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**Zooplankton of Shelikof Strait, Alaska,
April and May 1989:**

**Data from Fisheries-Oceanography
Coordinated Investigations (FOCI) Cruises**

June 1991

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Zooplankton of Shelikof Strait, Alaska, April and May 1989:
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. Studies emphasizing areal distribution and seasonal development of the zooplankton community in the Shelikof Strait region were conducted in 1985 (March to October) and 1986 (April to August); these data are reported in Siefert et al. (1988a) and Siefert and Incze (1989a), respectively. Zooplankton vertical distributions in areas of concentrated pollock larvae were studied in 1986 and 1987; these data are reported in Siefert et al. (1988b) and Siefert et al. (1990), respectively. Data for interannual comparisons of zooplankton abundance and composition to augment those data collected in 1985 and 1986 were collected in 1987 (Siefert and Incze 1989b) and 1988 (Siefert and Incze 1991). The data reported here are zooplankton abundance and composition data for 1989. This information will be used to continue the time-series study of springtime conditions at line 8 (Fig. 1), now dating from 1985 through 1989. In addition, data were collected to investigate possible differences in biological conditions across the Shelikof Strait sea valley farther to the west in mid May when first-feeding pollock larvae were present. Data summarized in these various reports are being used in the preparation of manuscripts

for peer-reviewed publications.

METHODS

Plankton samples were collected during three cruises conducted in the Shelikof Strait region from 5-16 April, 19 April to 5 May and 9-25 May 1989. A transect of stations across the Shelikof Strait between Cape Kekurnoi and Kodiak Island (line 8, Fig. 1) was occupied during each cruise (Figs. 2 and 3) to provide data for seasonal and interannual comparisons of zooplankton abundance and composition. Farther south a transect of seven stations across the sea valley was sampled three different times during the third cruise in an area where pollock larvae were abundant (Fig. 3). These transect stations were occupied to investigate spatial and temporal variability of conditions. Five of these stations (64-68, 84-88, and 104-108; see Fig. 3) spaced approximately 16km apart were sampled 3hrs apart during a transect. Transects were begun 48hrs from the beginning of the last.

Plankton samples were obtained by double-oblique tows of 60-cm bongo samplers (Posgay and Marak 1980) equipped with 333 μm mesh nets and 20-cm bongo samplers equipped with 150 μm mesh nets. At all stations described here, 20-cm bongo samplers 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, and a bathykymograph (BKG) was used to record maximum sampling depth and record the sampling

trajectories. Tows were taken from surface to near bottom (generally 10-15 m or less off bottom) on line 8, but were limited to the upper 100 m at the across-shelf transects in mid May. The upper 100 m includes that part of the water column used by larval pollock (mostly the upper 50 m), and restricting sampling to the shallower depth enabled more rapid occupation of the transects. Samples were preserved in 5% buffered formalin:seawater for later analysis.

Samples were sorted at the Plankton Sorting Center in Szczecin, Poland and identifications made in Poland were verified by D. Siefert in Seattle. Organisms were sorted into taxonomic categories selected to describe the seasonal development and interannual differences of zooplankton communities in Shelikof Strait, emphasizing the most abundant species. These taxa are listed in Table 1 with definitions of abbreviations used throughout this report.

For all samples, large organisms such as shrimp and jellyfish were first removed and noted, then sorting proceeded as follows. The sample collected with 333 μm mesh was split with a Folsom plankton splitter to obtain a subsample with approximately 100-200 organisms ≥ 5 mm in their maximum dimension (note that smaller organisms were much more numerous and were treated separately; see below). This first split was not made beyond 1/64 of the original sample. All organisms ≥ 5 mm were enumerated except the following taxa: decapod larvae, euphausiid furciliae

and larvaceans. These organisms have a broad distribution of sizes, including many individuals smaller than 5 mm so they were counted from a smaller subsample.

