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Zooplankton of Shelikof Strait, Alaska, April to August 1986:

Data from Fisheries-Oceanography Coordinated Investigations (FOCI) Cruises

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Zooplankton of Shelikof Strait, Alaska, April to August 1986: Data from Fisheries-Oceanography Coordinated Investigations (FOCI) Cruises

by

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INTRODUCTION

The data in this report were collected as part of the NOAA program Fisheries-Oceanography Coordinated Investigations (FOCI). These data were obtained as part of an ongoing effort to describe the environment of the Shelikof Strait region of Alaska and understand how it relates to the recruitment of walleye pollock, Theragra chalcogramma. Background studies emphasizing areal distribution and seasonal development (March-October) of zooplankton communities were conducted in 1985 using oblique bongo tows and data are given by Siefert et. al. (1988a). Studies of zooplankton in 1986 include vertical distributions in May (see Siefert et. al. 1988b) from MOCNESS samples and further seasonal collections with oblique bongo samples from selected sites during April, May and August. Data from the bongo samples collected in 1986 are reported on here. Incze et. al. (1987) provide a detailed description of the 1986 field operations. Data summarized in these various reports are undergoing analysis and will be the subjects of more detailed manuscripts, some currently in preparation.

METHODS

The area of the Gulf of Alaska covered by this study is

shown in Figure 1, and locations of stations sampled during each of the three cruises are illustrated in Figures 2-4. The majority of sampling was done in Shelikof Strait, south of Cape Kekurnoi and north of Cherikof Island. To provide data for seasonal and interannual comparisons, three transects of time series stations were established. We attempted to occupy stations on these transects during each cruise. The transects were between Cape Kekurnoi and Kodiak Island (line 8); between Sutwik Island and the Semidi Islands, and between the Semidi Islands and Chirikof Island. In May we experimented with different net mesh sizes on plankton nets and sampled additional stations for specific research purposes not necessarily related to the time series.

Plankton samples were obtained by double-oblique tows of 60-cm bongo samplers (Posgay and Marak 1980) equipped with 505 um (April cruise) or 333 um (May and August cruises) mesh nets. On the May cruise at the time series stations described above, 20-cm bongo samplers equipped with 150 um mesh nets were attached to the towing cable about 1 m above the 60-cm bongo. Mechanical flowmeters were installed in the mouth of each net to estimate the volume of water filtered by the nets, and a bathykymograph (BKG) was used to record maximum sampling depth and to verify that sampling trajectories were not biased. Tows were taken from surface to near bottom (generally within 10-15 m or less). Samples were preserved in 5% buffered formalin:seawater for later analysis.

In the laboratory, organisms were sorted into taxonomic categories selected to describe the seasonal development and spatial distribution of zooplankton communities in Shelikof Strait, emphasizing the most abundant species. A list of these taxa is given in Table 1, with definitions of abbreviations used throughout this report.

Samples were sorted at the Alaska Fisheries Science Center in Seattle and the Polish Sorting Center in Szczecin, Poland. Identifications made in Poland were verified by a biologist in Seattle. Samples processed in Poland had ichthyoplankton removed prior to analysis; whereas ichthyoplankton (identified only as Teleostei eggs and larvae) were included in analyses of samples processed in Seattle. Otherwise, the sorting procedures described below were followed at both laboratories. Large organisms such as shrimp and jellyfish were removed and noted. The sample was then split with a Folsom plankton splitter to obtain a subsample with approximately 100-200 organisms $\geq$5mm in their maximum dimension, however splits were not made beyond 1/64 of the original sample. All organisms >5mm, except decapod larvae, euphausiid furciliae and larvaceans, were then removed from this subsample, identified and tabulated. Next, one or two smaller portions of the above subsample were examined for all remaining taxa. The first small subsample was taken so as to obtain approximately 300-500 organisms. This subsample often provided sufficient counts (at least 30) of most of the taxa of particular interest to our study. If it did not, then a second

subsample was sorted for these organisms.

RESULTS

Data summaries for each cruise covered by this report are provided in Tables 2-5. The summary for a particular cruise is separated according to mesh size and identified by cruise number and dates. The tables list: the number of samples examined; the rank order of abundance for each taxon identified in these samples; the percentage of samples in which a taxon was found; and the mean, standard deviation, and maximum and minimum of a taxon's concentration (no. per m^2) in all samples collected during that cruise.

In addition to the cruise data summaries, a list of taxa found in each sample is contained in Appendices 1-3. Taxa are listed in order of abundance and each list includes: the number of organisms counted; the fraction of the sample from which they were counted (sub/fac); their number per $10m^3$ and per m^2; and the percent of organisms that they represent in the sample. Samples are identified by station numbers. In each appendix, location is given to tenths of a degree of latitude and longitude, date and time are GMT, station depth and sample intervals are in meters, volume filtered is expressed in cubic meters and net mesh is in micrometers.

For some taxonomic categories, we usually did not spend the

time to identify and record all species encountered; however, notes were kept on most abundant species in these categories. These species are listed separately in Table 6.

DISCUSSION

Care must be taken in using these data for quantitative comparisons. The size of the net mesh used to collect the samples, the sample splitting process, organism net avoidance behavior, and sample preservation all affect the estimates of taxa collected.

Few taxa in this study are quantitatively retained with a net of 505 um mesh; more are retained with the 333 um and 150 um mesh nets. Those samples collected with the 505 um mesh net and described here were originally intended for the description of pollock egg distribution alone. The width of the widest opening in the 505 um mesh net (the diagonal measure) is 707 um (Smith and Richardson 1977), therefore organisms with a minimum dimension (i.e. width of copepods) less than this would not be retained consistently. Similarly, nets with 333 um mesh used for zooplankton sampling do not consistently retain organisms with a minimum dimension less than 471 um (Miller et. al. 1984), and nets with 150 um mesh do not consistently retain organisms with a minimum dimension less than 212 um. On the basis of size, we consider that the following taxa were quantitatively retained

when the 505 um mesh nets were used: Calanus marshallae adults; Eucalanus bungii C4, C5 and adults; Metridia spp. adult F; Neocalanus cristatus C3, C4, C5, and adults; N. plumchrus adults; anomuran and brachyuran larvae; adult and juvenile euphausiids; chaetognaths ≥ 20mm; and other zooplankton ≥ 5mm in their maximum dimension. In addition to the above organisms the nets with 333 um mesh should retain the following taxa : C. marshallae C3, C4 and C5; C. pacificus C3, C4, C5, and adults; E. bungii C3; Metridia spp. C5 and adult males; M. pacifica C5 and adults; N. cristatus C2; N. plumchrus C3, C4 and C5; euphausiid furciliae; and copepods ≥ 2mm. Finally, 150 um mesh also quantitatively retains the following taxa : C. marshallae C2 and C1; C. pacificus C2 and C1; E. bungii C2 and C1; N. cristatus C1; N. plumchrus C2 and C1; Metriididae C4, C3, and C2; Pseudocalanus spp. C3, C4, C5, and adults; chaetognaths ≥ 5mm; euphausiid calyptopis C3, C2, and C1; and natantian larvae. The retention of various taxa by these nets is summarized in Table 1.

Estimates for gelatinous zooplankton (i.e. cnidarian medusae and larvaceans) are not quantitative because of the effects of sampling and preservation on their structure. The sample splitting process also affects estimates of thecosomate pteropods because they do not stay suspended in the sample. Also, euphausiid adults and juveniles tend to avoid being caught in these nets. Finally, ichthyoplankton data from the April and May cruises not reported on here (see Methods), have been analyzed in more detail and are being used in other studies

(personal communication, Dr. Arthur Kendall, NMFS, Seattle, WA).

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Appendix 2. Abundance of zooplankton taxa at each station sampled during FOX86-III, cruise 2MF86 in Shelikof Strait, 1-19 May 1986.

Appendix 3. Abundance of zooplankton taxa at each station sampled during FOX86-IV, cruise 1OC86 in Shelikof Strait, 28 July-16 August.

Table 1. Taxonomic and size/life history stage categories of invertebrates identified in zooplankton samples from Shelikof Strait. The size and/or stages of taxa which are considered to be quantitatively retained by the various mesh sizes are indicated by underlining. No underline indicates that at least some undersampling is likely with all of the nets used. One, two and three underlines indicate virtually complete retention by the 150, 333 and 505 um mesh nets (therefore all nets), respectively.

Taxon	Size/Life History Stages*
Acartia spp.	
Anomura	larva
Bivalvia	<5mm, veliger <5mm
Brachyura	larva
Bryozoa	cyphonautes <5mm
Calanus marshallae	adult F, adult M, C5, C4, C3, C2, C1
C. pacificus	adult F, adult M, C5, C4, C3, C2, C1
Cephalopoda	≥5mm, <5mm
Chaetognatha	≥20mm, <20mm and ≥5mm, <5mm
Cirripedia	nauplius <5mm, cypris <5mm
Cladocera	<5mm
Cnidaria	medusa ≥5mm, medusa <5mm
Ctenophora	≥5mm, <5mm
Cumacea	≥5mm, <5mm
Echinodermata	≥5mm, <5mm, larva <5mm
Eucalanus bungii	adult F, adult M, C5 F, C5 M, C4 F, C4 M, C3, C2, C1
Euphausiacea	damaged A&J; furcilia; calyptopis 3, 2, 1; nauplius/metanauplius
Euphausia pacifica	A&J
Foraminifera	<5mm

Table 1. Continued

Taxon	Size/Life History Stages*
Gammaridea	≥5mm, <5mm
Gastropoda	<5mm, veliger <5mm
Gymnosomata	≥5mm, <5mm
Hyperiidea	≥5mm, <5mm
Invertebrata	≥5mm, egg <5mm, <5mm
Larvacea	
Metridia spp.	adult F, adult M, C5 F, C5 M, C4
Metridia pacifica	adult F, adult M, C5 F, C5 M, C4
Metriididae	C3, C2, C1
Mysidacea	≥5mm, <5mm
Natantia	≥5mm A&J, <5mm A&J, larva
Nematoda	≥5mm, <5mm
Neocalanus cristatus	adult F, adult M, C5, C4, C3, C2, C1
N. plumchrus	adult F, adult M, C5, C4, C3, C2, C1
Oithona spp.	
Ostracoda	<5mm
Other Copepoda	≥5mm, <5mm and ≥2mm, <2mm, nauplius, unidentified
Other zooplankton	≥5mm, <5mm
Polychaeta	≥5mm, <5mm
Pseudocalanus spp.	adult F, adult M, C5 F, C5 M, C4 F, C4 M
? *Pseudocalanus* spp.**	C3, C2, C1
Radiolaria	<5mm
Siphonophora	≥5mm, <5mm

Table 1. Continued

Taxon	Size/Life History Stages*
Tessarabrachion oculatum	A&J
Thecosomata	≥5mm, <5mm
Thysanoessa inermis	A&J
T.inspinata	A&J
T. longipes	A&J
T. raschii	A&J
T. spinifera	A&J
Unidentified Calanoida	C3, C2, C1

* Life history stage abbreviations:

F= female
M= male
C= copepodite
A&J= adults and juveniles combined
blank= stage not determined

** identification uncertain

Table 2. Zooplankton data summary for FOX86-II, cruise 1MF86 in Shelikof Strait, 2-13 April 1986.

CRUISE 1MF86
2-13 Apr 86
Summary of 8 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Neocalanus plumchrus C-3	87.5	10109.5	7887.0	23543	0
Metridia pacifica - adult F	87.5	1957.9	1172.6	3370	0
Metridia pacifica C-5 M	87.5	990.0	1031.1	3363	0
Metridia spp. - adult F	87.5	752.2	908.9	2673	0
Neocalanus plumchrus C-2	87.5	735.5	574.8	1627	0
Other Copepoda damaged	62.5	725.2	821.8	2047	0
Metridia pacifica C-5 F	87.5	647.3	707.1	2242	0
Pseudocalanus spp. - adult F	87.5	615.6	308.7	1075	0
Neocalanus plumchrus C-4	75.0	610.5	831.4	1897	0
Calanus marshallae - adult F	87.5	443.1	409.8	1336	0
Larvacea	87.5	350.6	359.5	981	0
Chaetognatha 5-20mm	87.5	310.7	177.5	589	0
Metridia pacifica - adult M	87.5	303.7	239.2	731	0
Metridia pacifica C-4	87.5	276.0	210.3	700	0
Other Copepoda <2mm	87.5	261.3	168.5	455	0
Neocalanus cristatus C-3	87.5	252.1	370.7	1046	0
Calanus marshallae - adult M	87.5	231.1	250.0	813	0
Ostracoda <5mm	75.0	210.8	258.8	739	0
Cirripedia - nauplius <5mm	62.5	160.6	239.0	701	0
Hyperiidea <5mm	62.5	98.0	143.3	420	0
Cirripedia - cypris <5mm	25.0	60.2	123.8	342	0
Metridia spp. - adult M	62.5	60.0	57.6	142	0
Pseudocalanus spp. C-5 F	87.5	59.3	74.5	232	0
Calanus pacificus C-5	87.5	58.5	57.1	182	0
Other Copepoda 2-5mm	62.5	55.8	53.5	140	0
Invertebrata - egg <5mm	62.5	53.3	53.5	140	0
Cnidaria - medusa >5mm	87.5	46.3	43.1	128	0
Siphonophora <5mm	37.5	45.8	63.7	140	0
Mysidacea <5mm	37.5	42.1	65.4	171	0
Thecosomata <5mm	50.0	35.6	42.4	114	0
Anomura - larva	12.5	35.0	99.1	280	0
Acartia spp.	87.5	33.4	44.4	140	0
Pseudocalanus spp. C-5 M	75.0	31.2	37.0	116	0
Oithona spp.	87.5	27.7	22.8	73	0
Cnidaria - medusa <5mm	25.0	27.7	51.3	114	0
Chaetognatha >20mm	87.5	23.3	21.4	53	0
Thysanoessa spinifera A&J	62.5	20.5	24.3	60	0
Eucalanus bungii C-4 F	50.0	20.3	48.6	140	0
Neocalanus plumchrus - adult F	37.5	20.1	48.8	140	0
Neocalanus cristatus C-5	75.0	19.1	21.5	64	0
Metridia spp. C-5 M	25.0	18.9	49.1	140	0
Metridia spp. C-5 F	25.0	18.9	49.1	140	0
Other Copepoda >5mm	87.5	18.7	9.8	28	0

Table 2. Continued

CRUISE 1MF86
2-13 Apr 86
Summary of 8 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Pseudocalanus spp. C-4 F	25.0	18.1	40.9	116	0
Natantia - larva	37.5	17.7	25.9	57	0
Neocalanus plumchrus C-1	12.5	14.5	41.1	116	0
Nematoda <5mm	12.5	14.5	41.1	116	0
Gammaridea <5mm	25.0	14.4	26.6	58	0
Hyperiidea >5mm	87.5	13.8	11.2	36	0
Neocalanus cristatus C-4	87.5	12.5	7.4	22	0
Mysidacea >5mm	75.0	12.1	13.9	39	0
Gammaridea >5mm	50.0	11.0	19.3	57	0
Eucalanus bungii - adult F	75.0	10.8	9.0	28	0
Siphonophora >5mm	75.0	10.8	10.0	28	0
Metridia spp. C-4	37.5	10.2	21.6	62	0
Pseudocalanus spp. - adult M	50.0	10.0	12.4	34	0
Eucalanus bungii - adult M	87.5	9.9	10.0	28	0
Euphausia pacifica A&J	87.5	9.8	9.3	29	0
Polychaeta <5mm	12.5	7.1	20.1	57	0
Metriididae C-3	12.5	7.0	19.8	56	0
Other zooplankton <5mm	12.5	6.7	19.1	54	0
Thysanoessa inermis A&J	37.5	6.6	12.2	35	0
Eucalanus bungii C-5 F	62.5	4.2	3.7	9	0
Calanus pacificus - adult F	25.0	3.1	6.0	16	0
Eucalanus bungii C-5 M	37.5	2.7	3.7	7	0
Polychaeta >5mm	37.5	2.7	5.0	15	0
Euphausiacea - furcilia	12.5	2.2	6.3	18	0
Eucalanus bungii C-4 M	25.0	2.0	3.7	10	0
Calanus marshallae C-5	12.5	1.5	4.2	12	0
Eucalanus bungii C-3	12.5	1.2	3.4	10	0
Euphausiacea - calyptopis 2	12.5	0.7	2.1	6	0
Thysanoessa raschii A&J	12.5	0.5	1.5	4	0
Natantia A&J >5mm	12.5	0.5	1.3	4	0
Thysanoessa longipes A&J	12.5	0.5	1.3	4	0

Table 3. Zooplankton data summary for FOX86-III, cruise 2MF86 in Shelikof Strait, 1-19 May 1986. Sampled with 333 um mesh net.

CRUISE 2MF86
1-19 May 86
Summary of 42 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Cirripedia - nauplius <5mm	90.5	18935.8	25486.8	93340	0
Pseudocalanus spp. - adult F	100.0	18928.5	12002.7	50805	3884
Invertebrata - egg <5mm	90.5	8749.3	17876.5	98091	0
Pseudocalanus spp. - adult M	100.0	8022.5	4955.7	20698	1580
Pseudocalanus spp. C-5 F	100.0	7664.0	5947.6	27175	1053
Neocalanus plumchrus C-5	100.0	7012.0	5964.4	31942	100
Pseudocalanus spp. C-5 M	100.0	6360.3	4289.5	19105	1053
Acartia spp.	100.0	4389.6	3203.1	11993	516
Euphausiacea - calyptopis 2	85.7	4154.8	10020.6	44573	0
Neocalanus plumchrus C-4	102.4	4146.5	2955.7	11834	0
Cirripedia - cypris <5mm	69.0	3210.5	8839.3	40172	0
Euphausiacea - nauplius	88.1	3122.5	3884.9	20003	0
Larvacea	95.2	3021.4	3358.1	17595	0
Euphausiacea - calyptopis 3	73.8	3016.5	7682.8	28356	0
Oithona spp.	97.6	2906.9	7919.0	47353	0
Metridia pacifica C-4	100.0	2622.6	1893.3	8865	38
Metridia pacifica - adult F	100.0	2611.1	2548.1	10824	24
Calanus marshallae C-2	100.0	2437.9	3899.2	18768	251
Other Copepoda <2mm	92.9	2285.5	1668.5	5369	0
Metridia pacifica C-5 M	100.0	2223.5	1741.1	9603	33
Calanus marshallae C-3	102.4	2195.1	3423.6	16897	0
Euphausiacea - furcilia	64.3	2124.3	7184.0	34598	0
Metridia pacifica C-5 F	100.0	1956.4	1809.0	8953	24
Metridia pacifica - adult M	97.6	1916.3	2210.1	8794	0
Euphausiacea - calyptopis 1	88.1	1888.2	2823.2	11815	0
Pseudocalanus spp. C-4 F	100.0	1335.3	1091.2	4884	137
Calanus marshallae C-4	100.0	1098.6	2627.1	13413	19
Calanus marshallae C-1	95.2	960.4	2546.7	16422	0
Pseudocalanus spp. C-4 M	100.0	873.1	745.1	3028	84
Other Copepoda - nauplius	23.8	721.3	3166.0	19107	0
Metriididae C-3	73.8	708.6	952.2	4735	0
Ostracoda <5mm	54.8	600.0	844.3	3452	0
Thecosomata <5mm	66.7	593.9	835.5	3519	0
Polychaeta <5mm	69.0	562.9	833.0	3519	0
Other Copepoda damaged	31.0	514.9	982.3	3893	0
Neocalanus plumchrus C-3	81.0	423.0	415.2	1585	0
Calanus marshallae C-5	92.9	379.5	995.6	5060	0
Chaetognatha 5-20mm	100.0	354.9	245.7	1078	69
Hyperiidea <5mm	59.5	341.3	437.4	1662	0
Metridia spp. - adult F	64.3	294.8	598.0	3750	0
?Pseudocalanus spp. C-3	50.0	265.7	465.4	2492	0
Calanus marshallae - adult F	92.9	234.3	225.3	834	0
Metriididae C-2	21.4	207.0	678.2	3382	0

Table 3. Continued

CRUISE 2MF86
1-19 May 86
Summary of 42 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
?Pseudocalanus spp. C-2	14.3	176.7	634.4	3649	0
Natantia - larva	40.5	163.2	293.3	1478	0
Metriididae C-1	9.5	142.2	506.9	2492	0
Gastropoda - veliger <5mm	26.2	140.6	280.8	1182	0
Chaetognatha <5mm	28.6	130.6	276.1	1222	0
Other Copepoda 2-5mm	31.0	128.8	280.9	1444	0
Neocalanus plumchrus C-2	59.5	87.9	154.6	805	0
Neocalanus cristatus C-4	92.9	81.7	66.5	299	0
Mysidacea <5mm	21.4	81.4	192.7	811	0
Calanus marshallae - adult M	76.2	68.1	107.9	541	0
Cnidaria - medusa <5mm	9.5	65.5	271.4	1557	0
?Pseudocalanus spp. C-1	7.1	64.1	384.7	2492	0
Cnidaria - medusa >5mm	95.2	62.8	49.7	242	0
Gammaridea <5mm	9.5	62.0	264.4	1353	0
Other zooplankton <5mm	9.5	61.2	263.0	1630	0
Chaetognatha >20mm	100.0	59.9	64.7	341	3
Thysanoessa inermis A&J	78.6	55.0	80.4	336	0
Anomura - larva	14.3	52.4	169.6	779	0
Neocalanus cristatus C-5	95.2	36.6	43.4	243	0
Calanus pacificus C-5	45.2	35.7	66.6	334	0
Metridia spp. C-5 M	23.8	34.7	89.7	389	0
Metridia spp. C-5 F	21.4	33.9	80.6	389	0
Metridia spp. - adult M	23.8	32.9	71.4	340	0
Metridia spp. C-4	31.0	31.4	80.8	481	0
Neocalanus plumchrus - adult M	4.8	31.0	180.9	1168	0
Thysanoessa spinifera A&J	73.8	26.8	53.7	320	0
Other Copepoda >5mm	66.7	25.1	27.8	99	0
Siphonophora <5mm	7.1	17.4	69.7	394	0
Gammaridea >5mm	42.9	14.1	26.8	105	0
Mysidacea >5mm	54.8	13.0	24.8	143	0
Hyperiidea >5mm	78.6	11.5	15.3	64	0
Eucalanus bungii - adult F	73.8	10.7	13.7	53	0
Echinodermata - larva <5mm	2.4	9.7	62.9	407	0
Euphausia pacifica A&J	45.2	9.6	36.0	233	0
Gymnosomata <5mm	4.8	9.5	60.9	394	0
Cumacea <5mm	2.4	9.1	59.2	384	0
Eucalanus bungii C-2	7.1	6.8	30.6	179	0
Eucalanus bungii C-1	4.8	6.6	32.1	190	0
Siphonophora >5mm	33.3	4.7	10.2	51	0
Cladocera <5mm	2.4	4.4	28.6	185	0
Eucalanus bungii C-4 F	11.9	4.3	16.1	89	0
Polychaeta >5mm	31.0	3.3	9.0	54	0
Eucalanus bungii C-5 F	23.8	3.0	6.7	25	0

Table 3. Continued

CRUISE 2MF86
1-19 May 86
Summary of 42 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Eucalanus bungii C-5 M	26.2	2.3	4.8	21	0
Eucalanus bungii - adult M	28.6	2.2	4.7	23	0
Neocalanus plumchrus C-1	4.8	2.1	9.5	49	0
Neocalanus cristatus C-3	2.4	1.9	12.5	81	0
Unidentified Calanoida C-1	2.4	1.3	8.3	54	0
Calanus pacificus - adult F	9.5	1.2	4.0	18	0
Natantia A&J >5mm	21.4	0.8	2.3	12	0
Thysanoessa raschii A&J	11.9	0.8	2.4	11	0
Cumacea >5mm	11.9	0.8	2.5	13	0
Unidentified Calanoida C-3	2.4	0.7	4.6	30	0
Gymnosomata >5mm	11.9	0.6	1.6	6	0
Euphausiacea A&J damaged	2.4	0.5	3.3	21	0
Euphausiacea damaged	4.8	0.4	1.8	10	0
Calanus pacificus C-4	2.4	0.4	2.5	16	0
Eucalanus bungii C-3	2.4	0.4	2.3	15	0
Thysanoessa longipes A&J	7.1	0.2	1.0	6	0
Eucalanus bungii C-4 M	2.4	0.2	1.4	9	0
Thysanoessa inspinata A&J	4.8	0.2	0.9	6	0
Bivalvia >5mm	2.4	0.1	0.9	6	0
Tessarabrachion oculatum A&J	2.4	0.1	0.9	6	0

Table 4. Zooplankton data summary for FOX86-III, cruise 2MF86 in Shelikof Strait, 1-19 May 1986. Sampled with 150 um mesh net.

CRUISE 2MF86
1-19 May 86
Summary of 10 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Oithona spp.	100.0	39653.8	217379.4	482291	32247
Other Copepoda - nauplius	100.0	34302.5	190683.3	459684	31207
Cirripedia - nauplius <5mm	100.0	21817.4	178937.1	512435	5981
Euphausiacea - nauplius	100.0	15530.8	126558.3	369254	13298
Larvacea	100.0	15309.9	108876.6	286361	8435
?Pseudocalanus spp. C-1	100.0	13939.4	91088.5	241146	12483
?Pseudocalanus spp. C-2	100.0	12976.2	100690.2	286361	7282
?Pseudocalanus spp. C-3	100.0	12691.2	101303.6	286361	8879
Euphausiacea - calyptopis 1	100.0	11631.3	130775.2	391862	965
Polychaeta <5mm	100.0	11304.0	109307.4	324040	6112
Echinodermata - larva <5mm	100.0	10535.4	93038.0	271289	3022
Pseudocalanus spp. - adult F	100.0	10180.6	91869.2	271289	6758
Euphausiacea - furcilia	70.0	9314.0	110913.7	331575	0
Other Copepoda <2mm	100.0	8096.7	43740.7	69671	3893
Invertebrata - egg <5mm	100.0	7390.2	40949.1	82894	5440
Pseudocalanus spp. C-5 F	100.0	6976.9	68535.7	203467	3641
Cirripedia - cypris <5mm	90.0	6852.7	82900.1	248682	0
Pseudocalanus spp. C-5 M	100.0	6660.8	63301.4	188395	4836
Pseudocalanus spp. C-4 M	100.0	5681.9	49215.4	143180	3627
Euphausiacea - calyptopis 2	90.0	5241.6	51190.4	150716	0
Acartia spp.	100.0	4859.5	29986.9	75358	604
Pseudocalanus spp. - adult M	100.0	4666.0	36540.0	105501	3995
Pseudocalanus spp. C-4 F	100.0	4188.1	38324.4	113037	2896
Euphausiacea - calyptopis 3	80.0	3934.7	45270.6	135644	0
Metriididae C-1	100.0	3005.8	18151.7	38685	1298
Metriididae C-2	100.0	2195.6	13246.6	32237	483
Metriididae C-3	90.0	1905.3	12493.4	32237	0
Other zooplankton <5mm	100.0	1904.8	15674.4	45215	655
Calanus marshallae C-4	50.0	1829.6	20336.3	60286	0
Calanus marshallae C-1	100.0	1732.2	11203.9	23358	1300
Calanus marshallae C-3	90.0	1619.2	15443.4	45215	0
Gastropoda - veliger <5mm	80.0	1610.7	15283.2	45215	0
Calanus marshallae C-2	90.0	1601.6	10327.8	22607	0
Bivalvia <5mm	20.0	1268.4	17533.5	52751	0
Calanus marshallae C-5	40.0	1123.0	12731.7	37679	0
Bryozoa - cyphonautes <5mm	90.0	1021.2	10183.7	30143	0
Neocalanus plumchrus C-5	90.0	950.0	5939.3	15072	0
Foraminifera <5mm	30.0	894.8	10249.9	30143	0
Other Copepoda damaged	80.0	886.8	6127.5	15072	0
Metridia pacifica C-5 M	80.0	861.4	5891.9	15072	0
Metridia pacifica C-4	80.0	834.6	4923.7	9432	0
Neocalanus plumchrus C-4	80.0	797.4	4523.8	7923	0
Metridia pacifica - adult F	80.0	792.5	5698.5	15072	0

Table 4. Continued

CRUISE 2MF86
1-19 May 86
Summary of 10 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Other Copepoda 2-5mm	50.0	678.8	7583.0	22607	0
Cnidaria - medusa <5mm	60.0	667.3	7574.4	22607	0
Thecosomata <5mm	60.0	628.4	7538.4	22607	0
Chaetognatha <5mm	70.0	540.8	5131.0	15072	0
Metridia pacifica - adult M	60.0	402.5	2752.0	6103	0
Metridia pacifica C-5 F	70.0	375.7	2773.1	7547	0
Bivalvia - veliger <5mm	30.0	165.2	2117.1	6356	0
Ostracoda <5mm	30.0	90.7	847.5	2037	0
Neocalanus plumchrus C-1	10.0	82.4	1150.2	3460	0
Neocalanus plumchrus C-3	30.0	73.3	669.9	1776	0
Neocalanus plumchrus C-2	10.0	61.8	862.6	2595	0
Natantia - larva	70.0	54.8	312.3	555	0
Chaetognatha 5-20mm	100.0	42.5	213.9	412	35
Invertebrata <5mm	30.0	32.8	375.8	1110	0
Eucalanus bungii C-1	20.0	27.6	272.3	606	0
Hyperiidea <5mm	40.0	25.0	211.6	555	0
Anomura - larva	20.0	24.7	243.8	555	0
Eucalanus bungii C-2	20.0	23.5	233.2	555	0
Calanus marshallae - adult F	30.0	22.5	210.7	453	0
Cnidaria - medusa >5mm	100.0	21.7	191.3	559	6
Teleostei - larva >5mm	100.0	18.2	126.8	324	7
Mysidacea <5mm	20.0	15.8	163.1	437	0
Brachyura - larva	10.0	14.4	201.4	606	0
Calanus marshallae - adult M	20.0	14.4	185.1	555	0
Teleostei - egg <5mm	20.0	11.5	144.7	433	0
Neocalanus cristatus C-5	70.0	10.2	70.0	177	0
Chaetognatha >20mm	50.0	9.5	83.4	235	0
Thysanoessa inermis A&J	60.0	7.5	68.7	196	0
Siphonophora <5mm	10.0	6.2	86.4	260	0
Nematoda <5mm	10.0	5.4	75.2	226	0
Neocalanus cristatus C-4	50.0	4.5	31.7	72	0
Gammaridea >5mm	40.0	2.9	23.4	59	0
Siphonophora >5mm	50.0	2.8	24.7	68	0
Other Copepoda >5mm	30.0	1.9	15.2	30	0
Teleostei - larva <5mm	10.0	1.2	16.7	50	0
Euphausia pacifica A&J	20.0	1.0	12.5	37	0
Hyperiidea >5mm	30.0	0.9	7.6	18	0
Polychaeta >5mm	20.0	0.8	10.0	29	0
Eucalanus bungii - adult F	30.0	0.8	7.5	21	0
Thysanoessa spinifera A&J	20.0	0.7	6.5	15	0
Mysidacea >5mm	30.0	0.6	5.2	12	0
Thysanoessa raschii A&J	10.0	0.4	5.0	15	0
Thysanoessa inspinata A&J	10.0	0.2	2.5	8	0

Table 5. Zooplankton data summary for FOX86-IV, cruise 10C86 in Shelikof Strait, 28 July-16 August 1986.

CRUISE 10C86
28 Jul - 16 Aug 1986
Summary of 6 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Pseudocalanus spp. C-5 M	83.3	6671.0	10120.4	22894	0
Pseudocalanus spp. C-5 F	100.0	5298.7	8018.2	19112	226
Calanus marshallae C-5	100.0	5038.7	5306.1	14374	35
Pseudocalanus spp. - adult F	100.0	4548.9	4197.4	12131	400
Oithona spp.	100.0	4153.1	2657.6	8475	832
Metridia pacifica C-5 M	100.0	3131.5	2509.3	7145	350
Metridia pacifica - adult F	100.0	2831.4	2189.5	6090	884
Metridia pacifica C-5 F	100.0	2189.3	1586.3	4819	494
Metridia pacifica - adult M	100.0	2115.6	1968.1	5318	104
Acartia spp.	100.0	2079.3	1839.0	4154	96
Metridia pacifica C-4	100.0	1726.9	1465.8	3656	104
Other Copepoda <2mm	100.0	1602.5	1099.0	3490	165
Eucalanus bungii C-5 F	100.0	1293.5	895.6	2181	117
Thysanoessa inermis A&J	100.0	1054.7	1405.0	3694	26
Chaetognatha 5-20mm	100.0	1040.3	621.7	2024	436
Eucalanus bungii C-5 M	100.0	1014.1	728.2	1558	75
Cnidaria - medusa >5mm	100.0	893.5	633.7	1890	244
Thecosomata <5mm	100.0	805.4	488.7	1502	104
Foraminifera <5mm	50.0	626.1	966.9	2103	0
Calanus marshallae - adult F	83.3	583.1	408.9	1248	0
Euphausiacea - furcilia	83.3	520.9	366.0	1137	0
Neocalanus plumchrus C-5	100.0	515.9	602.3	1662	17
Metridia spp. C-5 F	50.0	515.0	1055.5	2653	0
Metridia spp. C-5 M	50.0	491.1	703.9	1592	0
Metriididae C-3	83.3	456.2	521.5	1163	0
Invertebrata - egg <5mm	100.0	448.1	345.0	997	81
Brachyura - larva	100.0	398.7	403.6	997	35
Pseudocalanus spp. - adult M	100.0	383.5	365.3	831	9
Neocalanus plumchrus - adult F	66.7	374.7	549.1	1163	0
Cnidaria - medusa <5mm	100.0	370.2	187.7	661	162
Hyperiidea <5mm	100.0	365.8	298.5	831	85
Eucalanus bungii C-4 F	83.3	323.0	297.7	679	0
Ostracoda <5mm	83.3	317.2	338.3	876	0
Eucalanus bungii C-4 M	66.7	276.6	302.7	701	0
Other Copepoda 2-5mm	83.3	226.2	228.7	596	0
Eucalanus bungii - adult F	100.0	193.2	142.3	406	19
Eucalanus bungii C-3	66.7	181.7	233.5	596	0
Other zooplankton <5mm	66.7	176.9	323.6	831	0
Euphausiacea A&J damaged	100.0	166.4	262.6	690	21
Calanus marshallae C-4	66.7	158.5	252.9	665	0
Neocalanus cristatus C-5	83.3	145.1	160.7	421	0
Gastropoda - veliger <5mm	83.3	134.0	187.1	499	0
Chaetognatha <5mm	66.7	127.2	116.4	265	0

Table 5. Continued

CRUISE 10C86
28 Jul - 16 Aug 1986
Summary of 6 samples sorted

Taxon	Percentage of samples in which found	Concentration (no / m2) Mean	s.d.	max	min
Cirripedia - cypris <5mm	50.0	119.9	203.7	499	0
Euphausia pacifica A&J	100.0	118.3	49.1	187	50
Neocalanus cristatus C-3	50.0	108.8	124.5	280	0
Gymnosomata <5mm	66.7	96.8	93.1	199	0
Other Copepoda damaged	66.7	93.4	125.5	315	0
Neocalanus cristatus C-1	33.3	88.5	197.6	491	0
Hyperiidea >5mm	83.3	80.7	75.5	205	0
Chaetognatha >20mm	100.0	76.9	48.9	145	16
Thysanoessa spinifera A&J	83.3	76.7	84.6	236	0
Neocalanus cristatus C-2	50.0	61.8	96.0	245	0
Metridia spp. - adult F	16.7	55.4	135.7	332	0
Neocalanus cristatus C-4	33.3	48.4	81.9	197	0
Eucalanus bungii - adult M	100.0	44.2	44.7	125	3
Unidentified Calanoida C-3	33.3	42.7	72.6	175	0
Calanus marshallae C-3	50.0	35.9	65.7	166	0
Calanus pacificus C-5	16.7	35.0	85.8	210	0
Natantia - larva	66.7	32.1	26.6	66	0
Larvacea	66.7	29.2	26.1	66	0
Polychaeta <5mm	16.7	29.2	71.5	175	0
Calanus pacificus - adult M	16.7	27.1	66.3	162	0
Siphonophora >5mm	16.7	24.1	59.0	145	0
Thysanoessa inspinata A&J	33.3	22.5	53.4	131	0
Unidentified Calanoida C-2	16.7	20.3	49.7	122	0
Siphonophora <5mm	50.0	19.7	21.7	42	0
Anomura - larva	16.7	18.8	46.1	113	0
Cirripedia - nauplius <5mm	33.3	15.0	32.6	81	0
Natantia A&J >5mm	50.0	13.9	22.4	55	0
Other Copepoda >5mm	33.3	8.5	13.2	26	0
Thysanoessa raschii A&J	16.7	8.3	20.3	50	0
Invertebrata <5mm	33.3	8.2	16.2	41	0
Gammaridea <5mm	16.7	7.1	17.3	42	0
Mysidacea >5mm	16.7	6.8	16.6	41	0
Calanus marshallae C-2	16.7	6.8	16.6	41	0
Pseudocalanus spp. C-4 F	16.7	6.8	16.6	41	0
Euphausiacea - calyptopis 1	16.7	5.8	14.3	35	0
Metriididae C-2	16.7	5.8	14.3	35	0
Polychaeta >5mm	33.3	4.2	8.3	21	0
Teleostei - larva >5mm	33.3	3.7	5.9	13	0
Tessarabrachion oculatum A&J	16.7	2.2	5.4	13	0
Cumacea >5mm	16.7	1.4	3.5	8	0
Gammaridea >5mm	16.7	0.7	1.7	4	0
Invertebrata >5mm	16.7	0.7	1.7	4	0
Other zooplankton >5mm	16.7	0.7	1.7	4	0

Table 6. Invertebrate zooplankton taxa not routinely identified to species, and the species most commonly encountered from these taxa in Shelikof Strait in 1986.

