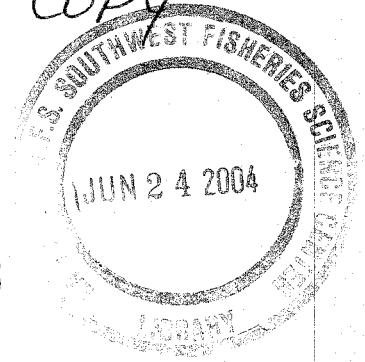


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## NOAA Technical Memorandum NMFS



**JANUARY 1988**

### **ICHTHYOPLANKTON AND STATION DATA FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 1967**

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**NOAA-TM-NMFS-SWFC-98**

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
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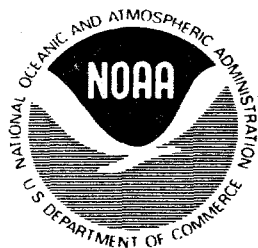
## NOAA Technical Memorandum NMFS

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## **NOAA Technical Memorandum NMFS**

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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 1967. It is the seventeenth report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of 258 stations was occupied during 2 cruises over a survey area which extended from Pt. Conception, California to Cape San Juanico, Mexico and seaward to several hundred miles. The data are listed in a series of 5 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 123 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 newly developed computer data base.

## INTRODUCTION

This report, the seventeenth 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 1967. 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.

Data resulting from CalCOFI surveys in 1967 have been published in a number of forms. Hydrographic data (Univ. of Calif., SIO, 1969) were presented in a standard format. Distributional maps of larvae of two taxa taken on CalCOFI surveys during 1967 are presented in the CalCOFI Atlas series: rockfish (*Sebastes* spp.), Ahlstrom et al., 1978; northern anchovy (*Engraulis mordax*), Hewitt, 1980.

A computer data base for eggs and larvae of sardine and anchovy, for larvae of hake (*Merluccius productus*), jack mackerel (*Trachurus symmetricus*) and Pacific mackerel (*Scomber japonicus*), and for eggs of Pacific saury (*Cololabis saira*) was established in 1969. The development of a data base for other fish larvae is a complex undertaking because competency of identification has evolved steadily over the past 38 years. We began the task of producing a CalCOFI ichthyoplankton data base and associated data report series in 1983. All available original records for 1967 were subjected to an extensive verification and editing process to produce this report. This and previous (Ambrose et al., 1987a,b,c; 1988; Sandknop et al., 1987a,b; 1988a,b; Stevens et al., 1987a,b,c; 1988; Sumida et al., 1987a,b; 1988a,b) 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 will be modified when additional 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 1967, CalCOFI survey cruises were conducted only in June-July (Cruise 6706) and December (Cruise 6712). Cruise 6706 is designated as 6707 in the hydrographic data reports (Univ. of Calif., SIO, 1969). A total of 258 stations included in this data base was occupied on these 2 cruises (170 stations on 6706 and 88 stations on 6712). Coverage of the survey station pattern varied between cruises and the entire survey area was not covered on any single cruise (Figures 1-3, Table 1). The area off northern California (lines 40-57) and central California (lines 60-77) was not covered. The area between Pt. Conception, California and Pt. Abreojos, Baja California (lines 80-130) was surveyed in June-July on Cruise 6706. The area from Cape San Quintin to Pt. San Juanico, Baja California (lines 107-137) was surveyed in December on Cruise 6712. Coverage extended seaward to station 140 (approximately 450 miles offshore) on lines 90 and



93 (Cruise 6706) but typically did not extend beyond station 80 (approximately 200 miles offshore)<sup>1</sup>. Several inshore stations were occupied during Cruises 6706 and 6712 which were not covered on early CalCOFI surveys. These stations were included in the data base (Table 1) but omitted from the station plots (Figures 2 and 3).

Two SIO vessels were employed on these cruises: the *Ellen B. Scripps* (Cruise 6706) and the *Horizon* (Cruise 6712) (Univ. of Calif., SIO, 1969).

### SAMPLING GEAR AND METHODS

The standard CalCOFI net used from 1949 to 1969 had a 1-m diameter mouth opening (0.785 m<sup>2</sup> area) and an overall length of about 5 m. The net was constructed of 30xxx gauze, a heavy duty grade of silk bolting cloth, with a mesh size of 0.55 mm after shrinkage. The last 40 cm of the cone and the cod end were constructed of 56xxx grit gauze which had a mesh size of 0.25 mm after shrinkage. The net ring was fastened to a short 3-lead bridle connected to several meters of line which attached to the towing cable by a clamp. A current meter was suspended in the center of the net mouth to measure volume of water filtered (see Kramer et al., 1972, for further details).

The standard tow from 1951 through 1968 was an oblique haul to 140 m depth (to 15 m of the bottom in shallow areas) designed to filter a constant amount of water per depth interval (ca. 3m<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 initiated by clamping the net line to the towing cable with the 45 kg terminal weight about 10-15 m below the surface. The net was lowered to 140 m depth by paying out 200 m of wire over a 4 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° (+3°) by adjusting the ship speed and course. After reaching the surface, the net was washed down and the

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<sup>1</sup>CalCOFI lines (Figure 4) 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).

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 Ahlstrom (1953), 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. Usually, each sample was sorted completely; however, one sample (Cruise 6706, 97.30) was fractionated into aliquots using a Folsom plankton splitter (McEwen et al., 1954) prior to sorting.

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:

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

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 1967. 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 carried out 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 121 taxa was identified for 1967, with 70 taken to species, 26 to genus, 20 to family, and 5 to order or suborder. Beginning in 1961, larvae in the families Paralepididae and Labridae were identified to genus or species.

The task of producing a reliable and equitable ichthyoplankton data base required extensive procedures to verify, correct, and edit the original identifications. The primary data source was the original identification sheets (see Kramer et al., 1972, for examples); however, a critical resource used in all phases of this process was the CalCOFI ichthyoplankton collection in which the samples are archived. Throughout the course of CalCOFI ichthyoplankton studies, samples have been identified to the lowest taxon possible. In reviewing these identifications for the data base, our approach has been conservative and we have preserved those identifications and counts which we could confirm, while correcting as many of the errors as possible. After computer entry of coded data, taxonomic errors and inconsistencies in the data base were corrected and the most obvious identification errors were corrected. Our current knowledge of ichthyoplankton techniques coupled with a precise understanding of the development of identification competency in the program over the years allowed us to critically judge the historical records. Identifications were changed to different taxa, lumped to a higher taxonomic category, or given a more precise taxonomic name. In some cases, identifications of a taxon were inconsistent among cruises in a year. These records were made equitable by lumping to the higher taxonomic category to avoid biases that could result in quantitative misinterpretations.

Next, statistical, seasonal, and geographic outliers were identified, employing a series of graphic summaries and listings. Examination of geographic outliers proved to be especially effective because of our accumulated knowledge of species distributions. In the course of examining samples for these outliers, other identification errors were discovered and eventually all taxa were scrutinized to some extent. Lastly, certain taxa were reexamined in all samples for the entire CalCOFI time series. These taxa were selected because of their commercial, ecological, phylogenetic, or zoogeographic importance or because taxonomic confusion was at the ordinal level. The

following is a list of the taxa for 1967 which received special attention, with explanations and caveats intended to aid in quantitative interpretations:

Anguilliformes - tentative and sporadic identifications to family or lower taxon lumped to order.

*Sardinops sagax* - all specimens south of line 120 checked for misidentification of *Opisthonema* spp.

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

*Nansenia* spp. - all specimens checked and identified as *N. candida* or *N. crassa*; all specimens of these species near their range boundaries checked.

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

Stomiiformes - all specimens checked and identified to genus or species; residuals are small, poorly preserved or unavailable specimens.

*Vinciguerria lucetia* - specimens taken seaward of station 100 checked for misidentification of *V. poweriae*; some *V. poweriae* may remain in these samples because small larvae of the two species could not be differentiated; sporadic identification of *V. poweriae* began in 1961.

Sternoptychidae - tentative and sporadic identifications of hatchetfishes to genus were lumped to family.

*Bathophilus* spp. - all specimens checked.

*Tactostoma macropus* - all specimens checked.

Paralepididae - all specimens examined and identified to species.

Scopelarchidae - tentative and sporadic identifications to genus lumped to family.

*Lampanyctus* spp. - tentative and sporadic identifications to species lumped to genus.

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

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

- Stenobranchius leucopsarus* - all specimens taken seaward of station 100 checked.
- Triphoturus mexicanus* - specimens taken seaward of station 100 checked for misidentification of *T. nigrescens*.
- Diogenichthys atlanticus* - all specimens at margins of range checked.
- Diogenichthys laternatus* - all specimens at margins of range checked.
- Electrona rissoi* - recognition of this species was inconsistent and others may be included in *Protomyctophum crockeri* or Myctophidae.
- Hygophum* spp. - all specimens reidentified to species.
- Hygophum atratum* - all specimens checked.
- Hygophum reinhardtii* - all specimens checked.
- Physiculus* spp. - specimen examined.
- Ophidiiformes - this category did not exist originally and ophidiiform larvae were included in *Brosmophycis marginata*, "Otophidium", "Zoarcidae", and "blenny"; identifications of *B. marginata* proved to be mostly correct and "Zoarcidae" to be a yet unidentified ophidiiform species; all "Otophidium" and "blenny" were reexamined and the former included *Chilara taylori* and other ophidiiform taxa (moved to order); "blenny" contained *C. taylori*, and other ophidiiform taxa in addition to true blennioids.
- Atherinidae - tentative and sporadic identifications to genus were lumped to family.
- Trachipteridae - tentative and sporadic identifications to genus were lumped to family.
- Melamphaes* spp. - all identifications ascribed to Melamphaidae were reexamined and assigned to genus (*Melamphaes*, *Poromitra*) or species (*Scopelogadus bispinosus*); larvae originally identified as *Melamphaes* spp. were not reexamined and this category may contain other melamphaid genera.
- Cottidae - all specimens checked; tentative and sporadic identifications to species were lumped to family.
- Zaniolepis* spp. - all specimens checked.
- Sebastes* spp. - category may contain other scorpaenid genera, particularly in samples south of line 120.

Blennioidei - this is the residual of the completely reexamined "blenny" category, which also contained various misidentified ophidiiforms, and is now restricted to members of northern stichaeioid families and true blennioids (other than *Hypsoblennius* spp.) in the southern part of the pattern.

Labridae - all specimens originally identified to family were reexamined and assigned to genus (*Halichoeres* spp.) or species (*Oxylebius californica*, *Semicossyphus pulcher*); residuals are small, poorly preserved or unavailable specimens.

*Mugil* spp. - specimen checked.

Apogonidae - all specimens checked and identified as *Howella brodiei*; in this report we list *H. brodiei* in Apogonidae for convenience, recognizing that its systematic affinities are not resolved.

Carangidae - all specimens checked; tentative and sporadic identifications to genus or species (except *Trachurus symmetricus* and *Seriola lalandi*) were lumped to family.

*Seriola lalandi* - all specimens checked.

Gerreidae - tentative and sporadic identifications to genus were lumped to family.

*Girella nigricans* - all specimens checked.

*Medialuna californiensis* - all specimens checked.

*Caulolatilus princeps* - all specimens checked.

Sciaenidae - tentative and sporadic identifications to genus lumped to family.

Scombridae - all larvae originally identified to this family or constituent taxa (except *Scomber japonicus*) were reexamined and reassigned; residual are small, poorly preserved or unavailable specimens.

Trichiuridae - tentative and sporadic identifications to genus lumped to family.

Pleuronectiformes - all available specimens of this category (originally called "flatfish") were examined and reidentified; residual is a small, poorly preserved specimen.

Bothidae - all specimens examined and reassigned; most were assigned to various paralichthyid genera.

*Citharichthys* spp. - all larvae identified to species were lumped to genus except *C. stigmaeus*; category includes larvae of *Etropus* spp.

*Citharichthys stigmaeus* - includes larvae larger than ca. 4.5 mm; smaller larvae are in *Citharichthys* spp.

*Paralichthys* spp. - all specimens of this genus were examined and most were assigned to *P. californicus* or *Xystreurus liolepis*.

*Xystreurus liolepis* - originally misidentified as *Paralichthys californicus*; all specimens reidentified.

*Lepidopsetta bilineata* - all specimens examined; originally identified as *Psettichthys melanostictus*.

*Microstomus pacificus* - all specimens examined.

*Pleuronichthys* spp. - all larvae of this genus and constituent species were examined and assigned to species; residuals are small, poorly preserved or unavailable specimens.

#### COMPUTER ENTRY AND EDITING

Each taxon 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 keypunched by cruise and station, along with pertinent station and tow data and entered into the VAX 11/780 computer at the University of California, San Diego, Computing Center. After entries were completed for an entire year, print-out listings of taxa and counts on each station were compared with the original data sheets to eliminate keypunch errors. Next, data in the file were cross-checked with data on an existing file which 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. Eventually all station and tow data were checked by comparing these sources.

The corrected ichthyoplankton data base was then examined statistically and outliers were found and checked as above. Distributional plots were then prepared for each taxon and these were checked by reviewing the data sources mentioned above and by examining archived specimens. A listing of each taxon by station (Table 4) was produced, which became 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% of all fish larvae taken on CalCOFI cruises during 1967 and numbered over three times as many as the sanddab category *Citharichthys* spp., the next most abundant taxa with 12% of the total larvae (Table 2, 3). Northern anchovy also ranked first in incidence; *Citharichthys* spp. ranked 5th. The next most abundant species was the gonostomatid *Vinciguerria lucetia* also with 12% of total larvae; it ranked 3rd in occurrence. The myctophid *Triphoturus mexicanus* ranked 4th in abundance (8%) and 2nd in incidence. A deepsea smelt, *Bathylagus wesethi*, ranked 5th in abundance and 6th in incidence. Larvae of Pacific sardine (*Sardinops sagax*) and the myctophid *Diogenichthys laternatus* ranked 6th and 7th in abundance respectively; however, in incidence these species ranked only 26th and 13th respectively, suggesting relatively large sample sizes. Jack mackerel (*Trachurus symmetricus*), *Sebastes* spp. (a composite of about 70 species of rockfish), and the gonostomatid genus *Cyclothone* spp. completed the 10 most abundant taxa ranking 8th, 9th, and 10th respectively; these taxa also ranked in the top 10 in incidence (10th, 8th, and 9th respectively). These 10 top-ranking taxa contributed 85% of all larvae taken during 1967. The remaining 15% was represented by 111 taxa plus the unidentified and disintegrated categories. Of the 10 taxa, 5 were midwater species or generic groupings, 2 were coastal demersal species or generic groupings, and 3 were coastal pelagic species.

#### EXPLANATION OF TABLES

Table 1 - This table lists by cruise the pertinent station and tow data for 1967, 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 2-3). 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: EB, *Ellen B. Scripps* and HO, *Horizon*.

Table 2 - This table lists pooled occurrences of all larval fish taxa taken during 1967 in ranked order.

Table 3 - This table lists pooled counts of all larval fish taxa taken during 1967 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. 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 1961 to 1969. Taxa are listed in the same order as in Table 4.

#### ACKNOWLEDGMENTS

Lois Hunter originally identified larvae from CalCOFI cruises of 1967. Ronald Whyte coded each larval fish taxon or type and Rita Ford entered them into the computer. Debby Snow efficiently assisted in all aspects of data editing and retrieval. Cindy Meyer, Larry Zins, and James Ryan provided programming assistance. Dorothy Roll designed the CalCOFI data acquisition system and provided data processing support. Ken Raymond, Roy Allen, and Henry Orr helped with graphics and production of the report. Lorraine Prescott and Diane Forsythe prepared the manuscript for printing. Paul Smith determined statistical outliers, provided assistance during geographical outlier checks and offered helpful suggestions throughout the project. Izadore Barrett, Director of the Southwest Fisheries Center and Reuben Lasker, Chief, Coastal Fisheries Resources Division, SWFC, 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. Fish Wildl. Serv. SSRF 54, 82 p.
- Ahlstrom, E. H. 1953. Pilchard eggs and larvae and other fish larvae, Pacific Coast - 1951. U.S. Fish Wildl. Serv. SSRF 102, 55 p.
- Ahlstrom, E. H., H. G. Moser, and E. M. Sandknop. 1978. Distributional atlas of fish larvae in the California Current region: rockfishes, *Sebastes* spp., 1950 through 1975. CalCOFI Atlas No. 26:xxi + 178 p.
- Ambrose, D. A., R. L. Charter, H. G. Moser, and C. R. Santos 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. Santos Methot. 1987b. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations 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. Santos 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. Earhart. 1988. Ichthyoplankton and station data for California Cooperative Oceanic Fisheries Investigations survey cruises in 1963. U.S. Dep. Commer., NOAA Tech. Memo., NMFS, SWFC, No. 94, 209 p.
- Haight, C. A., H. G. Moser, and P. E. Smith. 1979. Data entry programs: CalCOFI. II. Fish eggs and larvae identification sheet. National Marine Fisheries Service, Southwest Fisheries Center, La Jolla, Admin. Rept. No. LJ-79-25.
- Hewitt, R. 1980. Distributional atlas of fish larvae in the California Current region: northern anchovy, *Engraulis mordax* Girard, 1966 through 1979. CalCOFI Atlas No. 28:ix + 101 p.
- 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.
- 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. Amer. Soc. Ichthyol. Herpetol., 760 p.
- Sandknop, E. M., R. L. Charter, H. G. Moser, and J. D. Ryan. 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 for 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.
- 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. 1988. 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.
- 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 cruises 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.
- University of California, Scripps Institution of Oceanography. 1969. Data report: physical and chemical data, CalCOFI Cruises 6707, 6712. SIO Ref. 69-8.

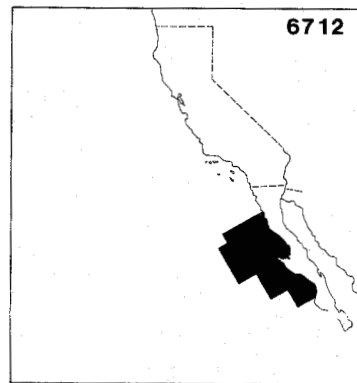
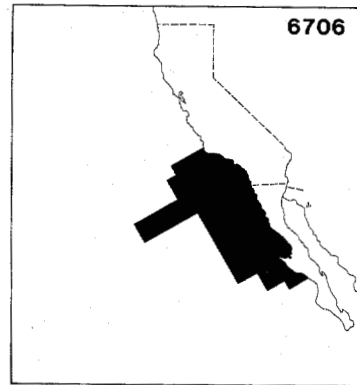


Figure 1. Composite arrangement of diagrammatic charts showing areas sampled on each CalCOFI cruise during 1967.

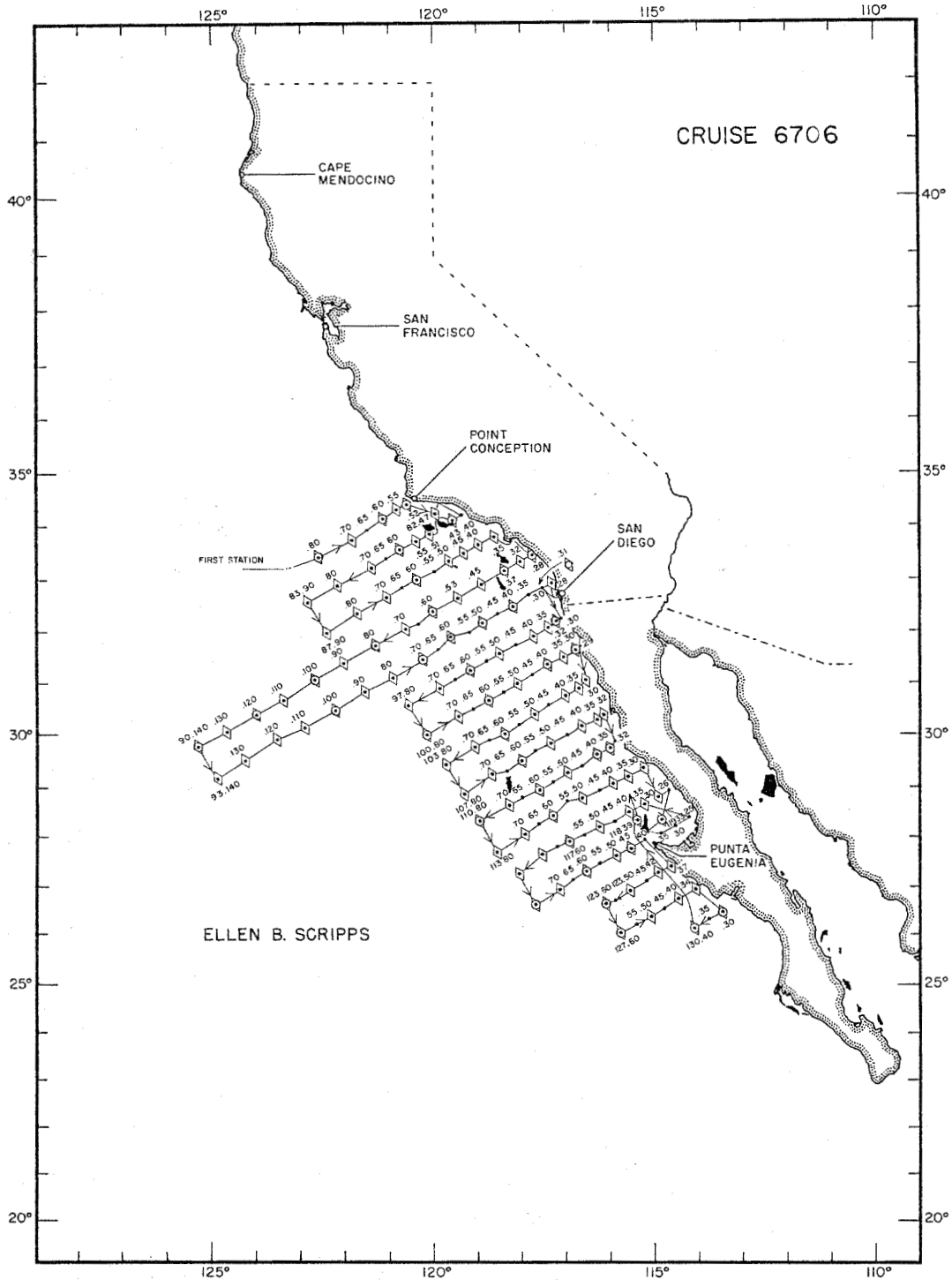


Figure 2. Station pattern for CalCOFI Cruise 6706 showing tracks for each vessel. Stations with plankton tows are indicated by a dot; circles designate hydrographic stations and diamonds signify STD recordings. Figures 2 and 3 modified from charts in Univ. of Calif., SIO (1969) to include only those stations listed in Table 1 of this report; see Table 1 for inshore stations not shown on charts.

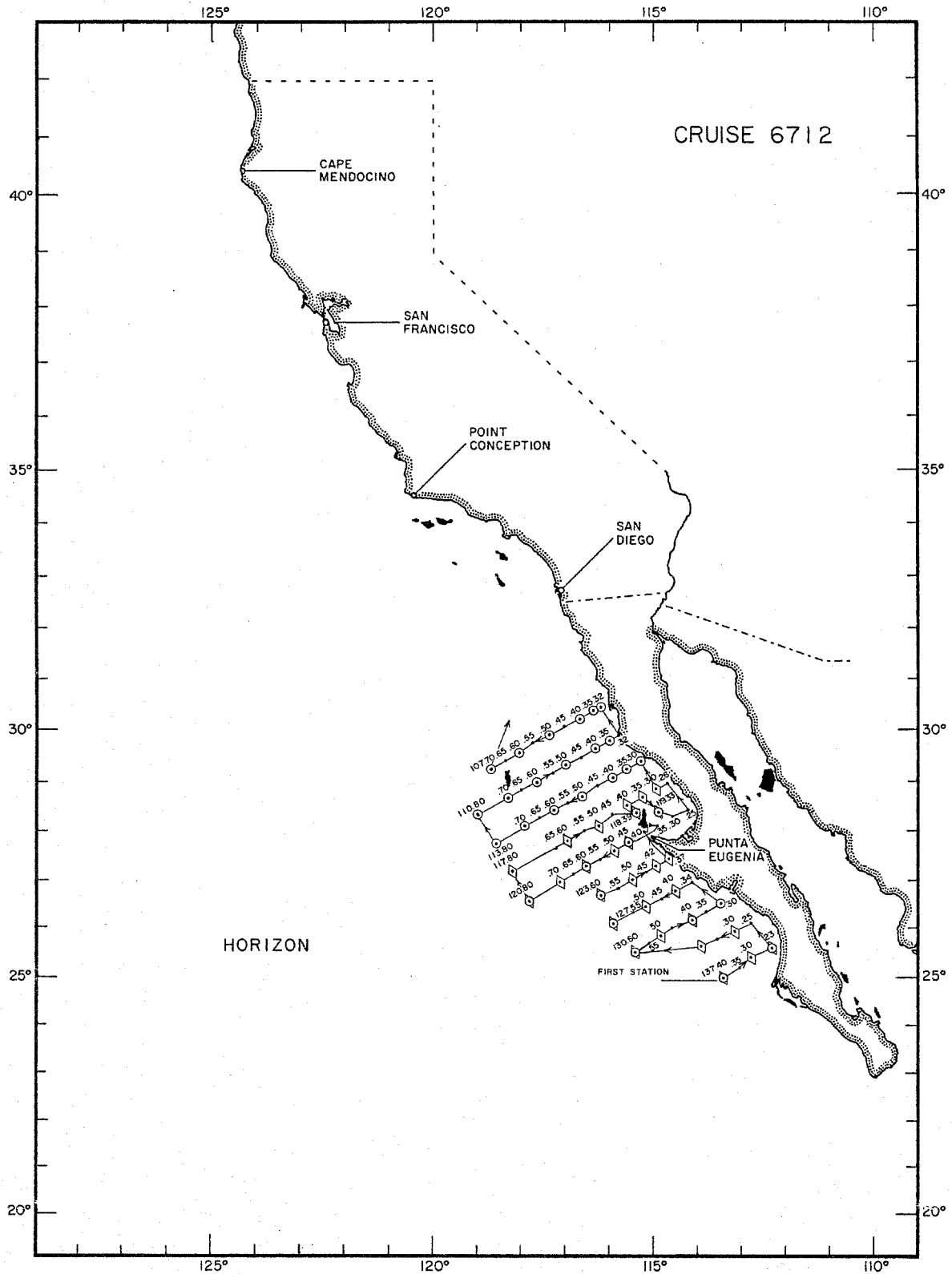


Figure 3. Station pattern for CalCOFI Cruise 6712. Symbols as in Figure 2.