The smaller organisms in our study (<5 mm) were enumerated either from 333 μ m mesh or the 150 μ m mesh subsamples, depending on the size of the animal being counted. Subsample sizes varied and often were quite small (down 1/1024) with the first containing a total of approximately 300-500 small organisms. If the first subsample did not provide at least 30 specimens of the taxa or certain developmental stages of the taxa of particular interest to our study, then a second subsample was sorted for these organisms. The taxa and developmental stages of interest for which there was an attempt to count 30 were: Neocalanus cristatus C4 and C5; Eucalanus bungii combining C1-C4 and C5-C6; all species of juvenile and adult euphausiids combined; Neocalanus spp. C4 and C5; Calanus marshallae C4-C6 combined; C. pacifica C4-C6 combined; unidentified C1-C3 calanoids (later identified as Neocalanus or Calanus spp.; see below); Pseudocalanus spp. C4, C5 and C6; Metridia pacifica C4, C5, and C6; Acartia spp. C1-C6 combined; Oithona spp. C1-C6 combined; and euphausiid larvae combining calyptope 1-3 and all furciliae. All organisms and developmental stages selected for enumeration from each of the two nets are listed accordingly in Table 2. A few taxa were counted from both nets: the C2 stages of Neocalanus cristatus, Neocalanus spp., and Calanus marshallae because they were first counted in Poland as C2 calanoids 1.0-2.4 mm total

length (later identified further) and together may or may not be retained quantitatively with either net; and "Other Zooplankton <5 mm", because the category includes a number of taxa for which the retention effectiveness of either net is unknown. All taxa quantitatively retained by one net or the other were counted to enable comparison with corresponding counts from samples processed differently from collections prior to 1988.

RESULTS

The data are presented in Appendices 1-3. Samples are identified by station number and mesh size. Data for concurrent bongo samples appear together. For each station, results from the 333 μm mesh net are listed first; data from the 150 μm mesh net follow.

Taxa are listed in order of their abundance within each sample. Each list shows the number of organisms counted, the fraction of the sample from which they were counted (sub/fac), and their estimated abundance as number per 10m^3 and per m^2 . Station numbers correspond to the those shown in Figures 2 and 3. Location is given to tenths of a degree of latitude and longitude, date and time are GMT, station water 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 did not spend the time to

identify and record all species encountered; instead, notes were kept on the most abundant species in these categories. These species are listed in Table 3.

DISCUSSION

Care must be taken when using these data for quantitative comparisons. Avoidance of nets by certain organisms, size of the mesh used for collection, the sample splitting process and sample preservation can all affect estimates of animal abundance.

Euphausiid adults and juveniles tend to avoid being caught in these nets and also may show diel differences in capture rates.

Nets with 333 μm mesh do not consistently retain organisms with a minimum dimension less than 471 μm (Miller et al. 1984); nets with 150 μm mesh do not consistently retain organisms with a minimum dimension less than 212 μm . On the basis of size, we consider that the following taxa were quantitatively retained when the 333 μm mesh nets were used: Calanus marshallae C3, C4, C5 and adults; C. pacificus C3, C4, C5 and adults; Eucalanus bungii C3, C4, C5 and adults; Metridia spp. C5 and adults; M. pacifica C5 and adults; Neocalanus cristatus C2, C3, C4, C5, and adults; Neocalanus spp. (N. plumchrus and/or N. flemingeri) C3, C4, C5 and adults; copepods ≥ 2 mm; decapod larvae; euphausiid furcilliae, juveniles and adults; chaetognaths ≥ 20 mm; and other

zooplankton ≥ 5 mm in their maximum dimension. Nets with 150 μm mesh should retain the following taxa, because of their size, in addition to the above organisms: C. marshallae C1 and C2; C. pacificus C1 and C2; E. bungii C1 and C2; Metriididae C2, C3, and C4; N. cristatus C1; N. spp. (N. plumchrus and/or N. flemingeri) C1 and C2; Pseudocalanus spp. C3, C4, C5, and adults; chaetognaths ≥ 5 mm and euphausiid calyptopis 1-3.