Taxon	Composition
Acartia spp.	*Acartia longiremis*
Anomura larva	Paguridae
Brachyura larva	*Chionoecetes bairdi*, other Majidae
Chaetognatha	*Eukronia hamata*, *Sagitta elegans*
Cnidaria medusa	*Aglantha digitale*
Gammaridea	*Cyphocharis challengeri*
Gymnosomata	*Clione* spp.
Hyperiidea	*Themisto pacifica*, *Primno macropa*
Larvacea	*Fritillaria* spp., *Oikopleura* spp.
Mysidacea	*Meterythrops* spp.
Natantia A&J	*Pandalus borealis*
Oithona spp.	*Oithona similis*
Other Copepoda ≥5mm	Euchaetidae
Other Copepoda ≥2 and <5mm	Euchaetidae, Scolecithricidae, Aetideidae
Other Copepoda <2mm	Scolecithricidae, *Microcalanus* spp., *Oncaea* spp., Aetideidae, *Centropages* spp.
Polychaeta	Tomopteridae
Thecosomata	*Limacina helicina*

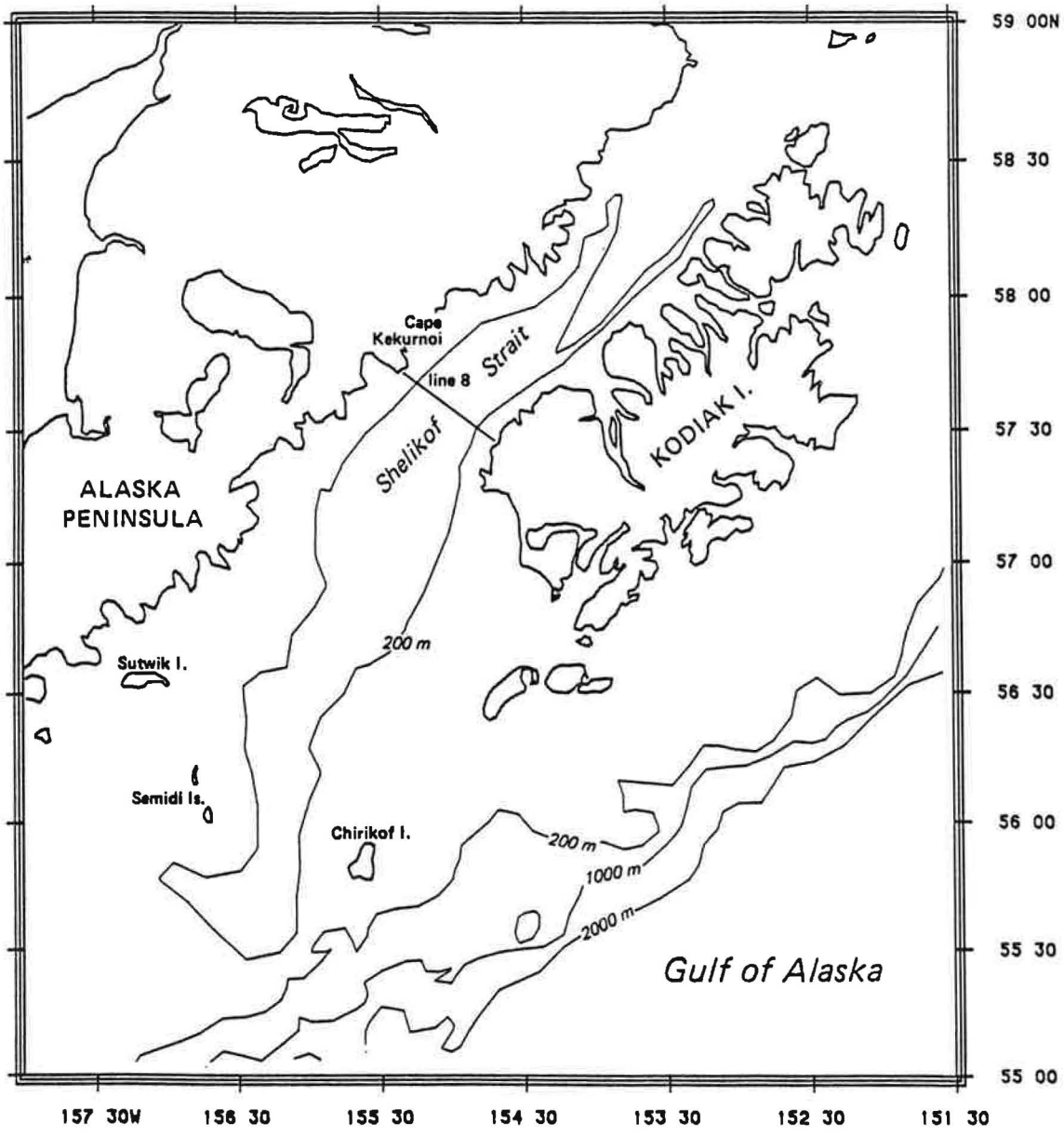

Figure 1. Geography and bathymetry of Shelikof Strait, northwestern Gulf of Alaska.

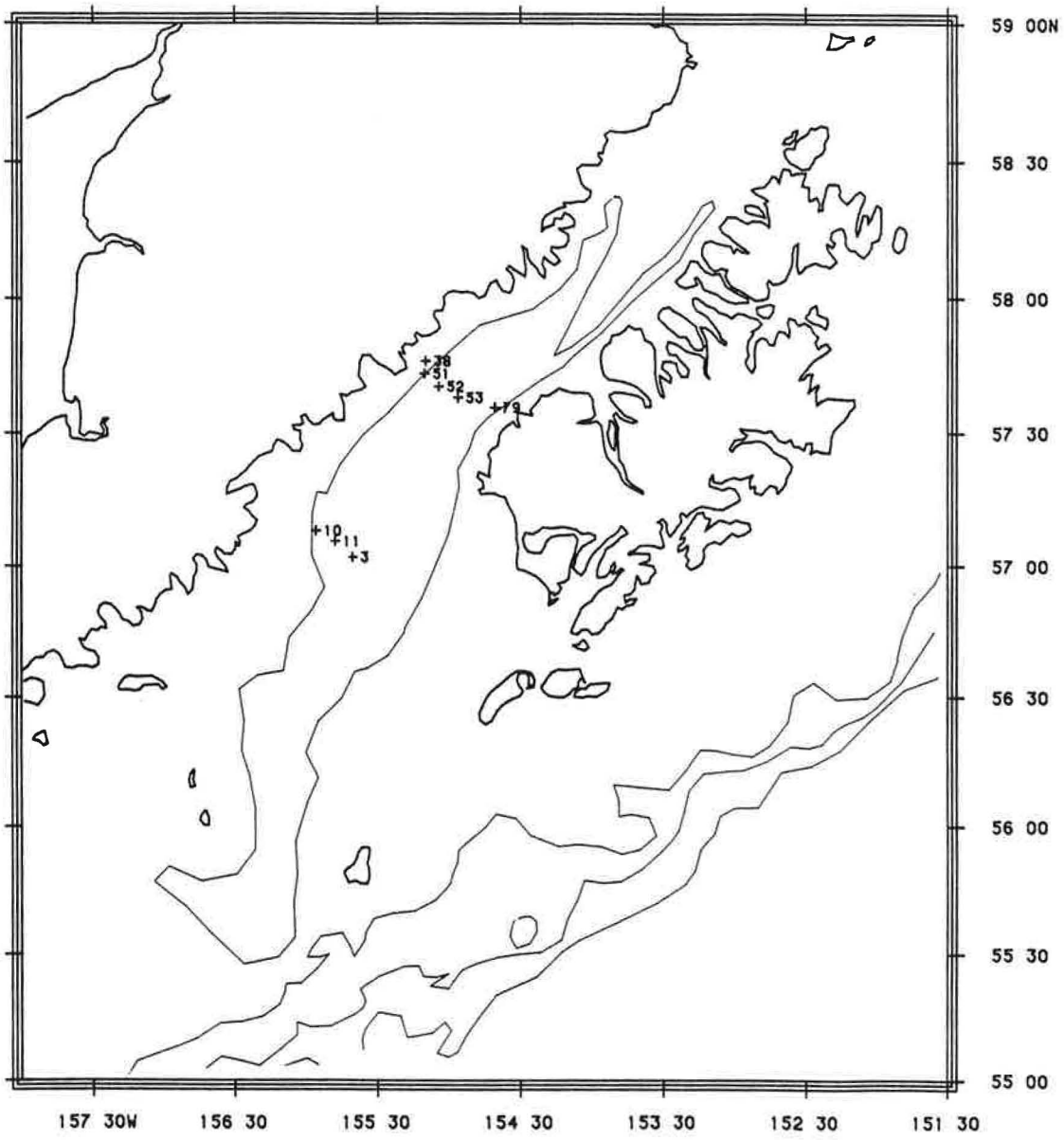

Figure 2. Stations sampled for zooplankton, FOX86-II, cruise 1MF86, 2-13 April 1986.

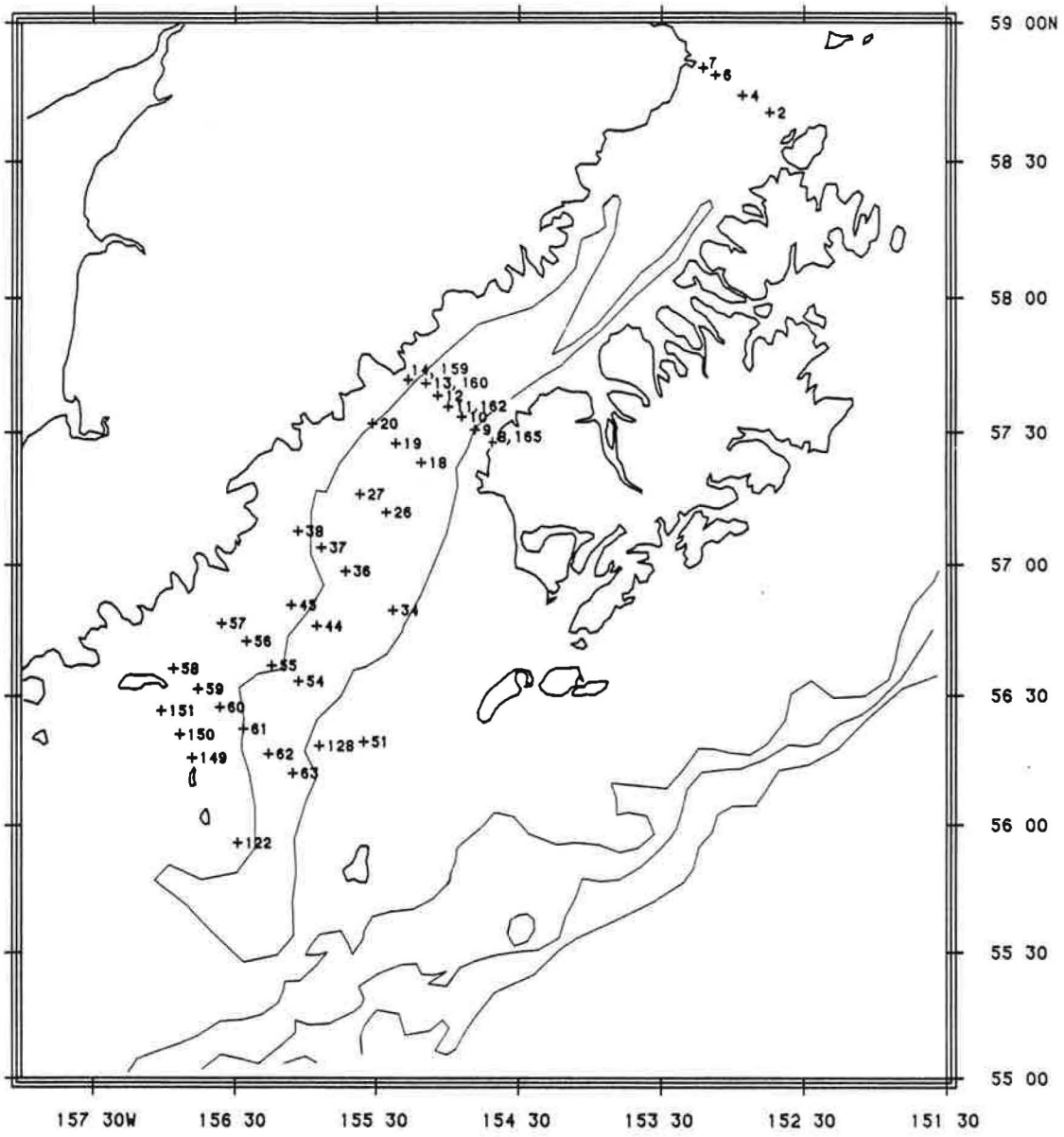

Figure 3. Stations sampled for zooplankton, FOX86-III, cruise 2MF86, 1-19 May 1986.

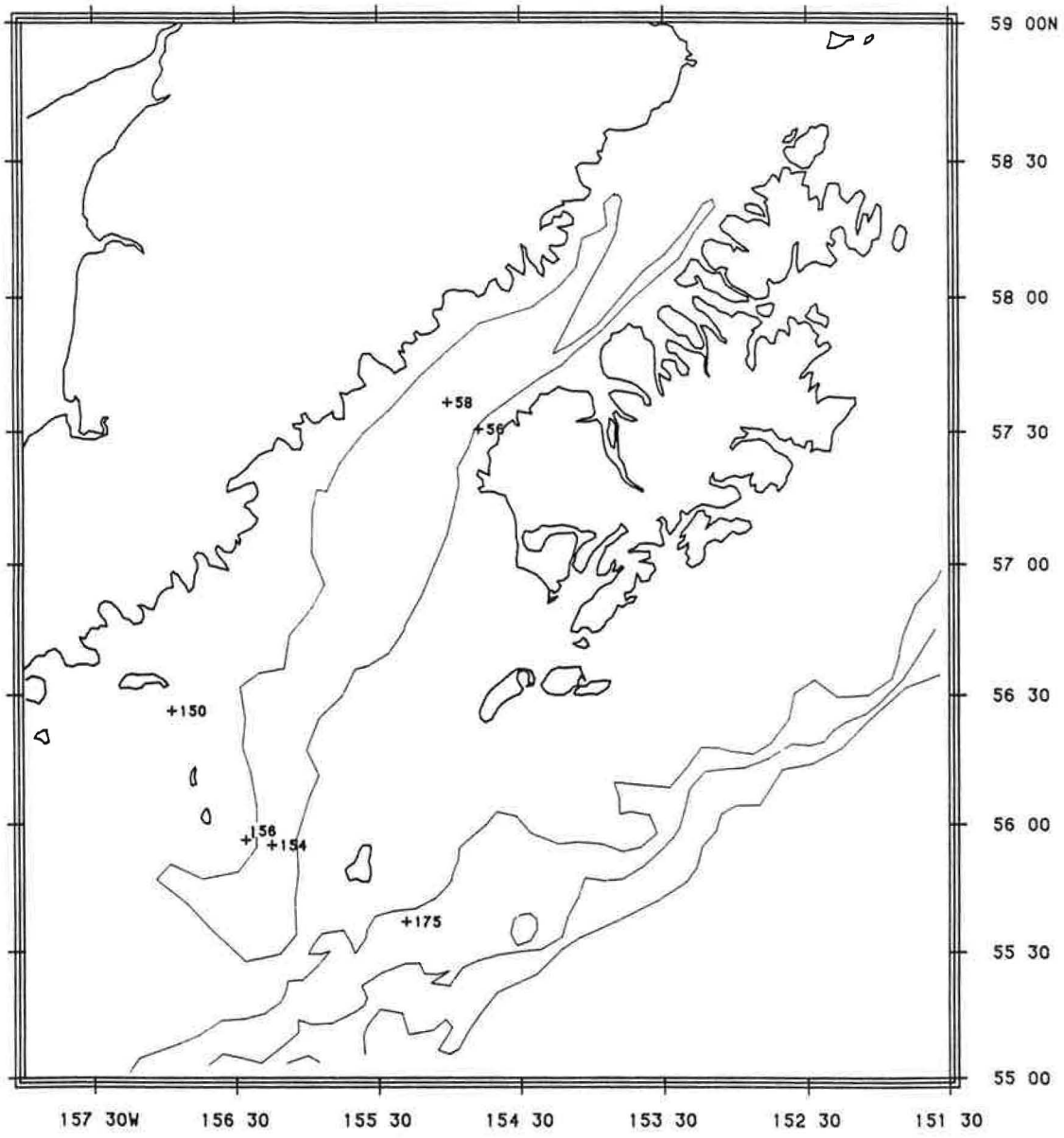

Figure 4. Stations sampled for zooplankton, FOX86-IV, cruise 10C86, 28 July-16 August 1986.

Appendix 1. Abundance of zooplankton taxa at each station sampled during FOX86-II, cruise 1MF86 in Shelikof Strait, 2-13 April 1986.

STA. 003 57 02.1 N 155 40.6 W 05 Apr 86 3:22

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
293	0 - 282	310.3	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	150	64.0	309	8725	49.7
Metridia pacifica - adult F	46	64.0	95	2676	15.2
Neocalanus plumchrus C-2	22	64.0	45	1280	7.3
Chaetognatha 5-20mm	81	8.0	21	589	3.4
Pseudocalanus spp. - adult F	40	16.0	21	582	3.3
Neocalanus cristatus C-3	10	64.0	21	582	3.3
Calanus marshallae - adult F	37	16.0	19	538	3.1
Metridia spp. - adult F	9	64.0	19	523	3.0
Metridia pacifica C-4	27	16.0	14	393	2.2
Metridia pacifica C-5 M	21	16.0	11	305	1.7
Metridia pacifica C-5 F	17	16.0	9	247	1.4
Other Copepoda <2mm	3	64.0	6	174	1.0
Calanus marshallae - adult M	11	16.0	6	160	0.9
Metridia pacifica - adult M	2	64.0	4	116	0.7
Oithona spp.	5	16.0	3	73	0.4
Metridia spp. - adult M	1	64.0	2	58	0.3
Thecosomata <5mm	1	64.0	2	58	0.3
Ostracoda <5mm	1	64.0	2	58	0.3
Mysidacea <5mm	1	64.0	2	58	0.3
Gammaridea <5mm	1	64.0	2	58	0.3
Larvacea	1	64.0	2	58	0.3
Pseudocalanus spp. C-5 M	2	16.0	1	29	0.2
Euphausia pacifica A&J	4	8.0	1	29	0.2
Calanus pacificus C-5	1	16.0	1	15	0.1
Other Copepoda >5mm	2	8.0	1	15	0.1
Pseudocalanus spp. C-5 F	1	16.0	1	15	0.1
Acartia spp.	1	16.0	1	15	0.1
Neocalanus plumchrus - adult F	1	16.0	1	15	0.1
Neocalanus plumchrus C-4	1	16.0	1	15	0.1
Polychaeta >5mm	2	8.0	1	15	0.1
Neocalanus cristatus C-4	2	8.0	1	15	0.1
Metridia spp. C-4	1	16.0	1	15	0.1
Hyperiidea >5mm	1	8.0	< 1	7	< 0.1
Eucalanus bungii C-5 M	1	8.0	< 1	7	< 0.1
Chaetognatha >20mm	1	8.0	< 1	7	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	7	< 0.1
Cnidaria - medusa >5mm	1	8.0	< 1	7	< 0.1
Neocalanus cristatus C-5	1	8.0	< 1	7	< 0.1
Mysidacea >5mm	1	8.0	< 1	7	< 0.1
Thysanoessa spinifera A&J	1	8.0	< 1	7	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	7	< 0.1
			623	17566	100.

STA. 010 57 08.1 N 155 56.0 W 05 Apr 86 14:18

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
276	0 - 271	298.5	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	176	128.0	755	20451	56.1
Metridia pacifica - adult F	29	128.0	124	3370	9.2
Metridia spp. - adult F	23	128.0	99	2673	7.3
Neocalanus plumchrus C-2	14	128.0	60	1627	4.5
Calanus marshallae - adult F	23	64.0	49	1336	3.7
Pseudocalanus spp. - adult F	37	32.0	40	1075	3.0
Neocalanus cristatus C-3	9	128.0	39	1046	2.9
Calanus marshallae - adult M	14	64.0	30	813	2.2
Larvacea	7	128.0	30	813	2.2
Metridia pacifica C-5 M	22	32.0	24	639	1.8
Chaetognatha 5-20mm	108	4.0	14	392	1.1
Metridia pacifica C-4	68	5.3	12	327	0.9
Pseudocalanus spp. C-5 F	2	128.0	9	232	0.6
Metridia pacifica - adult M	2	128.0	9	232	0.6
Metridia pacifica C-5 F	7	32.0	8	203	0.6
Invertebrata - egg <5mm	1	128.0	4	116	0.3
Pseudocalanus spp. C-4 F	1	128.0	4	116	0.3
Pseudocalanus spp. C-5 M	1	128.0	4	116	0.3
Neocalanus plumchrus C-1	1	128.0	4	116	0.3
Hyperiidea <5mm	1	128.0	4	116	0.3
Other Copepoda <2mm	1	128.0	4	116	0.3
Nematoda <5mm	1	128.0	4	116	0.3
Neocalanus plumchrus C-4	13	5.3	2	63	0.2
Cnidaria - medusa >5mm	13	4.0	2	47	0.1
Thysanoessa spinifera A&J	13	4.0	2	47	0.1
Oithona spp.	8	5.3	1	38	0.1
Hyperiidea >5mm	10	4.0	1	36	0.1
Calanus pacificus C-5	5	5.3	1	24	0.1
Acartia spp.	5	5.3	1	24	0.1
Eucalanus bungii - adult F	3	4.0	< 1	11	< 0.1
Thysanoessa inermis A&J	3	4.0	< 1	11	< 0.1
Eucalanus bungii - adult M	3	4.0	< 1	11	< 0.1
Other Copepoda >5mm	3	4.0	< 1	11	< 0.1
Eucalanus bungii C-4 M	2	5.3	< 1	10	< 0.1
Euphausia pacifica A&J	2	4.0	< 1	7	< 0.1
Gammaridea >5mm	2	4.0	< 1	7	< 0.1
Neocalanus cristatus C-4	2	4.0	< 1	7	< 0.1
Chaetognatha >20mm	2	4.0	< 1	7	< 0.1
Eucalanus bungii C-4 F	1	5.3	< 1	5	< 0.1
Metridia spp. C-4	1	5.3	< 1	5	< 0.1
Mysidacea >5mm	1	4.0	< 1	4	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	4	< 0.1
Siphonophora >5mm	1	4.0	< 1	4	< 0.1
Thysanoessa longipes A&J	1	4.0	< 1	4	< 0.1
Natantia A&J >5mm	1	4.0	< 1	4	< 0.1
			1344	36435	100.

STA. 011 57 05.7 N 155 48.0 W 05 Apr 86 15:33

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
298	0 - 287	340.6	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	128	64.0	241	6902	36.8
Metridia pacifica - adult F	62	64.0	116	3343	17.8
Other Copepoda damaged	29	64.0	54	1564	8.3
Metridia pacifica C-5 M	22	64.0	41	1186	6.3
Pseudocalanus spp. - adult F	130	7.1	27	778	4.1
Neocalanus plumchrus C-2	14	64.0	26	755	4.0
Metridia pacifica C-5 F	11	64.0	21	593	3.2
Calanus marshallae - adult F	83	7.1	17	497	2.6
Metridia spp. - adult F	7	64.0	13	377	2.0
Calanus marshallae - adult M	50	7.1	10	299	1.6
Chaetognatha 5-20mm	79	4.0	9	266	1.4
Metridia pacifica - adult M	4	64.0	8	216	1.1
Ostracoda <5mm	4	64.0	8	216	1.1
Metridia pacifica C-4	36	7.1	8	215	1.1
Hyperiidea <5mm	3	64.0	6	162	0.9
Cirripedia - nauplius <5mm	3	64.0	6	162	0.9
Other Copepoda <2mm	3	64.0	6	162	0.9
Larvacea	3	64.0	6	162	0.9
Cnidaria - medusa <5mm	2	64.0	4	108	0.6
Neocalanus cristatus C-3	2	64.0	4	108	0.6
Other Copepoda 2-5mm	2	64.0	4	108	0.6
Mysidacea <5mm	2	64.0	4	108	0.6
Cnidaria - medusa >5mm	19	4.0	2	64	0.3
Metridia spp. - adult M	1	64.0	2	54	0.3
Other zooplankton <5mm	1	64.0	2	54	0.3
Oithona spp.	7	7.1	1	42	0.2
Calanus pacificus C-5	6	7.1	1	36	0.2
Acartia spp.	6	7.1	1	36	0.2
Chaetognatha >20mm	8	4.0	1	27	0.1
Other Copepoda >5mm	6	4.0	1	20	0.1
Euphausiacea - furcilia	3	7.1	1	18	0.1
Euphausia pacifica A&J	5	4.0	1	17	0.1
Eucalanus bungii - adult F	4	4.0	< 1	13	0.1
Neocalanus cristatus C-4	4	4.0	< 1	13	0.1
Mysidacea >5mm	4	4.0	< 1	13	0.1
Calanus marshallae C-5	2	7.1	< 1	12	0.1
Pseudocalanus spp. C-5 F	2	7.1	< 1	12	0.1
Neocalanus cristatus C-5	3	4.0	< 1	10	0.1
Siphonophora >5mm	3	4.0	< 1	10	0.1
Eucalanus bungii C-5 F	2	4.0	< 1	7	< 0.1
Eucalanus bungii C-4 F	1	7.1	< 1	6	< 0.1
Euphausiacea - calyptopis 2	1	7.1	< 1	6	< 0.1
Eucalanus bungii C-4 M	1	7.1	< 1	6	< 0.1
Neocalanus plumchrus - adult F	1	7.1	< 1	6	< 0.1
Polychaeta >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
Hyperiidea >5mm	1	4.0	< 1	3	< 0.1

654	18779	100.

STA. 038 57 46.2 N 155 09.9 W 07 Apr 86 16:17

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
282	0 - 262	298.9	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	134	64.0	287	7516	44.4
Metridia pacifica - adult F	24	64.0	51	1346	8.0
Metridia pacifica C-5 M	19	64.0	41	1066	6.3
Metridia pacifica C-5 F	17	64.0	36	954	5.6
Pseudocalanus spp. - adult F	66	12.8	28	740	4.4
Neocalanus plumchrus C-2	10	64.0	21	561	3.3
Metridia spp. - adult F	10	64.0	21	561	3.3
Other Copepoda damaged	9	64.0	19	505	3.0
Larvacea	7	64.0	15	393	2.3
Other Copepoda <2mm	7	64.0	15	393	2.3
Cirripedia - nauplius <5mm	5	64.0	11	280	1.7
Metridia pacifica C-4	25	12.8	11	280	1.7
Calanus marshallae - adult F	23	12.8	10	258	1.5
Neocalanus plumchrus C-4	21	12.8	9	236	1.4
Chaetognatha 5-20mm	67	4.0	9	235	1.4
Ostracoda <5mm	4	64.0	9	224	1.3
Metridia pacifica - adult M	4	64.0	9	224	1.3
Calanus marshallae - adult M	11	12.8	5	123	0.7
Metridia spp. - adult M	2	64.0	4	112	0.7
Siphonophora <5mm	2	64.0	4	112	0.7
Calanus pacificus C-5	6	12.8	3	67	0.4
Thysanoessa spinifera A&J	17	4.0	2	60	0.4
Pseudocalanus spp. C-5 F	5	12.8	2	56	0.3
Neocalanus cristatus C-3	1	64.0	2	56	0.3
Thecosomata <5mm	1	64.0	2	56	0.3
Metriididae C-3	1	64.0	2	56	0.3
Natantia - larva	1	64.0	2	56	0.3
Other Copepoda 2-5mm	1	64.0	2	56	0.3
Invertebrata - egg <5mm	1	64.0	2	56	0.3
Thysanoessa inermis A&J	10	4.0	1	35	0.2
Neocalanus cristatus C-5	10	4.0	1	35	0.2
Pseudocalanus spp. - adult M	3	12.8	1	34	0.2
Pseudocalanus spp. C-5 M	3	12.8	1	34	0.2
Other Copepoda >5mm	8	4.0	1	28	0.2
Acartia spp.	2	12.8	1	22	0.1
Siphonophora >5mm	5	4.0	1	18	0.1
Hyperiidea >5mm	4	4.0	1	14	0.1
Oithona spp.	1	12.8	< 1	11	0.1
Euphausia pacifica A&J	3	4.0	< 1	11	0.1
Eucalanus bungii - adult F	3	4.0	< 1	11	0.1
Cnidaria - medusa >5mm	2	4.0	< 1	7	< 0.1
Neocalanus cristatus C-4	2	4.0	< 1	7	< 0.1
Eucalanus bungii C-5 F	2	4.0	< 1	7	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	4	< 0.1
Chaetognatha >20mm	1	4.0	< 1	4	< 0.1
			646	16919	100.

STA. 052 57 40.5 N 155 04.4 W 09 Apr 86 16:13

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
274	0 - 266	243.0	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	168	128.0	885	23543	51.7
Metridia pacifica C-5 M	24	128.0	126	3363	7.4
Metridia pacifica - adult F	145	14.2	85	2254	4.9
Metridia pacifica C-5 F	16	128.0	84	2242	4.9
Neocalanus plumchrus C-4	122	14.2	71	1897	4.2
Metridia spp. - adult F	11	128.0	58	1541	3.4
Other Copepoda damaged	10	128.0	53	1401	3.1
Neocalanus plumchrus C-2	8	128.0	42	1121	2.5
Larvacea	7	128.0	37	981	2.2
Metridia pacifica - adult M	47	14.2	27	731	1.6
Pseudocalanus spp. - adult F	46	14.2	27	715	1.6
Cirripedia - nauplius <5mm	5	128.0	26	701	1.5
Metridia pacifica C-4	45	14.2	26	700	1.5
Ostracoda <5mm	3	128.0	16	420	0.9
Other Copepoda <2mm	3	128.0	16	420	0.9
Hyperiidea <5mm	3	128.0	16	420	0.9
Chaetognatha 5-20mm	83	4.0	14	363	0.8
Calanus marshallae - adult F	20	14.2	12	311	0.7
Anomura - larva	2	128.0	11	280	0.6
Metridia spp. C-5 F	1	128.0	5	140	0.3
Cirripedia - cypris <5mm	1	128.0	5	140	0.3
Other Copepoda 2-5mm	1	128.0	5	140	0.3
Eucalanus bungii C-4 F	1	128.0	5	140	0.3
Siphonophora <5mm	1	128.0	5	140	0.3
Invertebrata - egg <5mm	1	128.0	5	140	0.3
Neocalanus plumchrus - adult F	1	128.0	5	140	0.3
Acartia spp.	1	128.0	5	140	0.3
Neocalanus cristatus C-3	1	128.0	5	140	0.3
Metridia spp. C-5 M	1	128.0	5	140	0.3
Calanus marshallae - adult M	8	14.2	5	124	0.3
Pseudocalanus spp. C-5 F	5	14.2	3	78	0.2
Calanus pacificus C-5	5	14.2	3	78	0.2
Cnidaria - medusa >5mm	17	4.0	3	74	0.2
Metridia spp. C-4	4	14.2	2	62	0.1
Chaetognatha >20mm	12	4.0	2	53	0.1
Thysanoessa spinifera A&J	9	4.0	1	39	0.1
Pseudocalanus spp. C-5 M	2	14.2	1	31	0.1
Other Copepoda >5mm	6	4.0	1	26	0.1
Mysidacea >5mm	6	4.0	1	26	0.1
Neocalanus cristatus C-5	5	4.0	1	22	< 0.1
Neocalanus cristatus C-4	5	4.0	1	22	< 0.1
Hyperiidea >5mm	4	4.0	1	18	< 0.1
Oithona spp.	1	14.2	1	16	< 0.1
Calanus pacificus - adult F	1	14.2	1	16	< 0.1
Pseudocalanus spp. - adult M	1	14.2	1	16	< 0.1
Gammaridea >5mm	3	4.0	< 1	13	< 0.1
Eucalanus bungii - adult F	2	4.0	< 1	9	< 0.1

Eucalanus bungii C-5 F	2	4.0	< 1	9	< 0.1
Siphonophora >5mm	2	4.0	< 1	9	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	4	< 0.1
Thysanoessa raschii A&J	1	4.0	< 1	4	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	4	< 0.1
			1713	45560	100.

STA. 053 57 38.0 N 154 56.3 W 09 Apr 86 17:11

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
238	0 - 232	261.1	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	151	64.0	370	8585	42.4
Other Copepoda damaged	36	64.0	88	2047	10.1
Metridia pacifica - adult F	28	64.0	69	1592	7.9
Neocalanus plumchrus C-4	70	12.8	34	796	3.9
Ostracoda <5mm	13	64.0	32	739	3.7
Metridia pacifica C-5 M	62	12.8	30	705	3.5
Metridia pacifica - adult M	10	64.0	25	569	2.8
Pseudocalanus spp. - adult F	50	12.8	25	569	2.8
Metridia pacifica C-5 F	50	12.8	25	569	2.8
Calanus marshallae - adult F	44	12.8	22	500	2.5
Other Copepoda <2mm	8	64.0	20	455	2.2
Neocalanus plumchrus C-2	8	64.0	20	455	2.2
Larvacea	4	64.0	10	227	1.1
Calanus marshallae - adult M	18	12.8	9	205	1.0
Chaetognatha 5-20mm	56	4.0	9	199	1.0
Calanus pacificus C-5	16	12.8	8	182	0.9
Mysidacea <5mm	3	64.0	7	171	0.8
Metridia spp. - adult F	3	64.0	7	171	0.8
Metridia pacifica C-4	14	12.8	7	159	0.8
Siphonophora <5mm	2	64.0	5	114	0.6
Metridia spp. - adult M	2	64.0	5	114	0.6
Cnidaria - medusa <5mm	2	64.0	5	114	0.6
Neocalanus cristatus C-5	18	4.0	3	64	0.3
Gammaridea <5mm	1	64.0	2	57	0.3
Thecosomata <5mm	1	64.0	2	57	0.3
Invertebrata - egg <5mm	1	64.0	2	57	0.3
Natantia - larva	1	64.0	2	57	0.3
Cirripedia - nauplius <5mm	1	64.0	2	57	0.3
Hyperiidea <5mm	1	64.0	2	57	0.3
Polychaeta <5mm	1	64.0	2	57	0.3
Neocalanus cristatus C-3	1	64.0	2	57	0.3
Other Copepoda 2-5mm	1	64.0	2	57	0.3
Chaetognatha >20mm	13	4.0	2	46	0.2
Cnidaria - medusa >5mm	12	4.0	2	43	0.2
Mysidacea >5mm	11	4.0	2	39	0.2
Pseudocalanus spp. C-5 F	3	12.8	1	34	0.2
Eucalanus bungii - adult F	8	4.0	1	28	0.1
Eucalanus bungii - adult M	8	4.0	1	28	0.1
Oithona spp.	2	12.8	1	23	0.1
Other Copepoda >5mm	6	4.0	1	21	0.1
Siphonophora >5mm	5	4.0	1	18	0.1
Hyperiidea >5mm	5	4.0	1	18	0.1
Neocalanus cristatus C-4	4	4.0	1	14	0.1
Eucalanus bungii C-4 F	1	12.8	< 1	11	0.1
Acartia spp.	1	12.8	< 1	11	0.1
Metridia spp. C-5 F	1	12.8	< 1	11	0.1
Pseudocalanus spp. - adult M	1	12.8	< 1	11	0.1

Pseudocalanus spp. C-5 M	1	12.8	< 1	11	0.1
Metridia spp. C-5 M	1	12.8	< 1	11	0.1
Thysanoessa spinifera A&J	3	4.0	< 1	11	0.1
Gammaridea >5mm	3	4.0	< 1	11	0.1
Eucalanus bungii C-5 M	2	4.0	< 1	7	< 0.1
Polychaeta >5mm	1	4.0	< 1	4	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	4	< 0.1
			872	20227	100.