TABLE 1. Station and plankton tow data for CalCOFI cruises in 1967. Counts for fish eggs and larvae are not adjusted for standard haul factor or percent of sample sorted.

		CALCOFI Cruise 6706										
Line Station	Lat. (N) deg. min.	Long. (W) deg. min.	Ship Code	Tow yr.	Tow Date mo. day	Time (PST)	Tow Depth (m)	Vol. Water Strained (cu. m)	Stand- ard Haul Factor	Percent Sorted	Total Larvae	Total Eggs
80.0	51.0	34 26.0	EB	67	06 22	0409	91	295	3.09	100.0	69	46
80.0	52.0	34 24.3	EB	67	06 22	0246	108	484	2.24	100.0	46	68
80.0	55.0	34 19.8	EB	67	06 21	2300	124	482	2.56	100.0	216	27
80.0	60.0	34 09.0	EB	67	06 21	1950	134	435	3.07	100.0	102	207
80.0	65.0	33 57.2	EB	67	06 21	1520	152	444	3.43	100.0	16	70
80.0	70.0	33 45.0	EB	67	06 21	1230	140	514	2.73	100.0	38	146
80.0	80.0	33 27.2	EB	67	06 21	0701	139	506	3.08	100.0	31	41
82.0	47.0	34 14.8	EB	67	06 22	0806	129	418	3.08	100.0	110	380
83.0	40.0	34 13.7	EB	67	06 23	1025	15	64	2.26	100.0	9	210
83.0	43.0	34 08.3	EB	67	06 23	1246	141	521	2.71	100.0	327	175
83.0	51.0	33 52.0	EB	67	06 23	1733	55	421	1.31	100.0	197	96
83.0	55.0	33 43.9	EB	67	06 23	2010	144	439	3.29	100.0	395	275
83.0	60.0	33 33.9	EB	67	06 23	0044	124	649	1.90	100.0	133	141
83.0	65.0	33 24.3	EB	67	06 24	0336	111	587	1.89	100.0	56	308
83.0	70.0	33 14.0	EB	67	06 24	0631	148	444	3.33	100.0	45	76
83.0	80.0	32 54.5	EB	67	06 24	1156	129	562	2.29	100.0	70	104
83.0	90.0	32 34.5	EB	67	06 24	1711	128	543	2.36	100.0	153	244
87.0	33.0	33 54.0	EB	67	06 26	0459	32	163	1.93	100.0	137	2394
87.0	35.0	33 50.0	EB	67	06 26	0341	145	536	2.70	100.0	707	628
87.0	40.0	33 40.0	EB	67	06 26	0046	142	496	2.87	100.0	673	689
87.0	45.0	33 30.0	EB	67	06 25	2200	147	499	2.95	100.0	128	7
87.0	50.0	33 20.0	EB	67	06 25	1918	60	277	2.16	100.0	120	121
87.0	55.0	33 09.0	EB	67	06 25	1621	146	475	3.07	100.0	195	419
87.0	60.0	33 00.0	EB	67	06 25	1351	151	446	3.38	100.0	48	31
87.0	65.0	32 52.0	EB	67	06 25	1021	137	526	2.60	100.0	37	20
87.0	70.0	32 39.7	EB	67	06 25	0746	131	548	2.40	100.0	108	86
87.0	80.0	32 21.0	EB	67	06 25	0256	122	602	2.03	100.0	325	71
87.0	90.0	32 00.0	EB	67	06 24	2150	128	537	2.38	100.0	247	114
90.0	28.0	33 28.5	EB	67	06 27	0421	126	563	2.24	100.0	454	867
90.0	32.0	33 21.2	EB	67	06 27	0636	136	520	2.62	100.0	177	80
90.0	37.0	33 11.1	EB	67	06 27	1011	145	530	2.73	100.0	814	244
90.0	45.0	32 54.6	EB	67	06 27	1406	143	518	2.75	100.0	79	6
90.0	53.0	32 39.0	EB	67	06 27	1801	144	514	2.81	100.0	244	790
90.0	60.0	32 22.0	EB	67	06 27	2231	143	486	2.93	100.0	212	111
90.0	65.0	32 08.0	EB	67	06 28	0116	144	516	2.78	100.0	53	29
90.0	70.0	32 04.0	EB	67	06 28	0326	140	499	2.81	100.0	136	661
90.0	80.0	31 44.5	EB	67	06 28	0831	144	478	3.00	100.0	40	44
90.0	90.0	31 24.1	EB	67	06 28	1306	141	514	2.73	100.0	51	22
90.0	100.0	31 04.0	EB	67	06 28	1826	132	509	2.59	100.0	36	154
90.0	110.0	30 39.0	EB	67	06 28	2341	141	512	2.76	100.0	171	172
90.0	120.0	30 23.0	EB	67	06 29	0446	141	507	2.77	100.0	60	124
90.0	130.0	30 03.2	EB	67	06 29	0916	140	529	2.64	100.0	41	75
90.0	140.0	29 45.0	EB	67	06 29	1431	135	529	2.56	100.0	206	100

TABLE 1. (cont.)

## CalCOFI Cruise 6706

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	
93.0	28.0	32 54.5	117 21.5	EB	67 07 02	0941	136	491	2.76	100.0	218	57
93.0	30.0	32 50.3	117 31.1	EB	67 07 02	0616	148	455	3.24	100.0	205	50
93.0	35.0	32 42.1	117 52.0	EB	67 07 02	0351	136	494	2.76	100.0	357	135
93.0	40.0	32 30.9	118 11.7	EB	67 07 02	0131	138	493	2.80	100.0	596	1856
93.0	45.0	32 21.2	118 33.8	EB	67 07 01	2158	146	452	3.23	100.0	445	603
93.0	50.0	32 10.0	118 53.0	EB	67 07 01	1932	146	489	2.99	100.0	286	139
93.0	55.0	31 59.5	119 12.2	EB	67 07 01	1616	148	478	3.09	100.0	214	415
93.0	60.0	31 54.2	119 37.0	EB	67 07 01	1331	140	501	2.80	100.0	41	71
93.0	65.0	31 40.0	119 53.9	EB	67 07 01	1016	135	505	2.68	100.0	54	51
93.0	70.0	31 29.0	120 15.5	EB	67 07 01	0741	147	464	3.18	100.0	22	53
93.0	80.0	31 07.0	120 56.5	EB	67 07 01	0116	141	491	2.87	100.0	78	184
93.0	90.0	30 49.8	121 34.0	EB	67 06 30	2001	140	500	2.80	100.0	54	137
93.0	100.0	30 28.5	122 12.8	EB	67 06 30	1536	147	480	3.07	100.0	12	132
93.0	110.0	30 08.2	122 54.0	EB	67 06 30	1001	142	521	2.72	100.0	250	40
93.0	120.0	29 54.5	123 32.0	EB	67 06 30	0551	137	548	2.51	100.0	263	244
93.0	130.0	29 29.0	124 14.0	EB	67 06 30	0101	136	540	2.52	100.0	242	133
93.0	140.0	29 09.0	124 52.5	EB	67 06 29	1935	143	512	2.80	100.0	179	94
97.0	29.0	32 17.3	117 04.6	EB	67 07 04	0330	21	216	0.96	100.0	406	1729
97.0	30.0	32 16.1	117 07.0	EB	67 07 04	0410	37	124	2.97	50.0	240	26
97.0	32.0	32 12.1	117 15.3	EB	67 07 04	0611	139	511	2.72	100.0	464	1602
97.0	35.0	32 05.6	117 25.4	EB	67 07 04	0816	141	501	2.82	100.0	162	28
97.0	40.0	31 56.0	117 46.0	EB	67 07 04	1116	143	472	3.02	100.0	110	23
97.0	45.0	31 45.0	118 10.9	EB	67 07 04	1401	145	510	2.85	100.0	64	28
97.0	50.0	31 35.0	118 32.1	EB	67 07 04	1646	133	521	2.56	100.0	48	207
97.0	55.0	31 26.2	118 49.5	EB	67 07 04	1916	144	492	2.92	100.0	49	11
97.0	60.0	31 14.8	119 10.0	EB	67 07 04	2241	140	506	2.78	100.0	33	42
97.0	65.0	31 05.1	119 30.0	EB	67 07 05	0111	131	485	2.70	100.0	25	26
97.0	70.0	30 54.0	119 50.5	EB	67 07 05	0406	143	493	2.90	100.0	82	162
97.0	80.0	30 33.6	120 31.7	EB	67 07 05	0856	142	454	3.14	100.0	38	233
100.0	29.0	31 42.1	116 43.4	EB	67 07 06	1937	100	380	2.63	100.0	467	417
100.0	30.0	31 40.5	116 46.5	EB	67 07 06	1851	139	481	2.89	100.0	269	442
100.0	35.0	31 30.6	117 07.0	EB	67 07 06	1551	140	490	2.86	100.0	43	51
100.0	40.0	31 21.4	117 26.2	EB	67 07 06	1306	138	500	2.77	100.0	23	123
100.0	45.0	31 10.0	117 45.5	EB	67 07 06	0941	136	483	2.83	100.0	23	95
100.0	50.0	30 59.0	118 07.2	EB	67 07 06	0656	137	483	3.39	100.0	54	200
100.0	55.0	30 49.2	118 27.2	EB	67 07 06	0406	151	367	4.13	100.0	43	83
100.0	60.0	30 40.5	118 46.3	EB	67 07 06	0116	140	400	3.49	100.0	38	47
100.0	65.0	30 30.1	119 07.3	EB	67 07 05	2151	138	534	2.59	100.0	155	176
100.0	70.0	30 20.5	120 06.7	EB	67 07 05	1901	136	541	2.52	100.0	51	187
103.0	29.0	31 07.0	116 21.0	EB	67 07 07	1735	20	96	2.57	100.0	33	221
103.0	30.0	31 06.2	116 24.5	EB	67 07 07	1818	64	235	2.08	100.0	62	208
103.0	35.0	30 56.0	116 44.8	EB	67 07 07	2115	132	535	2.72	100.0	104	381
103.0	40.0	30 46.0	117 03.0	EB	67 07 07	0011	137	524	2.46	100.0	131	145
103.0	45.0	30 35.0	117 22.7	EB	67 07 08	0226	128	557	2.30	100.0	484	190

TABLE 1. (cont.)

## CalCOFI Cruise 6706

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
103.0	50.0	30 23.0	EB	67 07 08	0526	143	513	2.79	100.0	226	235
103.0	55.0	30 12.0	EB	67 07 08	0801	141	519	2.72	100.0	162	292
103.0	60.0	30 02.1	EB	67 07 08	1126	139	502	2.77	100.0	148	259
103.0	65.0	29 55.0	EB	67 07 08	1356	139	548	2.53	100.0	105	117
103.0	70.0	29 46.3	EB	67 07 08	1646	146	483	3.02	100.0	67	124
103.0	80.0	29 25.0	EB	67 07 08	2136	143	517	2.76	100.0	166	775
107.0	31.0	30 27.8	EB	67 07 10	0654	29	162	1.77	100.0	69	234
107.0	32.0	30 25.9	EB	67 07 10	0556	140	512	2.73	100.0	65	703
107.0	35.0	30 19.4	EB	67 07 10	0346	147	469	3.13	100.0	79	69
107.0	40.0	30 10.2	EB	67 07 10	0056	121	557	2.17	100.0	338	97
107.0	45.0	30 00.5	EB	67 07 09	2201	142	510	2.79	100.0	220	180
107.0	50.0	29 50.0	EB	67 07 09	1926	139	499	2.78	100.0	147	81
107.0	55.0	29 41.5	EB	67 07 09	1621	141	508	2.78	100.0	20	39
107.0	60.0	29 31.5	EB	67 07 09	1351	140	493	2.84	100.0	29	166
107.0	65.0	29 18.7	EB	67 07 09	1001	139	530	2.62	100.0	75	215
107.0	70.0	29 12.8	EB	67 07 09	0726	145	513	2.84	100.0	164	448
107.0	80.0	28 50.0	EB	67 07 09	0226	126	568	2.21	100.0	191	927
110.0	32.0	29 52.0	EB	67 07 10	1305	10	77	1.32	100.0	12	931
110.0	35.0	29 46.8	EB	67 07 10	1701	139	488	2.85	100.0	100	66
110.0	40.0	29 36.5	EB	67 07 10	2021	139	469	2.96	100.0	508	34
110.0	45.0	29 26.2	EB	67 07 10	2246	129	490	2.63	100.0	114	31
110.0	50.0	29 15.9	EB	67 07 11	0136	126	503	2.50	100.0	310	207
110.0	55.0	29 04.8	EB	67 07 11	0411	139	502	2.77	100.0	49	60
110.0	60.0	28 55.3	EB	67 07 11	0726	140	501	2.79	100.0	19	324
110.0	65.0	28 44.8	EB	67 07 11	1001	142	510	2.77	100.0	43	120
110.0	70.0	28 36.5	EB	67 07 11	1235	127	573	2.22	100.0	105	472
110.0	80.0	28 17.0	EB	67 07 11	1740	129	528	2.45	100.0	66	233
113.0	29.0	29 24.0	EB	67 07 13	0206	12	76	1.55	100.0	60	297
113.0	30.0	29 21.6	EB	67 07 13	0118	55	159	3.43	100.0	79	86
113.0	35.0	29 12.0	EB	67 07 12	2241	137	506	2.70	100.0	129	53
113.0	40.0	29 02.0	EB	67 07 12	2011	143	500	2.86	100.0	43	26
113.0	45.0	28 53.0	EB	67 07 12	1726	142	515	2.76	100.0	39	17
113.0	50.0	28 46.1	EB	67 07 12	1501	136	520	2.62	100.0	19	35
113.0	55.0	28 40.0	EB	67 07 12	1221	141	533	2.63	100.0	186	85
113.0	60.0	28 24.0	EB	67 07 12	0946	141	522	2.70	100.0	131	177
113.0	65.0	28 13.2	EB	67 07 12	0611	140	519	2.70	100.0	122	237
113.0	70.0	28 01.7	EB	67 07 12	0321	132	538	2.46	100.0	44	328
113.0	80.0	27 40.6	EB	67 07 11	2206	146	520	2.81	100.0	52	893
117.0	25.0	28 57.8	EB	67 07 13	0939	46	200	2.32	100.0	10	19
117.0	26.0	28 56.0	EB	67 07 13	0858	65	224	2.91	100.0	124	45
117.0	30.0	28 47.8	EB	67 07 13	0637	87	330	2.65	100.0	500	5544
117.0	35.0	28 37.5	EB	67 07 14	1846	131	526	2.49	100.0	436	171
117.0	40.0	28 27.3	EB	67 07 14	2121	138	507	2.72	100.0	55	96
117.0	45.0	28 18.0	EB	67 07 14	0006	130	541	2.39	100.0	13	48
117.0	50.0	28 09.5	EB	67 07 15	0303	128	534	2.40	100.0	6	70

TABLE 1. (cont.)

## CALCOFI Cruise 6706

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
117.0	28 01.8	116 37.0	EB	67 07 15	0516	140	515	2.73	100.0	25	41
117.0	27 52.4	116 57.6	EB	67 07 15	0831	132	413	3.20	100.0	229	459
117.0	27 45.9	117 12.9	EB	67 07 15	1021	129	547	2.36	100.0	246	593
117.0	27 38.0	117 32.2	EB	67 07 15	1315	141	513	2.75	100.0	111	528
117.0	27 12.5	118 02.8	EB	67 07 15	1751	133	540	2.47	100.0	149	633
118.0	28 18.5	115 23.7	EB	67 07 20	0411	135	507	2.67	100.0	180	169
119.0	28 19.2	114 52.3	EB	67 07 13	1527	90	389	2.31	100.0	1275	274
120.0	28 23.8	114 10.8	EB	67 07 14	0914	20	97	2.06	100.0	151	556
120.0	28 22.2	114 14.7	EB	67 07 14	0839	41	180	2.28	100.0	207	57
120.0	28 11.7	114 33.3	EB	67 07 14	0553	77	289	2.66	100.0	415	246
120.0	28 02.9	114 54.0	EB	67 07 14	0338	68	247	2.74	100.0	934	173
120.0	27 56.5	115 14.0	EB	67 07 16	2031	34	121	2.79	100.0	651	384
120.0	27 42.5	115 33.0	EB	67 07 16	1746	143	517	2.77	100.0	200	280
120.0	27 36.5	115 52.7	EB	67 07 16	1421	139	578	2.40	100.0	159	107
120.0	27 18.2	116 15.0	EB	67 07 16	1045	138	528	2.61	100.0	20	138
120.0	27 17.2	116 32.9	EB	67 07 16	0841	136	550	2.48	100.0	256	630
120.0	27 06.9	116 51.0	EB	67 07 16	0531	142	516	2.75	100.0	165	854
120.0	26 54.8	117 10.0	EB	67 07 16	0256	136	525	2.59	100.0	157	833
120.0	26 37.1	117 41.0	EB	67 07 15	2251	137	542	2.52	100.0	137	647
123.0	27 26.0	114 36.1	EB	67 07 17	0129	32	175	1.85	100.0	98	180
123.0	27 24.5	114 39.8	EB	67 07 17	0210	52	269	1.93	100.0	85	169
123.0	27 13.7	114 59.0	EB	67 07 17	0456	123	541	2.27	100.0	55	145
123.0	27 06.8	115 11.2	EB	67 07 17	0631	131	530	2.47	100.0	11	20
123.0	26 53.6	115 34.0	EB	67 07 17	0916	130	553	2.35	100.0	3	13
123.0	26 40.7	115 55.8	EB	67 07 17	1146	137	509	2.69	100.0	7	16
123.0	26 39.1	116 08.3	EB	67 07 17	1406	137	523	2.63	100.0	11	20
127.0	26 57.4	114 02.1	EB	67 07 18	0943	54	186	2.92	100.0	51	127
127.0	26 55.0	114 07.2	EB	67 07 18	0858	70	210	3.32	100.0	141	320
127.0	26 41.8	114 29.0	EB	67 07 18	0606	135	508	2.65	100.0	2	12
127.0	26 32.0	114 48.3	EB	67 07 18	0321	133	506	2.63	100.0	21	558
127.0	26 22.0	115 08.3	EB	67 07 18	0054	131	519	2.53	100.0	13	696
127.0	26 13.0	115 25.5	EB	67 07 17	2201	136	559	2.43	100.0	6	518
127.0	26 03.1	115 47.0	EB	67 07 17	1931	142	408	3.49	100.0	6	987
130.0	26 33.0	113 21.0	EB	67 07 18	1719	43	162	2.63	100.0	1	2
130.0	26 29.0	113 29.0	EB	67 07 18	1858	61	209	2.90	100.0	2	2
130.0	26 19.5	113 48.0	EB	67 07 18	2126	142	467	3.05	100.0	4	14
130.0	26 09.0	114 07.0	EB	67 07 18	0051	137	455	3.01	100.0	0	15

TABLE 1. (cont.)

## CALCOFI Cruise 6712

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
107.0	31.0	30 27.8	HO	67 12 19	1109	34	199	1.71	100.0	189	13
107.0	32.0	30 25.8	HO	67 12 19	1236	146	481	3.04	100.0	66	118
107.0	35.0	30 21.5	HO	67 12 19	1506	145	469	3.10	100.0	160	23
107.0	40.0	30 11.1	HO	67 12 19	1811	134	513	2.62	100.0	142	15
107.0	45.0	30 02.1	HO	67 12 19	2041	111	616	1.80	100.0	301	42
107.0	50.0	29 53.0	HO	67 12 20	2336	143	486	2.93	100.0	46	28
107.0	55.0	29 43.0	HO	67 12 20	0201	144	493	2.92	100.0	58	23
107.0	60.0	29 32.0	HO	67 12 20	0456	142	498	2.85	100.0	44	9
107.0	65.0	29 21.0	HO	67 12 20	0701	141	505	2.79	100.0	19	60
107.0	70.0	29 11.0	HO	67 12 20	1011	136	514	2.65	100.0	25	21
110.0	32.0	29 52.0	HO	67 12 19	0714	20	138	1.45	100.0	40	23
110.0	35.0	29 46.0	HO	67 12 19	0541	107	592	1.81	100.0	253	179
110.0	40.0	29 36.0	HO	67 12 19	0246	138	519	2.66	100.0	53	38
110.0	45.0	29 26.5	HO	67 12 18	2336	135	507	2.66	100.0	95	3
110.0	50.0	29 16.5	HO	67 12 18	2136	129	565	2.28	100.0	82	7
110.0	55.0	29 06.5	HO	67 12 18	1846	152	416	3.65	100.0	53	16
110.0	60.0	28 56.5	HO	67 12 18	1651	143	459	3.11	100.0	14	12
110.0	65.0	28 46.0	HO	67 12 18	1336	139	478	2.90	100.0	12	5
110.0	70.0	28 36.5	HO	67 12 18	1126	138	512	2.68	100.0	27	9
110.0	80.0	28 16.5	HO	67 12 18	0556	136	507	2.68	100.0	118	11
113.0	29.0	29 24.2	HO	67 12 16	1759	23	198	1.15	100.0	18	46
113.0	30.0	29 22.0	HO	67 12 16	1909	40	180	2.19	100.0	9	1
113.0	35.0	29 11.2	HO	67 12 16	2221	122	528	2.31	100.0	89	1
113.0	40.0	29 01.5	HO	67 12 17	0136	138	500	2.76	100.0	22	4
113.0	45.0	28 50.8	HO	67 12 17	0406	143	488	2.94	100.0	78	1
113.0	50.0	28 39.0	HO	67 12 17	0816	132	538	2.46	100.0	7	9
113.0	55.0	28 30.2	HO	67 12 17	1051	101	603	1.67	100.0	6	0
113.0	60.0	28 21.5	HO	67 12 17	1421	106	582	1.82	100.0	39	17
113.0	65.0	28 12.0	HO	67 12 17	1636	137	513	2.67	100.0	23	24
113.0	70.0	28 02.0	HO	67 12 17	1946	137	509	2.68	100.0	64	48
117.0	25.0	27 41.2	HO	67 12 18	0046	141	515	2.74	100.0	46	10
117.0	26.0	28 58.0	HO	67 12 16	1138	19	236	0.79	100.0	2	25
117.0	30.0	28 56.0	HO	67 12 16	1228	39	295	1.30	100.0	69	50
117.0	35.0	28 48.0	HO	67 12 16	1413	61	295	2.06	100.0	21	114
117.0	40.0	28 38.0	HO	67 12 15	2256	140	499	2.81	100.0	82	90
117.0	45.0	28 28.0	HO	67 12 15	2026	150	504	2.96	100.0	64	19
117.0	50.0	28 18.0	HO	67 12 14	1316	140	516	2.71	100.0	55	88
117.0	55.0	28 03.0	HO	67 12 14	1026	122	513	2.38	100.0	58	73
117.0	60.0	27 55.5	HO	67 12 14	0741	135	435	3.11	100.0	92	24
117.0	65.0	27 44.5	HO	67 12 14	0456	134	471	2.84	100.0	44	5
117.0	70.0	27 36.0	HO	67 12 14	0206	137	519	2.63	100.0	115	8
118.0	80.0	27 07.5	HO	67 12 13	1756	147	445	3.30	100.0	163	26
118.0	85.0	26 58.5	HO	67 12 13	1826	136	519	2.61	100.0	66	75
119.0	33.0	28 19.0	HO	67 12 16	0208	68	287	2.35	100.0	66	24
120.0	24.0	28 25.0	HO	67 12 16	0724	30	213	1.38	100.0	40	94

TABLE 1. (cont.)