Estimates for gelatinous zooplankton (i.e. cnidarian medusae and larvaceans) are not quantitative because of the effects of sampling and preservation. Finally, the sample splitting process also affects estimates of thecosomate pteropods because they do not stay randomly suspended in the sample while the split is made.

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List of Tables

- Table 1. Taxonomic and size/life history stage categories identified in zooplankton samples from Shelikof Strait.
- Table 2. Organisms selected for enumeration from each mesh size used for sampling zooplankton.
- Table 3. Invertebrate zooplankton taxa not routinely identified to species, and the families, genera, or species most commonly encountered from these taxa in Shelikof Strait in 1989.

List of Figures

- Figure 1. Geography and bathymetry of Shelikof Strait, northwestern Gulf of Alaska.
- Figure 2. Stations sampled for zooplankton on line 8: a) cruise 1MF89, 5-16 April 1989 and b) cruise 2MF89, 19 April-5 May 1989.
- Figure 3. Stations sampled for zooplankton during cruise 3MF89, 9-25 May 1989.

List of Appendices

- Appendix 1. Abundance of zooplankton taxa at each station sampled during cruise 1MF89 in Shelikof Strait, 5-16 April 1989.
- Appendix 2. Abundance of zooplankton taxa at each station sampled during cruise 2MF89 in Shelikof Strait, 19 April-5 May 1989.
- Appendix 3. Abundance of zooplankton taxa at each station sampled during cruise 3MF89 in Shelikof Strait, 9-25 May 1989

Table 1. Taxonomic and size/life history stage categories of identified in this report.

<u>Taxon</u>	<u>Size/Life History Stages*</u>
<u>Acartia</u> spp.	
Anomura	larva
Bivalvia	<5 mm, veliger <5 mm
Brachyura	larva
Bryozoa	cyphonautes <5 mm
<u>Calanus marshallae</u>	adult F, adult M, C5, C4, C3, C2, C1
<u>C. pacificus</u>	adult F, adult M, C5, C4, C3, C2, C1
Cephalopoda	≥5 mm, <5 mm
Chaetognatha	≥20 mm, <20 mm and ≥5 mm, <5 mm
Cirripedia	cypris <5 mm, nauplius <5 mm
Cladocera	<5 mm
Cnidaria	medusa ≥5 mm, medusa <5 mm
Ctenophora	≥5 mm, <5 mm
Cumacea	≥5 mm, <5 mm
Echinodermata	≥5 mm, <5 mm, larva <5 mm
<u>Eucalanus bungii</u>	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
<u>Euphausia pacifica</u>	A&J
Foraminifera	<5 mm
Gammaridea	≥5 mm, <5 mm
Gastropoda	<5 mm, veliger <5 mm
Gymnosomata	≥5 mm, <5 mm
Hyperidea	≥5 mm, <5 mm

Table 1. Continued

<u>Taxon</u>	<u>Size/Life History Stages*</u>
Invertebrata	≥5 mm, <5 mm, egg <5 mm
Larvacea	
<u>Metridia</u> spp.	adult F, adult M, C5 F, C5 M, C4
<u>Metridia pacifica</u>	adult F, adult M, C5 F, C5 M, C4
Metriididae	C3, C2, C1
Mysidacea	≥5 mm, <5 mm
Natantia	≥5 mm A&J, <5 mm A&J, larva
Nematoda	≥5 mm, <5 mm
<u>Neocalanus cristatus</u>	adult F, adult M, C5, C4, C3, C2, C1
<u>Neocalanus.</u> spp.	adult F, adult M, C5, C4, C3, C2, C1
<u>Oithona</u> spp.	
Ostracoda	<5 mm
Other Copepoda	unidentified, ≥5 mm, <5 mm and ≥2 mm, <2 mm, nauplius
Other zooplankton	≥5 mm, <5 mm
Polychaeta	≥5 mm, <5 mm
<u>Pseudocalanus</u> spp.	adult F, adult M, C5 F, C5 M, C4 F, C4 M
? <u>Pseudocalanus</u> spp.*	C3, C2, C1
Radiolaria	<5 mm
Siphonophora	≥5 mm, <5 mm
Teleostei	larva ≥5 mm, larva <5 mm, egg <5 mm
<u>Tessarabrachion oculatum</u>	A&J
Thecosomata	≥5 mm, <5 mm
<u>Thysanoessa inermis</u>	A&J
<u>T. inspinata</u>	A&J