STA. 079 57 35.8 N 154 40.8 W 12 Apr 86 22:06

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
221	0 - 204	229.3	505

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-3	181	32.0	253	5153	38.4
Neocalanus plumchrus C-4	66	32.0	92	1879	14.0
Metridia pacifica - adult F	38	32.0	53	1082	8.1
Metridia pacifica C-5 M	23	32.0	32	655	4.9
Pseudocalanus spp. - adult F	49	10.7	23	466	3.5
Chaetognatha 5-20mm	62	8.0	22	441	3.3
Metridia pacifica C-5 F	13	32.0	18	370	2.8
Other Copepoda <2mm	13	32.0	18	370	2.8
Cirripedia - cypris <5mm	12	32.0	17	342	2.5
Metridia pacifica - adult M	12	32.0	17	342	2.5
Other Copepoda damaged	10	32.0	14	285	2.1
Larvacea	6	32.0	8	171	1.3
Metridia spp. - adult F	6	32.0	8	171	1.3
Metridia spp. - adult M	5	32.0	7	142	1.1
Metridia pacifica C-4	14	10.7	7	133	1.0
Cnidaria - medusa >5mm	18	8.0	6	128	1.0
Calanus marshallae - adult M	13	10.7	6	124	0.9
Thecosomata <5mm	4	32.0	6	114	0.8
Calanus marshallae - adult F	11	10.7	5	105	0.8
Neocalanus plumchrus C-2	3	32.0	4	85	0.6
Other Copepoda 2-5mm	3	32.0	4	85	0.6
Cirripedia - nauplius <5mm	3	32.0	4	85	0.6
Calanus pacificus C-5	7	10.7	3	67	0.5
Gammaridea >5mm	8	8.0	3	57	0.4
Invertebrata - egg <5mm	2	32.0	3	57	0.4
Pseudocalanus spp. C-5 F	5	10.7	2	48	0.4
Chaetognatha >20mm	6	8.0	2	43	0.3
Pseudocalanus spp. C-5 M	3	10.7	1	29	0.2
Natantia - larva	1	32.0	1	28	0.2
Siphonophora >5mm	4	8.0	1	28	0.2
Hyperiidea <5mm	1	32.0	1	28	0.2
Ostracoda <5mm	1	32.0	1	28	0.2
Pseudocalanus spp. C-4 F	1	32.0	1	28	0.2
Other Copepoda >5mm	4	8.0	1	28	0.2
Neocalanus cristatus C-3	1	32.0	1	28	0.2
Neocalanus cristatus C-4	3	8.0	1	21	0.2
Eucalanus bungii - adult M	3	8.0	1	21	0.2
Oithona spp.	2	10.7	1	19	0.1
Pseudocalanus spp. - adult M	2	10.7	1	19	0.1
Acartia spp.	2	10.7	1	19	0.1
Eucalanus bungii - adult F	2	8.0	1	14	0.1
Neocalanus cristatus C-5	2	8.0	1	14	0.1
Hyperiidea >5mm	2	8.0	1	14	0.1
Eucalanus bungii C-3	1	10.7	< 1	10	0.1
Calanus pacificus - adult F	1	10.7	< 1	10	0.1
Mysidacea >5mm	1	8.0	< 1	7	0.1
Eucalanus bungii C-5 M	1	8.0	< 1	7	0.1

Euphausia pacifica A&J	1	8.0	< 1	7	0.1
Thysanoessa inermis A&J	1	8.0	< 1	7	0.1
			658	13417	100.

Appendix 2. Abundance of zooplankton taxa at each station sampled during FOX86-III, cruise 2MF86 in Shelikof Strait, 1-19 May 1986.

STA. 002 58 40.7 N 152 44.4 W 02 May 86 12:01

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
203	0 - 197	273.0	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	68	1024.0	2550	50238	24.1
Pseudocalanus spp. - adult F	27	1024.0	1013	19947	9.6
Euphausiacea - calyptopis 2	54	341.3	675	13297	6.4
Pseudocalanus spp. - adult M	17	1024.0	638	12560	6.0
Metridia pacifica C-5 M	39	341.3	487	9603	4.6
Pseudocalanus spp. C-5 F	39	341.3	487	9603	4.6
Acartia spp.	36	341.3	450	8865	4.3
Metridia pacifica C-4	36	341.3	450	8865	4.3
Neocalanus plumchrus C-5	33	341.3	412	8126	3.9
Euphausiacea - calyptopis 3	32	341.3	400	7880	3.8
Metridia pacifica C-5 F	28	341.3	350	6895	3.3
Pseudocalanus spp. C-5 M	25	341.3	312	6156	3.0
Metridia pacifica - adult F	24	341.3	300	5910	2.8
Neocalanus plumchrus C-4	149	53.9	294	5794	2.8
Calanus marshallae C-3	16	341.3	200	3940	1.9
Calanus marshallae C-2	16	341.3	200	3940	1.9
Larvacea	5	1024.0	188	3694	1.8
Metridia pacifica - adult M	13	341.3	162	3201	1.5
Euphausiacea - nauplius	3	1024.0	113	2216	1.1
Invertebrata - egg <5mm	3	1024.0	113	2216	1.1
Euphausiacea - calyptopis 1	9	341.3	112	2216	1.1
Natantia - larva	2	1024.0	75	1478	0.7
Cirripedia - cypris <5mm	2	1024.0	75	1478	0.7
Neocalanus plumchrus C-3	5	341.3	62	1231	0.6
Calanus marshallae C-4	30	53.9	59	1167	0.6
Euphausiacea - furcilia	29	53.9	57	1128	0.5
Oithona spp.	28	53.9	55	1089	0.5
Pseudocalanus spp. C-4 F	23	53.9	45	894	0.4
Gastropoda - veliger <5mm	1	1024.0	38	739	0.4
Other Copepoda <2mm	1	1024.0	38	739	0.4
Polychaeta <5mm	1	1024.0	38	739	0.4
Calanus marshallae C-1	3	341.3	37	739	0.4
Neocalanus plumchrus C-2	2	341.3	25	492	0.2
Pseudocalanus spp. C-4 M	12	53.9	24	467	0.2
Metridia spp. - adult F	1	341.3	12	246	0.1
Calanus marshallae - adult F	5	53.9	10	194	0.1
Chaetognatha 5-20mm	50	4.0	7	144	0.1
Neocalanus cristatus C-4	45	4.0	7	130	0.1
Calanus marshallae C-5	3	53.9	6	117	0.1
Cnidaria - medusa >5mm	9	4.0	1	26	< 0.1
Chaetognatha >20mm	9	4.0	1	26	< 0.1
Thysanoessa inermis A&J	9	4.0	1	26	< 0.1
Neocalanus cristatus C-5	8	4.0	1	23	< 0.1
Thysanoessa spinifera A&J	6	4.0	1	17	< 0.1
Other Copepoda >5mm	5	4.0	1	14	< 0.1
Hyperiidea >5mm	2	4.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	2	4.0	< 1	6	< 0.1

Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Mysidacea >5mm	1	4.0	< 1	3	< 0.1
			10585	208525	100.

STA. 004 58 44.4 N 152 55.7 W 02 May 86 14:41

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
155	0 - 124	216.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	79	2048.0	7473	92666	26.3
Euphausiacea - calyptopis 2	38	2048.0	3595	44573	12.7
Euphausiacea - calyptopis 3	24	2048.0	2270	28152	8.0
Pseudocalanus spp. - adult F	23	2048.0	2176	26979	7.7
Calanus marshallae C-2	16	2048.0	1514	18768	5.3
Larvacea	15	2048.0	1419	17595	5.0
Pseudocalanus spp. - adult M	14	2048.0	1324	16422	4.7
Calanus marshallae C-1	14	2048.0	1324	16422	4.7
Acartia spp.	92	227.6	967	11993	3.4
Pseudocalanus spp. C-5 M	88	227.6	925	11471	3.3
Pseudocalanus spp. C-5 F	80	227.6	841	10429	3.0
Calanus marshallae C-3	5	2048.0	473	5865	1.7
Euphausiacea - calyptopis 1	5	2048.0	473	5865	1.7
Invertebrata - egg <5mm	5	2048.0	473	5865	1.7
Neocalanus plumchrus C-4	43	227.6	452	5605	1.6
Euphausiacea - nauplius	4	2048.0	378	4692	1.3
Cirripedia - cypris <5mm	4	2048.0	378	4692	1.3
Neocalanus plumchrus C-5	132	50.0	305	3780	1.1
Polychaeta <5mm	3	2048.0	284	3519	1.0
Thecosomata <5mm	3	2048.0	284	3519	1.0
Pseudocalanus spp. C-4 F	78	50.0	180	2234	0.6
Euphausiacea - furcilia	75	50.0	173	2148	0.6
Oithona spp.	64	50.0	148	1833	0.5
Other Copepoda <2mm	1	2048.0	95	1173	0.3
Neocalanus plumchrus C-3	1	2048.0	95	1173	0.3
Pseudocalanus spp. C-4 M	40	50.0	92	1145	0.3
Metridia pacifica - adult F	32	50.0	74	916	0.3
Calanus marshallae C-4	58	19.5	52	648	0.2
Metridia pacifica C-5 M	19	50.0	44	544	0.2
Metridia pacifica C-5 F	17	50.0	39	487	0.1
Metridia pacifica C-4	42	8.8	17	212	0.1
Eucalanus bungii C-1	17	19.5	15	190	0.1
Calanus marshallae C-5	9	19.5	8	101	< 0.1
Chaetognatha 5-20mm	81	2.0	7	93	< 0.1
Metridia pacifica - adult M	2	50.0	5	57	< 0.1
Calanus marshallae - adult F	3	19.5	3	34	< 0.1
Cnidaria - medusa >5mm	23	2.0	2	26	< 0.1
Eucalanus bungii C-2	3	8.8	1	15	< 0.1
Eucalanus bungii C-3	3	8.8	1	15	< 0.1
Calanus pacificus C-5	1	19.5	1	11	< 0.1
Chaetognatha >20mm	8	2.0	1	9	< 0.1
Thysanoessa spinifera A&J	4	2.0	< 1	5	< 0.1
Neocalanus cristatus C-4	4	2.0	< 1	5	< 0.1
Thysanoessa inermis A&J	4	2.0	< 1	5	< 0.1
Euphausia pacifica A&J	3	2.0	< 1	3	< 0.1
Eucalanus bungii - adult F	1	2.0	< 1	1	< 0.1
Neocalanus cristatus C-5	1	2.0	< 1	1	< 0.1

Thysanoessa inspinata A&J	1	2.0	< 1	1	< 0.1
Thysanoessa longipes A&J	1	2.0	< 1	1	< 0.1
			28384	351956	100.

STA. 006 58 48.8 N 153 07.2 W 02 May 86 17:02

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
198	0 - 184	282.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	78	512.0	1415	26034	18.8
Calanus marshallae C-2	54	512.0	980	18023	13.0
Pseudocalanus spp. - adult F	44	512.0	798	14686	10.6
Neocalanus plumchrus C-5	87	170.7	526	9681	7.0
Calanus marshallae C-3	29	512.0	526	9679	7.0
Pseudocalanus spp. C-5 F	22	512.0	399	7343	5.3
Neocalanus plumchrus C-4	62	170.7	375	6899	5.0
Pseudocalanus spp. - adult M	19	512.0	345	6342	4.6
Metridia pacifica C-4	55	170.7	333	6120	4.4
Metridia pacifica C-5 M	34	170.7	206	3783	2.7
Metridia pacifica C-5 F	32	170.7	194	3561	2.6
Pseudocalanus spp. C-5 M	10	512.0	181	3338	2.4
Calanus marshallae C-4	45	73.1	117	2144	1.5
Metriididae C-3	6	512.0	109	2003	1.4
Pseudocalanus spp. C-4 F	37	73.1	96	1763	1.3
Other Copepoda <2mm	5	512.0	91	1669	1.2
Cirripedia - cypris <5mm	5	512.0	91	1669	1.2
Metridia pacifica - adult M	31	73.1	80	1477	1.1
Acartia spp.	31	73.1	80	1477	1.1
Larvacea	3	512.0	54	1001	0.7
Metridia pacifica - adult F	21	73.1	54	1001	0.7
Euphausiacea - calyptopis 2	21	73.1	54	1001	0.7
Pseudocalanus spp. C-4 M	20	73.1	52	953	0.7
Gastropoda - veliger <5mm	2	512.0	36	668	0.5
Calanus marshallae C-1	2	512.0	36	668	0.5
Neocalanus plumchrus C-3	2	512.0	36	668	0.5
Thecosomata <5mm	2	512.0	36	668	0.5
Polychaeta <5mm	2	512.0	36	668	0.5
Euphausiacea - calyptopis 1	14	73.1	36	667	0.5
Euphausiacea - calyptopis 3	12	73.1	31	572	0.4
Oithona spp.	51	13.1	24	436	0.3
Calanus marshallae C-5	8	73.1	21	381	0.3
Natantia - larva	1	512.0	18	334	0.2
Other Copepoda damaged	1	512.0	18	334	0.2
Calanus marshallae - adult F	5	73.1	13	238	0.2
Chaetognatha 5-20mm	59	4.0	8	154	0.1
Euphausiacea - furcilia	16	13.1	7	137	0.1
Neocalanus cristatus C-4	32	4.0	5	83	0.1
Metridia spp. - adult M	1	73.1	3	48	< 0.1
Neocalanus cristatus C-5	8	4.0	1	21	< 0.1
Cnidaria - medusa >5mm	7	4.0	1	18	< 0.1
Thysanoessa spinifera A&J	6	4.0	1	16	< 0.1
Chaetognatha >20mm	4	4.0	1	10	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
			7524	138435	100.

STA. 007 58 50.3 N 153 12.5 W 02 May 86 18:27

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
75	0 - 94	136.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	93	256.0	1746	16409	17.8
Pseudocalanus spp. - adult F	72	256.0	1351	12704	13.8
Calanus marshallae C-3	35	256.0	657	6176	6.7
Calanus marshallae C-2	31	256.0	582	5470	5.9
Pseudocalanus spp. - adult M	30	256.0	563	5293	5.7
Pseudocalanus spp. C-5 F	28	256.0	526	4940	5.3
Pseudocalanus spp. C-5 M	27	256.0	507	4764	5.2
Neocalanus plumchrus C-5	60	85.3	375	3528	3.8
Neocalanus plumchrus C-4	52	85.3	325	3057	3.3
Metridia pacifica C-4	44	85.3	275	2587	2.8
Euphausiacea - calyptopis 2	41	85.3	256	2410	2.6
Calanus marshallae C-1	12	256.0	225	2117	2.3
Larvacea	11	256.0	206	1941	2.1
Metridia pacifica C-5 F	33	85.3	206	1940	2.1
Pseudocalanus spp. C-4 F	31	85.3	194	1823	2.0
Polychaeta <5mm	10	256.0	188	1764	1.9
Cirripedia - cypris <5mm	10	256.0	188	1764	1.9
Metridia pacifica C-5 M	27	85.3	169	1587	1.7
Pseudocalanus spp. C-4 M	26	85.3	163	1529	1.7
Metriididae C-3	7	256.0	131	1235	1.3
Calanus marshallae C-4	65	23.3	111	1044	1.1
Metridia pacifica - adult M	17	85.3	106	999	1.1
Euphausiacea - calyptopis 1	16	85.3	100	941	1.0
Metridia pacifica - adult F	14	85.3	88	823	0.9
Euphausiacea - nauplius	4	256.0	75	706	0.8
Invertebrata - egg <5mm	4	256.0	75	706	0.8
Euphausiacea - calyptopis 3	11	85.3	69	647	0.7
Gastropoda - veliger <5mm	3	256.0	56	529	0.6
Acartia spp.	220	3.4	55	516	0.6
Oithona spp.	151	3.4	38	354	0.4
Neocalanus plumchrus C-3	2	256.0	38	353	0.4
Other Copepoda <2mm	2	256.0	38	353	0.4
Metriididae C-2	1	256.0	19	176	0.2
Hyperiidea <5mm	1	256.0	19	176	0.2
Chaetognatha <5mm	1	256.0	19	176	0.2
Neocalanus plumchrus C-2	1	256.0	19	176	0.2
Metridia spp. C-5 F	3	85.3	19	176	0.2
Chaetognatha 5-20mm	114	2.0	17	157	0.2
Calanus marshallae C-5	6	23.3	10	96	0.1
Metridia spp. C-5 M	1	85.3	6	59	0.1
Euphausiacea - furcilia	25	3.4	6	59	0.1
Neocalanus cristatus C-5	31	2.0	5	43	< 0.1
Calanus marshallae - adult M	1	23.3	2	16	< 0.1
Calanus pacificus C-4	1	23.3	2	16	< 0.1
Calanus marshallae - adult F	1	23.3	2	16	< 0.1
Chaetognatha >20mm	8	2.0	1	11	< 0.1
Cnidaria - medusa >5mm	7	2.0	1	10	< 0.1

Polychaeta >5mm	1	2.0	< 1	1	< 0.1
Eucalanus bungii - adult F	1	2.0	< 1	1	< 0.1
			9827	92377	100.

STA. 008 57 29.0 N 154 42.1 W 03 May 86 9:06

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
73	0 - 62	90.2	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	63	256.0	1789	11090	18.9
Cirripedia - nauplius <5mm	44	256.0	1249	7746	13.2
Acartia spp.	38	256.0	1079	6689	11.4
Euphausiacea - nauplius	34	256.0	965	5985	10.2
Invertebrata - egg <5mm	27	256.0	767	4753	8.1
Larvacea	24	256.0	681	4225	7.2
Pseudocalanus spp. C-5 M	20	256.0	568	3521	6.0
Pseudocalanus spp. C-5 F	19	256.0	539	3345	5.7
Pseudocalanus spp. - adult M	17	256.0	483	2993	5.1
Oithona spp.	61	51.2	346	2148	3.7
Other Copepoda <2mm	5	256.0	142	880	1.5
Natantia - larva	4	256.0	114	704	1.2
Calanus marshallae C-2	19	51.2	108	669	1.1
Euphausiacea - calyptopis 2	84	6.9	64	399	0.7
Calanus marshallae C-1	11	51.2	62	387	0.7
Polychaeta <5mm	2	256.0	57	352	0.6
Gastropoda - veliger <5mm	2	256.0	57	352	0.6
Other Copepoda - nauplius	2	256.0	57	352	0.6
Thysanoessa inermis A&J	122	4.0	54	336	0.6
Euphausiacea - calyptopis 1	66	6.9	51	313	0.5
Pseudocalanus spp. C-4 F	38	6.9	29	180	0.3
Ostracoda <5mm	1	256.0	28	176	0.3
Thecosomata <5mm	1	256.0	28	176	0.3
Chaetognatha <5mm	1	256.0	28	176	0.3
Calanus marshallae C-3	4	51.2	23	141	0.2
Pseudocalanus spp. C-4 M	29	6.9	22	138	0.2
Neocalanus plumchrus C-5	21	6.9	16	100	0.2
Chaetognatha 5-20mm	25	4.0	11	69	0.1
Euphausiacea - calyptopis 3	9	6.9	7	43	0.1
Metridia pacifica C-4	8	6.9	6	38	0.1
Metridia pacifica C-5 M	7	6.9	5	33	0.1
Neocalanus plumchrus C-4	6	6.9	5	28	< 0.1
Metridia pacifica C-5 F	5	6.9	4	24	< 0.1
Metridia pacifica - adult F	5	6.9	4	24	< 0.1
Calanus marshallae C-4	4	6.9	3	19	< 0.1
Cnidaria - medusa >5mm	6	4.0	3	17	< 0.1
Calanus marshallae C-5	3	6.9	2	14	< 0.1
Thysanoessa spinifera A&J	4	4.0	2	11	< 0.1
Euphausiacea - furcilia	2	6.9	2	9	< 0.1
Thysanoessa raschii A&J	3	4.0	1	8	< 0.1
Metridia pacifica - adult M	1	6.9	1	5	< 0.1
Metridia spp. - adult F	1	6.9	1	5	< 0.1
Calanus marshallae - adult M	1	6.9	1	5	< 0.1
Calanus pacificus C-5	1	6.9	1	5	< 0.1
Chaetognatha >20mm	1	4.0	< 1	3	< 0.1
Neocalanus cristatus C-5	1	4.0	< 1	3	< 0.1
Gammaridea >5mm	1	4.0	< 1	3	< 0.1

9466	58690	100.

STA. 009 57 30.6 N 154 48.7 W 03 May 86 10:14

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
210	0 - 196	293.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	50	256.0	436	8551	15.9
Cirripedia - nauplius <5mm	30	256.0	262	5131	9.5
Neocalanus plumchrus C-4	66	85.3	192	3761	7.0
Metridia pacifica - adult F	18	256.0	157	3078	5.7
Neocalanus plumchrus C-5	54	85.3	157	3077	5.7
Other Copepoda <2mm	16	256.0	140	2736	5.1
Pseudocalanus spp. C-5 M	41	85.3	119	2336	4.3
Metridia pacifica C-4	39	85.3	113	2222	4.1
Metridia pacifica C-5 F	38	85.3	110	2165	4.0
Pseudocalanus spp. - adult M	10	256.0	87	1710	3.2
Euphausiacea - nauplius	10	256.0	87	1710	3.2
Metridia pacifica - adult M	9	256.0	79	1539	2.9
Thecosomata <5mm	8	256.0	70	1368	2.5
Metridia pacifica C-5 M	22	85.3	64	1254	2.3
Pseudocalanus spp. C-5 F	20	85.3	58	1140	2.1
Euphausiacea - calyptopis 2	20	85.3	58	1140	2.1
Acartia spp.	42	36.6	52	1027	1.9
Invertebrata - egg <5mm	6	256.0	52	1026	1.9
Oithona spp.	37	36.6	46	905	1.7
Calanus marshallae C-3	13	85.3	38	741	1.4
Larvacea	4	256.0	35	684	1.3
Calanus marshallae C-2	11	85.3	32	627	1.2
Euphausiacea - calyptopis 1	10	85.3	29	570	1.1
Polychaeta <5mm	3	256.0	26	513	1.0
Euphausiacea - calyptopis 3	8	85.3	23	456	0.8
Pseudocalanus spp. C-4 F	51	11.1	19	378	0.7
Cirripedia - cypris <5mm	2	256.0	17	342	0.6
Cnidaria - medusa <5mm	2	256.0	17	342	0.6
Natantia - larva	2	256.0	17	342	0.6
Metridia spp. - adult F	2	256.0	17	342	0.6
Chaetognatha 5-20mm	44	8.0	12	235	0.4
Neocalanus plumchrus C-3	4	85.3	12	228	0.4
Thysanoessa inermis A&J	41	8.0	11	219	0.4
Pseudocalanus spp. C-4 M	24	11.1	9	178	0.3
Other Copepoda - nauplius	1	256.0	9	171	0.3
Hyperiidea <5mm	1	256.0	9	171	0.3
Metriididae C-3	1	256.0	9	171	0.3
Ostracoda <5mm	1	256.0	9	171	0.3
?Pseudocalanus spp. C-3	1	256.0	9	171	0.3
Calanus marshallae C-1	3	85.3	9	171	0.3
Chaetognatha >20mm	26	8.0	7	139	0.3
Calanus marshallae C-4	16	11.1	6	119	0.2
Calanus marshallae - adult F	13	11.1	5	96	0.2
Thysanoessa spinifera A&J	10	8.0	3	53	0.1
Cnidaria - medusa >5mm	9	8.0	2	48	0.1
Calanus marshallae C-5	6	11.1	2	44	0.1
Other Copepoda >5mm	8	8.0	2	43	0.1

Neocalanus cristatus C-5	6	8.0	2	32	0.1
Calanus marshallae - adult M	4	11.1	2	30	0.1
Euphausiacea - furcilia	4	11.1	2	30	0.1
Neocalanus cristatus C-4	5	8.0	1	27	< 0.1
Calanus pacificus C-5	3	11.1	1	22	< 0.1
Euphausia pacifica A&J	4	8.0	1	21	< 0.1
Eucalanus bungii - adult F	2	8.0	1	11	< 0.1
Thysanoessa raschii A&J	2	8.0	1	11	< 0.1
Hyperiidea >5mm	2	8.0	1	11	< 0.1
Gammaridea >5mm	1	8.0	< 1	5	< 0.1
Siphonophora >5mm	1	8.0	< 1	5	< 0.1
			2747	53847	100.

STA. 010 57 33.5 N 154 54.2 W 03 May 86 11:47

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
234	0 - 213	368.2	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	60	256.0	417	8885	12.4
Pseudocalanus spp. - adult F	53	256.0	368	7848	10.9
Cirripedia - nauplius <5mm	39	256.0	271	5775	8.0
Acartia spp.	59	128.0	205	4368	6.1
Pseudocalanus spp. - adult M	28	256.0	195	4146	5.8
Metridia pacifica - adult F	24	256.0	167	3554	4.9
Pseudocalanus spp. C-5 F	23	256.0	160	3406	4.7
Metridia pacifica C-5 F	21	256.0	146	3110	4.3
Neocalanus plumchrus C-4	42	128.0	146	3110	4.3
Pseudocalanus spp. C-5 M	19	256.0	132	2814	3.9
Other Copepoda <2mm	18	256.0	125	2665	3.7
Neocalanus plumchrus C-5	30	128.0	104	2221	3.1
Metridia pacifica C-5 M	15	256.0	104	2221	3.1
Metridia pacifica - adult M	14	256.0	97	2073	2.9
Larvacea	11	256.0	76	1629	2.3
Metridia pacifica C-4	39	64.0	68	1444	2.0
Euphausiacea - nauplius	9	256.0	63	1333	1.9
Euphausiacea - calyptopis 2	16	128.0	56	1185	1.6
Oithona spp.	31	64.0	54	1148	1.6
Euphausiacea - calyptopis 1	15	128.0	52	1111	1.5
Calanus marshallae C-2	12	128.0	42	888	1.2
Ostracoda <5mm	5	256.0	35	740	1.0
Chaetognatha <5mm	4	256.0	28	592	0.8
Calanus marshallae C-1	7	128.0	24	518	0.7
Pseudocalanus spp. C-4 F	26	32.0	23	481	0.7
Calanus marshallae C-3	6	128.0	21	444	0.6
Metriididae C-3	3	256.0	21	444	0.6
Pseudocalanus spp. C-4 M	23	32.0	20	426	0.6
Neocalanus plumchrus C-3	5	128.0	17	370	0.5
Euphausiacea - calyptopis 3	5	128.0	17	370	0.5
?Pseudocalanus spp. C-3	2	256.0	14	296	0.4
Chaetognatha 5-20mm	53	8.0	12	245	0.3
Thysanoessa inermis A&J	48	8.0	10	222	0.3
Calanus marshallae C-4	19	16.0	8	176	0.2
Cirripedia - cypris <5mm	1	256.0	7	148	0.2
Gammaridea <5mm	1	256.0	7	148	0.2
Other zooplankton <5mm	1	256.0	7	148	0.2
Natantia - larva	1	256.0	7	148	0.2
Metridia spp. - adult M	1	256.0	7	148	0.2
Metridia spp. - adult F	1	256.0	7	148	0.2
Calanus marshallae - adult F	13	16.0	6	120	0.2
Thysanoessa spinifera A&J	24	8.0	5	111	0.2
Euphausiacea - furcilia	9	16.0	4	83	0.1
Calanus marshallae C-5	8	16.0	3	74	0.1
Other Copepoda >5mm	11	8.0	2	51	0.1
Calanus pacificus C-5	5	16.0	2	46	0.1
Neocalanus cristatus C-4	9	8.0	2	42	0.1

Cnidaria - medusa >5mm	7	8.0	2	32	< 0.1
Euphausia pacifica A&J	7	8.0	2	32	< 0.1
Gammaridea >5mm	6	8.0	1	28	< 0.1
Chaetognatha >20mm	5	8.0	1	23	< 0.1
Eucalanus bungii C-4 M	1	16.0	< 1	9	< 0.1
Calanus marshallae - adult M	1	16.0	< 1	9	< 0.1
Neocalanus cristatus C-5	2	8.0	< 1	9	< 0.1
Polychaeta >5mm	2	8.0	< 1	9	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	5	< 0.1
Mysidacea >5mm	1	8.0	< 1	5	< 0.1
Hyperiidea >5mm	1	8.0	< 1	5	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	5	< 0.1
			3373	71846	100.

STA. 011 57 35.8 N 154 59.9 W 03 May 86 14:28

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
243	0 - 218	283.0	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	55	512.0	995	21695	13.9
Cirripedia - nauplius <5mm	31	512.0	561	12228	7.9
Acartia spp.	30	512.0	543	11834	7.6
Neocalanus plumchrus C-4	150	102.4	543	11834	7.6
Pseudocalanus spp. C-5 M	28	512.0	507	11045	7.1
Pseudocalanus spp. - adult M	24	512.0	434	9467	6.1
Larvacea	22	512.0	398	8678	5.6
Neocalanus plumchrus C-5	81	102.4	293	6390	4.1
Invertebrata - egg <5mm	16	512.0	290	6311	4.1
Metridia pacifica - adult M	75	102.4	271	5917	3.8
Pseudocalanus spp. C-5 F	15	512.0	271	5917	3.8
Metridia pacifica - adult F	56	102.4	203	4418	2.8
Euphausiacea - nauplius	11	512.0	199	4339	2.8
Other Copepoda <2mm	11	512.0	199	4339	2.8
Metridia pacifica C-5 F	40	102.4	145	3156	2.0
Oithona spp.	31	128.0	140	3057	2.0
Metridia pacifica C-4	37	102.4	134	2919	1.9
Metridia pacifica C-5 M	33	102.4	119	2603	1.7
Calanus marshallae C-2	29	102.4	105	2288	1.5
Euphausiacea - calyptopis 1	20	102.4	72	1578	1.0
Hyperiidea <5mm	3	512.0	54	1183	0.8
Ostracoda <5mm	3	512.0	54	1183	0.8
Neocalanus plumchrus C-3	15	102.4	54	1183	0.8
Euphausiacea - calyptopis 2	13	102.4	47	1026	0.7
Calanus marshallae C-1	12	102.4	43	947	0.6
Other Copepoda 2-5mm	2	512.0	36	789	0.5
Calanus marshallae C-3	10	102.4	36	789	0.5
Metriididae C-3	2	512.0	36	789	0.5
Thecosomata <5mm	2	512.0	36	789	0.5
Pseudocalanus spp. C-4 F	23	39.4	32	698	0.4
Pseudocalanus spp. C-4 M	20	39.4	28	607	0.4
Metridia spp. - adult F	7	102.4	25	552	0.4
Cirripedia - cypris <5mm	1	512.0	18	394	0.3
Polychaeta <5mm	1	512.0	18	394	0.3
Mysidacea <5mm	1	512.0	18	394	0.3
?Pseudocalanus spp. C-3	1	512.0	18	394	0.3
Chaetognatha <5mm	1	512.0	18	394	0.3
Siphonophora <5mm	1	512.0	18	394	0.3
Euphausiacea - calyptopis 3	5	102.4	18	394	0.3
Gymnosomata <5mm	1	512.0	18	394	0.3
Calanus pacificus C-5	38	11.4	15	334	0.2
Chaetognatha 5-20mm	47	8.0	13	290	0.2
Calanus marshallae - adult F	24	11.4	10	211	0.1
Calanus marshallae C-4	23	11.4	9	202	0.1
Metridia spp. C-5 F	2	102.4	7	158	0.1
Calanus marshallae C-5	12	11.4	5	105	0.1
Cnidaria - medusa >5mm	16	8.0	5	99	0.1

Euphausiacea - furcilia	3	39.4	4	91	0.1
Neocalanus plumchrus C-2	1	102.4	4	79	0.1
Metridia spp. C-5 M	1	102.4	4	79	0.1
Other Copepoda >5mm	12	8.0	3	74	< 0.1
Chaetognatha >20mm	10	8.0	3	62	< 0.1
Neocalanus cristatus C-4	9	8.0	3	55	< 0.1
Gammaridea >5mm	4	8.0	1	25	< 0.1
Thysanoessa inermis A&J	4	8.0	1	25	< 0.1
Hyperiidea >5mm	4	8.0	1	25	< 0.1
Thysanoessa spinifera A&J	3	8.0	1	18	< 0.1
Euphausia pacifica A&J	3	8.0	1	18	< 0.1
Mysidacea >5mm	3	8.0	1	18	< 0.1
Neocalanus cristatus C-5	3	8.0	1	18	< 0.1
Eucalanus bungii - adult F	3	8.0	1	18	< 0.1
Calanus marshallae - adult M	2	11.4	1	18	< 0.1
Calanus pacificus - adult F	1	11.4	< 1	9	< 0.1
Eucalanus bungii C-4 F	1	8.0	< 1	6	< 0.1
Thysanoessa raschii A&J	1	8.0	< 1	6	< 0.1
Natantia A&J >5mm	1	8.0	< 1	6	< 0.1
Gymnosomata >5mm	1	8.0	< 1	6	< 0.1
Thysanoessa longipes A&J	1	8.0	< 1	6	< 0.1
			7145	155764	100.

STA. 012 57 38.3 N 155 04.3 W 03 May 86 15:54

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
263	0 - 245	342.8	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	134	256.0	1001	24514	24.4
Pseudocalanus spp. - adult F	75	256.0	560	13721	13.7
Neocalanus plumchrus C-4	30	256.0	224	5488	5.5
Acartia spp.	79	85.3	197	4816	4.8
Invertebrata - egg <5mm	22	256.0	164	4025	4.0
Pseudocalanus spp. - adult M	21	256.0	157	3842	3.8
Other Copepoda <2mm	20	256.0	149	3659	3.6
Metridia pacifica - adult M	20	256.0	149	3659	3.6
Pseudocalanus spp. C-5 F	18	256.0	134	3293	3.3
Euphausiacea - nauplius	17	256.0	127	3110	3.1
Larvacea	16	256.0	119	2927	2.9
Pseudocalanus spp. C-5 M	15	256.0	112	2744	2.7
Neocalanus plumchrus C-5	44	85.3	109	2682	2.7
Metridia pacifica - adult F	14	256.0	105	2561	2.6
Euphausiacea - calyptopis 1	38	85.3	95	2316	2.3
Metridia pacifica C-5 M	35	85.3	87	2134	2.1
Euphausiacea - calyptopis 2	33	85.3	82	2012	2.0
Oithona spp.	61	36.6	65	1595	1.6
Metridia pacifica C-4	61	36.6	65	1595	1.6
Metridia pacifica C-5 F	21	85.3	52	1280	1.3
Calanus marshallae C-2	15	85.3	37	914	0.9
Neocalanus plumchrus C-3	14	85.3	35	853	0.9
Natantia - larva	4	256.0	30	732	0.7
Pseudocalanus spp. C-4 F	24	36.6	26	628	0.6
Ostracoda <5mm	3	256.0	22	549	0.5
Calanus marshallae C-1	9	85.3	22	549	0.5
Polychaeta <5mm	2	256.0	15	366	0.4
Euphausiacea - calyptopis 3	6	85.3	15	366	0.4
Calanus marshallae C-3	5	85.3	12	305	0.3
Pseudocalanus spp. C-4 M	11	36.6	12	288	0.3
Chaetognatha 5-20mm	44	8.0	10	252	0.3
Cirripedia - cypris <5mm	1	256.0	7	183	0.2
Metridia spp. - adult M	1	256.0	7	183	0.2
Hyperiidea <5mm	1	256.0	7	183	0.2
Metriididae C-3	1	256.0	7	183	0.2
Other Copepoda 2-5mm	1	256.0	7	183	0.2
Mysidacea <5mm	1	256.0	7	183	0.2
Gastropoda - veliger <5mm	1	256.0	7	183	0.2
Metridia spp. - adult F	1	256.0	7	183	0.2
Thecosomata <5mm	1	256.0	7	183	0.2
Neocalanus cristatus C-4	25	8.0	6	143	0.1
Calanus pacificus C-5	17	11.1	6	135	0.1
Neocalanus plumchrus C-2	2	85.3	5	122	0.1
Calanus marshallae - adult F	11	11.1	4	87	0.1
Euphausiacea - furcilia	9	11.1	3	71	0.1
Calanus marshallae C-4	8	11.1	3	63	0.1
Calanus marshallae C-5	7	11.1	2	56	0.1

Chaetognatha >20mm	8	8.0	2	46	< 0.1
Other Copepoda >5mm	7	8.0	2	40	< 0.1
Neocalanus cristatus C-5	6	8.0	1	34	< 0.1
Hyperiidea >5mm	5	8.0	1	29	< 0.1
Metridia spp. C-4	1	36.6	1	26	< 0.1
Thysanoessa inermis A&J	4	8.0	1	23	< 0.1
Cnidaria - medusa >5mm	3	8.0	1	17	< 0.1
Mysidacea >5mm	2	8.0	< 1	11	< 0.1
Thysanoessa spinifera A&J	2	8.0	< 1	11	< 0.1
Calanus marshallae - adult M	1	11.1	< 1	8	< 0.1
Calanus pacificus - adult F	1	11.1	< 1	8	< 0.1
Gammaridea >5mm	1	8.0	< 1	6	< 0.1
Tessarabrachion oculatum A&J	1	8.0	< 1	6	< 0.1
			4096	100363	100.