CalCOFI Cruise 6712											
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
120.0	25.0	114 15.0	HO	67 12 16	0644	38	195	1.96	100.0	228	223
120.0	30.0	114 33.5	HO	67 12 16	0418	59	286	2.07	100.0	93	192
120.0	35.0	114 54.8	HO	67 12 12	0833	37	286	1.31	100.0	40	127
120.0	40.0	115 14.0	HO	67 12 11	1235	120	211	0.57	100.0	10	58
120.0	45.0	115 33.0	HO	67 12 12	1506	125	523	2.39	100.0	227	70
120.0	50.0	115 53.2	HO	67 12 12	1741	128	521	2.46	100.0	473	157
120.0	55.0	116 12.5	HO	67 12 12	1936	143	506	2.83	100.0	105	7
120.0	60.0	116 31.2	HO	67 12 12	2236	144	480	2.99	100.0	49	1
120.0	65.0	116 49.0	HO	67 12 13	0056	136	488	2.79	100.0	106	23
120.0	70.0	117 09.0	HO	67 12 13	0336	140	520	2.68	100.0	48	4
120.0	80.0	117 49.5	HO	67 12 13	0936	142	485	2.93	100.0	13	73
123.0	36.0	114 36.0	HO	67 12 11	0749	31	279	1.11	100.0	227	434
123.0	37.0	114 40.0	HO	67 12 11	0658	65	411	1.59	100.0	220	196
123.0	42.0	114 59.0	HO	67 12 11	0431	138	473	2.92	100.0	3	7
123.0	45.0	115 10.0	HO	67 12 11	0236	140	495	2.82	100.0	36	65
123.0	50.0	115 30.0	HO	67 12 11	0006	139	514	2.69	100.0	31	7
123.0	55.0	115 49.0	HO	67 12 11	2121	135	523	2.58	100.0	41	4
123.0	60.0	116 12.0	HO	67 12 10	1851	146	502	2.90	100.0	90	9
127.0	33.0	114 02.2	HO	67 12 09	1924	30	201	1.47	100.0	52	263
127.0	34.0	114 06.5	HO	67 12 09	2013	57	267	2.12	100.0	10	714
127.0	40.0	114 29.8	HO	67 12 09	2256	129	467	2.75	100.0	46	21
127.0	45.0	114 48.0	HO	67 12 10	0111	148	425	3.49	100.0	11	30
127.0	50.0	115 10.5	HO	67 12 10	0346	131	497	2.62	100.0	8	5
127.0	55.0	115 28.0	HO	67 12 10	0611	141	492	2.87	100.0	37	10
127.0	60.0	115 54.0	HO	67 12 10	0951	147	478	3.08	100.0	17	18
130.0	28.0	113 21.2	HO	67 12 09	1509	33	205	1.59	100.0	2	310
130.0	30.0	113 29.5	HO	67 12 09	1348	56	308	1.80	100.0	1	211
130.0	35.0	113 49.2	HO	67 12 09	1121	142	447	3.16	100.0	23	331
130.0	40.0	114 07.0	HO	67 12 09	0911	133	498	2.68	100.0	4	13
130.0	45.0	114 34.0	HO	67 12 09	0456	151	453	3.33	100.0	13	16
130.0	50.0	114 50.0	HO	67 12 09	0251	143	465	3.07	100.0	32	13
130.0	55.0	115 06.0	HO	67 12 08	0001	138	466	2.96	100.0	11	4
130.0	60.0	115 24.0	HO	67 12 08	2131	135	512	2.63	100.0	8	19
133.0	23.0	112 40.0	HO	67 12 08	0349	40	235	1.70	100.0	41	73
133.0	25.0	112 48.0	HO	67 12 08	0458	57	301	1.91	100.0	0	2
133.0	30.0	113 10.0	HO	67 12 08	0721	142	487	2.92	100.0	20	30
133.0	35.0	113 32.0	HO	67 12 08	0956	142	483	2.94	100.0	5	452
133.0	40.0	113 55.8	HO	67 12 08	1311	119	523	2.28	100.0	34	108
137.0	22.0	112 14.8	HO	67 12 07	2340	26	257	1.01	100.0	114	200
137.0	23.0	112 19.0	HO	67 12 07	2248	55	364	1.51	100.0	213	307
137.0	30.0	112 46.8	HO	67 12 07	1856	133	526	2.52	100.0	121	44
137.0	35.0	113 03.5	HO	67 12 07	1621	140	478	2.93	100.0	95	114
137.0	40.0	113 24.0	HO	67 12 07	1346	139	486	2.85	100.0	12	2

TABLE 2. Pooled occurrences of fish larvae taken during CalCOFI cruises in 1967.

Rank	Taxon	Occurrences
1	<i>Engraulis mordax</i>	150
2	<i>Triphoturus mexicanus</i>	142
3	<i>Vinciguerrria lucetia</i>	121
4	<i>Protomyctophum crockeri</i>	109
5	<i>Citharichthys</i> spp.	108
6	<i>Bathylagus wesethi</i>	99
7	Disintegrated fish larva	84
8	<i>Sebastes</i> spp.	81
9	<i>Cyclothone</i> spp.	80
10	<i>Trachurus symmetricus</i>	76
11	<i>Melamphaes</i> spp.	68
12	<i>Lampanyctus</i> spp.	67
13	<i>Diogenichthys laternatus</i>	63
14	Unidentified fish larva	60
15	<i>Diaphus</i> spp.	46
16	<i>Lampanyctus ritteri</i>	43
16	<i>Leuroglossus stilbius</i>	43
18	<i>Diogenichthys atlanticus</i>	38
18	<i>Symbolophorus californiensis</i>	38
20	<i>Ceratospelus townsendi</i>	37
21	<i>Lestidiops ringens</i>	36
21	Gobiidae	36
21	<i>Tetragonurus cuvieri</i>	36
24	Myctophidae	33
25	Sciaenidae	32
26	<i>Stenobranchius leucopsarus</i>	31
26	<i>Sardinops sagax</i>	31
28	Scopelarchidae	29
29	<i>Bathylagus ochotensis</i>	28
29	Sternoptychidae	28
31	<i>Merluccius productus</i>	25
32	<i>Pleuronichthys verticalis</i>	24
32	<i>Stomias atriventer</i>	24
34	<i>Synodus</i> spp.	23
34	<i>Oxyjulis californica</i>	23
34	Serranidae	23
37	<i>Peprilus simillimus</i>	22
38	<i>Argentina sialis</i>	21
38	<i>Hygophum atratum</i>	21
40	<i>Hypsoblennius</i> spp.	19
40	<i>Citharichthys stigmaeus</i>	19
42	<i>Icichthys lockingtoni</i>	18
43	<i>Gonichthys tenuiculus</i>	16
43	<i>Diogenichthys</i> spp.	16
45	<i>Chilara taylora</i>	15
45	<i>Idiacanthus antrostomus</i>	15
47	<i>Scomber japonicus</i>	14
48	<i>Microstomus pacificus</i>	13

TABLE 2. (cont.)

Rank	Taxon	Occurrences
48	<i>Paralichthys californicus</i>	13
50	<i>Hippoglossina stomata</i>	12
50	<i>Lampanyctus regalis</i>	12
52	<i>Myctophum nitidulum</i>	11
52	<i>Notoscopelus resplendens</i>	11
54	Ophidiiformes	10
54	<i>Lampadena urophaos</i>	10
54	Trichiuridae	10
54	<i>Pleuronichthys</i> spp.	10
54	<i>Tarletonbeania crenularis</i>	10
54	<i>Symphurus</i> spp.	10
60	Clinidae	9
60	<i>Chauliodus macouni</i>	9
60	Stomiiformes	9
60	<i>Microstoma microstoma</i>	9
64	<i>Scorpaena</i> spp.	8
64	Scombridae	8
64	<i>Nansenia crassa</i>	8
67	<i>Etrumeus acuminatus</i>	7
67	<i>Macroramphosus gracilis</i>	7
67	<i>Zaniolepis</i> spp.	7
67	<i>Hygophum reinhardtii</i>	7
67	<i>Sphyraena argentea</i>	7
67	<i>Notolychnus valdiviae</i>	7
73	<i>Nansenia candida</i>	6
73	<i>Medialuna californiensis</i>	6
73	<i>Parophrys vetulus</i>	6
73	<i>Syngnathus</i> spp.	6
73	<i>Bathylagus</i> spp.	6
73	<i>Scopelosaurus</i> spp.	6
73	Chiasmodontidae	6
73	Trachipteridae	6
73	<i>Poromitra</i> spp.	6
82	<i>Ichthyococcus</i> spp.	5
82	Agonidae	5
82	Anguilliformes	5
82	<i>Brosmophycis marginata</i>	5
82	<i>Seriola lalandi</i>	5
82	Cottidae	5
82	<i>Chromis punctipinnis</i>	5
89	<i>Semicossyphus pulcher</i>	4
89	<i>Halichoeres</i> spp.	4
89	<i>Sebastolobus</i> spp.	4
89	Cyclopteridae	4
89	<i>Scopelogadus bispinosus</i>	4
89	<i>Lyopsetta exilis</i>	4
89	<i>Xystreurys liolepis</i>	4
96	<i>Girella nigricans</i>	3
96	Blennioidei	3



TABLE 2. (cont.)

Rank	Taxon	Occurrences
96	<i>Cololabis saira</i>	3
96	<i>Tactostoma macropus</i>	3
100	Macrouridae	2
100	Atherinidae	2
100	<i>Pleuronichthys ritteri</i>	2
100	<i>Notolepis risso</i>	2
100	<i>Lepidopsetta bilineata</i>	2
100	<i>Bathophilus</i> spp.	2
100	Labridae	2
100	<i>Aristostomias scintillans</i>	2
100	Gerreidae	2
100	Carangidae	2
110	<i>Mugil</i> spp.	1
110	<i>Centrobranchus</i> spp.	1
110	<i>Coryphaena hippurus</i>	1
110	<i>Loweina rara</i>	1
110	<i>Brama</i> spp.	1
110	<i>Howella brodiei</i>	1
110	<i>Physiculus</i> spp.	1
110	Scorpaenidae	1
110	<i>Sarda chiliensis</i>	1
110	<i>Porichthys</i> spp.	1
110	<i>Caulolatilus princeps</i>	1
110	Pleuronectiformes	1
110	<i>Diplophos taenia</i>	1
110	<i>Pleuronichthys coenosus</i>	1

TABLE 3. Pooled numbers of fish larvae taken during CalCOFI cruises in 1967. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	<i>Engraulis mordax</i>	35258
2	<i>Citharichthys</i> spp.	10359
3	<i>Vinciguerrria lucetia</i>	10185
4	<i>Triphoturus mexicanus</i>	7237
5	<i>Bathylagus wesethi</i>	2786
6	<i>Sardinops sagax</i>	2061
7	<i>Diogenichthys laternatus</i>	1752
8	<i>Trachurus symmetricus</i>	1470
9	<i>Sebastes</i> spp.	1185
10	<i>Cyclothone</i> spp.	1010
11	<i>Diaphus</i> spp.	896
12	<i>Ceratoscopelus townsendi</i>	722
13	<i>Protomyctophum crockeri</i>	711
14	Unidentified fish larva	631
15	Sciaenidae	547
16	<i>Lampanyctus</i> spp.	495
17	<i>Lampanyctus ritteri</i>	474
18	<i>Lestidiops ringens</i>	426
19	Disintegrated fish larva	410
20	<i>Melamphaes</i> spp.	402
21	<i>Stenobranchius leucopsarus</i>	395
22	<i>Symbolophorus californiensis</i>	384
23	<i>Merluccius productus</i>	342
24	<i>Peprilus simillimus</i>	334
25	Myctophidae	308
26	<i>Diogenichthys atlanticus</i>	298
27	Serranidae	289
28	<i>Tetragonurus cuvieri</i>	238
29	<i>Pleuronichthys verticalis</i>	224
30	<i>Argentina sialis</i>	188
31	<i>Leuroglossus stilbius</i>	186
32	<i>Diogenichthys</i> spp.	183
33	<i>Synodus</i> spp.	181
34	<i>Scomber japonicus</i>	180
35	<i>Oxyjulis californica</i>	157
36	<i>Bathylagus ochotensis</i>	139
37	<i>Hypsoblennius</i> spp.	130
38	Gobiidae	129
39	Scopelarchidae	128
40	<i>Icichthys lockingtoni</i>	122
41	<i>Etrumeus acuminatus</i>	121
42	Scombridae	108
43	Sternoptychidae	103
44	<i>Idiacanthus antrostomus</i>	99
45	<i>Stomias atriventer</i>	82
46	<i>Hygophum atratum</i>	80
47	<i>Citharichthys stigmaeus</i>	70

TABLE 3. (cont.)

Rank	Taxon	Count
48	Trichiuridae	69
49	<i>Chilara taylori</i>	63
50	<i>Gonichthys tenuiculus</i>	55
51	<i>Scorpaena</i> spp.	53
51	<i>Tarletonbeania crenularis</i>	53
51	<i>Sphyraena argentea</i>	53
54	<i>Lampanyctus regalis</i>	52
54	<i>Hippoglossina stomata</i>	52
56	<i>Paralichthys californicus</i>	51
57	Cottidae	50
58	<i>Nansenia candida</i>	46
59	<i>Notoscopelus resplendens</i>	43
60	<i>Xystreurys liolepis</i>	40
60	<i>Microstomus pacificus</i>	40
60	Gerreidae	40
60	<i>Myctophum nitidulum</i>	40
64	<i>Lampadena urophaos</i>	39
65	<i>Symphurus</i> spp.	37
65	<i>Bathylagus</i> spp.	37
67	Stomiiformes	34
68	<i>Microstoma microstoma</i>	33
69	Ophidiiformes	32
69	Clinidae	32
71	<i>Pleuronichthys</i> spp.	31
72	<i>Hygophum reinhardtii</i>	30
73	<i>Chauliodus macouni</i>	28
74	<i>Nansenia crassa</i>	27
75	<i>Zaniolepis</i> spp.	26
76	Cyclopteridae	24
77	<i>Parophrys vetulus</i>	22
77	Anguilliformes	22
79	<i>Notolychnus valdiviae</i>	21
79	<i>Chromis punctipinnis</i>	21
79	<i>Scopelosaurus</i> spp.	21
82	<i>Medialuna californiensis</i>	20
83	<i>Macroramphosus gracilis</i>	19
83	Chiasmodontidae	19
83	<i>Seriola lalandi</i>	19
86	<i>Lyopsetta exilis</i>	18
87	Agonidae	16
87	<i>Poromitra</i> spp.	16
87	Trachipteridae	16
90	<i>Bathophilus</i> spp.	15
91	<i>Semicossyphus pulcher</i>	14
92	<i>Ichthyococcus</i> spp.	13
92	<i>Scopelogadus bispinosus</i>	13
94	<i>Brosmophycis marginata</i>	12
95	<i>Tactostoma macropus</i>	10
95	Labridae	10

TABLE 3. (cont.)

Rank	Taxon	Count
95	Atherinidae	10
95	<i>Sebastolobus</i> spp.	10
99	<i>Cololabis saira</i>	9
99	Blennioidei	9
99	<i>Aristostomias scintillans</i>	9
99	<i>Syngnathus</i> spp.	9
99	Carangidae	9
104	<i>Notolepis risso</i>	8
104	<i>Halichoeres</i> spp.	8
106	<i>Girella nigricans</i>	7
106	<i>Pleuronichthys ritteri</i>	7
108	<i>Howella brodiei</i>	6
109	Macrouridae	5
109	<i>Caulolatilus princeps</i>	5
109	<i>Lepidopsetta bilineata</i>	5
112	<i>Loweina rara</i>	3
112	<i>Brama</i> spp.	3
112	Pleuronectiformes	3
112	<i>Diplophos taenia</i>	3
112	Scorpaenidae	3
112	<i>Physiculus</i> spp.	3
112	<i>Sarda chiliensis</i>	3
112	<i>Mugil</i> spp.	3
112	<i>Centrobranchus</i> spp.	3
112	<i>Pleuronichthys coenosus</i>	3
122	<i>Porichthys</i> spp.	2
123	<i>Coryphaena hippurus</i>	1
	Total	85911

TABLE 4. Numbers of fish larvae taken on stations occupied during CalCOFI cruises in 1967. 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.
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	7.2
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.0
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	3.2
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.9
137.0	35.0	-	-	-	-	-	-	-	-	-	-	5.9

<i>Etrumeus acuminatus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	24.0	-	-	-	-	-	8.2	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	83.7	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	2.4	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	1.9	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.2
137.0	23.0	-	-	-	-	-	-	-	-	-	-	1.5
137.0	35.0	-	-	-	-	-	-	-	-	-	-	20.5

<i>Sardinops sagax</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	29.0	-	-	-	-	-	5.8	-	-	-	-	-
97.0	30.0	-	-	-	-	-	17.8	-	-	-	-	-
100.0	29.0	-	-	-	-	-	81.5	-	-	-	-	-
100.0	30.0	-	-	-	-	-	54.9	-	-	-	-	-
103.0	29.0	-	-	-	-	-	2.1	-	-	-	-	-
103.0	30.0	-	-	-	-	-	51.7	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	3.4
107.0	32.0	-	-	-	-	-	71.0	-	-	-	-	0.0
110.0	32.0	-	-	-	-	-	0.0	-	-	-	-	11.6
110.0	35.0	-	-	-	-	-	14.3	-	-	-	-	5.4
110.0	40.0	-	-	-	-	-	29.6	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	8.1	-	-	-	-	0.0
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	2.6
120.0	24.0	-	-	-	-	-	226.6	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	1141.1	-	-	-	-	0.6
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	7.2
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	8.4
123.0	36.0	-	-	-	-	-	24.1	-	-	-	-	98.8
123.0	37.0	-	-	-	-	-	17.4	-	-	-	-	39.8
127.0	33.0	-	-	-	-	-	0.0	-	-	-	-	5.9

TABLE 4. (cont.)

*Sardinops sagax* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
127.0	34.0	-	-	-	-	-	0.0	-	-	-	-	2.1
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	19.0
133.0	23.0	-	-	-	-	-	-	-	-	-	-	1.7
137.0	22.0	-	-	-	-	-	-	-	-	-	-	33.3
137.0	23.0	-	-	-	-	-	-	-	-	-	-	71.0

*Engraulis mordax*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	185.4	-	-	-	-	-	-
80.0	52.0	-	-	-	-	87.4	-	-	-	-	-	-
80.0	55.0	-	-	-	-	463.4	-	-	-	-	-	-
80.0	60.0	-	-	-	-	82.9	-	-	-	-	-	-
82.0	47.0	-	-	-	-	221.8	-	-	-	-	-	-
83.0	40.0	-	-	-	-	15.8	-	-	-	-	-	-
83.0	43.0	-	-	-	-	813.0	-	-	-	-	-	-
83.0	51.0	-	-	-	-	233.2	-	-	-	-	-	-
83.0	55.0	-	-	-	-	1135.0	-	-	-	-	-	-
83.0	60.0	-	-	-	-	79.8	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	33.0	-	-	-	-	252.8	-	-	-	-	-	-
87.0	35.0	-	-	-	-	1833.3	-	-	-	-	-	-
87.0	40.0	-	-	-	-	1856.9	-	-	-	-	-	-
87.0	45.0	-	-	-	-	327.5	-	-	-	-	-	-
87.0	50.0	-	-	-	-	207.4	-	-	-	-	-	-
87.0	55.0	-	-	-	-	485.1	-	-	-	-	-	-
87.0	60.0	-	-	-	-	3.4	-	-	-	-	-	-
87.0	70.0	-	-	-	-	31.2	-	-	-	-	-	-
90.0	28.0	-	-	-	-	972.2	-	-	-	-	-	-
90.0	32.0	-	-	-	-	442.8	-	-	-	-	-	-
90.0	37.0	-	-	-	-	2178.5	-	-	-	-	-	-
90.0	45.0	-	-	-	-	162.3	-	-	-	-	-	-
90.0	53.0	-	-	-	-	635.1	-	-	-	-	-	-
90.0	60.0	-	-	-	-	249.1	-	-	-	-	-	-
90.0	65.0	-	-	-	-	13.9	-	-	-	-	-	-
90.0	70.0	-	-	-	-	266.9	-	-	-	-	-	-
90.0	80.0	-	-	-	-	24.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	27.3	-	-	-	-	-	-
90.0	100.0	-	-	-	-	10.4	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	524.4	-	-	-	-	-
93.0	30.0	-	-	-	-	-	615.6	-	-	-	-	-
93.0	35.0	-	-	-	-	-	781.1	-	-	-	-	-
93.0	40.0	-	-	-	-	-	1467.2	-	-	-	-	-
93.0	45.0	-	-	-	-	-	1285.5	-	-	-	-	-
93.0	50.0	-	-	-	-	-	753.5	-	-	-	-	-

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	55.0	-	-	-	-	-	516.0	-	-	-	-	-
93.0	60.0	-	-	-	-	-	16.8	-	-	-	-	-
93.0	70.0	-	-	-	-	-	6.4	-	-	-	-	-
93.0	80.0	-	-	-	-	-	74.6	-	-	-	-	-
93.0	90.0	-	-	-	-	11.2	-	-	-	-	-	-
97.0	29.0	-	-	-	-	-	330.2	-	-	-	-	-
97.0	30.0	-	-	-	-	-	1116.7	-	-	-	-	-
97.0	32.0	-	-	-	-	-	1115.2	-	-	-	-	-
97.0	35.0	-	-	-	-	-	414.5	-	-	-	-	-
97.0	40.0	-	-	-	-	-	129.9	-	-	-	-	-
97.0	45.0	-	-	-	-	-	5.7	-	-	-	-	-
97.0	50.0	-	-	-	-	-	2.6	-	-	-	-	-
97.0	55.0	-	-	-	-	-	52.6	-	-	-	-	-
97.0	60.0	-	-	-	-	-	11.1	-	-	-	-	-
100.0	29.0	-	-	-	-	-	697.0	-	-	-	-	-
100.0	30.0	-	-	-	-	-	505.8	-	-	-	-	-
100.0	35.0	-	-	-	-	-	8.6	-	-	-	-	-
100.0	40.0	-	-	-	-	-	5.5	-	-	-	-	-
100.0	50.0	-	-	-	-	-	13.6	-	-	-	-	-
100.0	55.0	-	-	-	-	-	33.0	-	-	-	-	-
103.0	29.0	-	-	-	-	-	38.4	-	-	-	-	-
103.0	30.0	-	-	-	-	-	91.5	-	-	-	-	-
103.0	35.0	-	-	-	-	-	92.5	-	-	-	-	-
103.0	40.0	-	-	-	-	-	4.9	-	-	-	-	-
107.0	31.0	-	-	-	-	-	2.6	-	-	-	-	-
107.0	32.0	-	-	-	-	-	76.1	-	-	-	-	-
107.0	35.0	-	-	-	-	-	35.5	-	-	-	-	-
107.0	40.0	-	-	-	-	-	0.0	-	-	-	-	-
107.0	45.0	-	-	-	-	-	36.3	-	-	-	-	-
107.0	50.0	-	-	-	-	-	0.0	-	-	-	-	-
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	-
110.0	32.0	-	-	-	-	-	1.3	-	-	-	-	-
110.0	35.0	-	-	-	-	-	205.2	-	-	-	-	-
110.0	40.0	-	-	-	-	-	1160.3	-	-	-	-	-
110.0	45.0	-	-	-	-	-	44.7	-	-	-	-	-
110.0	50.0	-	-	-	-	-	40.0	-	-	-	-	-
110.0	55.0	-	-	-	-	-	5.5	-	-	-	-	-
110.0	65.0	-	-	-	-	-	0.0	-	-	-	-	-
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	-
113.0	29.0	-	-	-	-	-	60.4	-	-	-	-	-
113.0	30.0	-	-	-	-	-	198.9	-	-	-	-	-
113.0	35.0	-	-	-	-	-	24.3	-	-	-	-	-
113.0	40.0	-	-	-	-	-	0.0	-	-	-	-	-
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	-
113.0	55.0	-	-	-	-	-	0.0	-	-	-	-	-
												222.3
												100.3
												316.2
												351.1
												520.2
												73.3
												11.7
												24.7
												381.9
												13.3
												133.0
												29.6
												0.0
												5.8
												5.4
												1.1
												13.1
												134.0
												2.8
												5.9
												1.7

TABLE 4. (cont.)

*Engraulis mordax* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	25.0	-	-	-	-	-	16.2	-	-	-	-	0.0
117.0	26.0	-	-	-	-	-	299.7	-	-	-	-	87.1
117.0	30.0	-	-	-	-	-	967.3	-	-	-	-	14.4
117.0	35.0	-	-	-	-	-	597.6	-	-	-	-	146.1
117.0	40.0	-	-	-	-	-	8.2	-	-	-	-	0.0
117.0	45.0	-	-	-	-	-	2.4	-	-	-	-	70.5
117.0	50.0	-	-	-	-	-	2.4	-	-	-	-	52.4
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	90.2
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	17.0
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	163.1
118.0	39.0	-	-	-	-	-	16.0	-	-	-	-	211.4
119.0	33.0	-	-	-	-	-	157.1	-	-	-	-	141.0
120.0	24.0	-	-	-	-	-	20.6	-	-	-	-	48.3
120.0	25.0	-	-	-	-	-	212.0	-	-	-	-	433.2
120.0	30.0	-	-	-	-	-	50.5	-	-	-	-	184.2
120.0	35.0	-	-	-	-	-	369.9	-	-	-	-	51.1
120.0	40.0	-	-	-	-	-	334.8	-	-	-	-	4.6
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	74.1
120.0	50.0	-	-	-	-	-	24.0	-	-	-	-	1008.6
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	8.5
120.0	65.0	-	-	-	-	-	2.8	-	-	-	-	13.9
123.0	36.0	-	-	-	-	-	70.3	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	56.0	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	9.1	-	-	-	-	0.0
123.0	45.0	-	-	-	-	-	0.0	-	-	-	-	14.1
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.6
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	81.2
127.0	33.0	-	-	-	-	-	90.5	-	-	-	-	38.2
127.0	34.0	-	-	-	-	-	235.7	-	-	-	-	0.0
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	8.3
127.0	45.0	-	-	-	-	-	5.3	-	-	-	-	0.0
130.0	28.0	-	-	-	-	-	0.0	-	-	-	-	3.2
130.0	30.0	-	-	-	-	-	5.8	-	-	-	-	1.8
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.2
130.0	60.0	-	-	-	-	-	-	-	-	-	-	2.6
133.0	23.0	-	-	-	-	-	-	-	-	-	-	15.3
133.0	30.0	-	-	-	-	-	-	-	-	-	-	43.8
137.0	22.0	-	-	-	-	-	-	-	-	-	-	61.6
137.0	23.0	-	-	-	-	-	-	-	-	-	-	160.1
137.0	30.0	-	-	-	-	-	-	-	-	-	-	136.1
137.0	35.0	-	-	-	-	-	-	-	-	-	-	52.7



TABLE 4. (cont.)

