i> spp.	-	1	1	-	-	-	1	-
<i>Pleuronichthys coenosus</i>	3	-	3	-	6	-	2	2
<i>Pleuronichthys decurrens</i>	8	1	3	-	1	-	1	3
<i>Pleuronichthys ritteri</i>	8	2	33	1	6	4	11	4
<i>Pleuronichthys verticalis</i>	21	1	100	2	22	2	24	8
<i>Psettichthys melanostictus</i>	8	-	2	-	7	-	1	1
<i>Symphurus</i> spp.	20	8	26	1	16	-	8	-
Disintegrated fish larva	258	27	196	8	224	22	147	168
Unidentified fish larva	222	21	183	12	162	15	109	69

TABLE 6. List of stations which were occupied twice in one month during 1984.

Station	Month
73.3 50.0	10



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## CalCOFI Ichthyoplankton Data Reports

- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Santos Methot. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1951. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-79, 196 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, and J. D. Ryan. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1952. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-80, 207 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1953. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-81, 186 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1954. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-82, 207 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Santos Methot. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1955. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-83, 185 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1956. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-84, 189 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1957. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-85, 225 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, and J. D. Ryan. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1958. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-86, 248 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and M. S. Busby. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1959. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-87, 273 p.





- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Santos Methot. 1987. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1960. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-88, 253 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1961. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-92, 167 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1962. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-93, 179 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1963. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-94, 209 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1964. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-95, 222 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and L. R. Zins. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1965. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-96, 220 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1966. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-97, 287 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1967. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-98, 103 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1968. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-99, 112 p.



- Stevens, E. G., R. L. Charter, H. G. Moser, and L. R. Zins. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1969. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-100, 265 p.
- Sumida, B. Y., R. L. Charter, H. G. Moser, and D. L. Snow. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1972. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-109, 219 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1975. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-110, 229 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, C. A. Meyer, and A. E. Hays. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1978. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-111, 216 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and B. S. Earhart. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1981. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-112, 170 p.
- Stevens, E. G., R. L. Charter, H. G. Moser, and C. A. Meyer. 1990. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1984. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-SWFC-141, 157 p.



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