STA. 013 57 41.1 N 155 09.3 W 03 May 86 16:56

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
298	0 - 272	366.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	151	512.0	2110	57397	40.2
Pseudocalanus spp. - adult F	53	512.0	741	20146	14.1
Pseudocalanus spp. C-5 F	19	512.0	266	7222	5.1
Acartia spp.	77	102.4	215	5854	4.1
Pseudocalanus spp. - adult M	15	512.0	210	5702	4.0
Metridia pacifica - adult M	62	102.4	173	4713	3.3
Pseudocalanus spp. C-5 M	12	512.0	168	4561	3.2
Neocalanus plumchrus C-4	50	102.4	140	3801	2.7
Larvacea	8	512.0	112	3041	2.1
Euphausiacea - calyptopis 2	37	102.4	103	2813	2.0
Other Copepoda <2mm	6	512.0	84	2281	1.6
Metridia pacifica - adult F	29	102.4	81	2205	1.5
Metridia pacifica C-4	74	39.4	80	2165	1.5
Euphausiacea - calyptopis 1	26	102.4	73	1977	1.4
Oithona spp.	67	39.4	72	1960	1.4
Euphausiacea - calyptopis 3	25	102.4	70	1901	1.3
Neocalanus plumchrus C-5	52	42.7	61	1648	1.2
Metridia pacifica C-5 M	19	102.4	53	1444	1.0
Metridia pacifica C-5 F	16	102.4	45	1216	0.9
Euphausiacea - nauplius	3	512.0	42	1140	0.8
Invertebrata - egg <5mm	3	512.0	42	1140	0.8
Ostracoda <5mm	3	512.0	42	1140	0.8
Metriididae C-3	2	512.0	28	760	0.5
Cirripedia - cypris <5mm	2	512.0	28	760	0.5
Neocalanus plumchrus C-3	21	39.4	23	614	0.4
Calanus marshallae C-3	17	39.4	18	497	0.3
Pseudocalanus spp. C-4 F	82	6.6	15	402	0.3
Thecosomata <5mm	1	512.0	14	380	0.3
Natantia - larva	1	512.0	14	380	0.3
Polychaeta <5mm	1	512.0	14	380	0.3
?Pseudocalanus spp. C-2	1	512.0	14	380	0.3
Calanus marshallae C-2	12	39.4	13	351	0.2
Calanus marshallae C-1	10	39.4	11	293	0.2
Pseudocalanus spp. C-4 M	51	6.6	9	250	0.2
Metridia spp. C-5 F	3	102.4	8	228	0.2
Chaetognatha 5-20mm	65	4.0	7	193	0.1
Euphausiacea - furcilia	36	6.6	6	176	0.1
Metridia spp. C-5 M	2	102.4	6	152	0.1
Metridia spp. - adult F	2	102.4	6	152	0.1
Calanus pacificus C-5	24	6.6	4	118	0.1
Metridia spp. C-4	4	39.4	4	117	0.1
Calanus marshallae C-4	18	6.6	3	88	0.1
Chaetognatha >20mm	28	4.0	3	83	0.1
Neocalanus cristatus C-4	23	4.0	3	68	< 0.1
Cnidaria - medusa >5mm	20	4.0	2	59	< 0.1
Neocalanus plumchrus C-2	2	39.4	2	59	< 0.1
Calanus marshallae - adult F	10	6.6	2	49	< 0.1

Calanus marshallae C-5	8	6.6	1	39	< 0.1
Neocalanus cristatus C-5	9	4.0	1	27	< 0.1
Calanus marshallae - adult M	5	6.6	1	24	< 0.1
Gammaridea >5mm	8	4.0	1	24	< 0.1
Mysidacea >5mm	5	4.0	1	15	< 0.1
Polychaeta >5mm	5	4.0	1	15	< 0.1
Cumacea >5mm	3	4.0	< 1	9	< 0.1
Hyperiidea >5mm	2	4.0	< 1	6	< 0.1
Siphonophora >5mm	2	4.0	< 1	6	< 0.1
Other Copepoda >5mm	2	4.0	< 1	6	< 0.1
Eucalanus bungii - adult F	1	4.0	< 1	3	< 0.1
Thysanoessa inermis A&J	1	4.0	< 1	3	< 0.1
Thysanoessa spinifera A&J	1	4.0	< 1	3	< 0.1
			5244	142637	100.

STA. 014 57 41.8 N 155 16.7 W 03 May 86 20:20

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
298	0 - 271	408.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	110	1024.0	2758	74734	37.4
Pseudocalanus spp. - adult F	45	1024.0	1128	30573	15.3
Invertebrata - egg <5mm	11	1024.0	276	7473	3.7
Metridia pacifica - adult M	29	341.3	242	6567	3.3
Pseudocalanus spp. C-5 F	28	341.3	234	6340	3.2
Metridia pacifica - adult F	28	341.3	234	6340	3.2
Acartia spp.	163	53.9	215	5829	2.9
Pseudocalanus spp. C-5 M	24	341.3	201	5435	2.7
Pseudocalanus spp. - adult M	7	1024.0	175	4756	2.4
Larvacea	6	1024.0	150	4076	2.0
Other Copepoda <2mm	6	1024.0	150	4076	2.0
Euphausiacea - nauplius	6	1024.0	150	4076	2.0
Euphausiacea - calyptopis 1	17	341.3	142	3850	1.9
Neocalanus plumchrus C-4	84	53.9	111	3004	1.5
Metridia pacifica C-4	83	53.9	110	2968	1.5
Euphausiacea - calyptopis 2	13	341.3	109	2944	1.5
Calanus marshallae C-2	13	341.3	109	2944	1.5
Metridia pacifica C-5 M	79	53.9	104	2825	1.4
Polychaeta <5mm	4	1024.0	100	2718	1.4
Calanus marshallae C-1	12	341.3	100	2717	1.4
Metridia pacifica C-5 F	64	53.9	84	2289	1.1
Cirripedia - cypris <5mm	3	1024.0	75	2038	1.0
Oithona spp.	53	53.9	70	1895	0.9
Neocalanus plumchrus C-3	7	341.3	58	1585	0.8
Euphausiacea - calyptopis 3	6	341.3	50	1359	0.7
Neocalanus plumchrus C-5	34	53.9	45	1216	0.6
Calanus marshallae C-3	4	341.3	33	906	0.5
Ostracoda <5mm	1	1024.0	25	679	0.3
Metriididae C-3	1	1024.0	25	679	0.3
Hyperiidea <5mm	1	1024.0	25	679	0.3
Metridia spp. - adult F	2	341.3	17	453	0.2
Pseudocalanus spp. C-4 F	59	7.0	10	274	0.1
Neocalanus plumchrus C-2	1	341.3	8	226	0.1
Pseudocalanus spp. C-4 M	40	7.0	7	186	0.1
Chaetognatha 5-20mm	69	4.0	7	183	0.1
Metridia spp. C-5 F	4	53.9	5	143	0.1
Euphausiacea - furcilia	23	7.0	4	107	0.1
Calanus marshallae C-4	22	7.0	4	102	0.1
Neocalanus cristatus C-4	33	4.0	3	88	< 0.1
Neocalanus cristatus C-5	22	4.0	2	58	< 0.1
Cnidaria - medusa >5mm	20	4.0	2	53	< 0.1
Calanus marshallae C-5	9	7.0	2	42	< 0.1
Metridia spp. C-4	1	53.9	1	36	< 0.1
Metridia spp. C-5 M	1	53.9	1	36	< 0.1
Chaetognatha >20mm	11	4.0	1	29	< 0.1
Other Copepoda >5mm	9	4.0	1	24	< 0.1
Gammaridea >5mm	6	4.0	1	16	< 0.1

Calanus marshallae - adult M	3	7.0	1	14	< 0.1
Thysanoessa spinifera A&J	5	4.0	< 1	13	< 0.1
Calanus marshallae - adult F	2	7.0	< 1	9	< 0.1
Thysanoessa inermis A&J	3	4.0	< 1	8	< 0.1
Mysidacea >5mm	2	4.0	< 1	5	< 0.1
Hyperiidea >5mm	1	4.0	< 1	3	< 0.1
Cumacea >5mm	1	4.0	< 1	3	< 0.1
Polychaeta >5mm	1	4.0	< 1	3	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
			7369	199688	100.

STA. 018 57 23.2 N 155 11.2 W 04 May 86 2:47

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
251	0 - 233	311.1	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	206	512.0	3391	79002	42.8
Pseudocalanus spp. - adult F	29	512.0	477	11122	6.0
Pseudocalanus spp. C-5 M	24	512.0	395	9204	5.0
Pseudocalanus spp. C-5 F	21	512.0	346	8054	4.4
Invertebrata - egg <5mm	18	512.0	296	6903	3.7
Pseudocalanus spp. - adult M	17	512.0	280	6520	3.5
Euphausiacea - calyptopis 2	17	512.0	280	6520	3.5
Other Copepoda <2mm	14	512.0	230	5369	2.9
Euphausiacea - calyptopis 1	14	512.0	230	5369	2.9
Neocalanus plumchrus C-4	39	170.7	214	4987	2.7
Euphausiacea - nauplius	13	512.0	214	4986	2.7
Neocalanus plumchrus C-5	32	170.7	176	4092	2.2
Metridia pacifica - adult F	31	170.7	170	3964	2.1
Ostracoda <5mm	9	512.0	148	3452	1.9
Metridia pacifica C-4	45	73.1	106	2464	1.3
Metridia pacifica C-5 F	19	170.7	104	2429	1.3
Metridia pacifica C-5 M	18	170.7	99	2301	1.2
Cirripedia - cypris <5mm	6	512.0	99	2301	1.2
Euphausiacea - calyptopis 3	4	512.0	66	1534	0.8
Polychaeta <5mm	4	512.0	66	1534	0.8
Metridia pacifica - adult M	11	170.7	60	1406	0.8
Calanus marshallae C-2	23	73.1	54	1259	0.7
Neocalanus plumchrus C-3	15	73.1	35	821	0.4
Pseudocalanus spp. C-4 F	32	34.1	35	817	0.4
Mysidacea <5mm	2	512.0	33	767	0.4
Larvacea	2	512.0	33	767	0.4
Acartia spp.	30	34.1	33	766	0.4
Oithona spp.	28	34.1	31	715	0.4
Metridia spp. - adult F	4	170.7	22	511	0.3
Pseudocalanus spp. C-4 M	20	34.1	22	511	0.3
Metridia spp. C-5 M	3	170.7	16	384	0.2
Other Copepoda 2-5mm	1	512.0	16	384	0.2
Cumacea <5mm	1	512.0	16	384	0.2
Other Copepoda damaged	1	512.0	16	384	0.2
?Pseudocalanus spp. C-3	1	512.0	16	384	0.2
Chaetognatha 5-20mm	54	8.0	14	324	0.2
Calanus marshallae - adult F	10	34.1	11	255	0.1
Calanus marshallae C-4	9	34.1	10	230	0.1
Calanus marshallae C-3	3	73.1	7	164	0.1
Metridia spp. - adult M	1	170.7	5	128	0.1
Metridia spp. C-5 F	1	170.7	5	128	0.1
Calanus marshallae C-1	2	73.1	5	110	0.1
Gammaridea >5mm	17	8.0	4	102	0.1
Cnidaria - medusa >5mm	13	8.0	3	78	< 0.1
Calanus marshallae - adult M	3	34.1	3	77	< 0.1
Calanus marshallae C-5	3	34.1	3	77	< 0.1
Neocalanus cristatus C-4	12	8.0	3	72	< 0.1

Metridia spp. C-4	1	73.1	2	55	< 0.1
Neocalanus plumchrus C-2	1	73.1	2	55	< 0.1
Polychaeta >5mm	9	8.0	2	54	< 0.1
Calanus pacificus C-5	2	34.1	2	51	< 0.1
Euphausiacea - furcilia	2	34.1	2	51	< 0.1
Other Copepoda >5mm	7	8.0	2	42	< 0.1
Thysanoessa spinifera A&J	6	8.0	2	36	< 0.1
Hyperiidea >5mm	6	8.0	2	36	< 0.1
Neocalanus cristatus C-5	5	8.0	1	30	< 0.1
Chaetognatha >20mm	5	8.0	1	30	< 0.1
Euphausia pacifica A&J	3	8.0	1	18	< 0.1
Thysanoessa inermis A&J	3	8.0	1	18	< 0.1
Mysidacea >5mm	1	8.0	< 1	6	< 0.1
Cumacea >5mm	1	8.0	< 1	6	< 0.1
Euphausiacea damaged	1	8.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	6	< 0.1
Bivalvia >5mm	1	8.0	< 1	6	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
			7923	184613	100.

STA. 019 57 27.5 N 155 21.9 W 04 May 86 4:01

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
280	0 - 261	360.2	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	106	256.0	753	19660	25.6
Pseudocalanus spp. - adult F	31	256.0	220	5750	7.5
Neocalanus plumchrus C-4	77	85.3	182	4759	6.2
Pseudocalanus spp. C-5 F	20	256.0	142	3709	4.8
Acartia spp.	59	85.3	140	3646	4.7
Pseudocalanus spp. - adult M	16	256.0	114	2968	3.9
Metridia pacifica C-4	48	85.3	114	2966	3.9
Neocalanus plumchrus C-5	44	85.3	104	2719	3.5
Other Copepoda <2mm	12	256.0	85	2226	2.9
Metridia pacifica - adult F	36	85.3	85	2225	2.9
Metridia pacifica - adult M	36	85.3	85	2225	2.9
Metridia pacifica C-5 M	35	85.3	83	2163	2.8
Pseudocalanus spp. C-5 M	9	256.0	64	1669	2.2
Ostracoda <5mm	9	256.0	64	1669	2.2
Euphausiacea - calyptopis 2	27	85.3	64	1669	2.2
Metridia pacifica C-5 F	26	85.3	62	1607	2.1
Euphausiacea - calyptopis 1	26	85.3	62	1607	2.1
Euphausiacea - nauplius	7	256.0	50	1298	1.7
Larvacea	7	256.0	50	1298	1.7
Invertebrata - egg <5mm	7	256.0	50	1298	1.7
Calanus marshallae C-2	16	85.3	38	989	1.3
Oithona spp.	37	36.6	38	981	1.3
Hyperiidea <5mm	5	256.0	36	927	1.2
Euphausiacea - calyptopis 3	12	85.3	28	742	1.0
Neocalanus plumchrus C-3	12	85.3	28	742	1.0
Calanus marshallae C-3	11	85.3	26	680	0.9
Pseudocalanus spp. C-4 F	25	36.6	25	663	0.9
Gastropoda - veliger <5mm	3	256.0	21	556	0.7
Pseudocalanus spp. C-4 M	15	36.6	15	398	0.5
Chaetognatha 5-20mm	57	8.0	13	330	0.4
Calanus marshallae C-1	5	85.3	12	309	0.4
Calanus marshallae C-4	23	17.1	11	285	0.4
Metriididae C-3	1	256.0	7	185	0.2
Mysidacea <5mm	1	256.0	7	185	0.2
?Pseudocalanus spp. C-3	1	256.0	7	185	0.2
Cladocera <5mm	1	256.0	7	185	0.2
Metridia spp. - adult F	3	85.3	7	185	0.2
Metridia spp. C-5 M	3	85.3	7	185	0.2
Neocalanus plumchrus C-2	2	85.3	5	124	0.2
Metridia spp. - adult M	2	85.3	5	124	0.2
Metridia spp. C-4	2	85.3	5	124	0.2
Metridia spp. C-5 F	2	85.3	5	124	0.2
Calanus marshallae C-5	8	17.1	4	99	0.1
Euphausiacea - furcilia	7	17.1	3	87	0.1
Calanus marshallae - adult F	6	17.1	3	74	0.1
Neocalanus cristatus C-4	12	8.0	3	70	0.1
Calanus marshallae - adult M	4	17.1	2	50	0.1

Other Copepoda >5mm	7	8.0	2	41	0.1
Mysidacea >5mm	7	8.0	2	41	0.1
Neocalanus cristatus C-5	4	8.0	1	23	< 0.1
Chaetognatha >20mm	4	8.0	1	23	< 0.1
Thysanoessa inermis A&J	3	8.0	1	17	< 0.1
Siphonophora >5mm	2	8.0	< 1	12	< 0.1
Gammaridea >5mm	2	8.0	< 1	12	< 0.1
Eucalanus bungii - adult F	2	8.0	< 1	12	< 0.1
Thysanoessa inspinata A&J	1	8.0	< 1	6	< 0.1
Gymnosomata >5mm	1	8.0	< 1	6	< 0.1
Cnidaria - medusa >5mm	1	8.0	< 1	6	< 0.1
Hyperiidea >5mm	1	8.0	< 1	6	< 0.1
			2947	76922	100.

STA. 020 57 32.0 N 155 31.7 W 04 May 86 5:13

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
280	0 - 286	414.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	158	256.0	976	27925	35.9
Neocalanus plumchrus C-4	108	85.3	222	6360	8.2
Neocalanus plumchrus C-5	77	85.3	159	4535	5.8
Pseudocalanus spp. - adult F	24	256.0	148	4242	5.4
Pseudocalanus spp. C-5 M	49	85.3	101	2886	3.7
Pseudocalanus spp. - adult M	16	256.0	99	2828	3.6
Pseudocalanus spp. C-5 F	48	85.3	99	2827	3.6
Calanus marshallae C-2	46	85.3	95	2709	3.5
Euphausiacea - calyptopis 1	36	85.3	74	2120	2.7
Invertebrata - egg <5mm	11	256.0	68	1944	2.5
Metridia pacifica C-4	33	85.3	68	1943	2.5
Euphausiacea - nauplius	7	256.0	43	1237	1.6
Metridia pacifica - adult F	21	85.3	43	1237	1.6
Calanus marshallae C-3	19	85.3	39	1119	1.4
Metridia pacifica C-5 M	19	85.3	39	1119	1.4
Cirripedia - cypris <5mm	6	256.0	37	1060	1.4
Euphausiacea - calyptopis 2	17	85.3	35	1001	1.3
Pseudocalanus spp. C-4 F	57	23.3	32	917	1.2
Other Copepoda <2mm	5	256.0	31	884	1.1
Acartia spp.	54	23.3	30	869	1.1
Neocalanus plumchrus C-3	14	85.3	29	824	1.1
Metridia pacifica C-5 F	14	85.3	29	824	1.1
Euphausiacea - calyptopis 3	13	85.3	27	766	1.0
Calanus marshallae C-1	12	85.3	25	707	0.9
Oithona spp.	38	23.3	21	611	0.8
Ostracoda <5mm	3	256.0	19	530	0.7
Pseudocalanus spp. C-4 M	26	23.3	15	418	0.5
Metridia pacifica - adult M	7	85.3	14	412	0.5
Calanus marshallae C-4	23	23.3	13	370	0.5
Thecosomata <5mm	2	256.0	12	353	0.5
Gastropoda - veliger <5mm	2	256.0	12	353	0.5
Chaetognatha 5-20mm	60	8.0	12	331	0.4
Euphausiacea - furcilia	12	23.3	7	193	0.2
Mysidacea <5mm	1	256.0	6	177	0.2
Other Copepoda 2-5mm	1	256.0	6	177	0.2
Other Copepoda - nauplius	1	256.0	6	177	0.2
Metriididae C-3	1	256.0	6	177	0.2
Metridia spp. - adult F	2	85.3	4	118	0.2
Neocalanus cristatus C-4	18	8.0	3	99	0.1
Calanus marshallae C-5	5	23.3	3	80	0.1
Calanus marshallae - adult F	4	23.3	2	64	0.1
Metridia spp. C-5 M	1	85.3	2	59	0.1
Other Copepoda >5mm	8	8.0	2	44	0.1
Thysanoessa inermis A&J	7	8.0	1	39	< 0.1
Siphonophora >5mm	6	8.0	1	33	< 0.1
Chaetognatha >20mm	6	8.0	1	33	< 0.1
Cnidaria - medusa >5mm	4	8.0	1	22	< 0.1

Mysidacea >5mm	3	8.0	1	17	< 0.1
Calanus pacificus - adult F	1	23.3	1	16	< 0.1
Calanus marshallae - adult M	1	23.3	1	16	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	6	< 0.1
Thysanoessa raschii A&J	1	8.0	< 1	6	< 0.1
Hyperiidea >5mm	1	8.0	< 1	6	< 0.1
Thysanoessa spinifera A&J	1	8.0	< 1	6	< 0.1
Euphausia pacifica A&J	1	8.0	< 1	6	< 0.1
			2721	77830	100.

STA. 026 57 12.0 N 155 25.9 W 04 May 86 13:00

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
267	0 - 251	322.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	55	512.0	873	21924	15.5
Pseudocalanus spp. C-5 M	40	512.0	635	15945	11.3
Pseudocalanus spp. C-5 F	35	512.0	556	13952	9.9
Invertebrata - egg <5mm	33	512.0	524	13154	9.3
Neocalanus plumchrus C-5	50	256.0	397	9965	7.0
Pseudocalanus spp. - adult M	20	512.0	318	7972	5.6
Oithona spp.	37	256.0	294	7374	5.2
Neocalanus plumchrus C-4	37	256.0	294	7374	5.2
Acartia spp.	30	256.0	238	5979	4.2
Other Copepoda <2mm	9	512.0	143	3588	2.5
Pseudocalanus spp. C-4 F	34	128.0	135	3388	2.4
Euphausiacea - nauplius	7	512.0	111	2790	2.0
Metridia pacifica C-4	27	128.0	107	2691	1.9
Metridia pacifica C-5 M	26	128.0	103	2591	1.8
Cirripedia - nauplius <5mm	5	512.0	79	1993	1.4
Pseudocalanus spp. C-4 M	18	128.0	71	1794	1.3
Metriididae C-3	4	512.0	64	1594	1.1
Metridia pacifica C-5 F	15	128.0	60	1495	1.1
Calanus marshallae C-2	13	128.0	52	1296	0.9
Calanus marshallae C-1	13	128.0	52	1296	0.9
Metridia pacifica - adult F	13	128.0	52	1296	0.9
Larvacea	3	512.0	48	1196	0.8
Other Copepoda - nauplius	3	512.0	48	1196	0.8
?Pseudocalanus spp. C-2	3	512.0	48	1196	0.8
Neocalanus plumchrus C-3	9	128.0	36	897	0.6
?Pseudocalanus spp. C-3	2	512.0	32	797	0.6
Metridia pacifica - adult M	8	128.0	32	797	0.6
Calanus marshallae C-3	8	128.0	32	797	0.6
Metridia spp. - adult F	8	128.0	32	797	0.6
Chaetognatha 5-20mm	49	16.0	24	610	0.4
Calanus marshallae - adult F	20	25.6	16	399	0.3
Polychaeta <5mm	1	512.0	16	399	0.3
Mysidacea <5mm	1	512.0	16	399	0.3
Other zooplankton <5mm	1	512.0	16	399	0.3
Other Copepoda 2-5mm	1	512.0	16	399	0.3
Calanus marshallae C-4	15	25.6	12	299	0.2
Chaetognatha >20mm	20	16.0	10	249	0.2
Neocalanus plumchrus C-2	2	128.0	8	199	0.1
Thysanoessa inermis A&J	13	16.0	6	162	0.1
Cnidaria - medusa >5mm	11	16.0	5	137	0.1
Neocalanus cristatus C-4	10	16.0	5	125	0.1
Calanus marshallae - adult M	6	25.6	5	120	0.1
Metridia spp. C-5 M	1	128.0	4	100	0.1
Calanus marshallae C-5	4	25.6	3	80	0.1
Euphausiacea - calyptopis 1	3	25.6	2	60	< 0.1
Thysanoessa spinifera A&J	2	16.0	1	25	< 0.1
Hyperiidea >5mm	2	16.0	1	25	< 0.1

Other Copepoda >5mm	2	16.0	1	25	< 0.1
Neocalanus cristatus C-5	2	16.0	1	25	< 0.1
Mysidacea >5mm	2	16.0	1	25	< 0.1
Calanus pacificus C-5	1	25.6	1	20	< 0.1
Polychaeta >5mm	1	16.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	16.0	< 1	12	< 0.1
			5635	141427	100.

STA. 027 57 16.1 N 155 37.1 W 04 May 86 14:05

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
288	0 - 270	349.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	47	512.0	689	18590	14.9
Pseudocalanus spp. - adult M	35	512.0	513	13844	11.1
Acartia spp.	30	512.0	439	11866	9.5
Pseudocalanus spp. C-5 M	19	512.0	278	7515	6.0
Cirripedia - nauplius <5mm	18	512.0	264	7120	5.7
Invertebrata - egg <5mm	14	512.0	205	5537	4.4
Pseudocalanus spp. C-5 F	13	512.0	190	5142	4.1
Euphausiacea - nauplius	13	512.0	190	5142	4.1
Larvacea	13	512.0	190	5142	4.1
Other Copepoda <2mm	13	512.0	190	5142	4.1
Neocalanus plumchrus C-5	56	102.4	164	4430	3.6
Metridia pacifica - adult F	48	102.4	141	3797	3.0
Metridia pacifica - adult M	43	102.4	126	3402	2.7
Metridia pacifica C-4	39	102.4	114	3085	2.5
Neocalanus plumchrus C-4	37	102.4	108	2927	2.3
Ostracoda <5mm	7	512.0	103	2769	2.2
Metridia pacifica C-5 F	31	102.4	91	2452	2.0
Metridia pacifica C-5 M	30	102.4	88	2373	1.9
Other Copepoda damaged	5	512.0	73	1978	1.6
Oithona spp.	63	39.4	71	1918	1.5
Euphausiacea - calyptopis 1	18	102.4	53	1424	1.1
Calanus marshallae C-2	13	102.4	38	1028	0.8
Calanus marshallae C-3	12	102.4	35	949	0.8
Pseudocalanus spp. C-4 F	28	39.4	32	852	0.7
Hyperiidea <5mm	2	512.0	29	791	0.6
Euphausiacea - calyptopis 2	9	102.4	26	712	0.6
Euphausiacea - calyptopis 3	6	102.4	18	475	0.4
Pseudocalanus spp. C-4 M	15	39.4	17	457	0.4
Thecosomata <5mm	1	512.0	15	396	0.3
Other zooplankton <5mm	1	512.0	15	396	0.3
Other Copepoda 2-5mm	1	512.0	15	396	0.3
Natantia - larva	1	512.0	15	396	0.3
Neocalanus plumchrus C-3	3	102.4	9	237	0.2
Chaetognatha 5-20mm	34	8.0	8	210	0.2
Calanus pacificus C-5	22	11.4	7	194	0.2
Calanus marshallae C-1	2	102.4	6	158	0.1
Metridia spp. - adult F	2	102.4	6	158	0.1
Calanus marshallae - adult F	17	11.4	6	150	0.1
Calanus marshallae C-4	13	11.4	4	114	0.1
Calanus marshallae - adult M	12	11.4	4	106	0.1
Gammaridea >5mm	17	8.0	4	105	0.1
Other Copepoda >5mm	16	8.0	4	99	0.1
Neocalanus cristatus C-4	16	8.0	4	99	0.1
Neocalanus cristatus C-5	14	8.0	3	87	0.1
Metridia spp. - adult M	1	102.4	3	79	0.1
Neocalanus plumchrus C-2	1	102.4	3	79	0.1
Cnidaria - medusa >5mm	9	8.0	2	56	< 0.1

Chaetognatha >20mm	9	8.0	2	56	< 0.1
Calanus marshallae C-5	6	11.4	2	53	< 0.1
Thysanoessa spinifera A&J	7	8.0	2	43	< 0.1
Mysidacea >5mm	6	8.0	1	37	< 0.1
Euphausiacea - furcilia	4	11.4	1	35	< 0.1
Siphonophora >5mm	3	8.0	1	19	< 0.1
Calanus pacificus - adult F	2	11.4	1	18	< 0.1
Thysanoessa inermis A&J	2	8.0	< 1	12	< 0.1
Eucalanus bungii - adult F	2	8.0	< 1	12	< 0.1
Hyperiidea >5mm	1	8.0	< 1	6	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
Gymnosomata >5mm	1	8.0	< 1	6	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
			4618	124675	100.

STA. 034 56 49.7 N 155 23.0 W 05 May 86 0:13

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
246	0 - 222	306.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	48	256.0	401	8903	14.2
Pseudocalanus spp. - adult F	44	256.0	368	8161	13.0
Acartia spp.	65	85.3	181	4017	6.4
Neocalanus plumchrus C-5	59	85.3	164	3647	5.8
Pseudocalanus spp. - adult M	19	256.0	159	3524	5.6
Metridia pacifica C-5 M	44	85.3	122	2719	4.3
Oithona spp.	42	85.3	117	2596	4.1
Pseudocalanus spp. C-5 M	12	256.0	100	2226	3.6
Other Copepoda <2mm	12	256.0	100	2226	3.6
Metridia pacifica C-4	34	85.3	95	2101	3.4
Pseudocalanus spp. C-5 F	11	256.0	92	2040	3.3
Cirripedia - nauplius <5mm	11	256.0	92	2040	3.3
Metridia pacifica - adult F	31	85.3	86	1916	3.1
Other Copepoda damaged	10	256.0	84	1855	3.0
Neocalanus plumchrus C-4	69	36.6	82	1830	2.9
Metridia pacifica - adult M	27	85.3	75	1669	2.7
Euphausiacea - nauplius	8	256.0	67	1484	2.4
Metridia pacifica C-5 F	22	85.3	61	1360	2.2
Ostracoda <5mm	6	256.0	50	1113	1.8
Metriididae C-3	4	256.0	33	742	1.2
Calanus marshallae C-3	10	85.3	28	618	1.0
Pseudocalanus spp. C-4 F	22	36.6	26	583	0.9
Calanus marshallae C-2	8	85.3	22	494	0.8
Thecosomata <5mm	2	256.0	17	371	0.6
Cirripedia - cypris <5mm	2	256.0	17	371	0.6
Metriididae C-2	2	256.0	17	371	0.6
?Pseudocalanus spp. C-2	2	256.0	17	371	0.6
Calanus marshallae C-5	13	36.6	16	345	0.6
Calanus marshallae C-1	5	85.3	14	309	0.5
Chaetognatha 5-20mm	53	8.0	14	307	0.5
Calanus marshallae - adult F	9	36.6	11	239	0.4
Pseudocalanus spp. C-4 M	8	36.6	10	212	0.3
Natantia - larva	1	256.0	8	185	0.3
Other Copepoda 2-5mm	1	256.0	8	185	0.3
?Pseudocalanus spp. C-3	1	256.0	8	185	0.3
Polychaeta <5mm	1	256.0	8	185	0.3
Calanus marshallae C-4	6	36.6	7	159	0.3
Neocalanus plumchrus C-3	2	85.3	6	124	0.2
Metridia spp. - adult F	2	85.3	6	124	0.2
Neocalanus cristatus C-4	21	8.0	5	122	0.2
Cnidaria - medusa >5mm	16	8.0	4	93	0.1
Gammaridea >5mm	15	8.0	4	87	0.1
Chaetognatha >20mm	14	8.0	4	81	0.1
Euphausiacea - calyptopis 2	10	11.1	4	80	0.1
Calanus marshallae - adult M	3	36.6	4	80	0.1
Other Copepoda >5mm	8	8.0	2	46	0.1
Mysidacea >5mm	5	8.0	1	29	< 0.1

Neocalanus cristatus C-5	5	8.0	1	29	< 0.1
Euphausiacea - calyptopis 1	3	11.1	1	24	< 0.1
Hyperiidea >5mm	2	8.0	1	12	< 0.1
Euphausiacea - calyptopis 3	1	11.1	< 1	8	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
Eucalanus bungii C-5 M	1	8.0	< 1	6	< 0.1
Thysanoessa inermis A&J	1	8.0	< 1	6	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	6	< 0.1
Siphonophora >5mm	1	8.0	< 1	6	< 0.1
Euphausia pacifica A&J	1	8.0	< 1	6	< 0.1
			2821	62635	100.

STA. 036 56 58.6 N 155 43.2 W 05 May 86 3:45

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
298	0 - 269	365.6	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	82	512.0	1148	30887	22.5
Pseudocalanus spp. - adult F	64	512.0	896	24107	17.6
Acartia spp.	78	170.7	364	9795	7.2
Pseudocalanus spp. C-5 M	24	512.0	336	9040	6.6
Neocalanus plumchrus C-4	66	170.7	308	8288	6.1
Neocalanus plumchrus C-5	60	170.7	280	7535	5.5
Pseudocalanus spp. - adult M	14	512.0	196	5273	3.8
Pseudocalanus spp. C-5 F	12	512.0	168	4520	3.3
Larvacea	10	512.0	140	3767	2.7
Euphausiacea - nauplius	10	512.0	140	3767	2.7
Metridia pacifica - adult F	21	170.7	98	2637	1.9
Metridia pacifica C-4	43	73.1	86	2313	1.7
Oithona spp.	43	73.1	86	2313	1.7
Other Copepoda <2mm	6	512.0	84	2260	1.6
Metridia pacifica C-5 M	17	170.7	79	2135	1.6
Calanus marshallae C-3	33	73.1	66	1775	1.3
Metridia pacifica - adult M	14	170.7	65	1758	1.3
Calanus marshallae C-2	31	73.1	62	1667	1.2
Metridia pacifica C-5 F	13	170.7	61	1633	1.2
Pseudocalanus spp. C-4 F	29	73.1	58	1560	1.1
Pseudocalanus spp. C-4 M	18	73.1	36	968	0.7
Ostracoda <5mm	2	512.0	28	753	0.5
Metriididae C-2	2	512.0	28	753	0.5
?Pseudocalanus spp. C-3	2	512.0	28	753	0.5
Calanus marshallae C-1	12	73.1	24	645	0.5
Euphausiacea - calyptopis 1	39	22.3	24	640	0.5
Metridia spp. - adult F	5	170.7	23	628	0.5
Euphausiacea - calyptopis 2	38	22.3	23	623	0.5
Thecosomata <5mm	1	512.0	14	377	0.3
Other Copepoda - nauplius	1	512.0	14	377	0.3
Other Copepoda 2-5mm	1	512.0	14	377	0.3
Polychaeta <5mm	1	512.0	14	377	0.3
Chaetognatha 5-20mm	31	16.0	14	365	0.3
Chaetognatha >20mm	29	16.0	13	341	0.2
Calanus marshallae C-4	19	22.3	12	312	0.2
Calanus marshallae - adult F	18	22.3	11	295	0.2
Neocalanus cristatus C-4	14	16.0	6	165	0.1
Neocalanus plumchrus C-3	3	73.1	6	161	0.1
Cnidaria - medusa >5mm	13	16.0	6	153	0.1
Calanus pacificus C-5	9	22.3	5	148	0.1
Euphausiacea - calyptopis 3	8	22.3	5	131	0.1
Euphausiacea - furcilia	1	170.7	5	126	0.1
Calanus marshallae C-5	6	22.3	4	98	0.1
Calanus marshallae - adult M	5	22.3	3	82	0.1
Neocalanus cristatus C-5	6	16.0	3	71	0.1
Metridia spp. C-4	1	73.1	2	54	< 0.1
Unidentified Calanoida C-1	1	73.1	2	54	< 0.1

Other Copepoda >5mm	4	16.0	2	47	< 0.1
Eucalanus bungii C-5 F	1	16.0	< 1	12	< 0.1
Eucalanus bungii C-5 M	1	16.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	16.0	< 1	12	< 0.1
Eucalanus bungii - adult M	1	16.0	< 1	12	< 0.1
Hyperiidea >5mm	1	16.0	< 1	12	< 0.1
Gammaridea >5mm	1	16.0	< 1	12	< 0.1
Siphonophora >5mm	1	16.0	< 1	12	< 0.1
Mysidacea >5mm	1	16.0	< 1	12	< 0.1
			5093	136999	100.