*Argentina sialis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
83.0	51.0	-	-	-	-	1.3	-	-	-	-	-	-
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	45.0	-	-	-	-	3.0	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
97.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
107.0	32.0	-	-	-	-	-	5.5	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
113.0	55.0	-	-	-	-	-	5.3	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	26.5	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	34.9	-	-	-	-	0.0
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	5.4
117.0	50.0	-	-	-	-	-	2.4	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.1
118.0	39.0	-	-	-	-	-	18.7	-	-	-	-	20.9
120.0	45.0	-	-	-	-	-	11.1	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	28.8	-	-	-	-	0.0
133.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9

*Microstoma microstoma*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
90.0	28.0	-	-	-	-	2.2	-	-	-	-	-	-
93.0	90.0	-	-	-	-	5.6	-	-	-	-	-	-
97.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-
100.0	50.0	-	-	-	-	-	6.8	-	-	-	-	-
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0

*Nansenia candida*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	-	-	-	-	5.5	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	70.0	-	-	-	-	13.3	-	-	-	-	-	-
83.0	80.0	-	-	-	-	9.2	-	-	-	-	-	-
87.0	90.0	-	-	-	-	11.9	-	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-

TABLE 4. (cont.)

*Nansenia crassa*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	55.0	-	-	-	-	-	2.7	-	-	-	-	-
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.4
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	9.0
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.7
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.6
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.6
130.0	60.0	-	-	-	-	-	-	-	-	-	-	-

*Bathylagus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	80.0	-	-	-	-	6.0	-	-	-	-	-	-
113.0	65.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	8.4
117.0	65.0	-	-	-	-	-	9.4	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	5.6	-	-	-	-	0.0
127.0	45.0	-	-	-	-	-	5.3	-	-	-	-	0.0

*Bathylagus ochotensis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	21.5	-	-	-	-	-	-
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
80.0	80.0	-	-	-	-	13.8	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	60.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	70.0	-	-	-	-	6.7	-	-	-	-	-	-
87.0	45.0	-	-	-	-	3.0	-	-	-	-	-	-
87.0	60.0	-	-	-	-	3.4	-	-	-	-	-	-
90.0	37.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	45.0	-	-	-	-	5.5	-	-	-	-	-	-
90.0	53.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	60.0	-	-	-	-	5.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	30.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	40.0	-	-	-	-	-	8.4	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	70.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
93.0	90.0	-	-	-	-	5.6	-	-	-	-	-	-
97.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-

TABLE 4. (cont.)

<i>Bathylagus ochotensis</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	45.0	-	-	-	-	-	2.8	-	-	-	-	-
97.0	50.0	-	-	-	-	-	7.7	-	-	-	-	-
97.0	55.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	45.0	-	-	-	-	-	5.7	-	-	-	-	-
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	0.0
<i>Bathylagus wesethi</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	-	-	-	-	5.5	-	-	-	-	-	-
80.0	80.0	-	-	-	-	24.8	-	-	-	-	-	-
83.0	60.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	65.0	-	-	-	-	5.7	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	80.0	-	-	-	-	75.6	-	-	-	-	-	-
83.0	90.0	-	-	-	-	122.7	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
87.0	60.0	-	-	-	-	23.7	-	-	-	-	-	-
87.0	65.0	-	-	-	-	28.6	-	-	-	-	-	-
87.0	70.0	-	-	-	-	26.4	-	-	-	-	-	-
87.0	80.0	-	-	-	-	257.8	-	-	-	-	-	-
87.0	90.0	-	-	-	-	180.9	-	-	-	-	-	-
90.0	60.0	-	-	-	-	23.4	-	-	-	-	-	-
90.0	65.0	-	-	-	-	13.9	-	-	-	-	-	-
90.0	70.0	-	-	-	-	8.4	-	-	-	-	-	-
90.0	90.0	-	-	-	-	13.7	-	-	-	-	-	-
90.0	100.0	-	-	-	-	28.5	-	-	-	-	-	-
90.0	110.0	-	-	-	-	99.4	-	-	-	-	-	-
90.0	120.0	-	-	-	-	91.4	-	-	-	-	-	-
90.0	130.0	-	-	-	-	21.1	-	-	-	-	-	-
90.0	140.0	-	-	-	-	7.7	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	11.2	-	-	-	-	-
93.0	45.0	-	-	-	-	-	16.1	-	-	-	-	-
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	60.0	-	-	-	-	-	14.0	-	-	-	-	-
93.0	65.0	-	-	-	-	-	50.9	-	-	-	-	-
93.0	70.0	-	-	-	-	-	15.9	-	-	-	-	-
93.0	80.0	-	-	-	-	-	14.3	-	-	-	-	-
93.0	90.0	-	-	-	-	11.2	-	-	-	-	-	-
93.0	100.0	-	-	-	-	15.3	-	-	-	-	-	-
93.0	110.0	-	-	-	-	5.4	-	-	-	-	-	-
93.0	120.0	-	-	-	-	62.8	-	-	-	-	-	-
93.0	130.0	-	-	-	-	131.0	-	-	-	-	-	-
93.0	140.0	-	-	-	-	5.6	-	-	-	-	-	-

TABLE 4. (cont.)

*Bathylagus wesethi* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	40.0	-	-	-	-	-	9.1	-	-	-	-	-
97.0	45.0	-	-	-	-	-	8.6	-	-	-	-	-
97.0	60.0	-	-	-	-	-	22.2	-	-	-	-	-
97.0	65.0	-	-	-	-	-	10.8	-	-	-	-	-
97.0	70.0	-	-	-	-	-	29.0	-	-	-	-	-
97.0	80.0	-	-	-	-	-	53.4	-	-	-	-	-
100.0	35.0	-	-	-	-	-	8.6	-	-	-	-	-
100.0	40.0	-	-	-	-	-	16.6	-	-	-	-	-
100.0	45.0	-	-	-	-	-	5.7	-	-	-	-	-
100.0	55.0	-	-	-	-	-	12.4	-	-	-	-	-
100.0	60.0	-	-	-	-	-	7.0	-	-	-	-	-
100.0	65.0	-	-	-	-	-	54.4	-	-	-	-	-
100.0	70.0	-	-	-	-	-	30.2	-	-	-	-	-
100.0	80.0	-	-	-	-	-	12.8	-	-	-	-	-
103.0	35.0	-	-	-	-	-	76.3	-	-	-	-	-
103.0	40.0	-	-	-	-	-	62.6	-	-	-	-	-
103.0	45.0	-	-	-	-	-	96.6	-	-	-	-	-
103.0	50.0	-	-	-	-	-	55.8	-	-	-	-	-
103.0	55.0	-	-	-	-	-	35.4	-	-	-	-	-
103.0	60.0	-	-	-	-	-	22.2	-	-	-	-	-
103.0	65.0	-	-	-	-	-	48.1	-	-	-	-	-
103.0	70.0	-	-	-	-	-	33.2	-	-	-	-	-
103.0	80.0	-	-	-	-	-	24.8	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	0.0
107.0	32.0	-	-	-	-	-	5.5	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	87.6	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	89.0	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	50.2	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	75.1	-	-	-	-	0.0
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	28.5
107.0	65.0	-	-	-	-	-	23.6	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	22.7	-	-	-	-	2.7
107.0	80.0	-	-	-	-	-	4.4	-	-	-	-	1.8
110.0	35.0	-	-	-	-	-	5.7	-	-	-	-	8.0
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	21.0	-	-	-	-	6.8
110.0	50.0	-	-	-	-	-	12.5	-	-	-	-	6.2
110.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.4
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	10.7
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	10.3	-	-	-	-	4.6
113.0	35.0	-	-	-	-	-	21.6	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	2.9	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	8.1	-	-	-	-	2.7
113.0	70.0	-	-	-	-	-	2.5	-	-	-	-	2.8
117.0	35.0	-	-	-	-	-	5.0	-	-	-	-	-

TABLE 4. (cont.)

*Bathylagus wesethi* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	3.0
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	60.0	-	-	-	-	-	35.2	-	-	-	-	0.0
118.0	39.0	-	-	-	-	-	26.7	-	-	-	-	2.6
120.0	45.0	-	-	-	-	-	8.3	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
120.0	60.0	-	-	-	-	-	2.5	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0

*Leuroglossus stilbius*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
82.0	47.0	-	-	-	-	6.2	-	-	-	-	-	-
83.0	55.0	-	-	-	-	19.7	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	35.0	-	-	-	-	2.7	-	-	-	-	-	-
87.0	40.0	-	-	-	-	2.9	-	-	-	-	-	-
87.0	45.0	-	-	-	-	3.0	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
90.0	28.0	-	-	-	-	4.5	-	-	-	-	-	-
90.0	37.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	45.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	53.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	30.0	-	-	-	-	-	9.7	-	-	-	-	-
93.0	40.0	-	-	-	-	-	5.6	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
93.0	90.0	-	-	-	-	-	-	-	-	-	-	-
97.0	32.0	-	-	-	-	2.8	-	-	-	-	-	-
107.0	32.0	-	-	-	-	-	8.2	-	-	-	-	3.0
110.0	35.0	-	-	-	-	-	0.0	-	-	-	-	1.8
110.0	50.0	-	-	-	-	-	5.0	-	-	-	-	0.0
110.0	55.0	-	-	-	-	-	5.5	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
113.0	30.0	-	-	-	-	-	3.4	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0

TABLE 4. (cont.)

*Leuroglossus stilbius* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.9
117.0	45.0	-	-	-	-	-	2.4	-	-	-	-	8.1
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	7.8
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	4.8
120.0	50.0	-	-	-	-	-	7.2	-	-	-	-	2.5
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1
137.0	30.0	-	-	-	-	-	-	-	-	-	-	7.6

## Stomiiformes

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	90.0	-	-	-	-	11.8	-	-	-	-	-	-
90.0	110.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
110.0	35.0	-	-	-	-	-	0.0	-	-	-	-	1.8
117.0	65.0	-	-	-	-	-	4.7	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9

*Cyclothone* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	70.0	-	-	-	-	2.7	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	80.0	-	-	-	-	4.6	-	-	-	-	-	-
83.0	90.0	-	-	-	-	4.7	-	-	-	-	-	-
87.0	80.0	-	-	-	-	54.8	-	-	-	-	-	-
87.0	90.0	-	-	-	-	64.3	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	100.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	46.9	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	140.0	-	-	-	-	10.2	-	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
93.0	90.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	110.0	-	-	-	-	21.8	-	-	-	-	-	-
93.0	120.0	-	-	-	-	35.1	-	-	-	-	-	-
93.0	130.0	-	-	-	-	40.3	-	-	-	-	-	-

TABLE 4. (cont..)

*Cyclothone* spp. (cont..)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	140.0	-	-	-	-	25.2	-	-	-	-	-	-
97.0	70.0	-	-	-	-	-	5.8	-	-	-	-	-
100.0	65.0	-	-	-	-	-	10.4	-	-	-	-	-
100.0	70.0	-	-	-	-	-	5.0	-	-	-	-	-
100.0	80.0	-	-	-	-	-	7.7	-	-	-	-	-
103.0	35.0	-	-	-	-	-	27.1	-	-	-	-	-
103.0	40.0	-	-	-	-	-	26.1	-	-	-	-	-
103.0	45.0	-	-	-	-	-	59.8	-	-	-	-	-
103.0	50.0	-	-	-	-	-	25.1	-	-	-	-	-
103.0	55.0	-	-	-	-	-	19.0	-	-	-	-	-
103.0	60.0	-	-	-	-	-	11.1	-	-	-	-	-
103.0	70.0	-	-	-	-	-	6.0	-	-	-	-	-
103.0	80.0	-	-	-	-	-	80.0	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	34.7	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	27.9	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	13.9	-	-	-	-	2.9
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	38.0
107.0	60.0	-	-	-	-	-	5.7	-	-	-	-	8.6
107.0	65.0	-	-	-	-	-	10.5	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	19.9	-	-	-	-	2.7
107.0	80.0	-	-	-	-	-	24.3	-	-	-	-	-
110.0	32.0	-	-	-	-	-	1.3	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	16.0
110.0	45.0	-	-	-	-	-	5.3	-	-	-	-	2.7
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	9.1
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	7.3
110.0	80.0	-	-	-	-	-	4.9	-	-	-	-	10.7
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	5.7	-	-	-	-	2.8
113.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.6
113.0	65.0	-	-	-	-	-	13.5	-	-	-	-	5.3
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	13.4
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	5.9
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	60.0	-	-	-	-	-	16.0	-	-	-	-	0.0
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6
117.0	80.0	-	-	-	-	-	2.5	-	-	-	-	6.6
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	60.0	-	-	-	-	-	5.0	-	-	-	-	3.0
120.0	65.0	-	-	-	-	-	13.8	-	-	-	-	5.6
120.0	70.0	-	-	-	-	-	5.2	-	-	-	-	2.7
120.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0

TABLE 4. (cont.)

*Cyclothone* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	0.0
123.0	60.0	-	-	-	-	-	2.6	-	-	-	-	2.9
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1
133.0	40.0	-	-	-	-	-	-	-	-	-	-	2.3

*Diplophos taenia*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7

*Ichthyococcus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	35.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	40.0	-	-	-	-	-	2.6	-	-	-	-	-
107.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Vinciguerria lucetia*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	12.2	-	-	-	-	-	-
87.0	90.0	-	-	-	-	30.9	-	-	-	-	-	-
90.0	110.0	-	-	-	-	11.0	-	-	-	-	-	-
90.0	120.0	-	-	-	-	16.6	-	-	-	-	-	-
90.0	130.0	-	-	-	-	5.3	-	-	-	-	-	-
90.0	140.0	-	-	-	-	320.0	-	-	-	-	-	-
93.0	65.0	-	-	-	-	-	8.0	-	-	-	-	-
93.0	70.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	110.0	-	-	-	-	549.4	-	-	-	-	-	-
93.0	120.0	-	-	-	-	411.6	-	-	-	-	-	-
93.0	130.0	-	-	-	-	214.2	-	-	-	-	-	-
93.0	140.0	-	-	-	-	246.4	-	-	-	-	-	-
100.0	60.0	-	-	-	-	-	7.0	-	-	-	-	-
100.0	65.0	-	-	-	-	-	62.2	-	-	-	-	-
100.0	70.0	-	-	-	-	-	20.2	-	-	-	-	-
100.0	80.0	-	-	-	-	-	20.6	-	-	-	-	-
103.0	35.0	-	-	-	-	-	39.4	-	-	-	-	-
103.0	40.0	-	-	-	-	-	608.1	-	-	-	-	-
103.0	45.0	-	-	-	-	-	473.8	-	-	-	-	-
103.0	50.0	-	-	-	-	-	337.6	-	-	-	-	-
103.0	55.0	-	-	-	-	-	255.7	-	-	-	-	-



TABLE 4. (cont.)

*Vinciguerria lucetia* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	60.0	-	-	-	-	-	235.4	-	-	-	-	-
103.0	65.0	-	-	-	-	-	83.5	-	-	-	-	-
103.0	70.0	-	-	-	-	-	21.1	-	-	-	-	-
103.0	80.0	-	-	-	-	-	129.7	-	-	-	-	-
107.0	35.0	-	-	-	-	-	31.3	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	301.6	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	122.8	-	-	-	-	3.6
107.0	50.0	-	-	-	-	-	116.8	-	-	-	-	8.8
107.0	55.0	-	-	-	-	-	11.1	-	-	-	-	70.1
107.0	60.0	-	-	-	-	-	17.0	-	-	-	-	48.4
107.0	65.0	-	-	-	-	-	83.8	-	-	-	-	25.1
107.0	70.0	-	-	-	-	-	193.1	-	-	-	-	37.1
107.0	80.0	-	-	-	-	-	313.8	-	-	-	-	-
110.0	35.0	-	-	-	-	-	0.0	-	-	-	-	5.4
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	37.2
110.0	45.0	-	-	-	-	-	15.8	-	-	-	-	29.3
110.0	50.0	-	-	-	-	-	12.5	-	-	-	-	70.7
110.0	55.0	-	-	-	-	-	2.8	-	-	-	-	98.6
110.0	60.0	-	-	-	-	-	0.0	-	-	-	-	21.8
110.0	65.0	-	-	-	-	-	5.5	-	-	-	-	2.9
110.0	70.0	-	-	-	-	-	13.3	-	-	-	-	18.8
110.0	80.0	-	-	-	-	-	125.0	-	-	-	-	211.7
113.0	35.0	-	-	-	-	-	13.5	-	-	-	-	4.6
113.0	40.0	-	-	-	-	-	28.6	-	-	-	-	16.6
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	17.6
113.0	50.0	-	-	-	-	-	0.0	-	-	-	-	7.4
113.0	55.0	-	-	-	-	-	334.0	-	-	-	-	1.7
113.0	60.0	-	-	-	-	-	202.5	-	-	-	-	18.2
113.0	65.0	-	-	-	-	-	175.5	-	-	-	-	21.4
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	56.3
113.0	80.0	-	-	-	-	-	5.6	-	-	-	-	54.8
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	40.0	-	-	-	-	-	13.6	-	-	-	-	29.6
117.0	45.0	-	-	-	-	-	2.4	-	-	-	-	5.4
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.4
117.0	60.0	-	-	-	-	-	387.2	-	-	-	-	2.8
117.0	65.0	-	-	-	-	-	450.8	-	-	-	-	7.9
117.0	70.0	-	-	-	-	-	134.8	-	-	-	-	-
118.0	39.0	-	-	-	-	-	96.3	-	-	-	-	66.0
120.0	30.0	-	-	-	-	-	18.7	-	-	-	-	20.9
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	8.3	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	2.6	-	-	-	-	8.5
120.0	60.0	-	-	-	-	-	491.0	-	-	-	-	14.9

TABLE 4. (cont.)

*Vinciguerria lucetia* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	65.0	-	-	-	-	-	327.3	-	-	-	-	19.5
120.0	70.0	-	-	-	-	-	328.9	-	-	-	-	69.7
120.0	80.0	-	-	-	-	-	297.4	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	2.9
123.0	45.0	-	-	-	-	-	2.5	-	-	-	-	14.1
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	8.1
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	7.7
123.0	60.0	-	-	-	-	-	23.7	-	-	-	-	2.9
127.0	33.0	-	-	-	-	-	0.0	-	-	-	-	5.9
127.0	34.0	-	-	-	-	-	0.0	-	-	-	-	8.5
127.0	45.0	-	-	-	-	-	13.2	-	-	-	-	20.9
127.0	50.0	-	-	-	-	-	20.2	-	-	-	-	5.2
127.0	55.0	-	-	-	-	-	2.4	-	-	-	-	0.0
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	12.3
130.0	40.0	-	-	-	-	-	0.0	-	-	-	-	5.4
130.0	45.0	-	-	-	-	-	-	-	-	-	-	30.0
130.0	50.0	-	-	-	-	-	-	-	-	-	-	12.3
130.0	60.0	-	-	-	-	-	-	-	-	-	-	5.3
133.0	40.0	-	-	-	-	-	-	-	-	-	-	13.7
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9
137.0	40.0	-	-	-	-	-	-	-	-	-	-	5.7

*Sternoptychidae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
97.0	70.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	65.0	-	-	-	-	-	5.2	-	-	-	-	-
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-
103.0	45.0	-	-	-	-	-	2.3	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	80.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	3.0
107.0	35.0	-	-	-	-	-	9.4	-	-	-	-	0.0
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.8
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	0.0
110.0	60.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	65.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	2.9	-	-	-	-	0.0
113.0	55.0	-	-	-	-	-	5.3	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	5.6
117.0	60.0	-	-	-	-	-	3.2	-	-	-	-	0.0

TABLE 4. (cont.)

## Sternoptychidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	65.0	-	-	-	-	-	4.7	-	-	-	-	5.3
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	4.8
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	5.4
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
127.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
127.0	60.0	-	-	-	-	-	3.5	-	-	-	-	0.0

*Chauliodus macouni*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
87.0	60.0	-	-	-	-	3.4	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
97.0	70.0	-	-	-	-	-	5.8	-	-	-	-	-
107.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.1
107.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.9
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	1.8
113.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7

*Idiacanthus antrostomus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	90.0	-	-	-	-	9.4	-	-	-	-	-	-
87.0	80.0	-	-	-	-	6.1	-	-	-	-	-	-
87.0	90.0	-	-	-	-	11.9	-	-	-	-	-	-
90.0	110.0	-	-	-	-	13.8	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	110.0	-	-	-	-	8.2	-	-	-	-	-	-
93.0	120.0	-	-	-	-	10.0	-	-	-	-	-	-
93.0	130.0	-	-	-	-	7.6	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	5.2	-	-	-	-	-
100.0	70.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	45.0	-	-	-	-	-	2.3	-	-	-	-	-
103.0	80.0	-	-	-	-	-	11.0	-	-	-	-	-
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
107.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
110.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0

*Aristostomias scintillans*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	2.0	-	-	-	-	-	-

TABLE 4. (cont.)

<i>Aristostomias scintillans</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	90.0	-	-	-	-	7.1	-	-	-	-	-	-
<i>Bathophilus</i> spp.												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	12.2	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
<i>Tactostoma macropus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	100.0	-	-	-	-	5.2	-	-	-	-	-	-
103.0	45.0	-	-	-	-	-	2.3	-	-	-	-	-
<i>Stomias atriventer</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	70.0	-	-	-	-	2.4	-	-	-	-	-	-
97.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	6.1
107.0	40.0	-	-	-	-	-	0.0	-	-	-	-	5.2
107.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	60.0	-	-	-	-	-	0.0	-	-	-	-	6.2
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	8.0
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.3
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.6
113.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	80.0	-	-	-	-	-	0.0	-	-	-	-	3.0
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	3.3
120.0	65.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	2.8	-	-	-	-	2.8
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.9
130.0	50.0	-	-	-	-	-	-	-	-	-	-	3.1
130.0	60.0	-	-	-	-	-	-	-	-	-	-	2.6

TABLE 4. (cont.)

*Lestidiops ringens*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	80.0	-	-	-	-	4.1	-	-	-	-	-	-
87.0	90.0	-	-	-	-	14.3	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	110.0	-	-	-	-	5.5	-	-	-	-	-	-
90.0	120.0	-	-	-	-	8.3	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	65.0	-	-	-	-	2.5	2.7	-	-	-	-	-
93.0	120.0	-	-	-	-	12.6	-	-	-	-	-	-
93.0	130.0	-	-	-	-	-	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	18.1	-	-	-	-	-
100.0	70.0	-	-	-	-	-	17.6	-	-	-	-	-
100.0	80.0	-	-	-	-	-	5.1	-	-	-	-	-
103.0	35.0	-	-	-	-	-	9.8	-	-	-	-	-
103.0	40.0	-	-	-	-	-	26.1	-	-	-	-	-
103.0	45.0	-	-	-	-	-	13.8	-	-	-	-	-
103.0	50.0	-	-	-	-	-	30.7	-	-	-	-	-
103.0	55.0	-	-	-	-	-	21.8	-	-	-	-	-
103.0	60.0	-	-	-	-	-	5.5	-	-	-	-	-
103.0	70.0	-	-	-	-	-	18.1	-	-	-	-	-
103.0	80.0	-	-	-	-	-	30.4	-	-	-	-	-
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	9.4	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	19.5	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	5.6	-	-	-	-	2.9
107.0	70.0	-	-	-	-	-	107.9	-	-	-	-	0.0
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	-
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	2.9	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	2.7	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	2.5	-	-	-	-	0.0
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.8
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	2.6

*Notolepis risso*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	110.0	-	-	-	-	5.4	-	-	-	-	-	-
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	0.0

TABLE 4. (cont.)

*Scopelosaurus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	90.0	-	-	-	-	4.7	-	-	-	-	-	-
87.0	90.0	-	-	-	-	4.8	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-
103.0	80.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0

*Scopelarchidae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	60.0	-	-	-	-	13.5	-	-	-	-	-	-
87.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	120.0	-	-	-	-	7.5	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	7.8	-	-	-	-	-
103.0	35.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	50.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	55.0	-	-	-	-	-	2.7	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	80.0	-	-	-	-	-	5.5	-	-	-	-	-
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	19.5	-	-	-	-	1.8
107.0	50.0	-	-	-	-	-	8.3	-	-	-	-	0.0
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.7
107.0	65.0	-	-	-	-	-	2.6	-	-	-	-	0.0
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	-
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	1.8
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	5.3
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
130.0	55.0	-	-	-	-	-	-	-	-	-	-	3.0

*Myctophidae*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
83.0	65.0	-	-	-	-	3.8	-	-	-	-	-	-

TABLE 4. (cont.)

## Myctophidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	70.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	32.0	-	-	-	-	5.2	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	35.0	-	-	-	-	-	110.4	-	-	-	-	-
93.0	40.0	-	-	-	-	-	28.0	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	90.0	-	-	-	-	5.6	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
100.0	50.0	-	-	-	-	-	6.8	-	-	-	-	-
103.0	35.0	-	-	-	-	-	2.5	-	-	-	-	-
107.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.6
107.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
107.0	80.0	-	-	-	-	-	6.6	-	-	-	-	-
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	5.3
110.0	55.0	-	-	-	-	-	5.5	-	-	-	-	0.0
110.0	60.0	-	-	-	-	-	13.9	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.3
113.0	50.0	-	-	-	-	-	5.2	-	-	-	-	0.0
113.0	65.0	-	-	-	-	-	5.4	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	5.4
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	7.9
117.0	80.0	-	-	-	-	-	0.0	-	-	-	-	36.3
120.0	50.0	-	-	-	-	-	2.4	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.6
127.0	55.0	-	-	-	-	-	2.4	-	-	-	-	0.0
130.0	50.0	-	-	-	-	-	-	-	-	-	-	3.1

*Ceratoscopelus townsendi*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	80.0	-	-	-	-	4.6	-	-	-	-	-	-
83.0	90.0	-	-	-	-	4.7	-	-	-	-	-	-
87.0	40.0	-	-	-	-	2.9	-	-	-	-	-	-
87.0	80.0	-	-	-	-	12.2	-	-	-	-	-	-
87.0	90.0	-	-	-	-	40.5	-	-	-	-	-	-
90.0	110.0	-	-	-	-	13.8	-	-	-	-	-	-
90.0	140.0	-	-	-	-	69.1	-	-	-	-	-	-
93.0	45.0	-	-	-	-	-	6.5	-	-	-	-	-
93.0	110.0	-	-	-	-	59.8	-	-	-	-	-	-
93.0	120.0	-	-	-	-	20.1	-	-	-	-	-	-
93.0	130.0	-	-	-	-	15.1	-	-	-	-	-	-

TABLE 4. (cont.)

*Ceratoscopelus townsendi* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	140.0	-	-	-	-	106.4	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	10.4	-	-	-	-	-
100.0	80.0	-	-	-	-	-	5.1	-	-	-	-	-
103.0	40.0	-	-	-	-	-	75.7	-	-	-	-	-
103.0	45.0	-	-	-	-	-	34.5	-	-	-	-	-
103.0	50.0	-	-	-	-	-	19.5	-	-	-	-	-
103.0	55.0	-	-	-	-	-	13.6	-	-	-	-	-
103.0	60.0	-	-	-	-	-	8.3	-	-	-	-	-
103.0	65.0	-	-	-	-	-	5.1	-	-	-	-	-
103.0	70.0	-	-	-	-	-	30.2	-	-	-	-	-
103.0	80.0	-	-	-	-	-	16.6	-	-	-	-	-
107.0	40.0	-	-	-	-	-	17.4	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	22.3	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	8.3	-	-	-	-	2.8
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.7
107.0	70.0	-	-	-	-	-	19.9	-	-	-	-	-
107.0	80.0	-	-	-	-	-	39.8	-	-	-	-	-
110.0	45.0	-	-	-	-	-	7.9	-	-	-	-	0.0
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.7
110.0	80.0	-	-	-	-	-	9.8	-	-	-	-	2.7
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.3
113.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	70.0	-	-	-	-	-	2.6	-	-	-	-	0.0

*Diaphus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	30.7	-	-	-	-	-	-
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
83.0	60.0	-	-	-	-	28.5	-	-	-	-	-	-
83.0	65.0	-	-	-	-	35.9	-	-	-	-	-	-
83.0	70.0	-	-	-	-	43.3	-	-	-	-	-	-
83.0	80.0	-	-	-	-	16.0	-	-	-	-	-	-
83.0	90.0	-	-	-	-	94.4	-	-	-	-	-	-
87.0	35.0	-	-	-	-	10.8	-	-	-	-	-	-
87.0	60.0	-	-	-	-	54.1	-	-	-	-	-	-
87.0	65.0	-	-	-	-	31.2	-	-	-	-	-	-
87.0	70.0	-	-	-	-	19.2	-	-	-	-	-	-
87.0	80.0	-	-	-	-	81.2	-	-	-	-	-	-
87.0	90.0	-	-	-	-	9.5	-	-	-	-	-	-
90.0	45.0	-	-	-	-	19.3	-	-	-	-	-	-
90.0	60.0	-	-	-	-	99.6	-	-	-	-	-	-
90.0	65.0	-	-	-	-	13.9	-	-	-	-	-	-
90.0	70.0	-	-	-	-	33.7	-	-	-	-	-	-



TABLE 4. (cont.)

*Diaphus* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	80.0	-	-	-	-	36.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	10.9	-	-	-	-	-	-
90.0	100.0	-	-	-	-	10.4	-	-	-	-	-	-
90.0	110.0	-	-	-	-	22.1	-	-	-	-	-	-
90.0	120.0	-	-	-	-	5.5	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	140.0	-	-	-	-	23.0	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	11.2	-	-	-	-	-
93.0	45.0	-	-	-	-	-	16.1	-	-	-	-	-
93.0	50.0	-	-	-	-	-	9.0	-	-	-	-	-
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	60.0	-	-	-	-	-	14.0	-	-	-	-	-
93.0	80.0	-	-	-	-	-	20.1	-	-	-	-	-
93.0	90.0	-	-	-	-	11.2	-	-	-	-	-	-
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-
97.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-
97.0	55.0	-	-	-	-	-	2.9	-	-	-	-	-
97.0	70.0	-	-	-	-	-	2.9	-	-	-	-	-
97.0	80.0	-	-	-	-	-	9.4	-	-	-	-	-
100.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	55.0	-	-	-	-	-	12.4	-	-	-	-	-
100.0	65.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-
103.0	70.0	-	-	-	-	-	15.1	-	-	-	-	-
103.0	80.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	5.4	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	2.8	-	-	-	-	0.0

*Lampadena urophaos*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	140.0	-	-	-	-	8.4	-	-	-	-	-	-
103.0	65.0	-	-	-	-	-	2.5	-	-	-	-	-
107.0	40.0	-	-	-	-	-	2.2	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	5.4
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	80.0	-	-	-	-	-	7.6	-	-	-	-	0.0

TABLE 4. (cont.)

*Lampanyctus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	-	-	-	-	2.7	-	-	-	-	-	-
87.0	60.0	-	-	-	-	20.3	-	-	-	-	-	-
90.0	32.0	-	-	-	-	7.9	-	-	-	-	-	-
90.0	60.0	-	-	-	-	11.7	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	100.0	-	-	-	-	10.4	-	-	-	-	-	-
90.0	110.0	-	-	-	-	38.6	-	-	-	-	-	-
90.0	140.0	-	-	-	-	43.5	-	-	-	-	-	-
93.0	35.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	5.6	-	-	-	-	-
93.0	50.0	-	-	-	-	-	29.9	-	-	-	-	-
93.0	60.0	-	-	-	-	-	8.4	-	-	-	-	-
93.0	65.0	-	-	-	-	-	12.7	-	-	-	-	-
93.0	70.0	-	-	-	-	-	11.5	-	-	-	-	-
93.0	80.0	-	-	-	-	-	-	-	-	-	-	-
93.0	90.0	-	-	-	-	8.4	-	-	-	-	-	-
93.0	100.0	-	-	-	-	3.1	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	140.0	-	-	-	-	30.8	-	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
97.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	35.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	55.0	-	-	-	-	-	4.1	-	-	-	-	-
100.0	80.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	35.0	-	-	-	-	-	7.4	-	-	-	-	-
103.0	60.0	-	-	-	-	-	11.1	-	-	-	-	-
103.0	80.0	-	-	-	-	-	22.1	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	8.7	-	-	-	-	1.8
107.0	45.0	-	-	-	-	-	8.4	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	8.3	-	-	-	-	8.8
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	0.0
107.0	60.0	-	-	-	-	-	8.5	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	5.7	-	-	-	-	0.0
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	2.7
107.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.3
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	7.3
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.9
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	8.0
110.0	65.0	-	-	-	-	-	0.0	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	2.9	-	-	-	-	2.9
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	3.6
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	0.0
113.0	80.0	-	-	-	-	-	2.8	-	-	-	-	0.0

TABLE 4. (cont.)

*Lampanyctus* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	60.0	-	-	-	-	-	3.2	-	-	-	-	0.0
117.0	80.0	-	-	-	-	-	2.5	-	-	-	-	3.3
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	5.2
120.0	25.0	-	-	-	-	-	2.3	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	4.9
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	5.7
120.0	60.0	-	-	-	-	-	2.5	-	-	-	-	3.0
120.0	65.0	-	-	-	-	-	5.5	-	-	-	-	5.6
120.0	70.0	-	-	-	-	-	7.8	-	-	-	-	5.4
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.6
127.0	55.0	-	-	-	-	-	2.4	-	-	-	-	2.9
130.0	50.0	-	-	-	-	-	-	-	-	-	-	6.1

*Lampanyctus regalis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	6.1	-	-	-	-	-	-
83.0	60.0	-	-	-	-	3.8	-	-	-	-	-	-
83.0	65.0	-	-	-	-	7.6	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	40.0	-	-	-	-	2.9	-	-	-	-	-	-
87.0	65.0	-	-	-	-	2.6	-	-	-	-	-	-
87.0	70.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	60.0	-	-	-	-	8.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	5.6	-	-	-	-	-
93.0	100.0	-	-	-	-	3.1	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-

*Lampanyctus ritteri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	9.2	-	-	-	-	-	-
80.0	70.0	-	-	-	-	8.2	-	-	-	-	-	-
80.0	80.0	-	-	-	-	8.3	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	80.0	-	-	-	-	6.9	-	-	-	-	-	-
83.0	90.0	-	-	-	-	16.5	-	-	-	-	-	-
87.0	35.0	-	-	-	-	5.4	-	-	-	-	-	-
87.0	40.0	-	-	-	-	8.6	-	-	-	-	-	-
87.0	65.0	-	-	-	-	5.2	-	-	-	-	-	-
87.0	70.0	-	-	-	-	14.4	-	-	-	-	-	-

TABLE 4. (cont.)

<i>Lampanyctus ritteri</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	109.6	-	-	-	-	-	-
87.0	90.0	-	-	-	-	52.4	-	-	-	-	-	-
90.0	65.0	-	-	-	-	22.2	-	-	-	-	-	-
90.0	70.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	130.0	-	-	-	-	7.9	-	-	-	-	-	-
93.0	45.0	-	-	-	-	-	16.1	-	-	-	-	-
93.0	110.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	130.0	-	-	-	-	15.1	-	-	-	-	-	-
97.0	55.0	-	-	-	-	-	5.8	-	-	-	-	-
97.0	60.0	-	-	-	-	-	8.3	-	-	-	-	-
97.0	65.0	-	-	-	-	-	10.8	-	-	-	-	-
97.0	70.0	-	-	-	-	-	20.3	-	-	-	-	-
100.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	60.0	-	-	-	-	-	7.0	-	-	-	-	-
100.0	65.0	-	-	-	-	-	15.5	-	-	-	-	-
100.0	70.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	30.0	-	-	-	-	-	5.4	-	-	-	-	-
103.0	40.0	-	-	-	-	-	10.4	-	-	-	-	-
103.0	45.0	-	-	-	-	-	4.6	-	-	-	-	2.6
107.0	40.0	-	-	-	-	-	0.0	-	-	-	-	14.7
107.0	50.0	-	-	-	-	-	0.0	-	-	-	-	8.6
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.3
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	0.0
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	65.0	-	-	-	-	-	2.7	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	2.5	-	-	-	-	5.9
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	2.7	-	-	-	-	0.0
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	6.0

<i>Notolychnus valdiviae</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	2.0	-	-	-	-	-	-
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-
97.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	65.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	60.0	-	-	-	-	-	5.5	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	-

TABLE 4. (cont.)

*Notoscopelus resplendens*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	80.0	-	-	-	-	2.0	-	-	-	-	-	-
93.0	110.0	-	-	-	-	5.4	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
103.0	50.0	-	-	-	-	-	11.2	-	-	-	-	-
103.0	55.0	-	-	-	-	-	2.7	-	-	-	-	-
103.0	80.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	5.6	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	2.8	-	-	-	-	0.0

*Stenobranchius leucopsarus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	12.4	-	-	-	-	-	-
80.0	52.0	-	-	-	-	4.5	-	-	-	-	-	-
80.0	55.0	-	-	-	-	46.1	-	-	-	-	-	-
80.0	60.0	-	-	-	-	12.3	-	-	-	-	-	-
80.0	65.0	-	-	-	-	6.9	-	-	-	-	-	-
80.0	70.0	-	-	-	-	2.7	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
82.0	47.0	-	-	-	-	15.4	-	-	-	-	-	-
83.0	43.0	-	-	-	-	16.3	-	-	-	-	-	-
83.0	51.0	-	-	-	-	2.6	-	-	-	-	-	-
83.0	55.0	-	-	-	-	42.8	-	-	-	-	-	-
83.0	60.0	-	-	-	-	5.7	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	40.0	-	-	-	-	25.8	-	-	-	-	-	-
87.0	45.0	-	-	-	-	26.6	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
90.0	37.0	-	-	-	-	5.5	-	-	-	-	-	-
90.0	45.0	-	-	-	-	16.9	-	-	-	-	-	-
90.0	53.0	-	-	-	-	-	5.5	-	-	-	-	-
93.0	35.0	-	-	-	-	-	44.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	25.8	-	-	-	-	-
93.0	45.0	-	-	-	-	-	12.0	-	-	-	-	-
93.0	50.0	-	-	-	-	-	9.3	-	-	-	-	-
93.0	55.0	-	-	-	-	-	5.7	-	-	-	-	-
93.0	80.0	-	-	-	-	-	-	-	-	-	-	-
93.0	90.0	-	-	-	-	19.6	-	-	-	-	-	-
93.0	110.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	120.0	-	-	-	-	5.0	-	-	-	-	-	-

TABLE 4. (cont.)

<i>Stenobrachius leucopsarus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	50.0	-	-	-	-	-	6.8	-	-	-	-	-
<i>Triphoturus mexicanus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	40.0	-	-	-	-	20.1	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-
87.0	80.0	-	-	-	-	6.1	-	-	-	-	-	-
87.0	90.0	-	-	-	-	50.0	-	-	-	-	-	-
90.0	32.0	-	-	-	-	5.2	-	-	-	-	-	-
90.0	37.0	-	-	-	-	10.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	25.0	-	-	-	-	-	-
90.0	70.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	27.6	-	-	-	-	-	-
90.0	120.0	-	-	-	-	13.9	-	-	-	-	-	-
90.0	140.0	-	-	-	-	10.2	-	-	-	-	-	-
93.0	30.0	-	-	-	-	-	9.7	-	-	-	-	-
93.0	35.0	-	-	-	-	-	49.7	-	-	-	-	-
93.0	40.0	-	-	-	-	-	11.2	-	-	-	-	-
93.0	45.0	-	-	-	-	-	19.4	-	-	-	-	-
93.0	50.0	-	-	-	-	-	14.9	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	65.0	-	-	-	-	-	56.3	-	-	-	-	-
93.0	70.0	-	-	-	-	-	12.7	-	-	-	-	-
93.0	80.0	-	-	-	-	-	14.3	-	-	-	-	-
93.0	90.0	-	-	-	-	33.6	-	-	-	-	-	-
93.0	100.0	-	-	-	-	3.1	-	-	-	-	-	-
93.0	110.0	-	-	-	-	8.2	-	-	-	-	-	-
93.0	120.0	-	-	-	-	20.1	-	-	-	-	-	-
93.0	130.0	-	-	-	-	70.6	-	-	-	-	-	-
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-
97.0	29.0	-	-	-	-	-	8.6	-	-	-	-	-
97.0	30.0	-	-	-	-	-	124.7	-	-	-	-	-
97.0	32.0	-	-	-	-	-	35.4	-	-	-	-	-
97.0	35.0	-	-	-	-	-	2.8	-	-	-	-	-
97.0	40.0	-	-	-	-	-	21.1	-	-	-	-	-
97.0	45.0	-	-	-	-	-	139.6	-	-	-	-	-
97.0	50.0	-	-	-	-	-	66.6	-	-	-	-	-
97.0	55.0	-	-	-	-	-	8.8	-	-	-	-	-
97.0	60.0	-	-	-	-	-	38.9	-	-	-	-	-
97.0	65.0	-	-	-	-	-	37.8	-	-	-	-	-
97.0	70.0	-	-	-	-	-	130.5	-	-	-	-	-
97.0	80.0	-	-	-	-	-	28.3	-	-	-	-	-
100.0	29.0	-	-	-	-	-	52.6	-	-	-	-	-
100.0	30.0	-	-	-	-	-	60.7	-	-	-	-	-

TABLE 4. (cont.)

*Triphoturus mexicanus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	35.0	-	-	-	-	-	25.7	-	-	-	-	-
100.0	40.0	-	-	-	-	-	11.1	-	-	-	-	-
100.0	45.0	-	-	-	-	-	11.3	-	-	-	-	-
100.0	50.0	-	-	-	-	-	84.8	-	-	-	-	-
100.0	55.0	-	-	-	-	-	49.6	-	-	-	-	-
100.0	60.0	-	-	-	-	-	27.9	-	-	-	-	-
100.0	65.0	-	-	-	-	-	108.8	-	-	-	-	-
100.0	70.0	-	-	-	-	-	32.8	-	-	-	-	-
100.0	80.0	-	-	-	-	-	10.3	-	-	-	-	-
100.0	80.0	-	-	-	-	-	4.2	-	-	-	-	-
103.0	29.0	-	-	-	-	-	73.4	-	-	-	-	-
103.0	30.0	-	-	-	-	-	113.2	-	-	-	-	-
103.0	35.0	-	-	-	-	-	373.2	-	-	-	-	-
103.0	40.0	-	-	-	-	-	207.0	-	-	-	-	-
103.0	45.0	-	-	-	-	-	89.3	-	-	-	-	-
103.0	50.0	-	-	-	-	-	54.4	-	-	-	-	-
103.0	55.0	-	-	-	-	-	80.3	-	-	-	-	-
103.0	60.0	-	-	-	-	-	93.6	-	-	-	-	-
103.0	65.0	-	-	-	-	-	45.3	-	-	-	-	-
103.0	70.0	-	-	-	-	-	60.7	-	-	-	-	-
103.0	80.0	-	-	-	-	-	24.6	-	-	-	-	0.0
107.0	32.0	-	-	-	-	-	68.9	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	199.6	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	273.4	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	139.0	-	-	-	-	2.9
107.0	50.0	-	-	-	-	-	19.5	-	-	-	-	2.9
107.0	55.0	-	-	-	-	-	34.1	-	-	-	-	0.0
107.0	60.0	-	-	-	-	-	34.1	-	-	-	-	0.0
107.0	65.0	-	-	-	-	-	31.2	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	4.4	-	-	-	-	0.0
107.0	80.0	-	-	-	-	-	17.1	-	-	-	-	0.0
110.0	35.0	-	-	-	-	-	186.5	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	147.3	-	-	-	-	5.3
110.0	45.0	-	-	-	-	-	180.0	-	-	-	-	0.0
110.0	50.0	-	-	-	-	-	27.7	-	-	-	-	0.0
110.0	55.0	-	-	-	-	-	19.5	-	-	-	-	0.0
110.0	60.0	-	-	-	-	-	99.7	-	-	-	-	0.0
110.0	65.0	-	-	-	-	-	190.9	-	-	-	-	0.0
110.0	70.0	-	-	-	-	-	2.5	-	-	-	-	8.0
110.0	80.0	-	-	-	-	-	10.3	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	164.7	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	68.6	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	80.0	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	36.7	-	-	-	-	0.0
113.0	50.0	-	-	-	-	-	126.2	-	-	-	-	0.0
113.0	55.0	-	-	-	-	-	97.2	-	-	-	-	1.8
113.0	60.0	-	-	-	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

*Triphoturus mexicanus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	65.0	-	-	-	-	-	108.0	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	41.8	-	-	-	-	8.0
113.0	80.0	-	-	-	-	-	134.9	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	13.3	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	12.4	-	-	-	-	0.0
117.0	40.0	-	-	-	-	-	81.6	-	-	-	-	0.0
117.0	45.0	-	-	-	-	-	12.0	-	-	-	-	2.7
117.0	50.0	-	-	-	-	-	7.2	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	41.0	-	-	-	-	0.0
117.0	60.0	-	-	-	-	-	268.8	-	-	-	-	0.0
117.0	65.0	-	-	-	-	-	89.7	-	-	-	-	0.0
117.0	70.0	-	-	-	-	-	143.0	-	-	-	-	-
117.0	80.0	-	-	-	-	-	247.0	-	-	-	-	3.3
118.0	39.0	-	-	-	-	-	333.8	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	11.6	-	-	-	-	0.0
120.0	25.0	-	-	-	-	-	4.6	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	10.6	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	68.5	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	11.2	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	19.4	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	16.8	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	26.1	-	-	-	-	2.8
120.0	60.0	-	-	-	-	-	109.1	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	55.0	-	-	-	-	0.0
120.0	70.0	-	-	-	-	-	25.9	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	22.7	-	-	-	-	2.9
123.0	42.0	-	-	-	-	-	36.3	-	-	-	-	0.0
123.0	45.0	-	-	-	-	-	7.4	-	-	-	-	8.5
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	10.8
123.0	55.0	-	-	-	-	-	2.7	-	-	-	-	0.0
123.0	60.0	-	-	-	-	-	2.6	-	-	-	-	0.0
127.0	33.0	-	-	-	-	-	0.0	-	-	-	-	1.5
127.0	34.0	-	-	-	-	-	19.9	-	-	-	-	0.0
127.0	45.0	-	-	-	-	-	10.5	-	-	-	-	0.0
127.0	50.0	-	-	-	-	-	5.1	-	-	-	-	0.0
127.0	55.0	-	-	-	-	-	2.4	-	-	-	-	11.5
127.0	60.0	-	-	-	-	-	7.0	-	-	-	-	3.1
130.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7
130.0	55.0	-	-	-	-	-	-	-	-	-	-	3.0
130.0	60.0	-	-	-	-	-	-	-	-	-	-	5.3
133.0	40.0	-	-	-	-	-	-	-	-	-	-	2.3
137.0	35.0	-	-	-	-	-	-	-	-	-	-	17.6
137.0	40.0	-	-	-	-	-	-	-	-	-	-	17.1



TABLE 4. (cont.)

*Centrobranchus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-

*Diogenichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	45.0	-	-	-	-	-	2.8	-	-	-	-	-
110.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.6
110.0	55.0	-	-	-	-	-	36.0	-	-	-	-	0.0
113.0	55.0	-	-	-	-	-	7.9	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	18.9	-	-	-	-	0.0
113.0	65.0	-	-	-	-	-	5.4	-	-	-	-	0.0
117.0	70.0	-	-	-	-	-	2.8	-	-	-	-	-
120.0	60.0	-	-	-	-	-	14.9	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	38.5	-	-	-	-	0.0
120.0	70.0	-	-	-	-	-	23.3	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	5.0	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	1.9	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	0.0
123.0	45.0	-	-	-	-	-	4.9	-	-	-	-	0.0
123.0	50.0	-	-	-	-	-	7.0	-	-	-	-	0.0
123.0	55.0	-	-	-	-	-	8.1	-	-	-	-	0.0

*Diogenichthys atlanticus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	-	-	-	-	2.7	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	80.0	-	-	-	-	4.6	-	-	-	-	-	-
83.0	90.0	-	-	-	-	9.4	-	-	-	-	-	-
87.0	70.0	-	-	-	-	2.4	-	-	-	-	-	-
87.0	80.0	-	-	-	-	18.3	-	-	-	-	-	-
87.0	90.0	-	-	-	-	19.0	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	100.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	35.9	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	65.0	-	-	-	-	-	2.7	-	-	-	-	-
93.0	80.0	-	-	-	-	-	5.7	-	-	-	-	-
93.0	120.0	-	-	-	-	20.1	-	-	-	-	-	-
93.0	130.0	-	-	-	-	7.6	-	-	-	-	-	-
93.0	140.0	-	-	-	-	8.4	-	-	-	-	-	-
97.0	70.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	65.0	-	-	-	-	-	5.2	-	-	-	-	-
100.0	70.0	-	-	-	-	-	2.5	-	-	-	-	-

TABLE 4. (cont.)

*Diogenichthys atlanticus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
103.0	40.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	45.0	-	-	-	-	-	13.8	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	65.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	80.0	-	-	-	-	-	27.6	-	-	-	-	3.0
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	4.3	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	2.8	-	-	-	-	8.8
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	17.1
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	13.9
107.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.7
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	80.0	-	-	-	-	-	13.3	-	-	-	-	-
113.0	35.0	-	-	-	-	-	5.4	-	-	-	-	0.0
117.0	40.0	-	-	-	-	-	8.2	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0

*Diogenichthys laternatus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
107.0	45.0	-	-	-	-	-	0.0	-	-	-	-	3.6
107.0	50.0	-	-	-	-	-	0.0	-	-	-	-	11.7
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	5.8
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	13.3
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	37.2
110.0	50.0	-	-	-	-	-	15.0	-	-	-	-	45.6
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	54.6
110.0	60.0	-	-	-	-	-	5.6	-	-	-	-	3.1
110.0	65.0	-	-	-	-	-	8.3	-	-	-	-	8.7
110.0	70.0	-	-	-	-	-	4.4	-	-	-	-	13.4
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	13.4
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	20.8
113.0	40.0	-	-	-	-	-	0.0	-	-	-	-	27.6
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	105.8
113.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
113.0	55.0	-	-	-	-	-	0.0	-	-	-	-	1.7
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	23.7
113.0	65.0	-	-	-	-	-	0.0	-	-	-	-	10.7
113.0	70.0	-	-	-	-	-	17.2	-	-	-	-	59.0
113.0	80.0	-	-	-	-	-	0.0	-	-	-	-	52.1
117.0	30.0	-	-	-	-	-	0.0	-	-	-	-	4.1
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	8.4
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	94.7

TABLE 4. (cont.)

*Diogenichthys laternatus* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	13.6
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.4
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	24.9
117.0	60.0	-	-	-	-	-	6.4	-	-	-	-	36.9
117.0	65.0	-	-	-	-	-	7.1	-	-	-	-	47.3
117.0	80.0	-	-	-	-	-	0.0	-	-	-	-	85.8
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	52.2
119.0	33.0	-	-	-	-	-	0.0	-	-	-	-	2.3
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	9.8
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	135.8
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	53.8
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	125.5
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	34.8
120.0	80.0	-	-	-	-	-	0.0	-	-	-	-	26.4
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	1.1
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
123.0	42.0	-	-	-	-	-	0.0	-	-	-	-	5.8
123.0	45.0	-	-	-	-	-	0.0	-	-	-	-	25.4
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	35.0
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	51.6
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	26.1
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	96.3
127.0	45.0	-	-	-	-	-	0.0	-	-	-	-	14.0
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	17.2
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1
130.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7
130.0	45.0	-	-	-	-	-	-	-	-	-	-	13.3
130.0	50.0	-	-	-	-	-	-	-	-	-	-	64.5
130.0	55.0	-	-	-	-	-	-	-	-	-	-	26.6
130.0	60.0	-	-	-	-	-	-	-	-	-	-	2.6
137.0	30.0	-	-	-	-	-	-	-	-	-	-	7.6
137.0	35.0	-	-	-	-	-	-	-	-	-	-	11.7
137.0	40.0	-	-	-	-	-	-	-	-	-	-	8.6

*Gonichthys tenuiculus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	90.0	-	-	-	-	-	-	-	-	-	-	-
107.0	65.0	-	-	-	-	2.4	0.0	-	-	-	-	2.8
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.3
110.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	1.8
113.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	80.0	-	-	-	-	-	2.5	-	-	-	-	6.6
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	0.0

TABLE 4. (cont.)