STA. 037 57 04.0 N 155 53.3 W 05 May 86 7:42

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
295	0 - 275	339.0	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	57	1024.0	1722	47353	16.7
Invertebrata - egg <5mm	46	1024.0	1390	38215	13.4
Pseudocalanus spp. - adult F	34	1024.0	1027	28246	9.9
Cirripedia - nauplius <5mm	31	1024.0	936	25753	9.1
Pseudocalanus spp. C-5 F	30	1024.0	906	24923	8.8
Other Copepoda - nauplius	23	1024.0	695	19107	6.7
Pseudocalanus spp. - adult M	14	1024.0	423	11631	4.1
Pseudocalanus spp. C-5 M	11	1024.0	332	9138	3.2
Neocalanus plumchrus C-4	185	60.2	329	9035	3.2
Neocalanus plumchrus C-5	165	60.2	293	8058	2.8
Pseudocalanus spp. C-4 F	100	60.2	178	4884	1.7
Other Copepoda <2mm	5	1024.0	151	4154	1.5
Larvacea	5	1024.0	151	4154	1.5
Acartia spp.	74	60.2	131	3614	1.3
Pseudocalanus spp. C-4 M	62	60.2	110	3028	1.1
Calanus marshallae C-1	61	60.2	108	2979	1.0
Metridia pacifica C-5 F	58	60.2	103	2833	1.0
Metridia pacifica C-5 M	58	60.2	103	2833	1.0
Metridia pacifica C-4	57	60.2	101	2784	1.0
Polychaeta <5mm	3	1024.0	91	2492	0.9
?Pseudocalanus spp. C-3	3	1024.0	91	2492	0.9
Metriididae C-1	3	1024.0	91	2492	0.9
?Pseudocalanus spp. C-1	3	1024.0	91	2492	0.9
Euphausiacea - nauplius	3	1024.0	91	2492	0.9
Metridia pacifica - adult M	41	60.2	73	2002	0.7
Calanus marshallae C-2	40	60.2	71	1954	0.7
Hyperiidea <5mm	2	1024.0	60	1662	0.6
?Pseudocalanus spp. C-2	2	1024.0	60	1662	0.6
Metridia pacifica - adult F	29	60.2	52	1416	0.5
Calanus marshallae C-3	26	60.2	46	1270	0.4
Chaetognatha 5-20mm	77	16.0	36	1000	0.4
Metriididae C-3	1	1024.0	30	831	0.3
Ostracoda <5mm	1	1024.0	30	831	0.3
Chaetognatha <5mm	1	1024.0	30	831	0.3
Thecosomata <5mm	1	1024.0	30	831	0.3
Neocalanus plumchrus C-3	17	60.2	30	830	0.3
Metridia spp. - adult F	15	60.2	27	733	0.3
Calanus marshallae - adult F	13	60.2	23	635	0.2
Neocalanus plumchrus C-2	8	60.2	14	391	0.1
Neocalanus cristatus C-4	23	16.0	11	299	0.1
Calanus marshallae - adult M	5	60.2	9	244	0.1
Calanus marshallae C-4	4	60.2	7	195	0.1
Thysanoessa inermis A&J	14	16.0	7	182	0.1
Euphausiacea - calyptopis 3	3	60.2	5	147	0.1
Euphausiacea - calyptopis 1	3	60.2	5	147	0.1
Euphausiacea - calyptopis 2	3	60.2	5	147	0.1
Calanus marshallae C-5	3	60.2	5	147	0.1

Mysidacea >5mm	11	16.0	5	143	0.1
Chaetognatha >20mm	8	16.0	4	104	< 0.1
Thysanoessa spinifera A&J	5	16.0	2	65	< 0.1
Cnidaria - medusa >5mm	4	16.0	2	52	< 0.1
Metridia spp. - adult M	1	60.2	2	49	< 0.1
Neocalanus plumchrus C-1	1	60.2	2	49	< 0.1
Eucalanus bungii - adult F	3	16.0	1	39	< 0.1
Gammaridea >5mm	1	16.0	< 1	13	< 0.1
Other Copepoda >5mm	1	16.0	< 1	13	< 0.1
Neocalanus cristatus C-5	1	16.0	< 1	13	< 0.1
Hyperiidea >5mm	1	16.0	< 1	13	< 0.1
Siphonophora >5mm	1	16.0	< 1	13	< 0.1
			10332	284130	100.

STA. 038 57 07.7 N 156 03.1 W 05 May 86 9:23

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
140	0 - 131	170.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	63	256.0	946	12390	13.1
Cirripedia - nauplius <5mm	54	256.0	811	10620	11.2
Pseudocalanus spp. - adult M	51	256.0	766	10030	10.6
Neocalanus plumchrus C-5	45	256.0	676	8850	9.4
Neocalanus plumchrus C-4	45	256.0	676	8850	9.4
Pseudocalanus spp. C-5 M	39	256.0	586	7670	8.1
Invertebrata - egg <5mm	33	256.0	495	6490	6.9
Pseudocalanus spp. C-5 F	26	256.0	390	5113	5.4
Metridia pacifica C-4	94	51.2	282	3697	3.9
Larvacea	17	256.0	255	3343	3.5
Metridia pacifica C-5 M	63	51.2	189	2478	2.6
Acartia spp.	55	51.2	165	2163	2.3
Oithona spp.	31	51.2	93	1219	1.3
Euphausiacea - nauplius	6	256.0	90	1180	1.2
Pseudocalanus spp. C-4 F	28	51.2	84	1101	1.2
Other Copepoda <2mm	5	256.0	75	983	1.0
Neocalanus plumchrus C-3	22	51.2	66	865	0.9
Calanus marshallae C-3	19	51.2	57	747	0.8
Calanus marshallae C-2	18	51.2	54	708	0.7
Metridia pacifica C-5 F	17	51.2	51	669	0.7
Metridia pacifica - adult F	13	51.2	39	511	0.5
Chaetognatha 5-20mm	41	16.0	38	504	0.5
Metriididae C-3	2	256.0	30	393	0.4
Pseudocalanus spp. C-4 M	9	51.2	27	354	0.4
Thysanoessa spinifera A&J	26	16.0	24	320	0.3
Calanus marshallae C-4	20	19.7	23	303	0.3
Calanus marshallae - adult F	18	19.7	21	272	0.3
Euphausiacea - calyptopis 3	17	19.7	20	257	0.3
Calanus marshallae C-1	6	51.2	18	236	0.2
Thysanoessa inermis A&J	19	16.0	18	234	0.2
Gastropoda - veliger <5mm	1	256.0	15	197	0.2
?Pseudocalanus spp. C-3	1	256.0	15	197	0.2
Chaetognatha <5mm	1	256.0	15	197	0.2
Natantia - larva	1	256.0	15	197	0.2
Polychaeta <5mm	1	256.0	15	197	0.2
Cirripedia - cypris <5mm	1	256.0	15	197	0.2
Euphausiacea - calyptopis 2	11	19.7	13	166	0.2
Euphausiacea - calyptopis 1	9	19.7	10	136	0.1
Calanus marshallae - adult M	8	19.7	9	121	0.1
Neocalanus cristatus C-4	9	16.0	8	111	0.1
Cnidaria - medusa >5mm	8	16.0	8	98	0.1
Calanus marshallae C-5	3	19.7	3	45	< 0.1
Metridia pacifica - adult M	1	51.2	3	39	< 0.1
Metridia spp. - adult F	1	51.2	3	39	< 0.1
Neocalanus plumchrus C-2	1	51.2	3	39	< 0.1
Euphausiacea - furcilia	2	19.7	2	30	< 0.1
Eucalanus bungii - adult F	1	16.0	1	12	< 0.1

Neocalanus cristatus C-5	1	16.0	1	12	< 0.1
Natantia A&J >5mm	1	16.0	1	12	< 0.1
Mysidacea >5mm	1	16.0	1	12	< 0.1
			7222	94611	100.

STA. 044 56 46.1 N 155 55.2 W 05 May 86 15:38

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
316	0 - 288	363.7	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	58	512.0	816	23513	12.5
Invertebrata - egg <5mm	54	512.0	760	21891	11.6
Pseudocalanus spp. - adult F	42	512.0	591	17027	9.0
Neocalanus plumchrus C-5	32	512.0	450	12973	6.9
Pseudocalanus spp. C-5 M	31	512.0	436	12567	6.7
Pseudocalanus spp. - adult M	28	512.0	394	11351	6.0
Pseudocalanus spp. C-5 F	27	512.0	380	10946	5.8
Neocalanus plumchrus C-4	115	102.4	324	9324	5.0
Other Copepoda - nauplius	20	512.0	282	8108	4.3
Euphausiacea - nauplius	15	512.0	211	6081	3.2
Larvacea	15	512.0	211	6081	3.2
Other Copepoda <2mm	11	512.0	155	4459	2.4
Metridia pacifica C-4	51	102.4	144	4135	2.2
?Pseudocalanus spp. C-2	9	512.0	127	3649	1.9
Metridia pacifica C-5 M	41	102.4	115	3324	1.8
Acartia spp.	38	102.4	107	3081	1.6
Metriididae C-2	7	512.0	99	2838	1.5
Pseudocalanus spp. C-4 F	29	102.4	82	2351	1.2
Metridia pacifica - adult F	28	102.4	79	2270	1.2
Metriididae C-1	5	512.0	70	2027	1.1
Pseudocalanus spp. C-4 M	25	102.4	70	2027	1.1
Metridia pacifica - adult M	20	102.4	56	1622	0.9
Metridia pacifica C-5 F	19	102.4	53	1541	0.8
Calanus marshallae C-2	16	102.4	45	1297	0.7
Metriididae C-3	3	512.0	42	1216	0.6
Cirripedia - nauplius <5mm	3	512.0	42	1216	0.6
Ostracoda <5mm	3	512.0	42	1216	0.6
Mysidacea <5mm	2	512.0	28	811	0.4
Thecosomata <5mm	2	512.0	28	811	0.4
Hyperiidea <5mm	2	512.0	28	811	0.4
Cnidaria - medusa <5mm	2	512.0	28	811	0.4
Chaetognatha <5mm	2	512.0	28	811	0.4
Neocalanus plumchrus C-3	9	102.4	25	730	0.4
Chaetognatha 5-20mm	55	16.0	24	697	0.4
Calanus marshallae - adult F	8	102.4	23	649	0.3
Calanus marshallae C-3	8	102.4	23	649	0.3
Metridia spp. - adult F	8	102.4	23	649	0.3
Calanus marshallae C-1	7	102.4	20	568	0.3
?Pseudocalanus spp. C-3	1	512.0	14	405	0.2
Euphausiacea - calyptopis 1	4	102.4	11	324	0.2
Euphausiacea - calyptopis 2	3	102.4	8	243	0.1
Neocalanus cristatus C-4	13	16.0	6	165	0.1
Calanus marshallae C-4	2	102.4	6	162	0.1
Metridia spp. - adult M	2	102.4	6	162	0.1
Chaetognatha >20mm	9	16.0	4	114	0.1
Cnidaria - medusa >5mm	7	16.0	3	89	< 0.1
Neocalanus plumchrus C-2	1	102.4	3	81	< 0.1

Neocalanus cristatus C-3	1	102.4	3	81	< 0.1
Other Copepoda >5mm	4	16.0	2	51	< 0.1
Siphonophora >5mm	4	16.0	2	51	< 0.1
Eucalanus bungii - adult F	2	16.0	1	25	< 0.1
Neocalanus cristatus C-5	2	16.0	1	25	< 0.1
Thysanoessa spinifera A&J	1	16.0	< 1	13	< 0.1
Mysidacea >5mm	1	16.0	< 1	13	< 0.1
Eucalanus bungii C-5 M	1	16.0	< 1	13	< 0.1
Hyperiidea >5mm	1	16.0	< 1	13	< 0.1
			6533	188154	100.

STA. 045 56 50.9 N 156 05.9 W 05 May 86 16:58

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
199	0 - 191	245.7	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	76	1024.0	3168	60501	26.0
Pseudocalanus spp. - adult F	62	1024.0	2584	49356	21.2
Pseudocalanus spp. C-5 F	26	1024.0	1084	20698	8.9
Pseudocalanus spp. - adult M	26	1024.0	1084	20698	8.9
Pseudocalanus spp. C-5 M	24	1024.0	1000	19105	8.2
Cirripedia - nauplius <5mm	14	1024.0	583	11145	4.8
Neocalanus plumchrus C-4	45	204.8	375	7165	3.1
Larvacea	9	1024.0	375	7165	3.1
Neocalanus plumchrus C-5	43	204.8	358	6846	2.9
Other Copepoda <2mm	6	1024.0	250	4776	2.1
Acartia spp.	51	78.8	164	3124	1.3
Thecosomata <5mm	3	1024.0	125	2388	1.0
Metridia pacifica C-5 M	30	78.8	96	1838	0.8
Metridia pacifica C-4	101	22.8	94	1790	0.8
Metridia pacifica - adult M	27	78.8	87	1654	0.7
Metridia pacifica - adult F	27	78.8	87	1654	0.7
Pseudocalanus spp. C-4 M	26	78.8	83	1593	0.7
Pseudocalanus spp. C-4 F	25	78.8	80	1531	0.7
Calanus marshallae C-2	18	78.8	58	1103	0.5
Metridia pacifica C-5 F	18	78.8	58	1103	0.5
Hyperiidea <5mm	1	1024.0	42	796	0.3
?Pseudocalanus spp. C-3	1	1024.0	42	796	0.3
Cirripedia - cypris <5mm	1	1024.0	42	796	0.3
Ostracoda <5mm	1	1024.0	42	796	0.3
Calanus marshallae C-3	10	78.8	32	613	0.3
Oithona spp.	33	22.8	31	585	0.3
Calanus marshallae C-1	9	78.8	29	551	0.2
Neocalanus plumchrus C-3	8	78.8	26	490	0.2
Metridia spp. - adult F	6	78.8	19	368	0.2
Metriididae C-3	2	204.8	17	318	0.1
Chaetognatha 5-20mm	44	8.0	14	274	0.1
Calanus marshallae - adult F	15	22.8	14	266	0.1
Calanus marshallae C-4	14	22.8	13	248	0.1
Neocalanus cristatus C-4	25	8.0	8	155	0.1
Neocalanus plumchrus C-2	2	78.8	6	123	0.1
Cnidaria - medusa >5mm	11	8.0	4	68	< 0.1
Neocalanus cristatus C-5	8	8.0	3	50	< 0.1
Chaetognatha >20mm	7	8.0	2	44	< 0.1
Euphausiacea - calyptopis 2	2	22.8	2	35	< 0.1
Calanus marshallae C-5	2	22.8	2	35	< 0.1
Thysanoessa spinifera A&J	3	8.0	1	19	< 0.1
Euphausiacea - calyptopis 3	1	22.8	1	18	< 0.1
Calanus marshallae - adult M	1	22.8	1	18	< 0.1
Euphausiacea - calyptopis 1	1	22.8	1	18	< 0.1
Siphonophora >5mm	2	8.0	1	12	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	6	< 0.1
Thysanoessa inermis A&J	1	8.0	< 1	6	< 0.1

Hyperiidea >5mm	1	8.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	6	< 0.1
Eucalanus bungii C-5 M	1	8.0	< 1	6	< 0.1
Other Copepoda >5mm	1	8.0	< 1	6	< 0.1
Euphausia pacifica A&J	1	8.0	< 1	6	< 0.1
			12187	232766	100.

STA. 051 56 19.4 N 155 35.4 W 06 May 86 4:05

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
70	0 - 49	95.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	59	128.0	793	3884	18.4
Cirripedia - nauplius <5mm	38	128.0	511	2501	11.8
Cirripedia - cypris <5mm	32	128.0	430	2107	10.0
Pseudocalanus spp. - adult M	24	128.0	322	1580	7.5
Invertebrata - egg <5mm	20	128.0	269	1317	6.2
Acartia spp.	56	42.7	251	1230	5.8
Euphausiacea - calyptopis 3	53	42.7	238	1164	5.5
Pseudocalanus spp. C-5 M	16	128.0	215	1053	5.0
Pseudocalanus spp. C-5 F	16	128.0	215	1053	5.0
Euphausiacea - nauplius	14	128.0	188	922	4.4
Neocalanus plumchrus C-5	80	11.6	97	477	2.3
Other Copepoda <2mm	6	128.0	81	395	1.9
Euphausiacea - calyptopis 2	15	42.7	67	329	1.6
Euphausiacea - furcilia	50	11.6	61	298	1.4
Neocalanus plumchrus C-4	47	11.6	57	280	1.3
Hyperiidea <5mm	4	128.0	54	263	1.2
Calanus marshallae C-2	42	11.6	51	251	1.2
Polychaeta <5mm	3	128.0	40	197	0.9
Calanus marshallae C-3	26	11.6	32	155	0.7
Calanus marshallae C-1	23	11.6	28	137	0.6
Pseudocalanus spp. C-4 F	23	11.6	28	137	0.6
Metriididae C-3	2	128.0	27	132	0.6
Natantia - larva	2	128.0	27	132	0.6
Chaetognatha 5-20mm	111	2.0	23	114	0.5
Euphausiacea - calyptopis 1	5	42.7	22	110	0.5
Metridia pacifica C-5 M	18	11.6	22	107	0.5
Metridia pacifica C-4	42	4.7	21	102	0.5
Metridia pacifica C-5 F	15	11.6	18	89	0.4
Pseudocalanus spp. C-4 M	14	11.6	17	84	0.4
Oithona spp.	30	4.7	15	73	0.3
Metridia pacifica - adult F	30	4.7	15	73	0.3
Larvacea	1	128.0	13	66	0.3
Anomura - larva	1	128.0	13	66	0.3
Thecosomata <5mm	1	128.0	13	66	0.3
Calanus marshallae C-4	16	4.7	8	39	0.2
Metridia pacifica - adult M	14	4.7	7	34	0.2
Calanus marshallae - adult F	10	4.7	5	24	0.1
Neocalanus plumchrus C-3	4	11.6	5	24	0.1
Thysanoessa inermis A&J	21	2.0	4	22	0.1
Calanus marshallae C-5	8	4.7	4	19	0.1
Neocalanus cristatus C-4	12	2.0	3	12	0.1
Calanus marshallae - adult M	4	4.7	2	10	< 0.1
Neocalanus cristatus C-5	7	2.0	1	7	< 0.1
Cnidaria - medusa >5mm	7	2.0	1	7	< 0.1
Eucalanus bungii - adult F	6	2.0	1	6	< 0.1
Chaetognatha >20mm	4	2.0	1	4	< 0.1
Euphausia pacifica A&J	1	2.0	< 1	1	< 0.1

Polychaeta >5mm	1	2.0	< 1	1	< 0.1
Hyperiidea >5mm	1	2.0	< 1	1	< 0.1
			43 17	21154	100.

STA. 054 56 33.4 N 156 02.8 W 06 May 86 9:31

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
289	0 - 255	384.2	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-5	94	512.0	1253	31942	20.7
Pseudocalanus spp. - adult F	82	512.0	1093	27865	18.0
Pseudocalanus spp. C-5 F	35	512.0	466	11893	7.7
Pseudocalanus spp. - adult M	28	512.0	373	9515	6.2
Metridia pacifica - adult F	19	512.0	253	6456	4.2
Invertebrata - egg <5mm	19	512.0	253	6456	4.2
Neocalanus plumchrus C-4	150	56.9	222	5665	3.7
Metridia pacifica C-5 M	15	512.0	200	5097	3.3
Metridia pacifica C-5 F	14	512.0	187	4757	3.1
Metridia pacifica C-4	112	56.9	166	4230	2.7
Pseudocalanus spp. C-5 M	12	512.0	160	4078	2.6
Metridia pacifica - adult M	12	512.0	160	4078	2.6
Larvacea	12	512.0	160	4078	2.6
Acartia spp.	93	56.9	138	3512	2.3
Ostracoda <5mm	8	512.0	107	2719	1.8
Cirripedia - nauplius <5mm	6	512.0	80	2039	1.3
Cirripedia - cypris <5mm	5	512.0	67	1699	1.1
Calanus marshallae C-3	40	56.9	59	1511	1.0
Euphausiacea - nauplius	4	512.0	53	1359	0.9
Other Copepoda damaged	4	512.0	53	1359	0.9
Other Copepoda <2mm	4	512.0	53	1359	0.9
Calanus marshallae C-2	32	56.9	47	1208	0.8
Pseudocalanus spp. C-4 F	27	56.9	40	1020	0.7
Thecosomata <5mm	3	512.0	40	1019	0.7
Metriididae C-3	3	512.0	40	1019	0.7
?Pseudocalanus spp. C-3	5	256.0	33	850	0.5
Oithona spp.	19	56.9	28	718	0.5
Calanus marshallae - adult F	18	56.9	27	680	0.4
Anomura - larva	2	512.0	27	680	0.4
Other Copepoda 2-5mm	2	512.0	27	680	0.4
Chaetognatha 5-20mm	60	16.0	25	637	0.4
Pseudocalanus spp. C-4 M	15	56.9	22	566	0.4
Calanus marshallae C-4	9	56.9	13	340	0.2
Hyperiidea <5mm	1	512.0	13	340	0.2
Chaetognatha <5mm	1	512.0	13	340	0.2
Mysidacea <5mm	1	512.0	13	340	0.2
Metridia spp. - adult M	1	512.0	13	340	0.2
Metridia spp. - adult F	1	512.0	13	340	0.2
Neocalanus plumchrus C-3	8	56.9	12	302	0.2
Neocalanus cristatus C-4	16	16.0	7	170	0.1
Calanus marshallae C-5	4	56.9	6	151	0.1
Chaetognatha >20mm	11	16.0	5	117	0.1
Neocalanus cristatus C-5	11	16.0	5	117	0.1
Euphausiacea - calyptopis 3	3	56.9	4	113	0.1
Cnidaria - medusa >5mm	9	16.0	4	96	0.1
Thysanoessa inermis A&J	9	16.0	4	96	0.1
Euphausiacea - calyptopis 2	2	56.9	3	76	< 0.1

Calanus pacificus C-5	2	56.9	3	76	< 0.1
Calanus marshallae - adult M	2	56.9	3	76	< 0.1
Euphausiacea - furcilia	2	56.9	3	76	< 0.1
Metridia spp. C-4	2	56.9	3	76	< 0.1
Neocalanus plumchrus C-2	2	56.9	3	76	< 0.1
Eucalanus bungii - adult F	5	16.0	2	53	< 0.1
Other Copepoda >5mm	3	16.0	1	32	< 0.1
Mysidacea >5mm	3	16.0	1	32	< 0.1
Hyperiidea >5mm	2	16.0	1	21	< 0.1
Eucalanus bungii C-5 F	2	16.0	1	21	< 0.1
Eucalanus bungii C-5 M	1	16.0	< 1	11	< 0.1
Eucalanus bungii - adult M	1	16.0	< 1	11	< 0.1
Polychaeta >5mm	1	16.0	< 1	11	< 0.1
			6062	154589	100.

STA. 055 56 37.0 N 156 14.2 W 06 May 86 11:20

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
237	0 - 221	346.0	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	60	256.0	444	9809	13.4
Pseudocalanus spp. C-5 M	39	256.0	289	6376	8.7
Pseudocalanus spp. - adult M	38	256.0	281	6213	8.5
Pseudocalanus spp. C-5 F	38	256.0	281	6213	8.5
Neocalanus plumchrus C-5	32	256.0	237	5232	7.1
Invertebrata - egg <5mm	22	256.0	163	3597	4.9
Acartia spp.	62	85.3	153	3377	4.6
Other Copepoda <2mm	17	256.0	126	2779	3.8
Metridia pacifica C-4	50	85.3	123	2724	3.7
Oithona spp.	45	85.3	111	2451	3.3
Metridia pacifica - adult F	42	85.3	104	2288	3.1
Neocalanus plumchrus C-4	37	85.3	91	2016	2.8
Metridia pacifica C-5 M	37	85.3	91	2016	2.8
Metridia pacifica C-5 F	34	85.3	84	1852	2.5
Pseudocalanus spp. C-4 F	31	85.3	76	1689	2.3
Other Copepoda damaged	8	256.0	59	1308	1.8
Euphausiacea - nauplius	8	256.0	59	1308	1.8
Pseudocalanus spp. C-4 M	22	85.3	54	1198	1.6
Calanus marshallae C-2	19	85.3	47	1035	1.4
Metriididae C-3	6	256.0	44	981	1.3
Calanus marshallae C-1	16	85.3	39	872	1.2
Thecosomata <5mm	5	256.0	37	817	1.1
Larvacea	5	256.0	37	817	1.1
?Pseudocalanus spp. C-3	5	256.0	37	817	1.1
Metridia spp. - adult F	14	85.3	35	763	1.0
Chaetognatha <5mm	3	256.0	22	490	0.7
Polychaeta <5mm	3	256.0	22	490	0.7
Metriididae C-2	3	256.0	22	490	0.7
Cirripedia - nauplius <5mm	3	256.0	22	490	0.7
Metridia pacifica - adult M	7	85.3	17	381	0.5
Other Copepoda - nauplius	2	256.0	15	327	0.4
Chaetognatha 5-20mm	63	8.0	15	322	0.4
Neocalanus plumchrus C-3	5	85.3	12	272	0.4
?Pseudocalanus spp. C-2	1	256.0	7	163	0.2
Siphonophora <5mm	1	256.0	7	163	0.2
Mysidacea <5mm	1	256.0	7	163	0.2
Calanus marshallae C-4	3	85.3	7	163	0.2
Calanus marshallae - adult F	2	85.3	5	109	0.1
Calanus marshallae C-3	2	85.3	5	109	0.1
Calanus marshallae - adult M	2	85.3	5	109	0.1
Thysanoessa spinifera A&J	16	8.0	4	82	0.1
Thysanoessa inermis A&J	14	8.0	3	72	0.1
Neocalanus cristatus C-4	14	8.0	3	72	0.1
Metridia spp. C-4	1	85.3	2	54	0.1
Chaetognatha >20mm	9	8.0	2	46	0.1
Cnidaria - medusa >5mm	9	8.0	2	46	0.1
Eucalanus bungii - adult F	5	8.0	1	26	< 0.1

Neocalanus cristatus C-5	4	8.0	1	20	< 0.1
Mysidacea >5mm	3	8.0	1	15	< 0.1
Euphausiacea damaged	2	8.0	< 1	10	< 0.1
Hyperiidea >5mm	2	8.0	< 1	10	< 0.1
Other Copepoda >5mm	2	8.0	< 1	10	< 0.1
Natantia A&J >5mm	1	8.0	< 1	5	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	5	< 0.1
Eucalanus bungii C-4 F	1	8.0	< 1	5	< 0.1
			3315	73272	100.

STA. 056 56 42.6 N 156 25.0 W 06 May 86 13:07

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
196	0 - 170	289.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	79	256.0	699	11882	16.8
Neocalanus plumchrus C-5	71	256.0	628	10679	15.1
Neocalanus plumchrus C-4	31	256.0	274	4662	6.6
Metridia pacifica - adult F	26	256.0	230	3910	5.5
Pseudocalanus spp. C-5 M	25	256.0	221	3760	5.3
Pseudocalanus spp. - adult M	24	256.0	212	3610	5.1
Metridia pacifica C-5 F	24	256.0	212	3610	5.1
Cirripedia - nauplius <5mm	22	256.0	195	3309	4.7
Metridia pacifica C-5 M	20	256.0	177	3008	4.3
Invertebrata - egg <5mm	20	256.0	177	3008	4.3
Metridia pacifica C-4	86	51.2	152	2587	3.7
Pseudocalanus spp. C-5 F	17	256.0	150	2557	3.6
Acartia spp.	76	51.2	134	2286	3.2
Other Copepoda damaged	12	256.0	106	1805	2.6
Other Copepoda <2mm	9	256.0	80	1354	1.9
Calanus marshallae C-2	34	51.2	60	1023	1.4
Metridia pacifica - adult M	6	256.0	53	902	1.3
Calanus marshallae C-3	26	51.2	46	782	1.1
Pseudocalanus spp. C-4 F	22	51.2	39	662	0.9
Larvacea	3	256.0	27	451	0.6
Thecosomata <5mm	3	256.0	27	451	0.6
Oithona spp.	14	51.2	25	421	0.6
Pseudocalanus spp. C-4 M	13	51.2	23	391	0.6
Calanus marshallae - adult F	12	51.2	21	361	0.5
Metriididae C-3	2	256.0	18	301	0.4
Metridia spp. - adult F	2	256.0	18	301	0.4
Calanus marshallae C-4	10	51.2	18	301	0.4
Polychaeta <5mm	2	256.0	18	301	0.4
Chaetognatha 5-20mm	61	8.0	17	287	0.4
Other Copepoda 2-5mm	1	256.0	9	150	0.2
Ostracoda <5mm	1	256.0	9	150	0.2
Natantia - larva	1	256.0	9	150	0.2
Calanus marshallae C-5	5	51.2	9	150	0.2
?Pseudocalanus spp. C-3	1	256.0	9	150	0.2
Hyperiidea <5mm	1	256.0	9	150	0.2
Neocalanus cristatus C-4	27	8.0	7	127	0.2
Calanus marshallae C-1	4	51.2	7	120	0.2
Chaetognatha >20mm	21	8.0	6	99	0.1
Cnidaria - medusa >5mm	14	8.0	4	66	0.1
Euphausiacea - calyptopis 3	2	51.2	4	60	0.1
Euphausiacea - calyptopis 2	2	51.2	4	60	0.1
Thysanoessa inermis A&J	12	8.0	3	56	0.1
Thysanoessa spinifera A&J	8	8.0	2	38	0.1
Neocalanus plumchrus C-2	1	51.2	2	30	< 0.1
Calanus pacificus C-5	1	51.2	2	30	< 0.1
Calanus marshallae - adult M	1	51.2	2	30	< 0.1
Unidentified Calanoida C-3	1	51.2	2	30	< 0.1

Metridia spp. C-4	1	51.2	2	30	< 0.1
Other Copepoda >5mm	4	8.0	1	19	< 0.1
Neocalanus cristatus C-5	3	8.0	1	14	< 0.1
Euphausia pacifica A&J	3	8.0	1	14	< 0.1
Mysidacea >5mm	2	8.0	1	9	< 0.1
Eucalanus bungii C-5 M	2	8.0	1	9	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	5	< 0.1
Hyperiidea >5mm	1	8.0	< 1	5	< 0.1
			4160	70714	100.

STA. 057 56 46.7 N 156 35.7 W 06 May 86 15:11

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
126	0 - 115	210.9	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	120	256.0	1457	16752	23.4
Neocalanus plumchrus C-5	102	256.0	1238	14239	19.9
Pseudocalanus spp. C-5 F	54	256.0	656	7539	10.5
Pseudocalanus spp. C-5 M	38	256.0	461	5305	7.4
Pseudocalanus spp. - adult M	36	256.0	437	5026	7.0
Invertebrata - egg <5mm	36	256.0	437	5026	7.0
Neocalanus plumchrus C-4	32	256.0	388	4467	6.2
Acartia spp.	154	28.4	207	2385	3.3
Calanus marshallae C-2	88	28.4	119	1363	1.9
Pseudocalanus spp. C-4 F	56	28.4	75	867	1.2
Thecosomata <5mm	6	256.0	73	838	1.2
Calanus marshallae C-3	47	28.4	63	728	1.0
Larvacea	5	256.0	61	698	1.0
Cirripedia - cypris <5mm	5	256.0	61	698	1.0
Chaetognatha 5-20mm	71	16.0	54	619	0.9
Metridia pacifica C-4	39	28.4	53	604	0.8
Pseudocalanus spp. C-4 M	38	28.4	51	589	0.8
Euphausiacea - nauplius	4	256.0	49	558	0.8
Calanus marshallae C-3	29	28.4	39	449	0.6
Metriididae C-3	3	256.0	36	419	0.6
Metridia pacifica C-5 M	19	28.4	26	294	0.4
Oithona spp.	18	28.4	24	279	0.4
Neocalanus plumchrus C-3	17	28.4	23	263	0.4
Calanus marshallae C-4	17	28.4	23	263	0.4
Calanus marshallae - adult F	15	28.4	20	232	0.3
Natantia - larva	1	256.0	12	140	0.2
Metriididae C-2	1	256.0	12	140	0.2
?Pseudocalanus spp. C-3	1	256.0	12	140	0.2
Other Copepoda <2mm	1	256.0	12	140	0.2
Metridia pacifica C-5 F	8	28.4	11	124	0.2
Metridia pacifica - adult F	6	28.4	8	93	0.1
Chaetognatha >20mm	10	16.0	8	87	0.1
Calanus marshallae - adult M	5	28.4	7	77	0.1
Neocalanus plumchrus C-2	5	28.4	7	77	0.1
Neocalanus cristatus C-4	7	16.0	5	61	0.1
Cnidaria - medusa >5mm	5	16.0	4	44	0.1
Thysanoessa spinifera A&J	4	16.0	3	35	< 0.1
Eucalanus bungii C-5 F	2	16.0	2	17	< 0.1
Calanus marshallae C-5	1	28.4	1	15	< 0.1
Metridia pacifica - adult M	1	28.4	1	15	< 0.1
Metridia spp. C-5 M	1	28.4	1	15	< 0.1
Eucalanus bungii - adult F	1	16.0	1	9	< 0.1
			6237	71730	100.

STA. 058 56 36.3 N 156 56.0 W 06 May 86 19:48

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
130	0 - 126	183.9	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	118	256.0	1642	20695	30.5
Pseudocalanus spp. - adult F	50	256.0	696	8769	12.9
Neocalanus plumchrus C-4	41	256.0	571	7190	10.6
Neocalanus plumchrus C-5	40	256.0	557	7015	10.3
Pseudocalanus spp. - adult M	31	256.0	431	5437	8.0
Pseudocalanus spp. C-5 F	30	256.0	418	5261	7.7
Pseudocalanus spp. C-5 M	20	256.0	278	3508	5.2
Acartia spp.	115	28.4	178	2237	3.3
Thecosomata <5mm	5	256.0	70	877	1.3
Metridia pacifica C-4	37	28.4	57	720	1.1
Metridia pacifica C-5 M	32	28.4	49	623	0.9
Metridia pacifica - adult F	31	28.4	48	603	0.9
Invertebrata - egg <5mm	3	256.0	42	526	0.8
Cirripedia - cypris <5mm	3	256.0	42	526	0.8
Metridia pacifica C-5 F	26	28.4	40	506	0.7
Pseudocalanus spp. C-4 F	21	28.4	32	409	0.6
Other Copepoda <2mm	2	256.0	28	351	0.5
Natantia - larva	2	256.0	28	351	0.5
Calanus marshallae C-2	18	28.4	28	350	0.5
Chaetognatha 5-20mm	111	4.0	24	304	0.4
Metridia pacifica - adult M	13	28.4	20	253	0.4
Calanus marshallae C-3	12	28.4	19	233	0.3
Neocalanus plumchrus C-3	10	28.4	15	195	0.3
Pseudocalanus spp. C-4 M	9	28.4	14	175	0.3
Calanus marshallae C-1	7	28.4	11	136	0.2
Calanus marshallae C-4	7	28.4	11	136	0.2
Calanus marshallae - adult F	7	28.4	11	136	0.2
Neocalanus plumchrus C-2	5	28.4	8	97	0.1
Neocalanus cristatus C-4	31	4.0	7	85	0.1
Euphausiacea - calyptopis 1	2	28.4	3	39	0.1
Oithona spp.	2	28.4	3	39	0.1
Neocalanus plumchrus C-1	2	28.4	3	39	0.1
Thysanoessa inermis A&J	11	4.0	2	30	< 0.1
Chaetognatha >20mm	8	4.0	2	22	< 0.1
Thysanoessa spinifera A&J	4	4.0	1	11	< 0.1
Neocalanus cristatus C-5	2	4.0	< 1	5	< 0.1
Eucalanus bungii - adult F	2	4.0	< 1	5	< 0.1
Hyperiidea >5mm	2	4.0	< 1	5	< 0.1
Gammaridea >5mm	1	4.0	< 1	3	< 0.1
Gymnosomata >5mm	1	4.0	< 1	3	< 0.1
Thysanoessa raschii A&J	1	4.0	< 1	3	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
			5390	67911	100.

STA. 059 56 31.6 N 156 45.6 W 06 May 86 21:00

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
130	0 - 125	193.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	98	256.0	1297	16206	17.6
Invertebrata - egg <5mm	96	256.0	1270	15876	17.3
Acartia spp.	60	256.0	794	9922	10.8
Pseudocalanus spp. C-5 M	44	256.0	582	7276	7.9
Pseudocalanus spp. - adult M	43	256.0	569	7111	7.7
Pseudocalanus spp. C-5 F	40	256.0	529	6615	7.2
Neocalanus plumchrus C-5	97	51.2	257	3208	3.5
Metriididae C-3	19	256.0	251	3142	3.4
Pseudocalanus spp. C-4 F	15	256.0	198	2481	2.7
Pseudocalanus spp. C-4 M	15	256.0	198	2481	2.7
Oithona spp.	71	51.2	188	2348	2.6
Neocalanus plumchrus C-4	53	51.2	140	1753	1.9
Metridia pacifica C-4	49	51.2	130	1621	1.8
Other Copepoda <2mm	8	256.0	106	1323	1.4
?Pseudocalanus spp. C-3	7	256.0	93	1158	1.3
Calanus marshallae C-2	31	51.2	82	1025	1.1
Calanus marshallae C-3	31	51.2	82	1025	1.1
Calanus marshallae C-1	26	51.2	69	860	0.9
Calanus marshallae - adult F	21	51.2	56	695	0.8
Larvacea	4	256.0	53	661	0.7
Euphausiacea - nauplius	4	256.0	53	661	0.7
Chaetognatha 5-20mm	121	8.0	50	625	0.7
Metridia pacifica C-5 M	18	51.2	48	595	0.6
Cirripedia - nauplius <5mm	3	256.0	40	496	0.5
Other Copepoda - nauplius	2	256.0	26	331	0.4
Neocalanus plumchrus C-3	9	51.2	24	298	0.3
Metridia pacifica C-5 F	8	51.2	21	265	0.3
Calanus marshallae C-4	8	51.2	21	265	0.3
Metridia pacifica - adult M	6	51.2	16	198	0.2
Neocalanus plumchrus C-2	6	51.2	16	198	0.2
Metriididae C-2	1	256.0	13	165	0.2
Hyperiidea <5mm	1	256.0	13	165	0.2
Thecosomata <5mm	1	256.0	13	165	0.2
Calanus marshallae - adult M	5	51.2	13	165	0.2
?Pseudocalanus spp. C-1	1	256.0	13	165	0.2
Calanus marshallae C-5	3	51.2	8	99	0.1
Metridia pacifica - adult F	2	51.2	5	66	0.1
Neocalanus cristatus C-4	12	8.0	5	62	0.1
Cnidaria - medusa >5mm	7	8.0	3	36	< 0.1
Euphausiacea - calyptopis 2	1	51.2	3	33	< 0.1
Euphausiacea - calyptopis 1	1	51.2	3	33	< 0.1
Thysanoessa inermis A&J	6	8.0	2	31	< 0.1
Neocalanus cristatus C-5	3	8.0	1	16	< 0.1
Chaetognatha >20mm	3	8.0	1	16	< 0.1
Thysanoessa spinifera A&J	2	8.0	1	10	< 0.1
Hyperiidea >5mm	1	8.0	< 1	5	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	5	< 0.1

Eucalanus bungii - adult F	1	8.0	< 1	5	< 0.1
			7357	91965	100.

STA. 060 56 27.4 N 156 36.4 W 06 May 86 22:02

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
200	0 - 191	274.9	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	58	256.0	540	10315	19.1
Neocalanus plumchrus C-5	58	256.0	540	10315	19.1
Larvacea	26	256.0	242	4624	8.6
Pseudocalanus spp. - adult M	21	256.0	196	3735	6.9
Neocalanus plumchrus C-4	73	51.2	136	2596	4.8
Acartia spp.	70	51.2	130	2490	4.6
Metridia pacifica C-5 M	62	51.2	115	2205	4.1
Pseudocalanus spp. C-5 M	58	51.2	108	2063	3.8
Metridia pacifica C-4	55	51.2	102	1956	3.6
Pseudocalanus spp. C-5 F	51	51.2	95	1814	3.4
Other Copepoda <2mm	10	256.0	93	1778	3.3
Metridia pacifica C-5 F	43	51.2	80	1529	2.8
Metridia pacifica - adult F	38	51.2	71	1352	2.5
Invertebrata - egg <5mm	5	256.0	47	889	1.6
Calanus marshallae C-2	19	51.2	35	676	1.3
Thecosomata <5mm	3	256.0	28	534	1.0
Pseudocalanus spp. C-4 F	14	51.2	26	498	0.9
Calanus marshallae C-3	12	51.2	22	427	0.8
Pseudocalanus spp. C-4 M	11	51.2	20	391	0.7
Calanus marshallae C-4	11	51.2	20	391	0.7
Metridia pacifica - adult M	10	51.2	19	356	0.7
Metriididae C-3	2	256.0	19	356	0.7
Chaetognatha 5-20mm	100	4.0	15	278	0.5
Oithona spp.	7	51.2	13	249	0.5
Metridia spp. - adult F	7	51.2	13	249	0.5
Calanus marshallae - adult F	6	51.2	11	213	0.4
Euphausiacea - calyptopis 1	1	256.0	9	178	0.3
Natantia - larva	1	256.0	9	178	0.3
Euphausiacea - nauplius	1	256.0	9	178	0.3
Chaetognatha <5mm	1	256.0	9	178	0.3
Hyperiidea <5mm	1	256.0	9	178	0.3
Polychaeta <5mm	1	256.0	9	178	0.3
Calanus marshallae C-1	4	51.2	7	142	0.3
Neocalanus plumchrus C-3	3	51.2	6	107	0.2
Cnidaria - medusa >5mm	32	4.0	5	89	0.2
Neocalanus cristatus C-4	26	4.0	4	72	0.1
Calanus marshallae - adult M	1	51.2	2	36	0.1
Calanus marshallae C-5	1	51.2	2	36	0.1
Eucalanus bungii - adult F	8	4.0	1	22	< 0.1
Chaetognatha >20mm	8	4.0	1	22	< 0.1
Other Copepoda >5mm	5	4.0	1	14	< 0.1
Neocalanus cristatus C-5	2	4.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	2	4.0	< 1	6	< 0.1
Hyperiidea >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Thysanoessa spinifera A&J	1	4.0	< 1	3	< 0.1

Siphonophora >5mm	1	4.0	< 1	3	< 0.1
			2822	53910	100.

STA. 061 56 22.4 N 156 26.3 W 06 May 86 23:15

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
221	0 - 220	300.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	76	512.0	1296	28503	23.0
Pseudocalanus spp. C-5 F	32	512.0	546	12001	9.7
Pseudocalanus spp. - adult M	22	512.0	375	8251	6.7
Metridia pacifica - adult F	20	512.0	341	7501	6.1
Acartia spp.	172	56.9	326	7169	5.8
Pseudocalanus spp. C-5 M	18	512.0	307	6751	5.5
Neocalanus plumchrus C-5	143	56.9	271	5960	4.8
Neocalanus plumchrus C-4	141	56.9	267	5877	4.7
Other Copepoda <2mm	13	512.0	222	4876	3.9
Metridia spp. - adult F	10	512.0	170	3750	3.0
Metridia pacifica C-5 F	78	56.9	148	3251	2.6
Metridia pacifica C-5 M	70	56.9	133	2918	2.4
Metridia pacifica C-4	65	56.9	123	2709	2.2
Other Copepoda damaged	7	512.0	119	2625	2.1
Calanus marshallae C-2	52	65.9	114	2510	2.0
Oithona spp.	50	56.9	95	2084	1.7
Calanus marshallae C-3	37	55.9	69	1515	1.2
Metriididae C-3	4	512.0	68	1500	1.2
Invertebrata - egg <5mm	4	512.0	68	1500	1.2
Larvacea	4	512.0	68	1500	1.2
Pseudocalanus spp. C-4 F	31	56.9	59	1292	1.0
Neocalanus plumchrus C-4	27	56.9	51	1125	0.9
Metridia pacifica - adult M	3	512.0	51	1125	0.9
Chaetognatha 5-20mm	92	16.0	49	1078	0.9
Pseudocalanus spp. C-4 M	25	56.9	47	1042	0.8
Calanus marshallae - adult F	20	56.9	38	834	0.7
Euphausiacea - nauplius	2	512.0	34	750	0.6
Calanus marshallae C-4	15	56.9	28	625	0.5
Neocalanus plumchrus C-3	14	56.9	27	584	0.5
Calanus marshallae - adult M	10	56.9	19	417	0.3
Calanus marshallae C-1	10	56.9	19	417	0.3
?Pseudocalanus spp. C-3	1	512.0	17	375	0.3
Hyperiidea <5mm	1	512.0	17	375	0.3
Ostracoda <5mm	1	512.0	17	375	0.3
Neocalanus cristatus C-4	8	16.0	4	94	0.1
Calanus pacificus C-5	2	56.9	4	83	0.1
Calanus marshallae C-5	2	56.9	4	83	0.1
Cnidaria - medusa >5mm	7	16.0	4	82	0.1
Other Copepoda >5mm	5	16.0	3	59	< 0.1
Chaetognatha >20mm	5	16.0	3	59	< 0.1
Neocalanus cristatus C-5	4	16.0	2	47	< 0.1
Gammaridea >5mm	4	16.0	2	47	< 0.1
Hyperiidea >5mm	3	16.0	2	35	< 0.1
Eucalanus bungii - adult F	1	16.0	1	12	< 0.1
			5626	123767	100.

STA. 062 56 16.6 N 156 15.5 W 07 May 86 1:33

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
276	0 - 263	372.9	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus plumchrus C-5	227	56.9	346	9110	15.5
Pseudocalanus spp. - adult F	17	512.0	233	6139	10.5
Pseudocalanus spp. - adult M	14	512.0	192	5055	8.6
Pseudocalanus spp. C-5 F	89	56.9	136	3572	6.1
Pseudocalanus spp. C-5 M	75	56.9	114	3010	5.1
Neocalanus plumchrus C-4	72	56.9	110	2889	4.9
Metridia pacifica C-5 M	65	56.9	99	2609	4.4
Metridia pacifica C-5 F	64	56.9	98	2568	4.4
Metridia pacifica C-4	60	56.9	92	2408	4.1
Metridia pacifica - adult M	51	56.9	78	2047	3.5
Metridia pacifica - adult F	51	56.9	78	2047	3.5
Ostracoda <5mm	5	512.0	69	1806	3.1
Acartia spp.	42	56.9	64	1685	2.9
Other Copepoda 2-5mm	4	512.0	55	1444	2.5
Oithona spp.	34	56.9	52	1364	2.3
Pseudocalanus spp. C-4 F	30	56.9	46	1204	2.1
Calanus marshallae C-2	27	56.9	41	1084	1.8
Cirripedia - nauplius <5mm	3	512.0	41	1083	1.8
Larvacea	3	512.0	41	1083	1.8
Gammaridea <5mm	3	512.0	41	1083	1.8
Hyperiidea <5mm	2	512.0	27	722	1.2
Calanus marshallae C-3	17	56.9	26	682	1.2
Pseudocalanus spp. C-4 M	14	56.9	21	562	1.0
Chaetognatha 5-20mm	72	8.0	15	406	0.7
Cirripedia - cypris <5mm	1	512.0	14	361	0.6
Other Copepoda <2mm	1	512.0	14	361	0.6
Metridia spp. - adult F	7	56.9	11	281	0.5
Calanus marshallae C-4	7	56.9	11	281	0.5
Neocalanus cristatus C-4	35	8.0	8	197	0.3
Calanus marshallae C-5	4	56.9	6	161	0.3
Neocalanus plumchrus C-3	4	56.9	6	161	0.3
Metridia spp. C-4	4	56.9	6	161	0.3
Metridia spp. - adult M	3	56.9	5	120	0.2
Calanus marshallae C-1	3	56.9	5	120	0.2
Cnidaria - medusa >5mm	19	8.0	4	107	0.2
Calanus pacificus C-5	2	56.9	3	80	0.1
Euphausiacea - calyptopis 2	2	56.9	3	80	0.1
Calanus marshallae - adult M	2	56.9	3	80	0.1
Other Copepoda >5mm	14	8.0	3	79	0.1
Neocalanus cristatus C-5	11	8.0	2	62	0.1
Chaetognatha >20mm	11	8.0	2	62	0.1
Neocalanus plumchrus C-2	1	56.9	2	40	0.1
?Pseudocalanus spp. C-3	1	56.9	2	40	0.1
Euphausiacea - calyptopis 1	1	56.9	2	40	0.1
Metridia spp. C-5 F	1	56.9	2	40	0.1
Eucalanus bungii - adult M	4	8.0	1	23	< 0.1
Eucalanus bungii C-5 F	4	8.0	1	23	< 0.1

Gammaridea >5mm	4	8.0	1	23	< 0.1
Hyperiidea >5mm	4	8.0	1	23	< 0.1
Mysidacea >5mm	2	8.0	< 1	11	< 0.1
Eucalanus bungii C-5 M	2	8.0	< 1	11	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	6	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
Siphonophora >5mm	1	8.0	< 1	6	< 0.1
			2232	58708	100.

STA. 063 56 12.1 N 156 05.1 W 07 May 86 2:43

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
243	0 - 221	330.7	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	56	256.0	433	9580	13.3
Cirripedia - nauplius <5mm	36	256.0	279	6159	8.6
Neocalanus plumchrus C-5	34	256.0	263	5817	8.1
Neocalanus plumchrus C-4	31	256.0	240	5303	7.4
Invertebrata - egg <5mm	22	256.0	170	3764	5.2
Pseudocalanus spp. - adult M	22	256.0	170	3764	5.2
Metridia pacifica C-5 M	21	256.0	163	3593	5.0
Cirripedia - cypris <5mm	18	256.0	139	3079	4.3
Pseudocalanus spp. C-5 M	18	256.0	139	3079	4.3
Pseudocalanus spp. C-5 F	15	256.0	116	2566	3.6
Metridia pacifica - adult F	15	256.0	116	2566	3.6
Metridia pacifica C-4	71	51.2	110	2429	3.4
Euphausiacea - nauplius	14	256.0	108	2395	3.3
Larvacea	14	256.0	108	2395	3.3
Metridia pacifica C-5 F	11	256.0	85	1882	2.6
Other Copepoda <2mm	11	256.0	85	1882	2.6
Ostracoda <5mm	7	256.0	54	1198	1.7
Metridia pacifica - adult M	7	256.0	54	1198	1.7
Oithona spp.	34	51.2	53	1163	1.6
Acartia spp.	34	51.2	53	1163	1.6
Pseudocalanus spp. C-4 F	24	51.2	37	821	1.1
Calanus marshallae C-2	24	51.2	37	821	1.1
Calanus marshallae C-3	17	51.2	26	582	0.8
Pseudocalanus spp. C-4 M	14	51.2	22	479	0.7
Chaetognatha 5-20mm	39	16.0	19	417	0.6
Neocalanus plumchrus C-3	11	51.2	17	376	0.5
Polychaeta <5mm	2	256.0	15	342	0.5
Gastropoda - veliger <5mm	2	256.0	15	342	0.5
Calanus marshallae C-1	8	51.2	12	274	0.4
Neocalanus cristatus C-4	17	16.0	8	182	0.3
Other Copepoda 2-5mm	1	256.0	8	171	0.2
Thecosomata <5mm	1	256.0	8	171	0.2
Siphonophora <5mm	1	256.0	8	171	0.2
Other Copepoda damaged	1	256.0	8	171	0.2
Calanus marshallae - adult F	4	51.2	6	137	0.2
Euphausiacea - calyptopis 3	4	51.2	6	137	0.2
Calanus marshallae C-4	4	51.2	6	137	0.2
Cnidaria - medusa >5mm	10	16.0	5	107	0.1
Euphausiacea - calyptopis 1	3	51.2	5	103	0.1
Neocalanus cristatus C-5	9	16.0	4	96	0.1
Other Copepoda >5mm	8	16.0	4	86	0.1
Euphausiacea - calyptopis 2	2	51.2	3	68	0.1
Calanus pacificus C-5	2	51.2	3	68	0.1
Euphausiacea - furcilia	2	51.2	3	68	0.1
Metridia spp. C-4	2	51.2	3	68	0.1
Calanus marshallae - adult M	2	51.2	3	68	0.1
Chaetognatha >20mm	6	16.0	3	64	0.1

Hyperiidea >5mm	6	16.0	3	64	0.1
Mysidacea >5mm	6	16.0	3	64	0.1
Gammaridea >5mm	4	16.0	2	43	0.1
Calanus marshallae C-5	1	51.2	2	34	< 0.1
Neocalanus plumchrus C-2	1	51.2	2	34	< 0.1
Thysanoessa inermis A&J	3	16.0	1	32	< 0.1
Siphonophora >5mm	2	16.0	1	21	< 0.1
Eucalanus bungii C-5 M	2	16.0	1	21	< 0.1
Thysanoessa spinifera A&J	1	16.0	< 1	11	< 0.1
Eucalanus bungii - adult M	1	16.0	< 1	11	< 0.1
			3251	71839	100.

STA. 122 55 55.9 N 156 28.8 W 15 May 86 12:45

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
229	0 - 201	252.6	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	44	512.0	892	17928	14.3
Cirripedia - nauplius <5mm	33	512.0	669	13446	10.8
Euphausiacea - nauplius	32	512.0	649	13038	10.4
Neocalanus plumchrus C-5	245	56.9	552	11094	8.9
Pseudocalanus spp. - adult M	23	512.0	466	9371	7.5
Pseudocalanus spp. C-5 F	16	512.0	324	6519	5.2
Pseudocalanus spp. C-5 M	15	512.0	304	6112	4.9
Euphausiacea - calyptopis 1	97	56.9	219	4392	3.5
Invertebrata - egg <5mm	8	512.0	162	3260	2.6
Other Copepoda damaged	8	512.0	162	3260	2.6
Metridia pacifica - adult F	58	56.9	131	2626	2.1
Acartia spp.	49	56.9	110	2219	1.8
Metridia pacifica C-4	43	56.9	97	1947	1.6
Calanus marshallae C-2	39	56.9	88	1766	1.4
Metridia pacifica - adult M	37	56.9	83	1675	1.3
Pseudocalanus spp. C-4 F	37	56.9	83	1675	1.3
Oithona spp.	36	56.9	81	1630	1.3
Calanus marshallae C-3	36	56.9	81	1630	1.3
Other Copepoda <2mm	4	512.0	81	1630	1.3
Other zooplankton <5mm	4	512.0	81	1630	1.3
Cirripedia - cypris <5mm	4	512.0	81	1630	1.3
Metridia pacifica C-5 F	35	56.9	79	1585	1.3
Metridia pacifica C-5 M	33	56.9	74	1494	1.2
Euphausiacea - calyptopis 2	31	56.9	70	1404	1.1
Neocalanus plumchrus C-4	29	56.9	65	1313	1.0
Pseudocalanus spp. C-4 M	29	56.9	65	1313	1.0
Chaetognatha <5mm	3	512.0	61	1222	1.0
Hyperiidea <5mm	3	512.0	61	1222	1.0
Calanus marshallae C-4	20	56.9	45	906	0.7
Chaetognatha 5-20mm	63	16.0	40	802	0.6
Euphausiacea - calyptopis 3	10	56.9	23	453	0.4
Calanus marshallae C-5	9	56.9	20	408	0.3
Euphausiacea - furcilia	9	56.9	20	408	0.3
Larvacea	1	512.0	20	407	0.3
Polychaeta <5mm	1	512.0	20	407	0.3
?Pseudocalanus spp. C-3	1	512.0	20	407	0.3
Metriididae C-3	1	512.0	20	407	0.3
Ostracoda <5mm	1	512.0	20	407	0.3
Echinodermata - larva <5mm	1	512.0	20	407	0.3
Metridia spp. - adult F	6	56.9	14	272	0.2
Cnidaria - medusa >5mm	19	16.0	12	242	0.2
Calanus marshallae - adult F	4	56.9	9	181	0.1
Calanus marshallae C-1	3	56.9	7	136	0.1
Thysanoessa inermis A&J	10	16.0	6	127	0.1
Calanus marshallae - adult M	2	56.9	5	91	0.1
Neocalanus plumchrus C-3	2	56.9	5	91	0.1
Chaetognatha >20mm	7	16.0	4	89	0.1

Neocalanus cristatus C-5	7	16.0	4	89	0.1
Other Copepoda >5mm	5	16.0	3	64	0.1
Eucalanus bungii - adult F	4	16.0	3	51	< 0.1
Neocalanus plumchrus C-2	1	56.9	2	45	< 0.1
Neocalanus cristatus C-4	3	16.0	2	38	< 0.1
Eucalanus bungii C-5 F	2	16.0	1	25	< 0.1
Euphausia pacifica A&J	1	16.0	1	13	< 0.1
Thysanoessa spinifera A&J	1	16.0	1	13	< 0.1
Polychaeta >5mm	1	16.0	1	13	< 0.1
Hyperiidea >5mm	1	16.0	1	13	< 0.1
Mysidacea >5mm	1	16.0	1	13	< 0.1
Cumacea >5mm	1	16.0	1	13	< 0.1
			6222	125070	100.

STA. 128 56 18.5 N 155 54.1 W 16 May 86 7:57

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
181	0 - 150	227.1	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	145	1024.0	6539	98091	33.0
Pseudocalanus spp. - adult F	54	1024.0	2435	36530	12.3
Neocalanus plumchrus C-5	145	204.8	1308	19618	6.6
Pseudocalanus spp. - adult M	20	1024.0	902	13530	4.6
Pseudocalanus spp. C-5 F	83	204.8	749	11230	3.8
Metridia pacifica - adult F	16	1024.0	722	10824	3.6
Euphausiacea - nauplius	14	1024.0	631	9471	3.2
Metridia pacifica - adult M	13	1024.0	586	8794	3.0
Pseudocalanus spp. C-5 M	58	204.8	523	7847	2.6
Cirripedia - nauplius <5mm	11	1024.0	496	7441	2.5
Acartia spp.	55	204.8	496	7441	2.5
Metridia pacifica C-4	47	204.8	424	6359	2.1
Larvacea	9	1024.0	406	6088	2.0
Metriididae C-3	7	1024.0	316	4735	1.6
Calanus marshallae C-3	31	204.8	280	4194	1.4
Metridia pacifica C-5 F	30	204.8	271	4059	1.4
Other Copepoda <2mm	6	1024.0	271	4059	1.4
Metriididae C-2	5	1024.0	225	3382	1.1
Euphausiacea - calyptopis 1	24	204.8	216	3247	1.1
Pseudocalanus spp. C-4 F	21	204.8	189	2841	1.0
Metridia pacifica C-5 M	20	204.8	180	2706	0.9
Thecosomata <5mm	4	1024.0	180	2706	0.9
Pseudocalanus spp. C-4 M	19	204.8	171	2571	0.9
Calanus marshallae C-2	15	204.8	135	2029	0.7
Calanus marshallae C-4	14	204.8	126	1894	0.6
Oithona spp.	11	204.8	99	1488	0.5
Other Copepoda damaged	11	204.8	99	1488	0.5
Gammaridea <5mm	2	1024.0	90	1353	0.5
Cirripedia - cypris <5mm	2	1024.0	90	1353	0.5
Euphausiacea - calyptopis 2	9	204.8	81	1218	0.4
Calanus marshallae C-5	8	204.8	72	1082	0.4
Euphausiacea - calyptopis 3	6	204.8	54	812	0.3
Neocalanus plumchrus C-4	6	204.8	54	812	0.3
Chaetognatha 5-20mm	75	16.0	53	793	0.3
Polychaeta <5mm	1	1024.0	45	676	0.2
Metriididae C-1	1	1024.0	45	676	0.2
Hyperiidea <5mm	1	1024.0	45	676	0.2
Calanus marshallae - adult M	4	204.8	36	541	0.2
Euphausiacea - furcilia	4	204.8	36	541	0.2
Calanus marshallae - adult F	3	204.8	27	406	0.1
Calanus marshallae C-1	2	204.8	18	271	0.1
Neocalanus cristatus C-5	23	16.0	16	243	0.1
Euphausia pacifica A&J	22	16.0	16	233	0.1
Neocalanus plumchrus - adult M	1	204.8	9	135	< 0.1
Thysanoessa inermis A&J	12	16.0	8	127	< 0.1
Cnidaria - medusa >5mm	11	16.0	8	116	< 0.1
Thysanoessa spinifera A&J	10	16.0	7	106	< 0.1

Neocalanus cristatus C-4	7	16.0	5	74	< 0.1
Hyperiidea >5mm	6	16.0	4	63	< 0.1
Chaetognatha >20mm	5	16.0	4	53	< 0.1
Eucalanus bungii - adult F	4	16.0	3	42	< 0.1
Euphausiacea A&J damaged	2	16.0	1	21	< 0.1
Eucalanus bungii - adult M	1	16.0	1	11	< 0.1
Mysidacea >5mm	1	16.0	1	11	< 0.1
Other Copepoda >5mm	1	16.0	1	11	< 0.1
			19808	297123	100.

STA. 149 56 15.7 N 156 48.1 W 17 May 86 11:20

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
84	0 - 67	103.1	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	61	256.0	1515	10153	17.5
Invertebrata - egg <5mm	52	256.0	1292	8655	14.9
Pseudocalanus spp. - adult M	44	256.0	1093	7323	12.6
Pseudocalanus spp. C-5 M	33	256.0	820	5493	9.5
Pseudocalanus spp. C-5 F	31	256.0	770	5160	8.9
Pseudocalanus spp. C-4 F	27	256.0	671	4494	7.7
Neocalanus plumchrus C-5	182	28.4	502	3361	5.8
Pseudocalanus spp. C-4 M	11	256.0	273	1831	3.2
Acartia spp.	94	28.4	259	1736	3.0
Calanus marshallae C-3	94	28.4	259	1736	3.0
Euphausiacea - nauplius	8	256.0	199	1332	2.3
Calanus marshallae C-2	69	28.4	190	1274	2.2
Other Copepoda damaged	7	256.0	174	1165	2.0
Larvacea	5	256.0	124	832	1.4
Neocalanus plumchrus C-4	33	28.4	91	609	1.0
Calanus marshallae C-4	22	28.4	61	406	0.7
Metridia pacifica C-4	20	28.4	55	369	0.6
Metridia pacifica C-5 M	15	28.4	41	277	0.5
Metridia pacifica C-5 F	11	28.4	30	203	0.3
Chaetognatha 5-20mm	69	4.0	27	179	0.3
Metriididae C-3	1	256.0	25	166	0.3
?Pseudocalanus spp. C-3	1	256.0	25	166	0.3
Anomura - larva	1	256.0	25	166	0.3
Metridia pacifica - adult F	8	28.4	22	148	0.3
Metridia pacifica - adult M	7	28.4	19	129	0.2
Calanus marshallae C-5	6	28.4	17	111	0.2
Calanus marshallae C-1	5	28.4	14	92	0.2
Oithona spp.	5	28.4	14	92	0.2
Calanus marshallae - adult F	5	28.4	14	92	0.2
Euphausiacea - calyptopis 2	3	28.4	8	55	0.1
Euphausiacea - calyptopis 1	3	28.4	8	55	0.1
Thysanoessa inermis A&J	19	4.0	7	49	0.1
Cnidaria - medusa >5mm	16	4.0	6	42	0.1
Calanus pacificus C-5	1	28.4	3	18	< 0.1
Neocalanus plumchrus C-2	1	28.4	3	18	< 0.1
Thysanoessa spinifera A&J	5	4.0	2	13	< 0.1
Chaetognatha >20mm	4	4.0	2	10	< 0.1
Neocalanus cristatus C-5	3	4.0	1	8	< 0.1
Neocalanus cristatus C-4	3	4.0	1	8	< 0.1
Eucalanus bungii - adult F	2	4.0	1	5	< 0.1
		-0-	8662	58 035	100.

STA. 150 56 21.1 N 156 53.3 W 17 May 86 12:10

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
124	0 - 108	156.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	107	512.0	3506	37865	32.4
Neocalanus plumchrus C-5	53	512.0	1737	18756	16.0
Pseudocalanus spp. - adult M	30	512.0	983	10616	9.1
Pseudocalanus spp. C-5 F	23	512.0	754	8139	7.0
Cirripedia - nauplius <5mm	19	512.0	623	6724	5.7
Pseudocalanus spp. C-5 M	15	512.0	492	5308	4.5
Acartia spp.	124	56.9	452	4877	4.2
Other Copepoda damaged	11	512.0	360	3893	3.3
Metridia pacifica - adult M	70	56.9	255	2753	2.4
Metridia pacifica C-4	42	56.9	153	1652	1.4
Pseudocalanus spp. C-4 F	39	56.9	142	1534	1.3
Cirripedia - cypris <5mm	4	512.0	131	1416	1.2
Calanus marshallae C-3	28	56.9	102	1101	0.9
Metriididae C-3	3	512.0	98	1062	0.9
Metridia pacifica C-5 M	26	56.9	95	1023	0.9
Metridia pacifica C-5 F	25	56.9	91	983	0.8
Pseudocalanus spp. C-4 M	24	56.9	87	944	0.8
Calanus marshallae C-2	21	56.9	76	826	0.7
Neocalanus plumchrus C-4	18	56.9	66	708	0.6
Invertebrata - egg <5mm	2	512.0	66	708	0.6
Larvacea	2	512.0	66	708	0.6
Natantia - larva	2	512.0	66	708	0.6
Thecosomata <5mm	2	512.0	66	708	0.6
Metridia pacifica - adult F	16	56.9	58	629	0.5
Calanus marshallae C-4	14	56.9	51	551	0.5
Euphausiacea - calyptopis 1	11	56.9	40	433	0.4
Euphausiacea - nauplius	1	512.0	33	354	0.3
Hyperiidea <5mm	1	512.0	33	354	0.3
Polychaeta <5mm	1	512.0	33	354	0.3
Calanus marshallae - adult F	6	56.9	22	236	0.2
Chaetognatha 5-20mm	84	4.0	22	232	0.2
Calanus marshallae C-1	5	56.9	18	197	0.2
Calanus marshallae C-5	5	56.9	18	197	0.2
Euphausiacea - calyptopis 2	3	56.9	11	118	0.1
Chaetognatha >20mm	23	4.0	6	64	0.1
Cnidaria - medusa >5mm	17	4.0	4	47	< 0.1
Neocalanus plumchrus C-3	1	56.9	4	39	< 0.1
Metridia spp. C-4	1	56.9	4	39	< 0.1
Neocalanus cristatus C-4	14	4.0	4	39	< 0.1
Neocalanus cristatus C-5	7	4.0	2	19	< 0.1
Thysanoessa spinifera A&J	5	4.0	1	14	< 0.1
Thysanoessa inermis A&J	5	4.0	1	14	< 0.1
Eucalanus bungii - adult F	3	4.0	1	8	< 0.1
Euphausia pacifica A&J	2	4.0	1	6	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
Gymnosomata >5mm	1	4.0	< 1	3	< 0.1
Hyperiidea >5mm	1	4.0	< 1	3	< 0.1

Natantia A&J >5mm	1	4.0	< 1	3	< 0.1
			10830	116963	100.

STA. 151 56 26.6 N 157 01.1 W 17 May 86 13:05

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
89	0 - 66	114.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	79	2048.0	14142	93340	22.7
Pseudocalanus spp. - adult F	43	2048.0	7698	50805	12.3
Euphausiacea - calyptopis 2	35	2048.0	6266	41353	10.0
Cirripedia - cypris <5mm	34	2048.0	6087	40172	9.8
Euphausiacea - calyptopis 3	24	2048.0	4296	28356	6.9
Euphausiacea - furcilia	763	62.1	4142	27335	6.6
Pseudocalanus spp. C-5 F	23	2048.0	4117	27175	6.6
Pseudocalanus spp. - adult M	17	2048.0	3043	20086	4.9
Euphausiacea - calyptopis 1	10	2048.0	1790	11815	2.9
Pseudocalanus spp. C-5 M	7	2048.0	1253	8271	2.0
Calanus marshallae C-4	226	62.1	1227	8097	2.0
Calanus marshallae C-3	199	62.1	1080	7129	1.7
Euphausiacea - nauplius	4	2048.0	716	4726	1.1
Neocalanus plumchrus C-5	122	62.1	662	4371	1.1
Acartia spp.	118	62.1	641	4227	1.0
Metridia pacifica C-4	102	62.1	554	3654	0.9
Calanus marshallae C-2	101	62.1	548	3618	0.9
Other Copepoda <2mm	3	2048.0	537	3545	0.9
Larvacea	3	2048.0	537	3545	0.9
Metridia pacifica - adult F	91	62.1	494	3260	0.8
Calanus marshallae C-5	67	62.1	364	2400	0.6
Invertebrata - egg <5mm	2	2048.0	358	2363	0.6
Polychaeta <5mm	2	2048.0	358	2363	0.6
Metridia pacifica C-5 M	63	62.1	342	2257	0.5
Hyperiidea <5mm	1	2048.0	179	1182	0.3
Metriididae C-3	1	2048.0	179	1182	0.3
Gastropoda - veliger <5mm	1	2048.0	179	1182	0.3
Metridia pacifica C-5 F	29	62.1	157	1039	0.3
Neocalanus plumchrus C-4	17	62.1	92	609	0.1
Oithona spp.	10	62.1	54	358	0.1
Pseudocalanus spp. C-4 M	10	62.1	54	358	0.1
Pseudocalanus spp. C-4 F	10	62.1	54	358	0.1
Metridia pacifica - adult M	7	62.1	38	251	0.1
Eucalanus bungii C-2	5	62.1	27	179	< 0.1
Calanus marshallae C-1	4	62.1	22	143	< 0.1
Calanus marshallae - adult F	4	62.1	22	143	< 0.1
Chaetognatha 5-20mm	60	4.0	21	138	< 0.1
Chaetognatha >20mm	29	4.0	10	67	< 0.1
Neocalanus cristatus C-5	23	4.0	8	53	< 0.1
Cnidaria - medusa >5mm	17	4.0	6	39	< 0.1
Gammaridea >5mm	17	4.0	6	39	< 0.1
Eucalanus bungii C-4 F	1	62.1	5	36	< 0.1
Calanus marshallae - adult M	1	62.1	5	36	< 0.1
Calanus pacificus C-5	1	62.1	5	36	< 0.1
Metridia spp. C-5 F	1	62.1	5	36	< 0.1
?Pseudocalanus spp. C-1	1	62.1	5	36	< 0.1
Metridia spp. - adult F	1	62.1	5	36	< 0.1

Thysanoessa inermis A&J	6	4.0	2	14	< 0.1
Hyperiidea >5mm	4	4.0	1	9	< 0.1
Euphausia pacifica A&J	3	4.0	1	7	< 0.1
Natantia A&J >5mm	2	4.0	1	5	< 0.1
Neocalanus cristatus C-4	2	4.0	1	5	< 0.1
Other Copepoda >5mm	2	4.0	1	5	< 0.1
Cumacea >5mm	1	4.0	< 1	2	< 0.1
Polychaeta >5mm	1	4.0	< 1	2	< 0.1
Eucalanus bungii - adult F	1	4.0	< 1	2	< 0.1
Thysanoessa longipes A&J	1	4.0	< 1	2	< 0.1
			62402	411852	100.

STA. 159 57 42.5 N 155 14.2 W 18 May 86 14:17

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
305	0 - 277	326.1	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	105	256.0	824	22830	22.2
Euphausiacea - nauplius	92	256.0	722	20003	19.4
Pseudocalanus spp. - adult M	56	256.0	440	12176	11.8
Euphausiacea - calyptopis 1	37	256.0	290	8045	7.8
Cirripedia - nauplius <5mm	36	256.0	283	7827	7.6
Pseudocalanus spp. C-5 F	33	256.0	259	7175	7.0
Pseudocalanus spp. C-5 M	19	256.0	149	4131	4.0
Neocalanus plumchrus C-5	118	28.4	103	2846	2.8
Thecosomata <5mm	13	256.0	102	2827	2.7
Acartia spp.	117	28.4	102	2822	2.7
Invertebrata - egg <5mm	9	256.0	71	1957	1.9
Euphausiacea - calyptopis 2	9	256.0	71	1957	1.9
Pseudocalanus spp. C-4 F	66	28.4	57	1592	1.5
Calanus marshallae C-2	37	28.4	32	892	0.9
Pseudocalanus spp. C-4 M	36	28.4	31	868	0.8
Calanus marshallae C-3	36	28.4	31	868	0.8
Cirripedia - cypris <5mm	3	256.0	24	652	0.6
Neocalanus plumchrus C-4	23	28.4	20	555	0.5
Hyperiidea <5mm	2	256.0	16	435	0.4
Anomura - larva	2	256.0	16	435	0.4
Euphausiacea - calyptopis 3	2	256.0	16	435	0.4
Euphausiacea - furcilia	13	28.4	11	314	0.3
Larvacea	1	256.0	8	217	0.2
Chaetognatha 5-20mm	60	4.0	7	204	0.2
Cnidaria - medusa >5mm	45	4.0	6	153	0.1
Calanus marshallae C-1	6	28.4	5	145	0.1
Calanus marshallae C-4	5	28.4	4	121	0.1
Metridia pacifica C-5 M	4	28.4	3	96	0.1
Thysanoessa inermis A&J	27	4.0	3	92	0.1
Calanus marshallae C-5	2	28.4	2	48	< 0.1
Neocalanus plumchrus C-3	2	28.4	2	48	< 0.1
Metridia pacifica C-4	2	28.4	2	48	< 0.1
Metridia pacifica - adult F	2	28.4	2	48	< 0.1
Calanus marshallae - adult F	2	28.4	2	48	< 0.1
Metridia pacifica - adult M	1	28.4	1	24	< 0.1
Oithona spp.	1	28.4	1	24	< 0.1
Metridia pacifica C-5 F	1	28.4	1	24	< 0.1
Neocalanus plumchrus C-2	1	28.4	1	24	< 0.1
Eucalanus bungii - adult F	5	4.0	1	17	< 0.1
Neocalanus cristatus C-4	3	4.0	< 1	10	< 0.1
Chaetognatha >20mm	3	4.0	< 1	10	< 0.1
Neocalanus cristatus C-5	2	4.0	< 1	7	< 0.1
Hyperiidea >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	3	< 0.1
			3721	103058	100.