<i>Gonichthys tenuiculus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	60.0	-	-	-	-	-	5.0	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	70.0	-	-	-	-	-	7.8	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
133.0	40.0	-	-	-	-	-	-	-	-	-	-	4.6
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9
137.0	40.0	-	-	-	-	-	-	-	-	-	-	2.8

<i>Hygophum atratum</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
107.0	45.0	-	-	-	-	-	0.0	-	-	-	-	1.8
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	7.3
110.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.9
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.9
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.5
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	5.4
113.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.7
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6
120.0	45.0	-	-	-	-	-	5.5	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	60.0	-	-	-	-	-	2.5	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
120.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8
127.0	45.0	-	-	-	-	-	0.0	-	-	-	-	3.5
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
133.0	40.0	-	-	-	-	-	-	-	-	-	-	6.8
137.0	30.0	-	-	-	-	-	-	-	-	-	-	5.0
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9

<i>Hygophum reinhardtii</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	110.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	140.0	-	-	-	-	11.2	-	-	-	-	-	-
103.0	50.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	80.0	-	-	-	-	-	5.5	-	-	-	-	-

TABLE 4. (cont.)

*Loweina rara*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	70.0	-	-	-	-	-	2.9	-	-	-	-	-

*Myctophum nitidulum*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	80.0	-	-	-	-	2.3	-	-	-	-	-	-
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-
100.0	70.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	50.0	-	-	-	-	-	11.2	-	-	-	-	-
103.0	60.0	-	-	-	-	-	5.5	-	-	-	-	0.0
107.0	40.0	-	-	-	-	-	2.2	-	-	-	-	2.7
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	40.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Protomyctophum crockeri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	6.1	-	-	-	-	-	-
80.0	70.0	-	-	-	-	2.7	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	60.0	-	-	-	-	5.7	-	-	-	-	-	-
83.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
87.0	45.0	-	-	-	-	3.0	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
87.0	60.0	-	-	-	-	6.8	-	-	-	-	-	-
87.0	70.0	-	-	-	-	2.4	-	-	-	-	-	-
87.0	80.0	-	-	-	-	2.0	-	-	-	-	-	-
90.0	53.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	70.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	100.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	8.3	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	30.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	35.0	-	-	-	-	-	13.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	14.0	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-

TABLE 4. (cont.)

		<i>Protomyctophum crockeri</i> (cont.)											
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	
93.0	50.0	-	-	-	-	-	6.0	-	-	-	-	-	
93.0	60.0	-	-	-	-	-	5.6	-	-	-	-	-	
93.0	65.0	-	-	-	-	-	2.7	-	-	-	-	-	
93.0	80.0	-	-	-	-	5.6	5.7	-	-	-	-	-	
93.0	90.0	-	-	-	2.7	-	-	-	-	-	-	-	
93.0	110.0	-	-	-	5.0	-	-	-	-	-	-	-	
93.0	120.0	-	-	-	-	-	-	-	-	-	-	-	
97.0	50.0	-	-	-	-	-	2.6	-	-	-	-	-	
97.0	55.0	-	-	-	-	-	2.9	-	-	-	-	-	
97.0	70.0	-	-	-	-	-	8.7	-	-	-	-	-	
97.0	80.0	-	-	-	-	-	3.1	-	-	-	-	-	
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	-	
100.0	35.0	-	-	-	-	-	5.7	-	-	-	-	-	
100.0	55.0	-	-	-	-	-	24.8	-	-	-	-	-	
100.0	60.0	-	-	-	-	-	3.5	-	-	-	-	-	
100.0	65.0	-	-	-	-	-	44.0	-	-	-	-	-	
100.0	80.0	-	-	-	-	-	2.6	-	-	-	-	-	
103.0	35.0	-	-	-	-	-	17.2	-	-	-	-	-	
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-	
103.0	45.0	-	-	-	-	-	11.5	-	-	-	-	-	
103.0	50.0	-	-	-	-	-	11.2	-	-	-	-	-	
103.0	65.0	-	-	-	-	-	2.5	-	-	-	-	-	
103.0	70.0	-	-	-	-	-	3.0	-	-	-	-	3.0	
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	6.2	
107.0	35.0	-	-	-	-	-	6.3	-	-	-	-	5.2	
107.0	40.0	-	-	-	-	-	8.7	-	-	-	-	5.4	
107.0	45.0	-	-	-	-	-	5.6	-	-	-	-	11.7	
107.0	50.0	-	-	-	-	-	2.8	-	-	-	-	5.8	
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8	
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	0.0	
107.0	65.0	-	-	-	-	-	2.6	-	-	-	-	0.0	
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	0.0	
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	5.4	
110.0	35.0	-	-	-	-	-	8.6	-	-	-	-	23.9	
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	10.6	
110.0	45.0	-	-	-	-	-	7.9	-	-	-	-	2.3	
110.0	50.0	-	-	-	-	-	5.5	-	-	-	-	3.7	
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	8.7	
110.0	65.0	-	-	-	-	-	0.0	-	-	-	-	24.1	
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	10.7	
113.0	35.0	-	-	-	-	-	16.2	-	-	-	-	11.6	
113.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8	
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.9	
113.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5	
113.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.5	

TABLE 4. (cont.)

<i>Protomyctophum crockeri</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	65.0	-	-	-	-	-	2.7	-	-	-	-	21.4
113.0	70.0	-	-	-	-	-	7.4	-	-	-	-	10.7
113.0	80.0	-	-	-	-	-	2.8	-	-	-	-	8.2
117.0	35.0	-	-	-	-	-	5.0	-	-	-	-	16.9
117.0	40.0	-	-	-	-	-	8.2	-	-	-	-	3.0
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	50.0	-	-	-	-	-	2.4	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	5.5	-	-	-	-	0.0
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.7
117.0	65.0	-	-	-	-	-	4.7	-	-	-	-	2.6
117.0	80.0	-	-	-	-	-	0.0	-	-	-	-	9.9
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	13.0
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	5.7
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.0
120.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
120.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.9
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
123.0	55.0	-	-	-	-	-	0.0	-	-	-	-	7.7
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.9
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	12.3

*Symbolophorus californiensis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	70.0	-	-	-	-	10.9	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	65.0	-	-	-	-	3.8	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	80.0	-	-	-	-	4.6	-	-	-	-	-	-
83.0	90.0	-	-	-	-	30.7	-	-	-	-	-	-
87.0	60.0	-	-	-	-	3.4	-	-	-	-	-	-
87.0	65.0	-	-	-	-	7.8	-	-	-	-	-	-
87.0	80.0	-	-	-	-	46.7	-	-	-	-	-	-
87.0	90.0	-	-	-	-	38.1	-	-	-	-	-	-
90.0	37.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	110.0	-	-	-	-	58.0	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	65.0	-	-	-	-	-	2.7	-	-	-	-	-
93.0	130.0	-	-	-	-	17.6	-	-	-	-	-	-
100.0	65.0	-	-	-	-	-	23.3	-	-	-	-	-

TABLE 4. (cont.)

*Symbolophorus californiensis* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	70.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	35.0	-	-	-	-	-	9.8	-	-	-	-	-
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-
103.0	45.0	-	-	-	-	-	9.2	-	-	-	-	-
103.0	70.0	-	-	-	-	-	9.1	-	-	-	-	-
103.0	80.0	-	-	-	-	-	13.8	-	-	-	-	-
107.0	40.0	-	-	-	-	-	6.5	-	-	-	-	0.0
107.0	45.0	-	-	-	-	-	8.4	-	-	-	-	0.0
107.0	50.0	-	-	-	-	-	8.3	-	-	-	-	8.8
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
107.0	60.0	-	-	-	-	-	0.0	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	10.8	-	-	-	-	0.0
113.0	40.0	-	-	-	-	-	5.7	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	2.5	-	-	-	-	0.0
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	0.0

*Tarletonbeania crenularis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
80.0	60.0	-	-	-	-	18.4	-	-	-	-	-	-
83.0	65.0	-	-	-	-	5.7	-	-	-	-	-	-
90.0	53.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	35.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	5.6	-	-	-	-	-
93.0	50.0	-	-	-	-	-	6.0	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	60.0	-	-	-	-	-	3.5	-	-	-	-	-
107.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.9

*Synodus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.3
117.0	30.0	-	-	-	-	-	0.0	-	-	-	-	8.2
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	3.0
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	8.1
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	4.8
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	40.4
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.7



TABLE 4. (cont.)

*Synodus spp.* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	7.8
120.0	24.0	-	-	-	-	-	0.0	-	-	-	-	1.4
120.0	25.0	-	-	-	-	-	0.0	-	-	-	-	9.8
120.0	30.0	-	-	-	-	-	0.0	-	-	-	-	6.2
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	19.1
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	6.7
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	31.8
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	5.8
127.0	33.0	-	-	-	-	-	0.0	-	-	-	-	1.5
133.0	30.0	-	-	-	-	-	-	-	-	-	-	2.9
137.0	23.0	-	-	-	-	-	-	-	-	-	-	1.5

*Merluccius productus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
80.0	60.0	-	-	-	-	6.1	-	-	-	-	-	-
83.0	51.0	-	-	-	-	1.3	-	-	-	-	-	-
83.0	60.0	-	-	-	-	3.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	6.0	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	8.4	-	-	-	-	-
97.0	55.0	-	-	-	-	-	2.9	-	-	-	-	-
107.0	45.0	-	-	-	-	-	0.0	-	-	-	-	1.8
117.0	30.0	-	-	-	-	-	0.0	-	-	-	-	2.1
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	13.6
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	11.9
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	28.0
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	60.0
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	23.9
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	7.8
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	36.6
123.0	55.0	-	-	-	-	-	1.9	-	-	-	-	2.6
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	25.3
133.0	30.0	-	-	-	-	-	-	-	-	-	-	8.8
133.0	40.0	-	-	-	-	-	-	-	-	-	-	45.6
137.0	30.0	-	-	-	-	-	-	-	-	-	-	12.6
137.0	35.0	-	-	-	-	-	-	-	-	-	-	23.4

TABLE 4. (cont.)

*Physiculus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8

## Macrouridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
133.0	40.0	-	-	-	-	-	-	-	-	-	-	2.3

## Ophidiiformes

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
83.0	60.0	-	-	-	-	3.8	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	3.2
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.7
133.0	23.0	-	-	-	-	-	-	-	-	-	-	3.0
137.0	23.0	-	-	-	-	-	-	-	-	-	-	-

*Brosmophycis marginata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
82.0	47.0	-	-	-	-	3.1	-	-	-	-	-	-
83.0	51.0	-	-	-	-	1.3	-	-	-	-	-	-
83.0	60.0	-	-	-	-	1.9	-	-	-	-	-	-
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0

*Chilara taylori*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	35.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	3.0
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	13.5	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0

TABLE 4. (cont.)

*Chilara taylori* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	35.0	-	-	-	-	-	5.0	-	-	-	-	0.0
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	4.8
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6
120.0	35.0	-	-	-	-	11.0	-	-	-	-	-	0.0
120.0	55.0	-	-	-	-	2.6	-	-	-	-	-	0.0
123.0	36.0	-	-	-	-	0.0	-	-	-	-	-	1.1
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9

*Porichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	30.0	-	-	-	-	-	0.0	-	-	-	-	2.2

*Cololabis saira*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	60.0	-	-	-	-	-	3.5	-	-	-	-	-
117.0	45.0	-	-	-	-	-	2.4	-	-	-	-	0.0

## Atherinidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	29.0	-	-	-	-	-	5.8	-	-	-	-	-
113.0	29.0	-	-	-	-	-	4.7	-	-	-	-	0.0

## Trachipteridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	70.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	50.0	-	-	-	-	-	3.4	-	-	-	-	-

*Melamphaes* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
80.0	80.0	-	-	-	-	5.5	-	-	-	-	-	-

TABLE 4. (cont.)

		<i>Melamphaes</i> spp. (cont.)											
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	
83.0	60.0	-	-	-	-	1.9	-	-	-	-	-	-	
83.0	70.0	-	-	-	-	6.7	-	-	-	-	-	-	
83.0	80.0	-	-	-	-	11.4	-	-	-	-	-	-	
83.0	90.0	-	-	-	-	21.2	-	-	-	-	-	-	
87.0	65.0	-	-	-	-	2.6	-	-	-	-	-	-	
87.0	80.0	-	-	-	-	18.3	-	-	-	-	-	-	
87.0	90.0	-	-	-	-	9.5	-	-	-	-	-	-	
90.0	65.0	-	-	-	-	8.3	-	-	-	-	-	-	
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-	
90.0	100.0	-	-	-	-	7.8	-	-	-	-	-	-	
90.0	110.0	-	-	-	-	22.1	-	-	-	-	-	-	
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-	
90.0	130.0	-	-	-	-	7.9	-	-	-	-	-	-	
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-	
93.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-	
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-	
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-	
93.0	90.0	-	-	-	-	8.4	-	-	-	-	-	-	
93.0	100.0	-	-	-	-	6.1	-	-	-	-	-	-	
93.0	120.0	-	-	-	-	20.1	-	-	-	-	-	-	
93.0	130.0	-	-	-	-	12.6	-	-	-	-	-	-	
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-	
97.0	65.0	-	-	-	-	-	2.7	-	-	-	-	-	
97.0	70.0	-	-	-	-	-	11.6	-	-	-	-	-	
97.0	80.0	-	-	-	-	-	3.1	-	-	-	-	-	
100.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-	
100.0	55.0	-	-	-	-	-	4.1	-	-	-	-	-	
100.0	60.0	-	-	-	-	-	3.5	-	-	-	-	-	
100.0	65.0	-	-	-	-	-	7.8	-	-	-	-	-	
100.0	80.0	-	-	-	-	-	5.1	-	-	-	-	-	
103.0	35.0	-	-	-	-	-	2.5	-	-	-	-	-	
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-	
103.0	45.0	-	-	-	-	-	4.6	-	-	-	-	-	
103.0	50.0	-	-	-	-	-	8.4	-	-	-	-	-	
103.0	55.0	-	-	-	-	-	2.7	-	-	-	-	-	
103.0	80.0	-	-	-	-	-	5.1	-	-	-	-	-	
103.0	80.0	-	-	-	-	-	5.5	-	-	-	-	0.0	
107.0	40.0	-	-	-	-	-	19.5	-	-	-	-	0.0	
107.0	45.0	-	-	-	-	-	22.3	-	-	-	-	0.0	
107.0	50.0	-	-	-	-	-	5.6	-	-	-	-	0.0	
107.0	65.0	-	-	-	-	-	5.2	-	-	-	-	5.3	
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	5.3	
107.0	80.0	-	-	-	-	-	2.2	-	-	-	-	5.3	
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.3	
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.3	
110.0	55.0	-	-	-	-	-	2.8	-	-	-	-	0.0	

TABLE 4. (cont.)

<i>Melamphaes</i> spp. (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.3
113.0	40.0	-	-	-	-	-	2.9	-	-	-	-	2.8
113.0	60.0	-	-	-	-	-	2.7	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	3.0
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6
117.0	70.0	-	-	-	-	-	2.8	-	-	-	-	-
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	2.6
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	60.0	-	-	-	-	-	2.5	-	-	-	-	0.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
127.0	40.0	-	-	-	-	-	0.0	-	-	-	-	5.5
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	5.7
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	6.2
130.0	50.0	-	-	-	-	-	0.0	-	-	-	-	3.1
137.0	30.0	-	-	-	-	-	-	-	-	-	-	2.5

<i>Poromitra</i> spp.												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	45.0	-	-	-	-	-	2.3	-	-	-	-	-
103.0	65.0	-	-	-	-	-	2.5	-	-	-	-	-
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.9
117.0	35.0	-	-	-	-	-	2.5	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.1

<i>Scopelogadus bispinosus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	140.0	-	-	-	-	5.1	-	-	-	-	-	-
107.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.9
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
120.0	65.0	-	-	-	-	-	2.8	-	-	-	-	0.0

<i>Macroramphosus gracilis</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	55.0	-	-	-	-	-	2.7	-	-	-	-	-
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7

TABLE 4. (cont.)

*Macroramphosus gracilis* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.7
113.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.8
113.0	55.0	-	-	-	-	-	0.0	-	-	-	-	1.7
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.6

*Syngnathus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	29.0	-	-	-	-	-	1.0	-	-	-	-	-
113.0	29.0	-	-	-	-	-	0.0	-	-	-	-	1.1
117.0	25.0	-	-	-	-	-	0.0	-	-	-	-	0.8
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.1
120.0	24.0	-	-	-	-	-	0.0	-	-	-	-	1.4
120.0	25.0	-	-	-	-	-	0.0	-	-	-	-	2.0

## Agonidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	30.0	-	-	-	-	-	5.4	-	-	-	-	-
113.0	30.0	-	-	-	-	-	3.4	-	-	-	-	0.0

## Cottidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	45.0	-	-	-	-	5.9	-	-	-	-	-	-
87.0	50.0	-	-	-	-	25.9	-	-	-	-	-	-
100.0	29.0	-	-	-	-	-	10.5	-	-	-	-	-
103.0	30.0	-	-	-	-	-	5.4	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	2.3	-	-	-	-	-

## Cyclopteridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	29.0	-	-	-	-	-	10.5	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
107.0	31.0	-	-	-	-	-	3.5	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	6.9	-	-	-	-	0.0

TABLE 4. (cont.)

*Zaniolepis* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
82.0	47.0	-	-	-	-	3.1	-	-	-	-	-	-
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
100.0	29.0	-	-	-	-	-	10.5	-	-	-	-	-
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	29.0	-	-	-	-	-	3.1	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.4
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	1.1

## Scorpaenidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	130.0	-	-	-	-	2.5	-	-	-	-	-	-

*Scorpaena* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	11.6	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	8.0	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	16.4	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
127.0	45.0	-	-	-	-	-	5.3	-	-	-	-	0.0

*Sebastes* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	52.0	-	-	-	-	9.0	-	-	-	-	-	-
80.0	55.0	-	-	-	-	17.9	-	-	-	-	-	-
80.0	60.0	-	-	-	-	27.6	-	-	-	-	-	-
80.0	65.0	-	-	-	-	6.9	-	-	-	-	-	-
80.0	80.0	-	-	-	-	5.5	-	-	-	-	-	-
82.0	47.0	-	-	-	-	49.3	-	-	-	-	-	-
83.0	43.0	-	-	-	-	10.8	-	-	-	-	-	-
83.0	51.0	-	-	-	-	14.4	-	-	-	-	-	-
83.0	55.0	-	-	-	-	75.7	-	-	-	-	-	-
83.0	60.0	-	-	-	-	45.6	-	-	-	-	-	-
83.0	65.0	-	-	-	-	13.2	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	35.0	-	-	-	-	45.9	-	-	-	-	-	-
87.0	40.0	-	-	-	-	5.7	-	-	-	-	-	-

TABLE 4. (cont.)

Sebastes spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	45.0	-	-	-	-	5.9	-	-	-	-	-	-
87.0	50.0	-	-	-	-	8.6	-	-	-	-	-	-
87.0	55.0	-	-	-	-	95.2	-	-	-	-	-	-
87.0	60.0	-	-	-	-	3.4	-	-	-	-	-	-
87.0	70.0	-	-	-	-	7.2	-	-	-	-	-	-
90.0	28.0	-	-	-	-	6.7	-	-	-	-	-	-
90.0	45.0	-	-	-	-	19.3	-	-	-	-	-	-
90.0	53.0	-	-	-	-	8.4	-	-	-	-	-	-
90.0	60.0	-	-	-	-	14.7	-	-	-	-	-	-
90.0	65.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	70.0	-	-	-	-	8.4	-	-	-	-	-	-
90.0	80.0	-	-	-	-	21.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	19.1	-	-	-	-	-	-
90.0	100.0	-	-	-	-	7.8	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	19.6	-	-	-	-	-
93.0	45.0	-	-	-	-	-	9.7	-	-	-	-	-
93.0	50.0	-	-	-	-	-	12.0	-	-	-	-	-
93.0	55.0	-	-	-	-	-	46.3	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	70.0	-	-	-	-	-	9.5	-	-	-	-	-
93.0	80.0	-	-	-	-	-	40.2	-	-	-	-	-
93.0	90.0	-	-	-	-	2.8	-	-	-	-	-	-
93.0	100.0	-	-	-	-	6.1	-	-	-	-	-	-
97.0	30.0	-	-	-	-	-	23.8	-	-	-	-	-
97.0	32.0	-	-	-	-	-	8.2	-	-	-	-	-
97.0	50.0	-	-	-	-	-	12.8	-	-	-	-	-
97.0	55.0	-	-	-	-	-	20.4	-	-	-	-	-
97.0	65.0	-	-	-	-	-	5.4	-	-	-	-	-
97.0	80.0	-	-	-	-	-	3.1	-	-	-	-	-
100.0	30.0	-	-	-	-	-	11.6	-	-	-	-	-
100.0	35.0	-	-	-	-	-	11.4	-	-	-	-	-
100.0	40.0	-	-	-	-	-	8.3	-	-	-	-	-
100.0	45.0	-	-	-	-	-	19.8	-	-	-	-	-
100.0	55.0	-	-	-	-	-	16.5	-	-	-	-	-
100.0	60.0	-	-	-	-	-	31.4	-	-	-	-	-
103.0	29.0	-	-	-	-	-	4.2	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	0.0
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	36.5
107.0	35.0	-	-	-	-	-	9.4	-	-	-	-	71.3
107.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.6
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	23.5
110.0	45.0	-	-	-	-	-	5.3	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.7
113.0	30.0	-	-	-	-	-	0.0	-	-	-	-	4.4



TABLE 4. (cont.)

*Sebastes* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	13.9
117.0	26.0	-	-	-	-	-	0.0	-	-	-	-	1.3
117.0	30.0	-	-	-	-	-	2.7	-	-	-	-	2.1
117.0	35.0	-	-	-	-	-	12.4	-	-	-	-	22.5
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	23.7
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	8.1
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	9.5
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	6.2
117.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.8
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	5.3
118.0	39.0	-	-	-	-	-	0.0	-	-	-	-	2.6
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
123.0	36.0	-	-	-	-	-	1.9	-	-	-	-	0.0

*Sebastolobus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	60.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	80.0	-	-	-	-	2.3	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-

*Blennioidei*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	53.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-

*Hypsoblenius* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	40.0	-	-	-	-	2.3	-	-	-	-	-	-
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
90.0	28.0	-	-	-	-	11.2	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	5.5	-	-	-	-	-
93.0	30.0	-	-	-	-	-	6.5	-	-	-	-	-
97.0	29.0	-	-	-	-	-	16.3	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	29.0	-	-	-	-	-	6.2	-	-	-	-	-
107.0	31.0	-	-	-	-	-	3.5	-	-	-	-	0.0

TABLE 4. (cont.)

*Hypsoblennius* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	32.0	-	-	-	-	-	9.2	-	-	-	-	0.0
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	8.9	-	-	-	-	0.0
113.0	29.0	-	-	-	-	-	15.5	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	17.1	-	-	-	-	0.0
120.0	24.0	-	-	-	-	-	4.1	-	-	-	-	0.0
127.0	33.0	-	-	-	-	-	8.8	-	-	-	-	0.0
127.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
130.0	28.0	-	-	-	-	-	2.6	-	-	-	-	0.0
137.0	22.0	-	-	-	-	-	-	-	-	-	-	2.0

## Clinidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
82.0	47.0	-	-	-	-	12.3	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-
103.0	29.0	-	-	-	-	-	4.2	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
107.0	31.0	-	-	-	-	-	3.5	-	-	-	-	1.7
110.0	32.0	-	-	-	-	-	1.3	-	-	-	-	1.5
113.0	29.0	-	-	-	-	-	0.0	-	-	-	-	2.3

## Gobiidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
82.0	47.0	-	-	-	-	12.3	-	-	-	-	-	-
83.0	43.0	-	-	-	-	10.8	-	-	-	-	-	-
83.0	51.0	-	-	-	-	2.6	-	-	-	-	-	-
83.0	60.0	-	-	-	-	3.8	-	-	-	-	-	-
90.0	28.0	-	-	-	-	2.2	-	-	-	-	-	-
90.0	37.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	45.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	70.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	50.0	-	-	-	-	-	3.0	-	-	-	-	-
93.0	55.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	90.0	-	-	-	-	2.8	-	-	-	-	-	-
97.0	29.0	-	-	-	-	-	4.8	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
97.0	32.0	-	-	-	-	-	5.4	-	-	-	-	-
100.0	30.0	-	-	-	-	-	5.8	-	-	-	-	-

TABLE 4. (cont.)

## Gobiidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
100.0	45.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	0.0
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	3.0
110.0	35.0	-	-	-	-	-	0.0	-	-	-	-	1.8
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.9
113.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
117.0	35.0	-	-	-	-	-	5.0	-	-	-	-	0.0
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.4
119.0	33.0	-	-	-	-	-	2.3	-	-	-	-	0.0
120.0	24.0	-	-	-	-	-	0.0	-	-	-	-	1.4
120.0	25.0	-	-	-	-	-	4.6	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
127.0	34.0	-	-	-	-	-	3.3	-	-	-	-	0.0
137.0	30.0	-	-	-	-	-	-	-	-	-	-	2.5

## Labridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	24.0	-	-	-	-	-	4.1	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	5.6	-	-	-	-	0.0

*Halichoeres* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	35.0	-	-	-	-	-	2.5	-	-	-	-	-
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	2.2
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
137.0	23.0	-	-	-	-	-	-	-	-	-	-	1.5

*Oxyjulis californica*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	40.0	-	-	-	-	2.9	-	-	-	-	-	-
87.0	70.0	-	-	-	-	7.2	-	-	-	-	-	-
90.0	60.0	-	-	-	-	5.9	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	45.0	-	-	-	-	-	16.1	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-

TABLE 4. (cont.)