STA. 160 57 41.3 N 155 10.3 W 18 May 86 15:56

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
168	0 - 154	196.0	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - cypris <5mm	46	1024.0	2403	37012	11.7
Euphausiacea - furcilia	43	1024.0	2247	34598	11.0
Cirripedia - nauplius <5mm	39	1024.0	2038	31380	9.9
Pseudocalanus spp. - adult F	33	1024.0	1724	26552	8.4
Euphausiacea - calyptopis 2	30	1024.0	1567	24138	7.7
Euphausiacea - calyptopis 3	28	1024.0	1463	22529	7.1
Calanus marshallae C-3	21	1024.0	1097	16897	5.4
Pseudocalanus spp. - adult M	17	1024.0	888	13678	4.3
Calanus marshallae C-4	150	113.8	871	13413	4.3
Pseudocalanus spp. C-5 F	133	113.8	772	11893	3.8
Euphausiacea - calyptopis 1	12	1024.0	627	9655	3.1
Pseudocalanus spp. C-5 M	104	113.8	604	9300	2.9
Neocalanus plumchrus C-5	90	113.8	523	8048	2.6
Calanus marshallae C-2	10	1024.0	522	8046	2.6
Euphausiacea - nauplius	10	1024.0	522	8046	2.6
Larvacea	9	1024.0	470	7242	2.3
Acartia spp.	71	113.8	412	6349	2.0
Other Copepoda <2mm	5	1024.0	261	4023	1.3
Calanus marshallae C-5	41	113.8	238	3666	1.2
Pseudocalanus spp. C-4 F	30	113.8	174	2683	0.9
Metridia pacifica C-4	29	113.8	168	2593	0.8
Calanus marshallae C-1	3	1024.0	157	2414	0.8
Pseudocalanus spp. C-4 M	22	113.8	128	1967	0.6
Neocalanus plumchrus C-4	22	113.8	128	1967	0.6
Metridia pacifica C-5 M	17	113.8	99	1520	0.5
Metridia pacifica - adult F	12	113.8	70	1073	0.3
Hyperiidea <5mm	1	1024.0	52	805	0.3
Gastropoda - veliger <5mm	1	1024.0	52	805	0.3
Neocalanus plumchrus C-2	1	1024.0	52	805	0.3
Polychaeta <5mm	1	1024.0	52	805	0.3
Metridia pacifica C-5 F	5	113.8	29	447	0.1
Oithona spp.	4	113.8	23	358	0.1
Calanus marshallae - adult F	2	113.8	12	179	0.1
Chaetognatha 5-20mm	102	2.0	10	160	0.1
Eucalanus bungii C-1	1	113.8	6	89	< 0.1
Calanus marshallae - adult M	1	113.8	6	89	< 0.1
Eucalanus bungii C-2	1	113.8	6	89	< 0.1
Eucalanus bungii C-4 F	1	113.8	6	89	< 0.1
Neocalanus cristatus C-5	17	2.0	2	27	< 0.1
Chaetognatha >20mm	14	2.0	1	22	< 0.1
Cnidaria - medusa >5mm	12	2.0	1	19	< 0.1
Thysanoessa spinifera A&J	2	2.0	< 1	3	< 0.1
Thysanoessa inermis A&J	2	2.0	< 1	3	< 0.1
Eucalanus bungii C-5 M	2	2.0	< 1	3	< 0.1
Hyperiidea >5mm	1	2.0	< 1	2	< 0.1
			20486	315482	100.

STA. 162 57 35.8 N 154 59.0 W 18 May 86 18:32

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
241	0 - 226	297.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	59	1024.0	2032	45932	14.9
Euphausiacea - calyptopis 3	32	1024.0	1102	24912	8.1
Cirripedia - cypris <5mm	31	1024.0	1068	24134	7.8
Euphausiacea - furcilia	48	512.0	827	18684	6.1
Pseudocalanus spp. - adult M	23	1024.0	792	17906	5.8
Pseudocalanus spp. C-5 M	23	1024.0	792	17906	5.8
Euphausiacea - calyptopis 2	22	1024.0	758	17127	5.6
Pseudocalanus spp. C-5 F	21	1024.0	723	16349	5.3
Calanus marshallae C-3	28	512.0	482	10899	3.5
Metridia pacifica - adult F	25	512.0	431	9731	3.2
Metridia pacifica C-5 F	23	512.0	396	8953	2.9
Metridia pacifica - adult M	22	512.0	379	8564	2.8
Larvacea	11	1024.0	379	8564	2.8
Calanus marshallae C-4	22	512.0	379	8564	2.8
Metridia pacifica C-4	348	30.1	352	7964	2.6
Euphausiacea - calyptopis 1	8	1024.0	276	6228	2.0
Metridia pacifica C-5 M	16	512.0	276	6228	2.0
Neocalanus plumchrus C-5	247	30.1	250	5652	1.8
Euphausiacea - nauplius	7	1024.0	241	5450	1.8
Calanus marshallae C-5	13	512.0	224	5060	1.6
Cirripedia - nauplius <5mm	6	1024.0	207	4671	1.5
Other Copepoda <2mm	6	1024.0	207	4671	1.5
Acartia spp.	142	30.1	144	3249	1.1
Calanus marshallae C-2	7	512.0	121	2725	0.9
Metriididae C-3	3	1024.0	103	2336	0.8
Invertebrata - egg <5mm	3	1024.0	103	2336	0.8
Cnidaria - medusa <5mm	2	1024.0	69	1557	0.5
Neocalanus plumchrus - adult M	3	512.0	52	1168	0.4
Pseudocalanus spp. C-4 F	49	30.1	50	1121	0.4
Oithona spp.	40	30.1	41	915	0.3
Pseudocalanus spp. C-4 M	37	30.1	37	847	0.3
Metriididae C-1	1	1024.0	34	779	0.3
Calanus marshallae - adult F	2	512.0	34	779	0.3
Ostracoda <5mm	1	1024.0	34	779	0.3
Polychaeta <5mm	1	1024.0	34	779	0.3
Anomura - larva	1	1024.0	34	779	0.3
Thecosomata <5mm	1	1024.0	34	779	0.3
Metridia spp. C-4	21	30.1	21	481	0.2
Neocalanus plumchrus C-4	20	30.1	20	458	0.1
Metridia spp. C-5 M	1	512.0	17	389	0.1
Calanus marshallae C-1	1	512.0	17	389	0.1
Metridia spp. C-5 F	1	512.0	17	389	0.1
Chaetognatha 5-20mm	84	4.0	11	255	0.1
Chaetognatha >20mm	25	4.0	3	76	< 0.1
Neocalanus cristatus C-5	21	4.0	3	64	< 0.1
Eucalanus bungii C-4 F	2	30.1	2	46	< 0.1
Cnidaria - medusa <5mm	14	4.0	2	43	< 0.1

Calanus pacificus C-5	1	30.1	1	23	< 0.1
Gammaridea <5mm	6	4.0	1	18	< 0.1
Other Copepoda >5mm	4	4.0	1	12	< 0.1
Hyperiidea <5mm	4	4.0	1	12	< 0.1
Euphausia pacifica A&J	3	4.0	< 1	9	< 0.1
Thysanoessa inermis A&J	2	4.0	< 1	6	< 0.1
Polychaeta <5mm	1	4.0	< 1	3	< 0.1
Gymnosomata <5mm	1	4.0	< 1	3	< 0.1
Thysanoessa spinifera A&J	1	4.0	< 1	3	< 0.1
Neocalanus cristatus C-4	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
			13617	307753	100.

STA. 165 57 29.1 N 154 42.5 W 18 May 86 21:56

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
81	0 - 67	113.7	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	104	128.0	1171	7843	18.2
Cirripedia - nauplius <5mm	46	128.0	518	3469	8.1
Pseudocalanus spp. - adult M	41	128.0	461	3092	7.2
Euphausiacea - calyptopis 2	33	128.0	371	2489	5.8
Metridia pacifica C-4	157	25.6	353	2368	5.5
Euphausiacea - furcilia	31	128.0	349	2338	5.4
Pseudocalanus spp. C-5 F	30	128.0	338	2262	5.3
Cirripedia - cypris <5mm	24	128.0	270	1810	4.2
Acartia spp.	119	25.6	268	1795	4.2
Euphausiacea - calyptopis 1	22	128.0	248	1659	3.9
Euphausiacea - calyptopis 3	20	128.0	225	1508	3.5
Pseudocalanus spp. C-5 M	18	128.0	203	1357	3.2
Invertebrata - egg <5mm	12	128.0	135	905	2.1
Other Copepoda <2mm	11	128.0	124	830	1.9
Euphausiacea - nauplius	11	128.0	124	830	1.9
Metridia pacifica C-5 M	54	25.6	122	814	1.9
Calanus marshallae C-4	53	25.6	119	799	1.9
Calanus marshallae C-3	45	25.6	101	679	1.6
Neocalanus plumchrus C-5	44	25.6	99	664	1.5
Metridia pacifica - adult F	41	25.6	92	618	1.4
Metridia pacifica - adult M	34	25.6	77	513	1.2
Calanus marshallae C-2	32	25.6	72	483	1.1
Larvacea	6	128.0	68	452	1.1
Oithona spp.	29	25.6	65	437	1.0
Thecosomata <5mm	5	128.0	56	377	0.9
Metridia pacifica C-5 F	25	25.6	56	377	0.9
Metriididae C-2	5	128.0	56	377	0.9
Natantia - larva	4	128.0	45	302	0.7
Metriididae C-3	4	128.0	45	302	0.7
Pseudocalanus spp. C-4 F	20	25.6	45	302	0.7
Other Copepoda - nauplius	2	128.0	23	151	0.4
Polychaeta <5mm	2	128.0	23	151	0.4
Calanus marshallae C-5	6	25.6	14	90	0.2
Pseudocalanus spp. C-4 M	6	25.6	14	90	0.2
Chaetognatha 5-20mm	147	1.0	13	87	0.2
Chaetognatha <5mm	1	128.0	11	75	0.2
Calanus marshallae C-1	5	25.6	11	75	0.2
Anomura - larva	1	128.0	11	75	0.2
Other Copepoda 2-5mm	1	128.0	11	75	0.2
Hyperiidea <5mm	1	128.0	11	75	0.2
Neocalanus plumchrus C-4	1	25.6	2	15	< 0.1
Neocalanus cristatus C-5	7	1.0	1	4	< 0.1
Chaetognatha >20mm	5	1.0	< 1	3	< 0.1
Neocalanus cristatus C-4	3	1.0	< 1	2	< 0.1
Siphonophora >5mm	2	1.0	< 1	1	< 0.1
Eucalanus bungii C-5 M	1	1.0	< 1	1	< 0.1

6421	43023	100.

STA. 002 58 40.7 N 152 44.4 W 02 May 86 12:01

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
203	0 - 197	28.4	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	58	512.0	10456	205989	24.8
Cirripedia - nauplius <5mm	32	512.0	5769	113649	13.7
Other Copepoda - nauplius	41	256.0	3696	72806	8.7
Other Copepoda <2mm	30	256.0	2704	53273	6.4
?Pseudocalanus spp. C-1	27	256.0	2434	47946	5.8
Acartia spp.	41	128.0	1848	36403	4.4
Euphausiacea - nauplius	32	128.0	1442	28412	3.4
Invertebrata - egg <5mm	29	128.0	1307	25749	3.1
?Pseudocalanus spp. C-2	11	256.0	992	19533	2.3
Metriididae C-1	21	128.0	946	18646	2.2
Calanus marshallae C-1	21	128.0	946	18646	2.2
Polychaeta <5mm	37	64.0	834	16426	2.0
Echinodermata - larva <5mm	34	64.0	766	15094	1.8
Pseudocalanus spp. - adult F	27	64.0	608	11986	1.4
Metriididae C-2	13	128.0	586	11542	1.4
Metriididae C-3	12	128.0	541	10655	1.3
?Pseudocalanus spp. C-3	5	256.0	451	8879	1.1
Larvacea	19	64.0	428	8435	1.0
Pseudocalanus spp. C-4 M	19	64.0	428	8435	1.0
Pseudocalanus spp. C-5 F	19	64.0	428	8435	1.0
Pseudocalanus spp. C-5 M	19	64.0	428	8435	1.0
Metridia pacifica C-5 F	17	64.0	383	7547	0.9
Metridia pacifica C-5 M	16	64.0	361	7103	0.9
Calanus marshallae C-2	8	128.0	361	7103	0.9
Metridia pacifica C-4	16	64.0	361	7103	0.9
Neocalanus plumchrus C-5	12	64.0	270	5327	0.6
Euphausiacea - calyptopis 2	11	64.0	248	4883	0.6
Euphausiacea - calyptopis 1	10	64.0	225	4439	0.5
Neocalanus plumchrus C-4	10	64.0	225	4439	0.5
Metridia pacifica - adult F	10	64.0	225	4439	0.5
Pseudocalanus spp. C-4 F	9	64.0	203	3995	0.5
Other zooplankton <5mm	9	64.0	203	3995	0.5
Pseudocalanus spp. - adult M	9	64.0	203	3995	0.5
Metridia pacifica - adult M	8	64.0	180	3552	0.4
Gastropoda - veliger <5mm	7	64.0	158	3108	0.4
Neocalanus plumchrus C-3	2	128.0	90	1776	0.2
Cirripedia - cypris <5mm	4	64.0	90	1776	0.2
Euphausiacea - calyptopis 3	4	64.0	90	1776	0.2
Calanus marshallae C-3	2	128.0	90	1776	0.2
Other Copepoda 2-5mm	3	64.0	68	1332	0.2
Other Copepoda damaged	3	64.0	68	1332	0.2
Cnidaria - medusa <5mm	2	64.0	45	888	0.1
Bryozoa - cyphonautes <5mm	1	64.0	23	444	0.1
Calanus marshallae - adult F	1	64.0	23	444	0.1
Neocalanus cristatus C-4	6	1.0	2	42	< 0.1
Chaetognatha 5-20mm	5	1.0	2	35	< 0.1
Siphonophora >5mm	4	1.0	1	28	< 0.1

Thysanoessa inermis A&J	4	1.0	1	28	< 0.1
Eucalanus bungii - adult F	3	1.0	1	21	< 0.1
Neocalanus cristatus C-5	2	1.0	1	14	< 0.1
Cnidaria - medusa >5mm	1	1.0	< 1	7	< 0.1
Teleostei - larva >5mm	1	1.0	< 1	7	< 0.1
			42240	832126	100.

STA. 004 58 44.4 N 152 55.7 W 02 May 86 14:41

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
155	0 - 124	18.3	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	43	1024.0	24000	297596	22.6
Other Copepoda - nauplius	56	512.0	15628	193783	14.7
Larvacea	35	512.0	9767	121115	9.2
?Pseudocalanus spp. C-1	14	1024.0	7814	96892	7.4
?Pseudocalanus spp. C-3	12	1024.0	6698	83050	6.3
?Pseudocalanus spp. C-2	10	1024.0	5581	69208	5.3
Euphausiacea - nauplius	35	256.0	4884	60557	4.6
Cirripedia - nauplius <5mm	33	256.0	4605	57097	4.3
Echinodermata - larva <5mm	28	256.0	3907	48446	3.7
Polychaeta <5mm	48	128.0	3349	41525	3.2
Invertebrata - egg <5mm	35	128.0	2442	30279	2.3
Pseudocalanus spp. - adult F	28	128.0	1953	24223	1.8
Calanus marshallae C-1	27	128.0	1884	23358	1.8
Acartia spp.	45	64.0	1570	19465	1.5
Pseudocalanus spp. C-4 M	22	128.0	1535	19032	1.4
Calanus marshallae C-2	21	128.0	1465	18167	1.4
Euphausiacea - calyptopis 2	16	128.0	1116	13842	1.1
Pseudocalanus spp. - adult M	15	128.0	1046	12977	1.0
Pseudocalanus spp. C-5 F	13	128.0	907	11246	0.9
Pseudocalanus spp. C-5 M	13	128.0	907	11246	0.9
Pseudocalanus spp. C-4 F	12	128.0	837	10381	0.8
Euphausiacea - calyptopis 1	11	128.0	767	9516	0.7
Euphausiacea - calyptopis 3	8	128.0	558	6921	0.5
Neocalanus plumchrus C-4	12	64.0	419	5191	0.4
Other Copepoda <2mm	9	64.0	314	3893	0.3
Neocalanus plumchrus C-1	4	128.0	279	3460	0.3
Neocalanus plumchrus C-2	3	128.0	209	2595	0.2
Calanus marshallae C-3	3	128.0	209	2595	0.2
Gastropoda - veliger <5mm	6	64.0	209	2595	0.2
Neocalanus plumchrus C-5	6	64.0	209	2595	0.2
Cirripedia - cypris <5mm	6	64.0	209	2595	0.2
Thecosomata <5mm	4	64.0	140	1730	0.1
Metriididae C-2	4	64.0	140	1730	0.1
Bryozoa - cyphonautes <5mm	4	64.0	140	1730	0.1
Metriididae C-1	3	64.0	105	1298	0.1
Metriididae C-3	3	64.0	105	1298	0.1
Other zooplankton <5mm	2	64.0	70	865	0.1
Neocalanus plumchrus C-3	1	128.0	70	865	0.1
Bivalvia - veliger <5mm	1	64.0	35	433	< 0.1
Euphausiacea - furcilia	1	64.0	35	433	< 0.1
Natantia - larva	1	64.0	35	433	< 0.1
Eucalanus bungii C-2	1	64.0	35	433	< 0.1
Teleostei - egg <5mm	1	64.0	35	433	< 0.1
Chaetognatha 5-20mm	11	1.0	6	74	< 0.1
Cnidaria - medusa >5mm	3	1.0	2	20	< 0.1
Thysanoessa inermis A&J	2	1.0	1	14	< 0.1
Neocalanus cristatus C-4	1	1.0	1	7	< 0.1

Eucalanus bungii - adult F	1	1.0	1	7	< 0.1
Teleostei - larva >5mm	1	1.0	1	7	< 0.1
			106230	1317248	100.

STA. 007 58 50.3 N 153 12.5 W 02 May 86 18:27

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
75	0 - 94	14.9	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	46	512.0	15776	148292	21.2
Cirripedia - nauplius <5mm	58	256.0	9946	93489	13.3
Oithona spp.	55	256.0	9431	88653	12.7
?Pseudocalanus spp. C-2	18	512.0	6173	58027	8.3
?Pseudocalanus spp. C-1	16	512.0	5487	51580	7.4
Metriididae C-1	12	512.0	4115	38685	5.5
Metriididae C-3	10	512.0	3430	32237	4.6
?Pseudocalanus spp. C-3	10	512.0	3430	32237	4.6
Metriididae C-2	10	512.0	3430	32237	4.6
Euphausiacea - nauplius	33	64.0	1415	13298	1.9
Pseudocalanus spp. - adult F	27	64.0	1157	10880	1.6
Other zooplankton <5mm	99	16.0	1061	9973	1.4
Larvacea	47	32.0	1007	9470	1.4
Polychaeta <5mm	45	32.0	965	9067	1.3
Other Copepoda <2mm	32	32.0	686	6447	0.9
Pseudocalanus spp. - adult M	14	64.0	600	5642	0.8
Pseudocalanus spp. C-5 F	27	32.0	579	5440	0.8
Invertebrata - egg <5mm	27	32.0	579	5440	0.8
Pseudocalanus spp. C-5 M	24	32.0	514	4836	0.7
Calanus marshallae C-3	23	32.0	493	4634	0.7
Calanus marshallae C-2	23	32.0	493	4634	0.7
Pseudocalanus spp. C-4 F	19	32.0	407	3828	0.5
Pseudocalanus spp. C-4 M	18	32.0	386	3627	0.5
Echinodermata - larva <5mm	30	16.0	322	3022	0.4
Euphausiacea - calyptopis 1	29	16.0	311	2922	0.4
Neocalanus plumchrus C-4	49	8.0	263	2468	0.4
Metridia pacifica C-5 M	19	16.0	204	1914	0.3
Euphausiacea - calyptopis 2	18	16.0	193	1813	0.3
Neocalanus plumchrus C-5	36	8.0	193	1813	0.3
Gastropoda - veliger <5mm	34	8.0	182	1713	0.2
Calanus marshallae C-1	8	32.0	171	1612	0.2
Metridia pacifica C-5 F	13	16.0	139	1310	0.2
Metridia pacifica C-4	25	8.0	134	1259	0.2
Calanus marshallae C-4	22	8.0	118	1108	0.2
Euphausiacea - calyptopis 3	11	16.0	118	1108	0.2
Cirripedia - cypris <5mm	21	8.0	113	1058	0.2
Other Copepoda damaged	4	32.0	86	806	0.1
Metridia pacifica - adult F	15	8.0	80	756	0.1
Acartia spp.	12	8.0	64	604	0.1
Metridia pacifica - adult M	10	8.0	54	504	0.1
Thecosomata <5mm	7	8.0	38	353	0.1
Euphausiacea - furcilia	7	8.0	38	353	0.1
Chaetognatha <5mm	4	8.0	21	201	< 0.1
Chaetognatha 5-20mm	25	1.0	17	157	< 0.1
Bivalvia - veliger <5mm	3	8.0	16	151	< 0.1
Calanus marshallae C-5	2	8.0	11	101	< 0.1
Natantia - larva	2	8.0	11	101	< 0.1

Bryozoa - cyphonautes <5mm	2	8.0	11	101	< 0.1
Teleostei - larva >5mm	12	1.0	8	76	< 0.1
Calanus marshallae - adult F	1	8.0	5	50	< 0.1
Calanus marshallae - adult M	1	8.0	5	50	< 0.1
Hyperiidea <5mm	1	8.0	5	50	< 0.1
Teleostei - egg <5mm	1	8.0	5	50	< 0.1
Invertebrata <5mm	1	8.0	5	50	< 0.1
Teleostei - larva <5mm	1	8.0	5	50	< 0.1
Neocalanus cristatus C-4	5	1.0	3	31	< 0.1
Neocalanus cristatus C-5	2	1.0	1	13	< 0.1
Euphausia pacifica A&J	1	1.0	1	6	< 0.1
Cnidaria - medusa >5mm	1	1.0	1	6	< 0.1
			74510	700397	100.

STA. 008 57 29.0 N 154 42.1 W 03 May 86 9:06

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
73	0 - 62	8.2	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	42	256.0	13080	81095	20.4
Invertebrata - egg <5mm	34	256.0	10588	65648	16.5
Oithona spp.	32	256.0	9966	61787	15.6
Euphausiacea - nauplius	38	128.0	5917	36686	9.2
?Pseudocalanus spp. C-1	18	128.0	2803	17378	4.4
Cirripedia - nauplius <5mm	36	64.0	2803	17378	4.4
?Pseudocalanus spp. C-2	15	128.0	2336	14481	3.7
Acartia spp.	28	64.0	2180	13516	3.4
Echinodermata - larva <5mm	26	64.0	2024	12550	3.2
?Pseudocalanus spp. C-3	11	128.0	1713	10620	2.7
Pseudocalanus spp. C-5 M	21	64.0	1635	10137	2.6
Larvacea	35	32.0	1362	8447	2.1
Polychaeta <5mm	29	32.0	1129	6999	1.8
Pseudocalanus spp. - adult F	14	64.0	1090	6758	1.7
Pseudocalanus spp. - adult M	13	64.0	1012	6275	1.6
Pseudocalanus spp. C-5 F	12	64.0	934	5793	1.5
Other Copepoda <2mm	19	32.0	740	4586	1.2
Pseudocalanus spp. C-4 M	16	32.0	623	3862	1.0
Pseudocalanus spp. C-4 F	12	32.0	467	2896	0.7
Other zooplankton <5mm	8	32.0	311	1931	0.5
Metriididae C-1	8	32.0	311	1931	0.5
Calanus marshallae C-1	6	32.0	234	1448	0.4
Euphausiacea - calyptopis 1	4	32.0	156	965	0.2
Bryozoa - cyphonautes <5mm	3	32.0	117	724	0.2
Metriididae C-2	2	32.0	78	483	0.1
Anomura - larva	2	32.0	78	483	0.1
Cirripedia - cypris <5mm	2	32.0	78	483	0.1
Natantia - larva	1	32.0	39	241	0.1
Other Copepoda damaged	1	32.0	39	241	0.1
Ostracoda <5mm	1	32.0	39	241	0.1
Thecosomata <5mm	1	32.0	39	241	0.1
Thysanoessa inermis A&J	26	1.0	32	196	< 0.1
Chaetognatha 5-20mm	15	1.0	18	113	< 0.1
Teleostei - larva >5mm	8	1.0	10	60	< 0.1
Cnidaria - medusa >5mm	6	1.0	7	45	< 0.1
Thysanoessa raschii A&J	2	1.0	2	15	< 0.1
			63989	396734	100.

STA. 011 57 35.8 N 154 59.9 W 03 May 86 14:28

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
243	0 - 218	35.2	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	50	512.0	7263	158343	24.8
Oithona spp.	57	256.0	4140	90256	14.1
Other Copepoda <2mm	44	256.0	3196	69671	10.9
Invertebrata - egg <5mm	27	256.0	1961	42753	6.7
?Pseudocalanus spp. C-1	19	256.0	1380	30085	4.7
Euphausiacea - nauplius	56	85.3	1355	29546	4.6
Larvacea	51	85.3	1234	26908	4.2
?Pseudocalanus spp. C-2	15	256.0	1090	23751	3.7
Pseudocalanus spp. - adult F	36	85.3	871	18994	3.0
?Pseudocalanus spp. C-3	10	256.0	726	15834	2.5
Acartia spp.	60	36.6	623	13583	2.1
Cirripedia - nauplius <5mm	44	36.6	457	9961	1.6
Echinodermata - larva <5mm	41	36.6	426	9282	1.5
Metriididae C-1	17	85.3	411	8969	1.4
Pseudocalanus spp. C-5 M	38	36.6	395	8602	1.3
Pseudocalanus spp. - adult M	16	85.3	387	8442	1.3
Neocalanus plumchrus C-4	35	36.6	363	7923	1.2
Pseudocalanus spp. C-4 M	27	36.6	280	6112	1.0
Polychaeta <5mm	27	36.6	280	6112	1.0
Pseudocalanus spp. C-5 F	24	36.6	249	5433	0.9
Other zooplankton <5mm	20	36.6	208	4528	0.7
Metriididae C-2	8	85.3	194	4221	0.7
Pseudocalanus spp. C-4 F	18	36.6	187	4075	0.6
Calanus marshallae C-2	17	36.6	177	3848	0.6
Metridia pacifica - adult M	14	36.6	145	3169	0.5
Euphausiacea - calyptopis 1	12	36.6	125	2717	0.4
Neocalanus plumchrus C-5	12	36.6	125	2717	0.4
Calanus marshallae C-1	11	36.6	114	2490	0.4
Metridia pacifica - adult F	11	36.6	114	2490	0.4
Metridia pacifica C-5 M	11	36.6	114	2490	0.4
Metriididae C-3	4	85.3	97	2110	0.3
Ostracoda <5mm	9	36.6	93	2037	0.3
Metridia pacifica C-4	8	36.6	83	1811	0.3
Gastropoda - veliger <5mm	8	36.6	83	1811	0.3
Chaetognatha <5mm	6	36.6	62	1358	0.2
Metridia pacifica C-5 F	5	36.6	52	1132	0.2
Bryozoa - cyphonautes <5mm	4	36.6	42	906	0.1
Euphausiacea - calyptopis 2	3	36.6	31	679	0.1
Other Copepoda 2-5mm	2	36.6	21	453	0.1
Natantia - larva	2	36.6	21	453	0.1
Calanus marshallae - adult F	2	36.6	21	453	0.1
Chaetognatha 5-20mm	48	1.0	14	297	< 0.1
Nematoda <5mm	1	36.6	10	226	< 0.1
Mysidacea <5mm	1	36.6	10	226	< 0.1
Calanus marshallae C-3	1	36.6	10	226	< 0.1
Hyperiidea <5mm	1	36.6	10	226	< 0.1
Teleostei - larva >5mm	24	1.0	7	148	< 0.1

Cnidaria - medusa >5mm	12	1.0	3	74	< 0.1
Siphonophora >5mm	11	1.0	3	68	< 0.1
Chaetognatha >20mm	10	1.0	3	62	< 0.1
Neocalanus cristatus C-5	9	1.0	3	56	< 0.1
Neocalanus cristatus C-4	6	1.0	2	37	< 0.1
Euphausia pacifica A&J	6	1.0	2	37	< 0.1
Gammaridea >5mm	4	1.0	1	25	< 0.1
Other Copepoda >5mm	4	1.0	1	25	< 0.1
Thysanoessa spinifera A&J	2	1.0	1	12	< 0.1
Mysidacea >5mm	2	1.0	1	12	< 0.1
Hyperiidea >5mm	2	1.0	1	12	< 0.1
Polychaeta >5mm	1	1.0	< 1	6	< 0.1
Thysanoessa inermis A&J	1	1.0	< 1	6	< 0.1
			29279	638292	100.

STA. 014 57 41.8 N 155 16.7 W 03 May 86 20:20

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
298	0 - 271	45.4	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	70	256.0	3946	106926	19.5
Other Copepoda - nauplius	48	256.0	2706	73321	13.4
Cirripedia - nauplius <5mm	36	256.0	2029	54990	10.0
Other Copepoda <2mm	33	256.0	1860	50408	9.2
Larvacea	54	85.3	1014	27485	5.0
?Pseudocalanus spp. C-1	17	256.0	958	25968	4.7
Euphausiacea - nauplius	43	85.3	808	21886	4.0
Pseudocalanus spp. - adult F	33	85.3	620	16796	3.1
?Pseudocalanus spp. C-2	10	256.0	564	15275	2.8
Invertebrata - egg <5mm	22	85.3	413	11197	2.0
Pseudocalanus spp. C-4 M	22	85.3	413	11197	2.0
Acartia spp.	50	36.6	403	10919	2.0
?Pseudocalanus spp. C-3	7	256.0	395	10693	1.9
Echinodermata - larva <5mm	19	85.3	357	9670	1.8
Euphausiacea - calyptopis 1	43	36.6	347	9391	1.7
Pseudocalanus spp. - adult M	18	85.3	338	9162	1.7
Polychaeta <5mm	17	85.3	319	8653	1.6
Pseudocalanus spp. C-5 M	16	85.3	301	8144	1.5
Metriididae C-2	15	85.3	282	7635	1.4
Metriididae C-1	14	85.3	263	7126	1.3
Metridia pacifica - adult F	20	36.6	161	4368	0.8
Pseudocalanus spp. C-5 F	8	85.3	150	4072	0.7
Metriididae C-3	8	85.3	150	4072	0.7
Pseudocalanus spp. C-4 F	7	85.3	131	3563	0.6
Calanus marshallae C-1	15	36.6	121	3276	0.6
Metridia pacifica - adult M	14	36.6	113	3057	0.6
Metridia pacifica C-4	14	36.6	113	3057	0.6
Other Copepoda damaged	2	256.0	113	3055	0.6
Metridia pacifica C-5 F	10	36.6	81	2184	0.4
Neocalanus plumchrus C-5	9	36.6	73	1965	0.4
Metridia pacifica C-5 M	8	36.6	64	1747	0.3
Calanus marshallae C-2	8	36.6	64	1747	0.3
Neocalanus plumchrus C-4	8	36.6	64	1747	0.3
Ostracoda <5mm	7	36.6	56	1529	0.3
Bryozoa - cyphonautes <5mm	7	36.6	56	1529	0.3
Euphausiacea - calyptopis 2	7	36.6	56	1529	0.3
Chaetognatha <5mm	7	36.6	56	1529	0.3
Other Copepoda 2-5mm	1	256.0	56	1528	0.3
Cirripedia - cypris <5mm	4	36.6	32	874	0.2
Euphausiacea - calyptopis 3	4	36.6	32	874	0.2
Calanus marshallae C-3	4	36.6	32	874	0.2
Euphausiacea - furcilia	4	36.6	32	874	0.2
Other zooplankton <5mm	3	36.6	24	655	0.1
Neocalanus plumchrus C-3	2	36.6	16	437	0.1
Cnidaria - medusa <5mm	2	36.6	16	437	0.1
Mysidacea <5mm	2	36.6	16	437	0.1
Hyperiidea <5mm	1	36.6	8	218	< 0.1

Natantia - larva	1	36.6	8	218	< 0.1
Invertebrata <5mm	1	36.6	8	218	< 0.1
Chaetognatha 5-20mm	30	1.0	7	179	< 0.1
Neocalanus cristatus C-4	12	1.0	3	72	< 0.1
Neocalanus cristatus C-5	7	1.0	2	42	< 0.1
Cnidaria - medusa >5mm	5	1.0	1	30	< 0.1
Gammaridea >5mm	5	1.0	1	30	< 0.1
Other Copepoda >5mm	4	1.0	1	24	< 0.1
Hyperiidea >5mm	3	1.0	1	18	< 0.1
Teleostei - larva >5mm	2	1.0	< 1	12	< 0.1
Chaetognatha >20mm	2	1.0	< 1	12	< 0.1
Thysanoessa inermis A&J	2	1.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	1.0	< 1	6	< 0.1
Siphonophora >5mm	1	1.0	< 1	6	< 0.1
Mysidacea >5mm	1	1.0	< 1	6	< 0.1
			20257	548955	100.

STA. 159 57 42.5 N 155 14.2 W 18 May 86 14:23

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
305	0 - 277	9.4	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	34	512.0	18499	512435	7.7
Oithona spp.	32	512.0	17411	482291	7.3
Other Copepoda - nauplius	61	256.0	16595	459684	6.9
Euphausiacea - calyptopis 1	26	512.0	14147	391862	5.9
Euphausiacea - nauplius	49	256.0	13330	369254	5.6
Euphausiacea - furcilia	44	256.0	11970	331575	5.0
Polychaeta <5mm	43	256.0	11698	324039	4.9
?Pseudocalanus spp. C-3	19	512.0	10338	286360	4.3
Larvacea	38	256.0	10338	286360	4.3
?Pseudocalanus spp. C-2	19	512.0	10338	286360	4.3
Pseudocalanus spp. - adult F	36	256.0	9794	271289	4.1
Echinodermata - larva <5mm	36	256.0	9794	271289	4.1
Cirripedia - cypris <5mm	33	256.0	8978	248681	3.8
?Pseudocalanus spp. C-1	16	512.0	8706	241146	3.6
Pseudocalanus spp. C-5 F	27	256.0	7345	203467	3.1
Pseudocalanus spp. C-5 M	25	256.0	6801	188395	2.8
Euphausiacea - calyptopis 2	10	512.0	5441	150716	2.3
Pseudocalanus spp. C-4 M	19	256.0	5169	143180	2.2
Euphausiacea - calyptopis 3	9	512.0	4897	135644	2.0
Pseudocalanus spp. C-4 F	15	256.0	4081	113037	1.7
Pseudocalanus spp. - adult M	14	256.0	3809	105501	1.6
Invertebrata - egg <5mm	11	256.0	2993	82894	1.3
Acartia spp.	10	256.0	2721	75358	1.1
Other Copepoda <2mm	9	256.0	2448	67822	1.0
Calanus marshallae C-4	8	256.0	2176	60286	0.9
Bivalvia <5mm	7	256.0	1904	52751	0.8
Gastropoda - veliger <5mm	6	256.0	1632	45215	0.7
Calanus marshallae C-3	6	256.0	1632	45215	0.7
Other zooplankton <5mm	6	256.0	1632	45215	0.7
Calanus marshallae C-5	5	256.0	1360	37679	0.6
Metriididae C-1	4	256.0	1088	30143	0.5
Foraminifera <5mm	4	256.0	1088	30143	0.5
Bryozoa - cyphonautes <5mm	4	256.0	1088	30143	0.5
Thecosomata <5mm	3	256.0	816	22607	0.3
Other Copepoda 2-5mm	3	256.0	816	22607	0.3
Calanus marshallae C-2	3	256.0	816	22607	0.3
Cnidaria - medusa <5mm	3	256.0	816	22607	0.3
Metridia pacifica - adult F	2	256.0	544	15072	0.2
Neocalanus plumchrus C-5	2	256.0	544	15072	0.2
Metriididae C-2	2	256.0	544	15072	0.2
Metridia pacifica C-5 M	2	256.0	544	15072	0.2
Other Copepoda damaged	2	256.0	544	15072	0.2
Calanus marshallae C-1	2	256.0	544	15072	0.2
Chaetognatha <5mm	2	256.0	544	15072	0.2
Neocalanus plumchrus C-4	1	256.0	272	7536	0.1
Metriididae C-3	1	256.0	272	7536	0.1
Metridia pacifica C-4	1	256.0	272	7536	0.1

Cnidaria - medusa >5mm	19	1.0	20	559	< 0.1
Chaetognatha 5-20mm	14	1.0	15	412	< 0.1
Teleostei - larva >5mm	11	1.0	12	324	< 0.1
Chaetognatha >20mm	8	1.0	9	235	< 0.1
Neocalanus cristatus C-5	6	1.0	6	177	< 0.1
Gammaridea >5mm	2	1.0	2	59	< 0.1
Thysanoessa inermis A&J	2	1.0	2	59	< 0.1
Polychaeta >5mm	1	1.0	1	29	< 0.1
			239199	6625824	100.

STA. 160 57 41.3 N 155 10.3 W 18 May 86 16:00

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
168	0 - 154	21.7	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	44	512.0	10377	159811	17.1
Other Copepoda - nauplius	28	512.0	6604	101698	10.9
Larvacea	31	256.0	3656	56297	6.0
?Pseudocalanus spp. C-3	15	512.0	3538	54481	5.8
Cirripedia - nauplius <5mm	24	256.0	2830	43585	4.7
Echinodermata - larva <5mm	22	256.0	2594	39953	4.3
?Pseudocalanus spp. C-1	11	512.0	2594	39953	4.3
Euphausiacea - furcilia	39	128.0	2300	35413	3.8
Pseudocalanus spp. C-4 M	33	128.0	1946	29965	3.2
?Pseudocalanus spp. C-2	8	512.0	1887	29057	3.1
Euphausiacea - nauplius	16	256.0	1887	29057	3.1
Polychaeta <5mm	29	128.0	1710	26333	2.8
Euphausiacea - calyptopis 1	14	256.0	1651	25424	2.7
Euphausiacea - calyptopis 2	12	256.0	1415	21792	2.3
Pseudocalanus spp. C-5 F	23	128.0	1356	20884	2.2
Pseudocalanus spp. - adult M	21	128.0	1238	19068	2.0
Acartia spp.	20	128.0	1179	18160	1.9
Pseudocalanus spp. - adult F	20	128.0	1179	18160	1.9
Pseudocalanus spp. C-4 F	19	128.0	1120	17252	1.8
Pseudocalanus spp. C-5 M	16	128.0	943	14528	1.6
Cirripedia - cypris <5mm	15	128.0	884	13620	1.5
Invertebrata - egg <5mm	14	128.0	825	12712	1.4
Calanus marshallae C-3	31	42.7	610	9390	1.0
Calanus marshallae C-4	30	42.7	590	9087	1.0
Euphausiacea - calyptopis 3	5	256.0	590	9080	1.0
Other Copepoda <2mm	9	128.0	531	8172	0.9
Calanus marshallae C-2	24	42.7	472	7270	0.8
Metriididae C-2	8	128.0	472	7264	0.8
Other zooplankton <5mm	7	128.0	413	6356	0.7
Bivalvia - veliger <5mm	7	128.0	413	6356	0.7
Neocalanus plumchrus C-5	18	42.7	354	5452	0.6
Bryozoa - cyphonautes <5mm	5	128.0	295	4540	0.5
Gastropoda - veliger <5mm	5	128.0	295	4540	0.5
Metriididae C-1	4	128.0	236	3632	0.4
Metriididae C-3	4	128.0	236	3632	0.4
Calanus marshallae C-1	11	42.7	216	3332	0.4
Calanus marshallae C-5	9	42.7	177	2726	0.3
Other Copepoda damaged	3	128.0	177	2724	0.3
Cnidaria - medusa <5mm	3	128.0	177	2724	0.3
Metridia pacifica C-5 M	6	42.7	118	1817	0.2
Chaetognatha <5mm	2	128.0	118	1816	0.2
Metridia pacifica C-4	4	42.7	79	1212	0.1
Metridia pacifica - adult F	3	42.7	59	909	0.1
Thecosomata <5mm	1	128.0	59	908	0.1
Brachyura - larva	2	42.7	39	606	0.1
Metridia pacifica C-5 F	2	42.7	39	606	0.1
Eucalanus bungii C-1	2	42.7	39	606	0.1

Neocalanus plumchrus C-4	1	42.7	20	303	< 0.1
Natantia - larva	1	42.7	20	303	< 0.1
Chaetognatha 5-20mm	29	1.0	13	206	< 0.1
Teleostei - larva >5mm	15	1.0	7	106	< 0.1
Cnidaria - medusa >5mm	10	1.0	5	71	< 0.1
Neocalanus cristatus C-5	6	1.0	3	43	< 0.1
Chaetognatha >20mm	5	1.0	2	35	< 0.1
			60586	933029	100.

STA. 162 57 35.8 N 154 59.0 W 18 May 86 18:32

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
241	0 - 226	29.8	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	36	512.0	6190	139905	15.4
Other Copepoda - nauplius	31	512.0	5331	120473	13.3
Larvacea	22	512.0	3783	85497	9.4
Other Copepoda <2mm	32	170.7	1835	41461	4.6
Pseudocalanus spp. - adult F	29	170.7	1663	37574	4.1
Euphausiacea - nauplius	25	170.7	1433	32392	3.6
Echinodermata - larva <5mm	23	170.7	1319	29800	3.3
Polychaeta <5mm	52	73.1	1277	28852	3.2
Invertebrata - egg <5mm	20	170.7	1147	25913	2.9
Pseudocalanus spp. C-5 F	19	170.7	1089	24618	2.7
?Pseudocalanus spp. C-1	17	170.7	975	22026	2.4
?Pseudocalanus spp. C-2	17	170.7	975	22026	2.4
Euphausiacea - calyptopis 2	16	170.7	917	20731	2.3
Euphausiacea - calyptopis 1	15	170.7	860	19435	2.1
?Pseudocalanus spp. C-3	15	170.7	860	19435	2.1
Euphausiacea - furcilia	35	73.1	859	19420	2.1
Cirripedia - cypris <5mm	30	73.1	737	16646	1.8
Pseudocalanus spp. - adult M	12	170.7	688	15548	1.7
Pseudocalanus spp. C-5 M	12	170.7	688	15548	1.7
Metriididae C-3	23	73.1	565	12762	1.4
Metriididae C-1	21	73.1	516	11652	1.3
Metridia pacifica C-4	17	73.1	417	9432	1.0
Metriididae C-2	17	73.1	417	9432	1.0
Pseudocalanus spp. C-4 F	7	170.7	401	9070	1.0
Pseudocalanus spp. C-4 M	7	170.7	401	9070	1.0
Euphausiacea - calyptopis 3	6	170.7	344	7774	0.9
Other Copepoda damaged	6	170.7	344	7774	0.9
Cirripedia - nauplius <5mm	14	73.1	344	7768	0.9
Acartia spp.	14	73.1	344	7768	0.9
Calanus marshallae C-5	12	73.1	295	6658	0.7
Foraminifera <5mm	12	73.1	295	6658	0.7
Metridia pacifica - adult M	11	73.1	270	6103	0.7
Calanus marshallae C-4	11	73.1	270	6103	0.7
Gastropoda - veliger <5mm	10	73.1	246	5549	0.6
Metridia pacifica C-5 M	9	73.1	221	4994	0.6
Metridia pacifica - adult F	9	73.1	221	4994	0.6
Neocalanus plumchrus C-5	8	73.1	196	4439	0.5
Neocalanus plumchrus C-4	7	73.1	172	3884	0.4
Other zooplankton <5mm	7	73.1	172	3884	0.4
Bryozoa - cyphonautes <5mm	5	73.1	123	2774	0.3
Calanus marshallae C-3	5	73.1	123	2774	0.3
Other Copepoda 2-5mm	2	170.7	115	2591	0.3
Calanus marshallae C-1	4	73.1	98	2219	0.2
Chaetognatha <5mm	4	73.1	98	2219	0.2
Metridia pacifica C-5 F	4	73.1	98	2219	0.2
Cnidaria - medusa <5mm	2	73.1	49	1110	0.1
Invertebrata <5mm	2	73.1	49	1110	0.1

Calanus marshallae C-2	2	73.1	49	1110	0.1
Anomura - larva	1	73.1	25	555	0.1
Eucalanus bungii C-2	1	73.1	25	555	0.1
Eucalanus bungii C-1	1	73.1	25	555	0.1
Natantia - larva	1	73.1	25	555	0.1
Thecosomata <5mm	1	73.1	25	555	0.1
Calanus marshallae - adult M	1	73.1	25	555	0.1
Hyperiidea <5mm	1	73.1	25	555	0.1
Chaetognatha 5-20mm	27	1.0	9	205	< 0.1
Neocalanus cristatus C-5	11	1.0	4	83	< 0.1
Cnidaria - medusa >5mm	11	1.0	4	83	< 0.1
Chaetognatha >20mm	7	1.0	2	53	< 0.1
Other Copepoda >5mm	4	1.0	1	30	< 0.1
Thysanoessa spinifera A&J	2	1.0	1	15	< 0.1
Thysanoessa inspinata A&J	1	1.0	< 1	8	< 0.1
Teleostei - larva >5mm	1	1.0	< 1	8	< 0.1
Gammaridea >5mm	1	1.0	< 1	8	< 0.1
Mysidacea >5mm	1	1.0	< 1	8	< 0.1
Siphonophora >5mm	1	1.0	< 1	8	< 0.1
Hyperiidea >5mm	1	1.0	< 1	8	< 0.1
			40071	905596	100.

STA. 165 57 29.1 N 154 42.5 W 18 May 86 21:56

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
81	0 - 67	8.2	150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda <2mm	33	128.0	5123	34327	10.7
Oithona spp.	31	128.0	4813	32247	10.0
Other Copepoda - nauplius	30	128.0	4658	31207	9.7
Euphausiacea - nauplius	30	128.0	4658	31207	9.7
Euphausiacea - calyptopis 1	21	128.0	3260	21845	6.8
Larvacea	25	64.0	1941	13003	4.1
?Pseudocalanus spp. C-1	12	128.0	1863	12483	3.9
?Pseudocalanus spp. C-3	11	128.0	1708	11442	3.6
Pseudocalanus spp. - adult F	21	64.0	1630	10922	3.4
Pseudocalanus spp. C-5 M	19	64.0	1475	9882	3.1
Pseudocalanus spp. - adult M	18	64.0	1397	9362	2.9
Acartia spp.	32	32.0	1242	8322	2.6
Invertebrata - egg <5mm	30	32.0	1164	7802	2.4
Pseudocalanus spp. C-4 F	15	64.0	1164	7802	2.4
?Pseudocalanus spp. C-2	7	128.0	1087	7282	2.3
Polychaeta <5mm	26	32.0	1009	6761	2.1
Other Copepoda damaged	6	128.0	932	6241	1.9
Cirripedia - nauplius <5mm	23	32.0	893	5981	1.9
Metriididae C-3	11	64.0	854	5721	1.8
Pseudocalanus spp. C-4 M	8	64.0	621	4161	1.3
Metriididae C-1	8	64.0	621	4161	1.3
Euphausiacea - calyptopis 2	4	128.0	621	4161	1.3
Metridia pacifica C-4	14	32.0	543	3641	1.1
Pseudocalanus spp. C-5 F	7	64.0	543	3641	1.1
Echinodermata - larva <5mm	13	32.0	505	3381	1.1
Euphausiacea - furcilia	12	32.0	466	3121	1.0
Gastropoda - veliger <5mm	12	32.0	466	3121	1.0
Metriididae C-2	5	64.0	388	2601	0.8
Other zooplankton <5mm	10	32.0	388	2601	0.8
Euphausiacea - calyptopis 3	2	128.0	311	2080	0.6
Cirripedia - cypris <5mm	8	32.0	311	2080	0.6
Calanus marshallae C-1	5	32.0	194	1300	0.4
Metridia pacifica C-5 M	4	32.0	155	1040	0.3
Metridia pacifica C-5 F	3	32.0	116	780	0.2
Calanus marshallae C-2	3	32.0	116	780	0.2
Foraminifera <5mm	3	32.0	116	780	0.2
Calanus marshallae C-3	2	32.0	78	520	0.2
Chaetognatha <5mm	2	32.0	78	520	0.2
Neocalanus plumchrus C-5	2	32.0	78	520	0.2
Metridia pacifica - adult M	2	32.0	78	520	0.2
Bivalvia <5mm	2	32.0	78	520	0.2
Cnidaria - medusa <5mm	1	32.0	39	260	0.1
Metridia pacifica - adult F	1	32.0	39	260	0.1
Calanus marshallae C-4	1	32.0	39	260	0.1
Siphonophora <5mm	1	32.0	39	260	0.1
Chaetognatha 5-20mm	13	1.0	16	106	< 0.1
Teleostei - larva >5mm	2	1.0	2	16	< 0.1

Cnidaria - medusa >5mm	2	1.0	2	16	< 0.1
Siphonophora >5mm	1	1.0	1	8	< 0.1
			47919	321055	100.

Appendix 3. Abundance of zooplankton taxa at each station sampled during FOX86-IV, cruise 10C86 in Shelikof Strait, 28 July-16 August.

STA. 175.2 55 37.2 N 155 18.4 W 01 Aug 86 10:40

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
645	0 - 273	664.6	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	29	256.0	112	3050	11.2
Foraminifera <5mm	20	256.0	77	2103	7.7
Chaetognatha 5-20mm	154	32.0	74	2024	7.4
Other Copepoda <2mm	52	85.3	67	1822	6.7
Pseudocalanus spp. - adult F	42	85.3	54	1472	5.4
Acartia spp.	41	85.3	53	1437	5.3
Thecosomata <5mm	33	85.3	42	1156	4.3
Metriididae C-3	29	85.3	37	1016	3.7
Metridia pacifica - adult F	27	85.3	35	946	3.5
Ostracoda <5mm	25	85.3	32	876	3.2
Metridia pacifica C-5 F	22	85.3	28	771	2.8
Eucalanus bungii C-4 M	20	85.3	26	701	2.6
Invertebrata - egg <5mm	18	85.3	23	631	2.3
Eucalanus bungii C-3	17	85.3	22	596	2.2
Other Copepoda 2-5mm	17	85.3	22	596	2.2
Hyperiidea <5mm	16	85.3	21	561	2.1
Metridia pacifica C-4	16	85.3	21	561	2.1
Eucalanus bungii C-4 F	16	85.3	21	561	2.1
Neocalanus cristatus C-1	14	85.3	18	491	1.8
Cnidaria - medusa >5mm	33	32.0	16	434	1.6
Neocalanus cristatus C-5	32	32.0	15	421	1.5
Euphausiacea - furcilia	12	85.3	15	420	1.5
Metridia pacifica - adult M	10	85.3	13	350	1.3
Metridia pacifica C-5 M	10	85.3	13	350	1.3
Other Copepoda damaged	9	85.3	12	315	1.2
Neocalanus cristatus C-3	8	85.3	10	280	1.0
Cnidaria - medusa <5mm	8	85.3	10	280	1.0
Neocalanus cristatus C-2	7	85.3	9	245	0.9
Pseudocalanus spp. C-5 F	7	85.3	9	245	0.9
Eucalanus bungii C-5 F	18	32.0	9	237	0.9
Calanus pacificus C-5	6	85.3	8	210	0.8
Neocalanus cristatus C-4	15	32.0	7	197	0.7
Unidentified Calanoida C-3	5	85.3	6	175	0.6
Polychaeta <5mm	5	85.3	6	175	0.6
Gymnosomata <5mm	5	85.3	6	175	0.6
Euphausia pacifica A&J	12	32.0	6	158	0.6
Eucalanus bungii - adult F	12	32.0	6	158	0.6
Siphonophora >5mm	11	32.0	5	145	0.5
Thysanoessa inspinata A&J	10	32.0	5	131	0.5
Pseudocalanus spp. - adult M	3	85.3	4	105	0.4
Eucalanus bungii C-5 M	6	32.0	3	79	0.3
Neocalanus plumchrus C-5	2	85.3	3	70	0.3
Hyperiidea >5mm	5	32.0	2	66	0.2
Thysanoessa spinifera A&J	5	32.0	2	66	0.2
Chaetognatha >20mm	3	32.0	1	39	0.1
Siphonophora <5mm	1	85.3	1	35	0.1
Brachyura - larva	1	85.3	1	35	0.1

Calanus marshallae C-5	1	85.3	1	35	0.1
Euphausiacea - calyptopis 1	1	85.3	1	35	0.1
Metriididae C-2	1	85.3	1	35	0.1
Thysanoessa inermis A&J	2	32.0	1	26	0.1
Euphausiacea A&J damaged	2	32.0	1	26	0.1
Other Copepoda >5mm	2	32.0	1	26	0.1
Tessarabrachion oculatum A&J	1	32.0	< 1	13	< 0.1
Eucalanus bungii - adult M	1	32.0	< 1	13	< 0.1
			996	27177	100.

STA. 156 55 56.4 N 156 25.8 W 02 Aug 86 10:34

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
212	0 - 190	286.5	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. - adult F	107	64.0	239	4541	12.9
Oithona spp.	93	64.0	208	3947	11.2
Metridia pacifica C-5 M	51	64.0	114	2164	6.1
Metridia pacifica - adult M	47	64.0	105	1995	5.7
Eucalanus bungii C-5 F	91	32.0	102	1931	5.5
Metridia pacifica C-5 F	41	64.0	92	1740	4.9
Foraminifera <5mm	38	64.0	85	1613	4.6
Thysanoessa inermis A&J	73	32.0	82	1549	4.4
Eucalanus bungii C-5 M	67	32.0	75	1422	4.0
Metridia pacifica - adult F	29	64.0	65	1231	3.5
Chaetognatha 5-20mm	56	32.0	63	1188	3.4
Cnidaria - medusa >5mm	51	32.0	57	1082	3.1
Metridia pacifica C-4	24	64.0	54	1019	2.9
Other Copepoda <2mm	24	64.0	54	1019	2.9
Pseudocalanus spp. - adult M	17	64.0	38	721	2.0
Calanus marshallae C-5	17	64.0	38	721	2.0
Eucalanus bungii C-4 F	16	64.0	36	679	1.9
Pseudocalanus spp. C-5 M	12	64.0	27	509	1.4
Eucalanus bungii C-4 M	12	64.0	27	509	1.4
Thecosomata <5mm	12	64.0	27	509	1.4
Euphausiacea - furcilia	11	64.0	25	467	1.3
Pseudocalanus spp. C-5 F	11	64.0	25	467	1.3
Calanus marshallae - adult F	10	64.0	22	424	1.2
Neocalanus plumchrus C-5	8	64.0	18	340	1.0
Eucalanus bungii - adult F	15	32.0	17	318	0.9
Eucalanus bungii C-3	7	64.0	16	297	0.8
Chaetognatha <5mm	6	64.0	13	255	0.7
Cnidaria - medusa <5mm	6	64.0	13	255	0.7
Cirripedia - cypris <5mm	5	64.0	11	212	0.6
Brachyura - larva	4	64.0	9	170	0.5
Other Copepoda damaged	4	64.0	9	170	0.5
Euphausiacea A&J damaged	8	32.0	9	170	0.5
Neocalanus cristatus C-3	4	64.0	9	170	0.5
Acartia spp.	3	64.0	7	127	0.4
Calanus marshallae C-4	3	64.0	7	127	0.4
Invertebrata - egg <5mm	3	64.0	7	127	0.4
Neocalanus cristatus C-5	26	6.4	6	110	0.3
Euphausia pacifica A&J	5	32.0	6	106	0.3
Neocalanus cristatus C-4	22	6.4	5	93	0.3
Neocalanus cristatus C-2	2	64.0	4	85	0.2
Hyperiidea <5mm	2	64.0	4	85	0.2
Metriididae C-3	2	64.0	4	85	0.2
Chaetognatha >20mm	3	32.0	3	64	0.2
Thysanoessa spinifera A&J	3	32.0	3	64	0.2
Natantia A&J >5mm	13	6.4	3	55	0.2
Siphonophora <5mm	1	64.0	2	42	0.1
Ostracoda <5mm	1	64.0	2	42	0.1

Natantia - larva	1	64.0	2	42	0.1
Gammaridea <5mm	1	64.0	2	42	0.1
Gastropoda - veliger <5mm	1	64.0	2	42	0.1
Other zooplankton <5mm	1	64.0	2	42	0.1
Larvacea	1	64.0	2	42	0.1
Eucalanus bungii - adult M	1	32.0	1	21	0.1
Teleostei - larva >5mm	3	6.4	1	13	< 0.1
Cumacea >5mm	2	6.4	< 1	8	< 0.1
Hyperiidea >5mm	2	6.4	< 1	8	< 0.1
Gammaridea >5mm	1	6.4	< 1	4	< 0.1
Polychaeta >5mm	1	6.4	< 1	4	< 0.1
Other zooplankton >5mm	1	6.4	< 1	4	< 0.1
Invertebrata >5mm	1	6.4	< 1	4	< 0.1
			1858	35298	100.

STA. 154 55 55.2 N 156 15.0 W 02 Aug 86 10:34

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
224	0 - 202	318.4	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Metridia pacifica - adult F	75	128.0	301	6090	11.5
Pseudocalanus spp. - adult F	71	128.0	285	5765	10.9
Metridia pacifica C-5 M	54	128.0	217	4385	8.3
Acartia spp.	51	128.0	205	4141	7.8
Thysanoessa inermis A&J	91	64.0	183	3694	7.0
Metridia pacifica C-5 F	36	128.0	145	2923	5.5
Oithona spp.	35	128.0	141	2842	5.4
Calanus marshallae C-5	31	128.0	125	2517	4.7
Eucalanus bungii C-5 F	45	64.0	90	1827	3.4
Metridia pacifica C-4	21	128.0	84	1705	3.2
Metridia pacifica - adult M	19	128.0	76	1543	2.9
Thecosomata <5mm	37	64.0	74	1502	2.8
Other Copepoda <2mm	36	64.0	72	1462	2.8
Chaetognatha 5-20mm	35	64.0	70	1421	2.7
Eucalanus bungii C-5 M	35	64.0	70	1421	2.7
Euphausiacea - furcilia	28	64.0	56	1137	2.1
Calanus marshallae - adult F	9	128.0	36	731	1.4
Euphausiacea A&J damaged	17	64.0	34	690	1.3
Neocalanus plumchrus C-5	15	64.0	30	609	1.1
Pseudocalanus spp. C-5 F	15	64.0	30	609	1.1
Pseudocalanus spp. - adult M	7	128.0	28	568	1.1
Eucalanus bungii C-4 F	13	64.0	26	528	1.0
Hyperiidea <5mm	11	64.0	22	447	0.8
Eucalanus bungii - adult F	10	64.0	20	406	0.8
Eucalanus bungii C-4 M	10	64.0	20	406	0.8
Pseudocalanus spp. C-5 M	9	64.0	18	365	0.7
Brachyura - larva	8	64.0	16	325	0.6
Cnidaria - medusa >5mm	6	64.0	12	244	0.5
Neocalanus cristatus C-3	5	64.0	10	203	0.4
Calanus pacificus - adult M	4	64.0	8	162	0.3
Cnidaria - medusa <5mm	4	64.0	8	162	0.3
Other Copepoda 2-5mm	4	64.0	8	162	0.3
Eucalanus bungii C-3	4	64.0	8	162	0.3
Euphausia pacifica A&J	3	64.0	6	122	0.2
Chaetognatha <5mm	3	64.0	6	122	0.2
Unidentified Calanoida C-2	3	64.0	6	122	0.2
Ostracoda <5mm	3	64.0	6	122	0.2
Gastropoda - veliger <5mm	3	64.0	6	122	0.2
Other zooplankton <5mm	3	64.0	6	122	0.2
Chaetognatha >20mm	3	64.0	6	122	0.2
Cirripedia - nauplius <5mm	2	64.0	4	81	0.2
Calanus marshallae C-4	1	128.0	4	81	0.2
Unidentified Calanoida C-3	2	64.0	4	81	0.2
Invertebrata - egg <5mm	2	64.0	4	81	0.2
Thysanoessa spinifera A&J	2	64.0	4	81	0.2
Neocalanus plumchrus - adult F	2	64.0	4	81	0.2
Neocalanus cristatus C-2	1	64.0	2	41	0.1

Other Copepoda damaged	1	64.0	2	41	0.1
Calanus marshallae C-2	1	64.0	2	41	0.1
Larvacea	1	64.0	2	41	0.1
Neocalanus cristatus C-5	1	64.0	2	41	0.1
Calanus marshallae C-3	1	64.0	2	41	0.1
Foraminifera <5mm	1	64.0	2	41	0.1
Gymnosomata <5mm	1	64.0	2	41	0.1
Invertebrata <5mm	1	64.0	2	41	0.1
Natantia - larva	1	64.0	2	41	0.1
Eucalanus bungii - adult M	1	64.0	2	41	0.1
Mysidacea >5mm	1	64.0	2	41	0.1
Pseudocalanus spp. C-4 F	1	64.0	2	41	0.1
Siphonophora <5mm	1	64.0	2	41	0.1
Neocalanus cristatus C-1	1	64.0	2	41	0.1
			2629	53101	100.

STA. 150 56 26.4 N 156 57.0 W 03 Aug 86 3:46

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
119	0 - 115	141.6	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Calanus marshallae C-5	553	32.0	1250	14374	58.4
Calanus marshallae - adult F	48	32.0	108	1248	5.1
Metridia pacifica C-5 M	37	32.0	84	962	3.9
Metridia pacifica - adult F	34	32.0	77	884	3.6
Oithona spp.	32	32.0	72	832	3.4
Cnidaria - medusa <5mm	76	10.7	57	661	2.7
Euphausiacea - furcilia	58	10.7	44	504	2.0
Metridia pacifica C-5 F	19	32.0	43	494	2.0
Chaetognatha 5-20mm	150	4.0	42	487	2.0
Cnidaria - medusa >5mm	136	4.0	38	442	1.8
Pseudocalanus spp. - adult F	46	10.7	35	400	1.6
Invertebrata - egg <5mm	37	10.7	28	322	1.3
Pseudocalanus spp. C-5 M	35	10.7	26	304	1.2
Pseudocalanus spp. C-5 F	26	10.7	20	226	0.9
Hyperiidea >5mm	63	4.0	18	205	0.8
Metridia spp. C-5 M	22	10.7	17	191	0.8
Other Copepoda <2mm	19	10.7	14	165	0.7
Hyperiidea <5mm	16	10.7	12	139	0.6
Chaetognatha <5mm	14	10.7	11	122	0.5
Eucalanus bungii C-5 F	36	4.0	10	117	0.5
Anomura - larva	13	10.7	10	113	0.5
Metridia spp. C-5 F	12	10.7	9	104	0.4
Thecosomata <5mm	12	10.7	9	104	0.4
Eucalanus bungii C-4 F	12	10.7	9	104	0.4
Metridia pacifica C-4	12	10.7	9	104	0.4
Metridia pacifica - adult M	4	32.0	9	104	0.4
Acartia spp.	11	10.7	8	96	0.4
Euphausia pacifica A&J	27	4.0	8	88	0.4
Calanus marshallae C-4	3	32.0	7	78	0.3
Eucalanus bungii C-5 M	23	4.0	6	75	0.3
Thysanoessa inermis A&J	23	4.0	6	75	0.3
Brachyura - larva	8	10.7	6	70	0.3
Natantia - larva	5	10.7	4	43	0.2
Eucalanus bungii C-4 M	5	10.7	4	43	0.2
Other Copepoda damaged	4	10.7	3	35	0.1
Eucalanus bungii C-3	4	10.7	3	35	0.1
Other Copepoda 2-5mm	4	10.7	3	35	0.1
Euphausiacea A&J damaged	9	4.0	3	29	0.1
Larvacea	3	10.7	2	26	0.1
Eucalanus bungii - adult F	6	4.0	2	19	0.1
Neocalanus plumchrus C-5	2	10.7	2	17	0.1
Chaetognatha >20mm	5	4.0	1	16	0.1
Thysanoessa spinifera A&J	4	4.0	1	13	0.1
Teleostei - larva >5mm	3	4.0	1	10	< 0.1
Calanus marshallae C-3	1	10.7	1	9	< 0.1
Invertebrata <5mm	1	10.7	1	9	< 0.1
Pseudocalanus spp. - adult M	1	10.7	1	9	< 0.1

Gastropoda - veliger <5mm	1	10.7	1	9	< 0.1
Cirripedia - nauplius <5mm	1	10.7	1	9	< 0.1
Neocalanus plumchrus - adult F	1	10.7	1	9	< 0.1
Metriididae C-3	1	10.7	1	9	< 0.1
Cirripedia - cypris <5mm	1	10.7	1	9	< 0.1
Thysanoessa inspinata A&J	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
			2138	24592	100.

STA. 058 56 36.6 N 155 00.6 W 08 Aug 86 23:50

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
236	0 - 204	314.3	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. C-5 M	96	256.0	782	15953	14.7
Pseudocalanus spp. - adult F	73	256.0	595	12131	11.2
Pseudocalanus spp. C-5 F	67	256.0	546	11134	10.2
Oithona spp.	51	256.0	415	8475	7.8
Metridia pacifica C-5 M	43	256.0	350	7145	6.6
Calanus marshallae C-5	35	256.0	285	5816	5.4
Metridia pacifica - adult M	32	256.0	261	5318	4.9
Metridia pacifica C-5 F	29	256.0	236	4819	4.4
Metridia pacifica - adult F	28	256.0	228	4653	4.3
Acartia spp.	25	256.0	204	4154	3.8
Metridia pacifica C-4	22	256.0	179	3656	3.4
Other Copepoda <2mm	21	256.0	171	3490	3.2
Eucalanus bungii C-5 F	105	32.0	107	2181	2.0
Cnidaria - medusa >5mm	91	32.0	93	1890	1.7
Neocalanus plumchrus C-5	10	256.0	81	1662	1.5
Eucalanus bungii C-5 M	75	32.0	76	1558	1.4
Metridia spp. C-5 M	7	256.0	57	1163	1.1
Metriididae C-3	7	256.0	57	1163	1.1
Neocalanus plumchrus - adult F	7	256.0	57	1163	1.1
Invertebrata - egg <5mm	6	256.0	49	997	0.9
Brachyura - larva	6	256.0	49	997	0.9
Hyperiidea <5mm	5	256.0	41	831	0.8
Other zooplankton <5mm	5	256.0	41	831	0.8
Pseudocalanus spp. - adult M	5	256.0	41	831	0.8
Thecosomata <5mm	5	256.0	41	831	0.8
Calanus marshallae C-4	4	256.0	33	665	0.6
Cirripedia - cypris <5mm	3	256.0	24	499	0.5
Gastropoda - veliger <5mm	3	256.0	24	499	0.5
Calanus marshallae - adult F	3	256.0	24	499	0.5
Thysanoessa inermis A&J	21	32.0	21	436	0.4
Chaetognatha 5-20mm	42	16.0	21	436	0.4
Ostracoda <5mm	2	256.0	16	332	0.3
Metridia spp. C-5 F	2	256.0	16	332	0.3
Metridia spp. - adult F	2	256.0	16	332	0.3
Cnidaria - medusa <5mm	2	256.0	16	332	0.3
Neocalanus cristatus C-5	24	16.0	12	249	0.2
Euphausia pacifica A&J	9	32.0	9	187	0.2
Calanus marshallae C-3	1	256.0	8	166	0.2
Gymnosomata <5mm	1	256.0	8	166	0.2
Other Copepoda 2-5mm	1	256.0	8	166	0.2
Eucalanus bungii - adult F	7	32.0	7	145	0.1
Chaetognatha >20mm	14	16.0	7	145	0.1
Eucalanus bungii - adult M	6	32.0	6	125	0.1
Hyperiidea >5mm	9	16.0	5	93	0.1
Euphausiacea A&J damaged	1	32.0	1	21	< 0.1
Polychaeta >5mm	2	16.0	1	21	< 0.1

5328	108687	100.

STA. 056 56 30.6 N 154 47.4 W 09 Aug 86 3:28

DEPTH	SAMPLING INTERVAL	VOLUME FILTERED	NET MESH
204	0 - 184	236.6	333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Pseudocalanus spp. C-5 M	115	256.0	1244	22894	23.8
Pseudocalanus spp. C-5 F	96	256.0	1039	19112	19.9
Calanus marshallae C-5	34	256.0	368	6769	7.1
Oithona spp.	29	256.0	314	5773	6.0
Metridia pacifica C-5 M	19	256.0	206	3783	3.9
Metridia pacifica - adult M	17	256.0	184	3384	3.5
Metridia pacifica C-4	50	85.3	180	3317	3.5
Metridia pacifica - adult F	16	256.0	173	3185	3.3
Pseudocalanus spp. - adult F	45	85.3	162	2985	3.1
Metridia spp. C-5 F	40	85.3	144	2653	2.8
Acartia spp.	38	85.3	137	2521	2.6
Metridia pacifica C-5 F	12	256.0	130	2389	2.5
Other Copepoda <2mm	25	85.3	90	1658	1.7
Metridia spp. C-5 M	24	85.3	87	1592	1.7
Eucalanus bungii C-5 M	123	16.0	83	1530	1.6
Eucalanus bungii C-5 F	118	16.0	80	1468	1.5
Cnidaria - medusa >5mm	102	16.0	69	1269	1.3
Neocalanus plumchrus - adult F	15	85.3	54	995	1.0
Brachyura - larva	12	85.3	43	796	0.8
Thecosomata <5mm	11	85.3	40	730	0.8
Chaetognatha 5-20mm	55	16.0	37	684	0.7
Calanus marshallae - adult F	3	256.0	32	597	0.6
Euphausiacea - furcilia	9	85.3	32	597	0.6
Thysanoessa inermis A&J	44	16.0	30	547	0.6
Cnidaria - medusa <5mm	8	85.3	29	531	0.6
Ostracoda <5mm	8	85.3	29	531	0.6
Invertebrata - egg <5mm	8	85.3	29	531	0.6
Metriididae C-3	7	85.3	25	464	0.5
Other Copepoda 2-5mm	6	85.3	22	398	0.4
Neocalanus plumchrus C-5	6	85.3	22	398	0.4
Chaetognatha <5mm	4	85.3	14	265	0.3
Thysanoessa spinifera A&J	19	16.0	13	236	0.2
Gymnosomata <5mm	3	85.3	11	199	0.2
Gastropoda - veliger <5mm	2	85.3	7	133	0.1
Hyperiidea <5mm	2	85.3	7	133	0.1
Hyperiidea >5mm	9	16.0	6	112	0.1
Eucalanus bungii - adult F	9	16.0	6	112	0.1
Chaetognatha >20mm	6	16.0	4	75	0.1
Larvacea	1	85.3	4	66	0.1
Eucalanus bungii C-4 F	1	85.3	4	66	0.1
Natantia - larva	1	85.3	4	66	0.1
Other zooplankton <5mm	1	85.3	4	66	0.1
Pseudocalanus spp. - adult M	1	85.3	4	66	0.1
Eucalanus bungii - adult M	5	16.0	3	62	0.1
Euphausiacea A&J damaged	5	16.0	3	62	0.1
Thysanoessa raschii A&J	4	16.0	3	50	0.1
Euphausia pacifica A&J	4	16.0	3	50	0.1

Neocalanus cristatus C-5	4	16.0	3	50	0.1
Other Copepoda >5mm	2	16.0	1	25	< 0.1
Natantia A&J >5mm	2	16.0	1	25	< 0.1
			5218	96003	100.