*Oxyjulis californica* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	80.0	-	-	-	-	-	5.7	-	-	-	-	-
97.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-
97.0	40.0	-	-	-	-	-	12.1	-	-	-	-	-
97.0	50.0	-	-	-	-	-	2.6	-	-	-	-	-
100.0	29.0	-	-	-	-	-	10.5	-	-	-	-	-
100.0	30.0	-	-	-	-	-	26.0	-	-	-	-	-
103.0	30.0	-	-	-	-	-	10.9	-	-	-	-	-
107.0	31.0	-	-	-	-	-	5.3	-	-	-	-	0.0
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	13.5	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	5.5	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	5.2	-	-	-	-	0.0

*Semicossyphus pulcher*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Chromis punctipinnis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	28.0	-	-	-	-	4.5	-	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
100.0	30.0	-	-	-	-	-	8.7	-	-	-	-	-
113.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Mugil* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	35.0	-	-	-	-	-	0.0	-	-	-	-	2.8

*Howella brodiei*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	140.0	-	-	-	-	5.6	-	-	-	-	-	-

TABLE 4. (cont.)

*Brama* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	140.0	-	-	-	-	2.8	-	-	-	-	-	-

Carangidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	32.0	-	-	-	-	-	5.4	-	-	-	-	-
117.0	60.0	-	-	-	-	-	3.2	-	-	-	-	0.0

*Seriola lalandi*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
117.0	55.0	-	-	-	-	-	2.7	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	2.3	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	7.2	-	-	-	-	0.0
127.0	34.0	-	-	-	-	-	3.3	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	3.0	-	-	-	-	0.0

*Trachurus symmetricus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	30.7	-	-	-	-	-	-
80.0	65.0	-	-	-	-	20.6	-	-	-	-	-	-
80.0	70.0	-	-	-	-	54.6	-	-	-	-	-	-
83.0	60.0	-	-	-	-	41.8	-	-	-	-	-	-
83.0	65.0	-	-	-	-	15.1	-	-	-	-	-	-
83.0	70.0	-	-	-	-	53.3	-	-	-	-	-	-
83.0	80.0	-	-	-	-	6.9	-	-	-	-	-	-
83.0	90.0	-	-	-	-	26.0	-	-	-	-	-	-
87.0	60.0	-	-	-	-	27.0	-	-	-	-	-	-
87.0	65.0	-	-	-	-	13.0	-	-	-	-	-	-
87.0	70.0	-	-	-	-	127.2	-	-	-	-	-	-
87.0	80.0	-	-	-	-	4.1	-	-	-	-	-	-
87.0	90.0	-	-	-	-	23.8	-	-	-	-	-	-
90.0	53.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	60.0	-	-	-	-	172.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	16.7	-	-	-	-	-	-
90.0	70.0	-	-	-	-	33.7	-	-	-	-	-	-
90.0	80.0	-	-	-	-	6.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	35.5	-	-	-	-	-	-
90.0	100.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	44.2	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	140.0	-	-	-	-	10.2	-	-	-	-	-	-

TABLE 4. (cont.)

		<i>Trachurus symmetricus</i> (cont.)											
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	
93.0	28.0	-	-	-	-	-	5.5	-	-	-	-	-	
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-	
93.0	50.0	-	-	-	-	-	3.0	-	-	-	-	-	
93.0	55.0	-	-	-	-	-	55.6	-	-	-	-	-	
93.0	60.0	-	-	-	-	-	16.8	-	-	-	-	-	
93.0	65.0	-	-	-	-	-	5.4	-	-	-	-	-	
93.0	70.0	-	-	-	-	-	6.4	-	-	-	-	-	
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-	
93.0	90.0	-	-	-	-	8.4	-	-	-	-	-	-	
93.0	110.0	-	-	-	-	2.7	-	-	-	-	-	-	
93.0	120.0	-	-	-	-	10.0	-	-	-	-	-	-	
93.0	130.0	-	-	-	-	30.2	-	-	-	-	-	-	
97.0	40.0	-	-	-	-	-	30.2	-	-	-	-	-	
97.0	45.0	-	-	-	-	-	14.3	-	-	-	-	-	
97.0	50.0	-	-	-	-	-	28.2	-	-	-	-	-	
97.0	55.0	-	-	-	-	-	43.8	-	-	-	-	-	
97.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-	
97.0	70.0	-	-	-	-	-	8.7	-	-	-	-	-	
97.0	80.0	-	-	-	-	-	6.3	-	-	-	-	-	
97.0	80.0	-	-	-	-	-	5.3	-	-	-	-	-	
100.0	29.0	-	-	-	-	-	11.6	-	-	-	-	-	
100.0	30.0	-	-	-	-	-	54.3	-	-	-	-	-	
100.0	35.0	-	-	-	-	-	14.1	-	-	-	-	-	
100.0	45.0	-	-	-	-	-	37.3	-	-	-	-	-	
100.0	50.0	-	-	-	-	-	16.5	-	-	-	-	-	
100.0	55.0	-	-	-	-	-	10.4	-	-	-	-	-	
100.0	65.0	-	-	-	-	-	7.6	-	-	-	-	-	
100.0	70.0	-	-	-	-	-	5.4	-	-	-	-	-	
103.0	30.0	-	-	-	-	-	33.9	-	-	-	-	-	
103.0	40.0	-	-	-	-	-	29.9	-	-	-	-	-	
103.0	45.0	-	-	-	-	-	16.7	-	-	-	-	-	
103.0	50.0	-	-	-	-	-	8.2	-	-	-	-	-	
103.0	55.0	-	-	-	-	-	5.5	-	-	-	-	-	
103.0	60.0	-	-	-	-	-	15.2	-	-	-	-	-	
103.0	65.0	-	-	-	-	-	21.1	-	-	-	-	-	
103.0	70.0	-	-	-	-	-	5.5	-	-	-	-	0.0	
107.0	32.0	-	-	-	-	-	6.3	-	-	-	-	0.0	
107.0	35.0	-	-	-	-	-	5.6	-	-	-	-	0.0	
107.0	45.0	-	-	-	-	-	5.6	-	-	-	-	0.0	
107.0	50.0	-	-	-	-	-	13.9	-	-	-	-	0.0	
107.0	55.0	-	-	-	-	-	11.4	-	-	-	-	0.0	
107.0	60.0	-	-	-	-	-	31.4	-	-	-	-	0.0	
107.0	65.0	-	-	-	-	-	2.2	-	-	-	-	-	
107.0	80.0	-	-	-	-	-	2.6	-	-	-	-	0.0	
110.0	45.0	-	-	-	-	-	2.2	-	-	-	-	0.0	
110.0	70.0	-	-	-	-	-	2.5	-	-	-	-	0.0	
110.0	80.0	-	-	-	-	-	-	-	-	-	-	-	

TABLE 4. (cont.)

<i>Trachurus symmetricus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	30.0	-	-	-	-	-	3.4	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	5.4	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	5.5	-	-	-	-	0.0
113.0	50.0	-	-	-	-	-	7.9	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	2.5	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	4.5	-	-	-	-	0.0
<i>Coryphaena hippurus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
123.0	36.0	-	-	-	-	-	0.0	-	-	-	-	1.1
<i>Gerreidae</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
137.0	22.0	-	-	-	-	-	-	-	-	-	-	1.0
137.0	23.0	-	-	-	-	-	-	-	-	-	-	39.3
<i>Girella nigricans</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.4
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
<i>Medialuna californiensis</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
93.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
97.0	45.0	-	-	-	-	-	5.7	-	-	-	-	-
97.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	35.0	-	-	-	-	-	2.9	-	-	-	-	-
113.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
<i>Caulolatilus princeps</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
119.0	33.0	-	-	-	-	-	4.6	-	-	-	-	0.0

TABLE 4. (cont..)

Sciaenidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	37.0	-	-	-	-	5.5	13.8	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	35.0	-	-	-	-	-	1.0	-	-	-	-	-
97.0	29.0	-	-	-	-	-	17.8	-	-	-	-	-
97.0	30.0	-	-	-	-	-	239.3	-	-	-	-	-
100.0	29.0	-	-	-	-	-	17.3	-	-	-	-	-
100.0	30.0	-	-	-	-	-	4.2	-	-	-	-	-
103.0	29.0	-	-	-	-	-	5.4	-	-	-	-	-
103.0	55.0	-	-	-	-	-	1.8	-	-	-	-	82.1
107.0	31.0	-	-	-	-	-	2.7	-	-	-	-	0.0
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.1
110.0	32.0	-	-	-	-	-	2.8	-	-	-	-	20.3
110.0	35.0	-	-	-	-	-	8.9	-	-	-	-	1.8
110.0	40.0	-	-	-	-	-	2.5	-	-	-	-	0.0
110.0	50.0	-	-	-	-	-	0.0	-	-	-	-	0.0
113.0	29.0	-	-	-	-	-	42.4	-	-	-	-	16.1
117.0	30.0	-	-	-	-	-	10.0	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	11.6	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	4.6	-	-	-	-	0.0
120.0	25.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	5.5	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	2.8	-	-	-	-	2.4
120.0	45.0	-	-	-	-	-	2.4	-	-	-	-	0.0
120.0	50.0	-	-	-	-	-	0.0	-	-	-	-	3.2
130.0	35.0	-	-	-	-	-	-	-	-	-	-	3.0
137.0	22.0	-	-	-	-	-	-	-	-	-	-	4.5
137.0	23.0	-	-	-	-	-	-	-	-	-	-	-

Serranidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	29.0	-	-	-	-	-	1.0	-	-	-	-	-
97.0	32.0	-	-	-	-	-	19.0	-	-	-	-	-
100.0	29.0	-	-	-	-	-	18.4	-	-	-	-	-
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	-
103.0	30.0	-	-	-	-	-	8.2	-	-	-	-	-
107.0	32.0	-	-	-	-	-	5.5	-	-	-	-	0.0
117.0	40.0	-	-	-	-	-	0.0	-	-	-	-	3.0
120.0	24.0	-	-	-	-	-	10.3	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	13.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	5.5	-	-	-	-	12.0
120.0	55.0	-	-	-	-	-	0.0	-	-	-	-	2.8
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	2.8



TABLE 4. (cont.)

## Serranidae (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
123.0	36.0	-	-	-	-	-	5.6	-	-	-	-	3.3
123.0	37.0	-	-	-	-	-	1.9	-	-	-	-	3.2
123.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.8
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	2.9
127.0	45.0	-	-	-	-	-	5.3	-	-	-	-	0.0
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1
137.0	30.0	-	-	-	-	-	-	-	-	-	-	52.9
137.0	35.0	-	-	-	-	-	-	-	-	-	-	102.6

## Scombridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	29.0	-	-	-	-	-	26.3	-	-	-	-	-
100.0	30.0	-	-	-	-	-	46.2	-	-	-	-	-
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
127.0	34.0	-	-	-	-	-	16.6	-	-	-	-	0.0
127.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	6.1	-	-	-	-	0.0

*Sarda chiliensis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Scomber japonicus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
90.0	130.0	-	-	-	-	18.5	-	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
97.0	32.0	-	-	-	-	-	10.9	-	-	-	-	-
97.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
107.0	40.0	-	-	-	-	-	13.0	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	8.9	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	18.9	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	10.0	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	13.9	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	35.6	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	11.2	-	-	-	-	0.0
137.0	30.0	-	-	-	-	-	-	-	-	-	-	25.2
137.0	35.0	-	-	-	-	-	-	-	-	-	-	2.9

TABLE 4. (cont.)

Trichiuridae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	140.0	-	-	-	-	5.6	-	-	-	-	-	-
119.0	33.0	-	-	-	-	-	2.3	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.0
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	8.4
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
123.0	45.0	-	-	-	-	-	0.0	-	-	-	-	28.2
127.0	34.0	-	-	-	-	-	0.0	-	-	-	-	8.5
127.0	55.0	-	-	-	-	-	0.0	-	-	-	-	5.7
127.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.1

*Sphyaena argentea*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	28.0	-	-	-	-	-	5.5	-	-	-	-	-
97.0	32.0	-	-	-	-	-	5.4	-	-	-	-	-
107.0	32.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	11.0	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	2.8	-	-	-	-	0.0
127.0	34.0	-	-	-	-	-	23.2	-	-	-	-	0.0

*Icichthys lockingtoni*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	60.0	-	-	-	-	33.8	-	-	-	-	-	-
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	60.0	-	-	-	-	15.2	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	70.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	70.0	-	-	-	-	7.2	-	-	-	-	-	-
87.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	5.6	-	-	-	-	-	-
90.0	70.0	-	-	-	-	3.0	-	-	-	-	-	-
90.0	80.0	-	-	-	-	5.5	-	-	-	-	-	-
90.0	90.0	-	-	-	-	-	3.0	-	-	-	-	-
93.0	50.0	-	-	-	-	-	3.1	-	-	-	-	-
93.0	55.0	-	-	-	-	-	16.8	-	-	-	-	-
93.0	60.0	-	-	-	-	-	-	-	-	-	-	-

TABLE 4. (cont.)

*Peprilus simillimus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	28.0	-	-	-	-	-	8.3	-	-	-	-	-
93.0	55.0	-	-	-	-	-	6.2	-	-	-	-	-
97.0	29.0	-	-	-	-	-	1.0	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
97.0	32.0	-	-	-	-	-	10.9	-	-	-	-	-
97.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-
100.0	29.0	-	-	-	-	-	13.2	-	-	-	-	-
100.0	30.0	-	-	-	-	-	5.8	-	-	-	-	-
110.0	50.0	-	-	-	-	-	27.5	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	26.0	-	-	-	-	-	0.0	-	-	-	-	1.3
117.0	30.0	-	-	-	-	-	84.8	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	52.3	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	6.2
119.0	33.0	-	-	-	-	-	9.2	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	8.0	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	65.8	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	4.8
120.0	50.0	-	-	-	-	-	4.8	-	-	-	-	0.0
127.0	34.0	-	-	-	-	-	6.6	-	-	-	-	0.0
127.0	60.0	-	-	-	-	-	3.5	-	-	-	-	0.0

*Tetragonurus cuvieri*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	90.0	-	-	-	-	2.4	-	-	-	-	-	-
90.0	100.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	110.0	-	-	-	-	22.1	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	130.0	-	-	-	-	13.2	-	-	-	-	-	-
90.0	140.0	-	-	-	-	12.8	-	-	-	-	-	-
93.0	65.0	-	-	-	-	-	2.7	-	-	-	-	-
93.0	110.0	-	-	-	-	2.7	-	-	-	-	-	-
93.0	120.0	-	-	-	-	7.5	-	-	-	-	-	-
93.0	130.0	-	-	-	-	12.6	-	-	-	-	-	-
93.0	140.0	-	-	-	-	25.2	-	-	-	-	-	-
97.0	70.0	-	-	-	-	-	-	-	-	-	-	-
97.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	65.0	-	-	-	-	-	9.4	-	-	-	-	-
100.0	70.0	-	-	-	-	-	2.6	-	-	-	-	-
100.0	80.0	-	-	-	-	-	2.5	-	-	-	-	-
103.0	40.0	-	-	-	-	-	5.1	-	-	-	-	-
103.0	45.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	55.0	-	-	-	-	-	6.9	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.7	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-

TABLE 4. (cont.)

*Tetragonurus cuvieri* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	80.0	-	-	-	-	-	5.5	-	-	-	-	-
107.0	55.0	-	-	-	-	-	11.1	-	-	-	-	0.0
107.0	60.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	65.0	-	-	-	-	-	2.6	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
110.0	70.0	-	-	-	-	-	2.2	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
113.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	16.2	-	-	-	-	0.0
117.0	45.0	-	-	-	-	-	7.2	-	-	-	-	0.0
117.0	55.0	-	-	-	-	-	16.4	-	-	-	-	0.0
117.0	80.0	-	-	-	-	-	4.9	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	55.0	-	-	-	-	-	7.8	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.2

## Chiasmodontidae

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
110.0	40.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
113.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.5
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	65.0	-	-	-	-	-	0.0	-	-	-	-	5.3

## Pleuronectiformes

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0

*Citharichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	65.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	28.0	-	-	-	-	9.0	-	-	-	-	-	-
90.0	32.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	37.0	-	-	-	-	5.5	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	40.0	-	-	-	-	-	8.4	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-

TABLE 4. (cont.)

*Citharichthys* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
97.0	30.0	-	-	-	-	-	71.3	-	-	-	-	-
97.0	32.0	-	-	-	-	-	8.2	-	-	-	-	-
100.0	29.0	-	-	-	-	-	13.2	-	-	-	-	-
100.0	30.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	50.0	-	-	-	-	-	20.3	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	-
107.0	31.0	-	-	-	-	-	3.5	-	-	-	-	8.6
107.0	32.0	-	-	-	-	-	0.0	-	-	-	-	39.5
107.0	35.0	-	-	-	-	-	0.0	-	-	-	-	96.1
107.0	60.0	-	-	-	-	-	2.8	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	0.0	-	-	-	-	2.7
110.0	35.0	-	-	-	-	-	5.7	-	-	-	-	21.7
110.0	40.0	-	-	-	-	-	65.1	-	-	-	-	10.6
110.0	45.0	-	-	-	-	-	10.5	-	-	-	-	10.6
110.0	50.0	-	-	-	-	-	457.5	-	-	-	-	11.4
110.0	55.0	-	-	-	-	-	41.5	-	-	-	-	3.7
110.0	60.0	-	-	-	-	-	2.8	-	-	-	-	3.1
110.0	65.0	-	-	-	-	-	2.8	-	-	-	-	2.9
110.0	70.0	-	-	-	-	-	11.1	-	-	-	-	0.0
113.0	29.0	-	-	-	-	-	1.5	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	10.3	-	-	-	-	0.0
113.0	35.0	-	-	-	-	-	0.0	-	-	-	-	4.6
113.0	45.0	-	-	-	-	-	8.3	-	-	-	-	76.4
113.0	55.0	-	-	-	-	-	0.0	-	-	-	-	3.3
113.0	65.0	-	-	-	-	-	8.1	-	-	-	-	0.0
113.0	70.0	-	-	-	-	-	32.0	-	-	-	-	0.0
117.0	25.0	-	-	-	-	-	7.0	-	-	-	-	0.0
117.0	26.0	-	-	-	-	-	46.6	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	145.8	-	-	-	-	12.4
117.0	35.0	-	-	-	-	-	288.8	-	-	-	-	5.6
117.0	40.0	-	-	-	-	-	8.2	-	-	-	-	3.0
117.0	45.0	-	-	-	-	-	0.0	-	-	-	-	2.7
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	40.5
117.0	55.0	-	-	-	-	-	0.0	-	-	-	-	80.9
117.0	60.0	-	-	-	-	-	9.6	-	-	-	-	42.6
117.0	65.0	-	-	-	-	-	9.4	-	-	-	-	34.2
117.0	70.0	-	-	-	-	-	22.0	-	-	-	-	-
118.0	39.0	-	-	-	-	-	45.4	-	-	-	-	13.0
119.0	33.0	-	-	-	-	-	2670.4	-	-	-	-	9.4
120.0	24.0	-	-	-	-	-	24.7	-	-	-	-	0.0
120.0	25.0	-	-	-	-	-	232.6	-	-	-	-	2.0
120.0	30.0	-	-	-	-	-	965.6	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	1882.4	-	-	-	-	0.0
120.0	40.0	-	-	-	-	-	83.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	459.8	-	-	-	-	372.8
120.0	50.0	-	-	-	-	-	223.2	-	-	-	-	125.5

TABLE 4. (cont.)

*Citharichthys* spp. (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	55.0	-	-	-	-	-	2.6	-	-	-	-	116.0
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	41.9
120.0	65.0	-	-	-	-	-	0.0	-	-	-	-	86.5
123.0	36.0	-	-	-	-	-	33.3	-	-	-	-	124.3
123.0	37.0	-	-	-	-	-	30.9	-	-	-	-	216.2
123.0	42.0	-	-	-	-	-	61.3	-	-	-	-	0.0
123.0	45.0	-	-	-	-	-	12.4	-	-	-	-	8.5
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	13.5
123.0	55.0	-	-	-	-	-	8.1	-	-	-	-	25.8
123.0	60.0	-	-	-	-	-	0.0	-	-	-	-	130.5
127.0	33.0	-	-	-	-	-	40.9	-	-	-	-	20.6
127.0	34.0	-	-	-	-	-	136.1	-	-	-	-	0.0
127.0	40.0	-	-	-	-	-	5.3	-	-	-	-	8.3
127.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
127.0	50.0	-	-	-	-	-	5.1	-	-	-	-	15.7
127.0	55.0	-	-	-	-	-	4.9	-	-	-	-	54.5
127.0	60.0	-	-	-	-	-	7.0	-	-	-	-	3.1
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	9.5
130.0	50.0	-	-	-	-	-	-	-	-	-	-	6.1
133.0	23.0	-	-	-	-	-	-	-	-	-	-	42.5
133.0	30.0	-	-	-	-	-	-	-	-	-	-	2.9
137.0	22.0	-	-	-	-	-	-	-	-	-	-	7.1
137.0	23.0	-	-	-	-	-	-	-	-	-	-	31.7
137.0	30.0	-	-	-	-	-	-	-	-	-	-	45.4
137.0	35.0	-	-	-	-	-	-	-	-	-	-	14.7

*Citharichthys stigmaeus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
87.0	55.0	-	-	-	-	3.1	-	-	-	-	-	-
93.0	45.0	-	-	-	-	-	3.2	-	-	-	-	-
93.0	55.0	-	-	-	-	-	6.2	-	-	-	-	-
93.0	90.0	-	-	-	-	5.6	-	-	-	-	-	-
97.0	29.0	-	-	-	-	-	1.0	-	-	-	-	-
97.0	30.0	-	-	-	-	-	5.9	-	-	-	-	-
97.0	45.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	40.0	-	-	-	-	-	5.5	-	-	-	-	-
100.0	45.0	-	-	-	-	-	2.8	-	-	-	-	-
107.0	45.0	-	-	-	-	-	0.0	-	-	-	-	1.8
110.0	40.0	-	-	-	-	-	5.9	-	-	-	-	2.7
110.0	45.0	-	-	-	-	-	0.0	-	-	-	-	3.7
110.0	55.0	-	-	-	-	-	0.0	-	-	-	-	0.0
113.0	60.0	-	-	-	-	-	5.4	-	-	-	-	-

TABLE 4. (cont.)

<i>Citharichthys stigmaeus</i> (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
118.0	39.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	60.0	-	-	-	-	-	0.0	-	-	-	-	3.0
<i>Hippoglossina stomata</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	11.6	-	-	-	-	0.0
120.0	25.0	-	-	-	-	-	2.3	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	5.5	-	-	-	-	0.0
123.0	36.0	-	-	-	-	-	7.4	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	7.7	-	-	-	-	1.6
127.0	34.0	-	-	-	-	-	3.3	-	-	-	-	0.0
133.0	23.0	-	-	-	-	-	-	-	-	-	-	1.7
<i>Paralichthys californicus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	5.4	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
97.0	29.0	-	-	-	-	-	1.0	-	-	-	-	-
97.0	32.0	-	-	-	-	-	5.4	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
107.0	31.0	-	-	-	-	-	1.8	-	-	-	-	5.1
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.4
120.0	24.0	-	-	-	-	-	6.2	-	-	-	-	1.4
120.0	40.0	-	-	-	-	-	13.9	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	0.0
137.0	22.0	-	-	-	-	-	-	-	-	-	-	1.0
<i>Xystreureys liolepis</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
119.0	33.0	-	-	-	-	-	16.2	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	11.0	-	-	-	-	0.0
123.0	36.0	-	-	-	-	-	9.3	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	3.9	-	-	-	-	0.0

TABLE 4. (cont.)

*Lepidopsetta bilineata*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
82.0	47.0	-	-	-	-	3.1	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-

*Lyopsetta exilis*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	51.0	-	-	-	-	6.2	-	-	-	-	-	-
80.0	55.0	-	-	-	-	2.6	-	-	-	-	-	-
82.0	47.0	-	-	-	-	6.2	-	-	-	-	-	-
117.0	26.0	-	-	-	-	-	2.9	-	-	-	-	0.0

*Microstomus pacificus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	80.0	-	-	-	-	2.8	-	-	-	-	-	-
83.0	60.0	-	-	-	-	3.8	-	-	-	-	-	-
90.0	60.0	-	-	-	-	2.9	-	-	-	-	-	-
90.0	65.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	70.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	50.0	-	-	-	-	-	3.0	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
100.0	55.0	-	-	-	-	-	4.1	-	-	-	-	0.0
107.0	35.0	-	-	-	-	-	3.1	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	3.0	-	-	-	-	-

*Parophrys vetulus*

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
90.0	28.0	-	-	-	-	2.2	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	5.5	-	-	-	-	-
93.0	30.0	-	-	-	-	-	6.5	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	-
120.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0

*Pleuronichthys* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	55.0	-	-	-	-	5.1	-	-	-	-	-	-



TABLE 4. (cont.)

<i>Pleuronichthys</i> spp. (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
83.0	51.0	-	-	-	-	1.3	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
87.0	50.0	-	-	-	-	4.3	-	-	-	-	-	-
93.0	40.0	-	-	-	-	-	2.8	-	-	-	-	-
100.0	29.0	-	-	-	-	-	2.6	-	-	-	-	0.0
110.0	32.0	-	-	-	-	-	1.3	-	-	-	-	0.0
120.0	24.0	-	-	-	-	-	2.1	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	5.5	-	-	-	-	0.0
<i>Pleuronichthys coenosus</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
<i>Pleuronichthys ritteri</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	24.0	-	-	-	-	-	0.0	-	-	-	-	1.4
120.0	40.0	-	-	-	-	-	5.6	-	-	-	-	0.0
<i>Pleuronichthys verticalis</i>												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
82.0	47.0	-	-	-	-	3.1	-	-	-	-	-	-
83.0	40.0	-	-	-	-	2.3	-	-	-	-	-	-
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
93.0	30.0	-	-	-	-	-	3.2	-	-	-	-	-
97.0	29.0	-	-	-	-	-	6.7	-	-	-	-	-
97.0	30.0	-	-	-	-	-	11.9	-	-	-	-	-
97.0	32.0	-	-	-	-	-	5.4	-	-	-	-	-
103.0	30.0	-	-	-	-	-	2.7	-	-	-	-	0.0
110.0	35.0	-	-	-	-	-	2.8	-	-	-	-	0.0
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
113.0	30.0	-	-	-	-	-	6.9	-	-	-	-	0.0
117.0	26.0	-	-	-	-	-	11.6	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	10.6	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	39.8	-	-	-	-	0.0
119.0	33.0	-	-	-	-	-	18.5	-	-	-	-	0.0
120.0	25.0	-	-	-	-	-	6.8	-	-	-	-	0.0
120.0	30.0	-	-	-	-	-	21.3	-	-	-	-	0.0
120.0	35.0	-	-	-	-	-	27.4	-	-	-	-	0.0

TABLE 4. (cont.)

*Pleuronichthys verticalis* (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	50.0	-	-	-	-	-	7.2	-	-	-	-	0.0
123.0	36.0	-	-	-	-	-	20.4	-	-	-	-	0.0
123.0	37.0	-	-	-	-	-	1.9	-	-	-	-	0.0
127.0	33.0	-	-	-	-	-	2.9	-	-	-	-	0.0
127.0	34.0	-	-	-	-	-	3.3	-	-	-	-	0.0

*Symphurus* spp.

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	35.0	-	-	-	-	-	5.5	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	2.4
123.0	37.0	-	-	-	-	-	0.0	-	-	-	-	1.6
123.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.7
127.0	45.0	-	-	-	-	-	2.6	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	3.0	-	-	-	-	0.0
133.0	23.0	-	-	-	-	-	-	-	-	-	-	1.7
133.0	35.0	-	-	-	-	-	-	-	-	-	-	11.8
137.0	23.0	-	-	-	-	-	-	-	-	-	-	3.0

## Disintegrated fish larva

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	60.0	-	-	-	-	3.1	-	-	-	-	-	-
80.0	65.0	-	-	-	-	3.4	-	-	-	-	-	-
80.0	70.0	-	-	-	-	5.5	-	-	-	-	-	-
83.0	43.0	-	-	-	-	8.1	-	-	-	-	-	-
83.0	55.0	-	-	-	-	3.3	-	-	-	-	-	-
83.0	65.0	-	-	-	-	1.9	-	-	-	-	-	-
83.0	80.0	-	-	-	-	11.4	-	-	-	-	-	-
87.0	33.0	-	-	-	-	1.9	-	-	-	-	-	-
87.0	35.0	-	-	-	-	2.7	-	-	-	-	-	-
87.0	40.0	-	-	-	-	2.9	-	-	-	-	-	-
87.0	65.0	-	-	-	-	2.6	-	-	-	-	-	-
87.0	70.0	-	-	-	-	7.2	-	-	-	-	-	-
87.0	80.0	-	-	-	-	6.1	-	-	-	-	-	-
87.0	90.0	-	-	-	-	4.8	-	-	-	-	-	-
90.0	53.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	80.0	-	-	-	-	3.0	-	-	-	-	-	-
90.0	90.0	-	-	-	-	2.7	-	-	-	-	-	-
90.0	120.0	-	-	-	-	2.8	-	-	-	-	-	-
90.0	130.0	-	-	-	-	2.6	-	-	-	-	-	-
90.0	140.0	-	-	-	-	2.6	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-

TABLE 4. (cont.)

Disintegrated fish larva (cont.)												
STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
93.0	30.0						6.5					
93.0	35.0						16.6					
93.0	65.0						2.7					
93.0	120.0				2.5							
93.0	140.0				2.8							
97.0	29.0						1.0					
97.0	32.0						5.4					
97.0	35.0						39.5					
97.0	70.0						2.9					
97.0	80.0						3.1					
100.0	29.0						13.2					
100.0	40.0						2.8					
100.0	45.0						2.8					
100.0	50.0						3.4					
100.0	65.0						2.6					
100.0	80.0						7.7					
103.0	29.0						6.2					
103.0	30.0						5.4					
103.0	35.0						4.9					
103.0	40.0						5.2					
103.0	50.0						5.6					
103.0	65.0						5.1					
103.0	80.0						2.8					
107.0	31.0						3.5					
107.0	40.0						6.5					
107.0	65.0						0.0					0.0
110.0	35.0						2.8					2.8
110.0	45.0						0.0					0.0
110.0	50.0						0.0					2.7
110.0	55.0						2.8					2.3
110.0	60.0						8.4					0.0
110.0	70.0						8.9					0.0
110.0	80.0						2.5					0.0
113.0	29.0						7.8					0.0
113.0	35.0						8.1					0.0
113.0	45.0						5.5					5.9
113.0	60.0						0.0					1.8
113.0	65.0						5.4					0.0
117.0	25.0						0.0					0.8
117.0	30.0						10.6					0.0
117.0	40.0						5.4					8.9
117.0	45.0						2.4					0.0
117.0	65.0						0.0					2.6
118.0	39.0						2.7					0.0
120.0	24.0						2.1					0.0
120.0	25.0						2.3					0.0

TABLE 4. (cont.)

Disintegrated fish larva (cont.)

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
120.0	40.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	0.0
120.0	70.0	-	-	-	-	-	5.2	-	-	-	-	0.0
120.0	80.0	-	-	-	-	-	0.0	-	-	-	-	2.9
123.0	36.0	-	-	-	-	-	5.6	-	-	-	-	0.0
127.0	33.0	-	-	-	-	-	0.0	-	-	-	-	1.5
127.0	34.0	-	-	-	-	-	13.3	-	-	-	-	2.1
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.2
133.0	23.0	-	-	-	-	-	-	-	-	-	-	5.1
137.0	22.0	-	-	-	-	-	-	-	-	-	-	3.0
137.0	23.0	-	-	-	-	-	-	-	-	-	-	1.5
137.0	30.0	-	-	-	-	-	-	-	-	-	-	2.5

Unidentified fish larva

STATION	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
80.0	52.0	-	-	-	-	2.2	-	-	-	-	-	-
82.0	47.0	-	-	-	-	3.1	-	-	-	-	-	-
83.0	43.0	-	-	-	-	2.7	-	-	-	-	-	-
87.0	35.0	-	-	-	-	8.1	-	-	-	-	-	-
87.0	50.0	-	-	-	-	2.2	-	-	-	-	-	-
87.0	80.0	-	-	-	-	2.0	-	-	-	-	-	-
90.0	28.0	-	-	-	-	2.2	-	-	-	-	-	-
90.0	37.0	-	-	-	-	8.2	-	-	-	-	-	-
90.0	130.0	-	-	-	-	18.5	-	-	-	-	-	-
93.0	28.0	-	-	-	-	-	2.8	-	-	-	-	-
93.0	80.0	-	-	-	-	-	2.9	-	-	-	-	-
93.0	120.0	-	-	-	-	2.5	-	-	-	-	-	-
97.0	29.0	-	-	-	-	-	4.8	-	-	-	-	-
97.0	32.0	-	-	-	-	-	2.7	-	-	-	-	-
97.0	40.0	-	-	-	-	-	114.8	-	-	-	-	-
100.0	29.0	-	-	-	-	-	7.9	-	-	-	-	-
100.0	30.0	-	-	-	-	-	5.8	-	-	-	-	-
100.0	65.0	-	-	-	-	-	2.6	-	-	-	-	-
103.0	29.0	-	-	-	-	-	6.2	-	-	-	-	-
103.0	40.0	-	-	-	-	-	5.2	-	-	-	-	-
103.0	50.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	55.0	-	-	-	-	-	10.9	-	-	-	-	-
103.0	60.0	-	-	-	-	-	2.8	-	-	-	-	-
103.0	80.0	-	-	-	-	-	5.5	-	-	-	-	0.0
107.0	31.0	-	-	-	-	-	10.6	-	-	-	-	0.0
107.0	70.0	-	-	-	-	-	48.3	-	-	-	-	0.0
110.0	32.0	-	-	-	-	-	1.3	-	-	-	-	0.0
110.0	40.0	-	-	-	-	-	8.9	-	-	-	-	0.0
110.0	45.0	-	-	-	-	-	21.0	-	-	-	-	0.0

TABLE 4. (cont.)

STATION	Unidentified fish larva (cont.)											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.
110.0	50.0	-	-	-	-	-	2.5	-	-	-	-	0.0
110.0	80.0	-	-	-	-	-	2.5	-	-	-	-	10.7
113.0	35.0	-	-	-	-	-	2.7	-	-	-	-	0.0
117.0	30.0	-	-	-	-	-	15.9	-	-	-	-	0.0
117.0	35.0	-	-	-	-	-	2.5	-	-	-	-	0.0
117.0	50.0	-	-	-	-	-	0.0	-	-	-	-	2.4
119.0	33.0	-	-	-	-	-	0.0	-	-	-	-	2.3
120.0	30.0	-	-	-	-	-	26.6	-	-	-	-	2.1
120.0	35.0	-	-	-	-	-	8.2	-	-	-	-	1.3
120.0	40.0	-	-	-	-	-	108.8	-	-	-	-	0.6
120.0	45.0	-	-	-	-	-	2.8	-	-	-	-	2.4
120.0	50.0	-	-	-	-	-	26.4	-	-	-	-	2.5
120.0	55.0	-	-	-	-	-	2.6	-	-	-	-	0.0
123.0	36.0	-	-	-	-	-	3.7	-	-	-	-	4.4
123.0	37.0	-	-	-	-	-	38.6	-	-	-	-	0.0
123.0	42.0	-	-	-	-	-	2.3	-	-	-	-	0.0
127.0	33.0	-	-	-	-	-	5.8	-	-	-	-	1.5
127.0	34.0	-	-	-	-	-	3.3	-	-	-	-	0.0
130.0	35.0	-	-	-	-	-	0.0	-	-	-	-	3.2
137.0	22.0	-	-	-	-	-	-	-	-	-	-	3.0
137.0	23.0	-	-	-	-	-	-	-	-	-	-	3.0
137.0	30.0	-	-	-	-	-	-	-	-	-	-	5.0
137.0	35.0	-	-	-	-	-	-	-	-	-	-	11.7

TABLE 5. Summary of pooled occurrences of all larval fish taxa taken on CalCOFI surveys from 1961 to 1969. Taxa are listed in the same order as Table 4.

NAME	1961	1962	1963	1964	1965	1966	1967	1968	1969
Anguilliformes	7	8	20	8	24	17	5	3	13
<i>Etrumeus acuminatus</i>	4	7	36	37	35	26	7	1	9
<i>Opisthonema</i> spp.	-	-	-	-	2	3	-	-	-
<i>Sardinops sagax</i>	53	58	99	88	104	143	31	10	79
<i>Engraulis mordax</i>	408	454	567	707	618	987	150	188	880
<i>Argentina sialis</i>	18	49	33	37	49	93	21	18	98
<i>Microstoma microstoma</i>	12	19	11	31	17	48	9	19	73
<i>Nansenia candida</i>	9	13	5	7	9	39	6	12	32
<i>Nansenia crassa</i>	29	15	30	33	22	48	8	5	40
<i>Bathylagus</i> spp.	18	1	54	1	7	18	6	35	215
<i>Bathylagus milleri</i>	-	-	2	3	1	1	-	1	33
<i>Bathylagus ochotensis</i>	57	66	98	196	127	260	28	106	359
<i>Bathylagus pacificus</i>	5	7	8	38	3	26	-	15	80
<i>Bathylagus wesethi</i>	149	168	160	235	220	461	99	90	328
<i>Leuroglossus stilbius</i>	202	225	236	360	300	449	43	116	498
<i>Dolichopteryx</i> spp.	-	-	-	-	-	-	-	-	1
<i>Macropinna microstoma</i>	1	-	-	-	-	-	-	-	1
Osmeriidae	-	-	2	-	-	-	-	-	1
Stomiiformes	12	4	3	6	1	6	9	1	4
Gonostomatidae	2	5	12	8	18	8	-	4	126
<i>Cyclothone</i> spp.	214	277	241	247	265	593	80	65	346
<i>Diplophos taenia</i>	5	5	7	-	3	11	1	1	7
<i>Ichthyococcus</i> spp.	4	11	11	13	7	35	5	2	34
<i>Vinciguerria lucetia</i>	342	371	383	369	436	828	121	82	479
<i>Vinciguerria poweriae</i>	3	7	3	4	3	6	-	-	1
<i>Woodsia nonsuchae</i>	-	-	1	-	-	-	-	-	-
Sternoptychidae	54	71	45	79	59	250	28	48	469
Astronesthidae	-	2	-	-	-	-	-	-	1
<i>Chauliodus macouni</i>	28	28	31	68	57	171	9	46	189
<i>Idiacanthus antrastomus</i>	48	43	26	32	33	72	15	22	114
<i>Aristostomias scintillans</i>	9	10	9	6	9	12	2	-	11
<i>Bathophilus</i> spp.	5	10	4	3	4	5	2	1	2
<i>Eustomias</i> spp.	1	1	-	1	1	-	-	1	-
<i>Photonectes</i> spp.	7	3	2	2	6	4	-	-	-
<i>Tactostoma macropus</i>	7	4	2	4	2	16	3	-	4
<i>Stomias atriventer</i>	58	76	98	81	100	326	24	46	214
Evermannellidae	1	3	1	1	1	-	-	-	-
Paralepididae	1	3	1	1	3	-	-	3	6
<i>Paralepis ringens</i>	50	80	58	10	67	232	36	52	231
<i>Notolepis risso</i>	9	12	9	7	9	12	2	8	18
<i>Paralepis atlantica</i>	-	-	-	-	1	-	-	-	-
<i>Stemonosudis macrura</i>	4	6	-	2	6	5	-	1	1
<i>Sudis atrox</i>	2	4	-	2	4	-	-	-	-
<i>Aulopus</i> spp.	-	-	-	-	-	-	-	-	-
<i>Scopelosaurus</i> spp.	16	10	8	16	19	21	6	3	36
Scopelarchidae	67	60	50	21	33	114	29	13	93

TABLE 5. (cont.)

NAME	1961	1962	1963	1964	1965	1966	1967	1968	1969
Myctophidae	165	151	179	220	222	346	33	79	329
<i>Diaproscopeilus townsendi</i>	149	157	128	146	156	302	37	23	153
<i>Diaphus</i> spp.	77	56	46	101	80	187	46	34	110
<i>Lampadena urophaos</i>	53	45	50	25	32	62	10	1	23
<i>Lampanyctus</i> spp.	148	139	199	155	183	401	67	65	550
<i>Lampanyctus regalis</i>	13	12	2	20	9	46	12	11	19
<i>Lampanyctus ritteri</i>	154	204	120	189	234	523	43	72	155
<i>Notolychnus valdiviae</i>	29	13	22	16	21	22	7	1	10
<i>Notoscopeilus resplendens</i>	59	41	50	39	44	54	11	3	29
<i>Parvilux ingens</i>	-	-	-	-	-	-	-	-	1
<i>Stenobrachius leucopsarus</i>	177	179	186	342	263	420	31	127	390
<i>Triphoturus mexicanus</i>	407	422	451	448	494	990	142	92	556
<i>Triphoturus nigrescens</i>	4	-	-	-	1	-	-	-	-
<i>Benthoosema pterota</i>	2	10	-	2	2	3	-	-	2
<i>Centrobranchus</i> spp.	54	62	88	61	11	165	16	13	79
<i>Diogenichthys</i> spp.	102	155	92	111	116	171	38	46	210
<i>Diogenichthys atlanticus</i>	94	127	161	163	249	361	63	32	210
<i>Diogenichthys laternatus</i>	3	5	-	3	2	3	-	-	7
<i>Electrona rissoi</i>	20	24	29	46	81	146	16	12	48
<i>Gonichthys tenuiculus</i>	4	3	29	6	11	4	-	-	13
<i>Hygophum</i> spp.	27	38	41	44	103	178	21	6	81
<i>Hygophum atratum</i>	39	58	27	20	27	9	7	-	10
<i>Hygophum reinhardtii</i>	8	4	5	4	8	6	1	-	11
<i>Loweina rara</i>	46	42	31	32	19	58	11	8	59
<i>Myctophum nitidulum</i>	247	252	225	292	261	671	109	139	717
<i>Protomyctophum crockeri</i>	-	-	-	-	-	-	-	-	9
<i>Protomyctophum thompsoni</i>	82	140	78	116	111	291	38	61	157
<i>Symbolophorus californiensis</i>	160	115	111	140	132	208	10	73	277
<i>Tarletonbeania crenularis</i>	19	23	41	35	42	121	23	-	54
<i>Synodus</i> spp.	-	-	-	-	-	2	-	-	-
<i>Bregmaceros</i> spp.	-	-	-	3	-	2	-	-	-
<i>Microgadus proximus</i>	152	228	229	290	290	398	25	95	361
<i>Merluccius productus</i>	-	1	1	1	3	2	1	-	2
<i>Physiculus</i> spp.	4	6	6	5	3	5	2	3	14
Macrouridae	16	16	35	49	37	69	10	16	45
Ophidiiformes	-	2	3	3	7	17	5	8	16
<i>Brosmophycis marginata</i>	-	1	-	1	-	-	-	-	-
Carapidae	12	31	15	11	29	55	15	-	28
<i>Chilara taylori</i>	2	10	61	19	40	67	-	-	34
<i>Ophidion scrippsae</i>	1	1	1	1	-	1	1	-	2
<i>Porichthys</i> spp.	15	26	17	7	18	43	-	-	30
Ceratioidei	3	-	5	8	9	12	-	-	1
Gobiesocidae	2	-	1	3	2	10	-	2	5
Exocoetidae	-	-	-	2	1	-	-	-	-
Hemiramphidae	11	6	13	22	9	31	3	10	32
<i>Cololabis saira</i>	-	-	9	23	8	11	2	2	5
Atherinidae	27	27	20	22	19	75	6	9	80
Trachipteridae	-	-	-	-	-	-	-	-	-
Eutaenlophoridae	-	-	-	-	-	-	-	-	5

TABLE 5. (cont.)

NAME	1961	1962	1963	1964	1965	1966	1967	1968	1969
<i>Melamphaes</i> spp.	117	106	134	114	151	340	68	84	333
<i>Poromitra</i> spp.	13	18	28	28	32	51	6	14	27
<i>Scopeloberyx robustus</i>	4	2	2	-	7	-	-	-	2
<i>Scopelogadus hispidus</i>	18	34	10	31	13	60	4	5	17
<i>Macroramphosus gracilis</i>	3	6	6	3	7	6	7	-	11
<i>Syngnathus</i> spp.	6	5	8	12	12	15	6	3	10
Agonidae	3	6	16	24	22	20	5	4	9
<i>Anoplopoma fimbria</i>	-	-	-	1	-	-	-	-	-
Cottidae	11	21	33	45	37	43	5	12	40
<i>Scorpaenichthys marmoratus</i>	3	3	7	13	20	15	-	5	24
Cyclopteridae	8	2	12	14	16	14	4	4	17
Hexagrammidae	-	1	-	2	1	1	-	1	6
<i>Ophiodon elongatus</i>	-	3	7	27	13	7	-	1	1
<i>Oxylebius pictus</i>	6	9	12	11	7	26	7	5	20
<i>Zanolepis</i> spp.	2	1	2	1	-	1	1	3	19
Scorpaenidae	-	1	2	-	-	1	1	-	-
<i>Scorpaena</i> spp.	11	11	17	16	25	62	8	3	12
<i>Sebastes</i> spp.	311	273	289	492	387	698	81	207	705
<i>Sebastolobus</i> spp.	8	2	17	20	20	87	4	14	47
<i>Prionotus</i> spp.	10	9	40	15	30	25	-	-	19
Acanthuridae	-	-	1	-	-	-	-	-	-
Blennioidei	1	-	14	6	4	-	3	-	4
<i>Hypsoblemmius</i> spp.	11	14	68	69	73	77	19	6	61
Clinidae	12	21	31	44	64	51	9	10	51
Gobiidae	31	41	87	80	104	198	36	19	138
<i>Icosteus aenigmaticus</i>	1	1	1	1	-	3	-	-	1
Labridae	-	2	9	-	7	-	2	3	-
<i>Halichoeres</i> spp.	12	12	40	18	36	50	4	1	28
<i>Oxyjulis californica</i>	23	22	34	15	31	97	23	15	58
<i>Semicossyphus pulcher</i>	6	10	21	7	27	28	4	-	8
Pomacentridae	-	-	10	4	8	5	-	-	-
<i>Chromis punctipinnis</i>	3	21	42	13	39	105	5	1	54
<i>Hypsypops rubicundus</i>	-	-	1	1	8	1	-	-	-
<i>Mugil</i> spp.	-	-	-	1	1	5	1	-	-
Apogonidae	-	-	-	-	-	1	1	-	-
<i>Howella brodiei</i>	16	7	-	5	4	3	1	1	4
<i>Brama</i> spp.	21	17	17	7	9	21	1	-	12
Carangidae	-	1	20	14	25	13	2	-	3
<i>Seriola lalandi</i>	5	12	15	7	14	30	5	4	9
<i>Trachurus symmetricus</i>	144	208	199	206	214	503	76	85	248
<i>Caristius macropus</i>	-	-	-	-	1	1	-	-	1
<i>Coryphaena hippurus</i>	-	7	2	1	10	5	1	-	1
<i>Chaetodipterus zonatus</i>	-	-	1	1	-	-	-	-	-
Gerreidae	-	2	15	10	14	12	2	-	4
Haemulidae	-	1	13	16	11	17	-	-	4
<i>Girella nigricans</i>	5	1	11	3	3	4	3	7	7
<i>Medialuna californiensis</i>	4	11	13	4	5	22	6	3	12
<i>Caulolatilus princeps</i>	4	3	2	3	7	5	1	-	2
Mullidae	-	-	2	-	-	-	-	-	-



TABLE 5. (cont.)

NAME	1961	1962	1963	1964	1965	1966	1967	1968	1969
Sciaenidae	28	42	85	135	147	157	32	38	195
Serranidae	10	6	68	38	59	91	23	2	72
Sparidae	-	-	1	-	-	1	-	-	-
Polynemidae	-	15	6	5	8	7	-	-	1
Gempylidae	3	-	3	2	4	-	8	2	2
Scombridae	-	-	2	-	8	4	-	-	2
Auxis spp.	7	3	10	8	9	29	1	-	30
<i>Sarda chiliensis</i>	-	3	57	39	34	68	14	-	24
<i>Scomber japonicus</i>	26	32	1	1	5	3	-	-	-
<i>Scomberomorus</i> spp.	1	-	1	17	27	74	10	-	23
Trichiuridae	10	23	27	10	25	31	7	4	15
<i>Sphyaena argentea</i>	6	6	22	78	53	131	18	48	202
<i>Ycichthys lockingtoni</i>	38	39	52	1	1	2	-	1	1
Nomeidae	-	-	1	1	1	2	-	1	1
<i>Peprilus simillimus</i>	2	19	19	18	45	52	22	11	45
<i>Tetragonurus cuvieri</i>	45	76	98	46	31	74	36	5	48
Chiasmodontidae	25	22	39	13	40	60	6	10	41
Pleuronectiformes	2	-	13	7	4	-	1	1	7
<i>Bothus</i> spp.	-	-	2	-	-	-	-	-	-
<i>Citharichthys</i> spp.	186	221	281	243	342	590	108	101	611
<i>Citharichthys stigmaeus</i>	50	97	65	73	65	171	19	42	269
<i>Hippoglossina stomata</i>	24	15	44	42	44	83	12	5	52
<i>Paralichthys californicus</i>	21	37	57	96	107	81	13	13	60
<i>Syacium ovale</i>	-	-	3	-	1	3	-	-	-
<i>Xystreureus liolepis</i>	1	9	15	18	8	30	4	-	22
<i>Glyptocephalus zachirus</i>	2	-	9	18	4	36	-	14	15
<i>Hypsopsetta guttulata</i>	1	-	4	5	10	3	-	-	6
<i>Lepidopsetta bilineata</i>	1	1	-	1	2	3	2	2	1
<i>Lyopsetta exilis</i>	32	31	33	46	33	72	4	20	65
<i>Microstomus pacificus</i>	2	-	11	13	16	52	13	17	56
<i>Parophrys vetulus</i>	14	32	41	41	81	80	6	21	80
<i>Platichthys stellatus</i>	-	-	-	-	-	3	-	-	-
<i>Pleuronichthys</i> spp.	4	3	10	12	1	-	10	3	1
<i>Pleuronichthys coenosus</i>	2	2	6	9	5	11	1	3	15
<i>Pleuronichthys decurrens</i>	1	4	-	1	4	11	-	2	11
<i>Pleuronichthys ritteri</i>	5	3	12	12	9	8	2	1	7
<i>Pleuronichthys verticalis</i>	10	47	56	74	88	81	24	18	66
<i>Psettichthys melanostictus</i>	1	1	5	12	9	10	-	4	14
<i>Symphurus</i> spp.	18	41	73	48	75	138	10	-	71
Soleidae	-	-	-	-	1	-	-	-	-
Tetraodontidae	-	-	-	-	3	-	-	-	-
Disintegrated fish larva	184	223	274	311	319	542	84	74	458
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