Table 1. Continued

<u>Taxon</u>	<u>Size/Life History Stages*</u>
<u>T. longipes</u>	A&J
<u>T. raschii</u>	A&J
<u>T. spinifera</u>	A&J
Unidentified Calanoida	C3, C2, C1

* Life history stage abbreviations:

blank= stage not determined

F= female

M= male

C= copepodite

A&J= adults and juveniles combined

A&J damaged= adults and juveniles that cannot be identified to
genus or species because they are damaged? Pseudocalanus spp.= probably Pseudocalanus spp., but could not
be positively identified

Table 2. Organisms selected for enumeration from each mesh size used for sampling zooplankton.

333 μ m mesh

Neocalanus cristatus
Adult, C5, C4, C3, C2

Neocalanus spp.
Adult, C5, C4, C3, C2

Calanus marshallae
Adult, C5, C4, C3, C2

C. pacificus
Adult, C5, C4, C3, C2

Eucalanus bungii
Adult, C5, C4, C3

Metridia pacifica
Adult, C5

Metridia spp.
Adult, C5

Other Copepoda \geq 2 mm

Euphausiacea
A&J, furciliae

Decapoda (Crustacea) larvae

Larvacea

Other zooplankton \geq or $<$ 5 mm

150 μ m mesh

N. cristatus
C1

Neocalanus spp.
C2, C1

C. marshallae
C2, C1

C. pacificus
C2, C1

E. bungii
C2, C1

Metriididae
C4, C3, C2, C1

Other Copepoda $<$ 2 mm
Copepod nauplii

Oithona spp.

Pseudocalanus spp. C6-C4,
? Pseudocalanus spp. C3-C1

Acartia spp.

Euphausiacea
Calyptope 3, 2, 1, nauplii

Other zooplankton $<$ 5 mm

Table 3. Invertebrate zooplankton taxa not routinely identified to species, and the families, genera or species most commonly encountered from these taxa in Shelikof Strait in 1989.

<u>Taxon</u>	<u>Composition</u>
<u>Acartia</u> spp.	<u>A. longiremis</u>
Anomura larva	Paguridae
Brachyura larva	Majidae
Chaetognatha	<u>Eukronia hamata</u> , <u>Sagitta elegans</u>
Cnidaria medusa	<u>Aglantha digitale</u>
Gammaridea	<u>Cyphocharis challengeri</u>
Gymnosomata	<u>Clione</u> spp.
Hyperiidia	<u>Themisto pacifica</u> , <u>Primno macropa</u>
Larvacea	<u>Fritillaria</u> spp., <u>Oikopleura</u> spp.
Mysidacea	<u>Meterothrops</u> spp.
<u>Neocalanus</u> spp.	<u>N. flemingeri</u> , <u>N. plumchrus</u>
<u>Oithona</u> spp.	<u>O. similis</u>
Other Copepoda ≥ 5 mm	Euchaetidae
Other Copepoda ≥ 2 and < 5 mm	Euchaetidae
Other Copepoda < 2 mm	Scolecithricidae, <u>Microcalanus</u> spp., <u>Oncaea</u> spp.
Polychaeta	Tomopteridae
Thecosomata	<u>Limacina helicina</u>

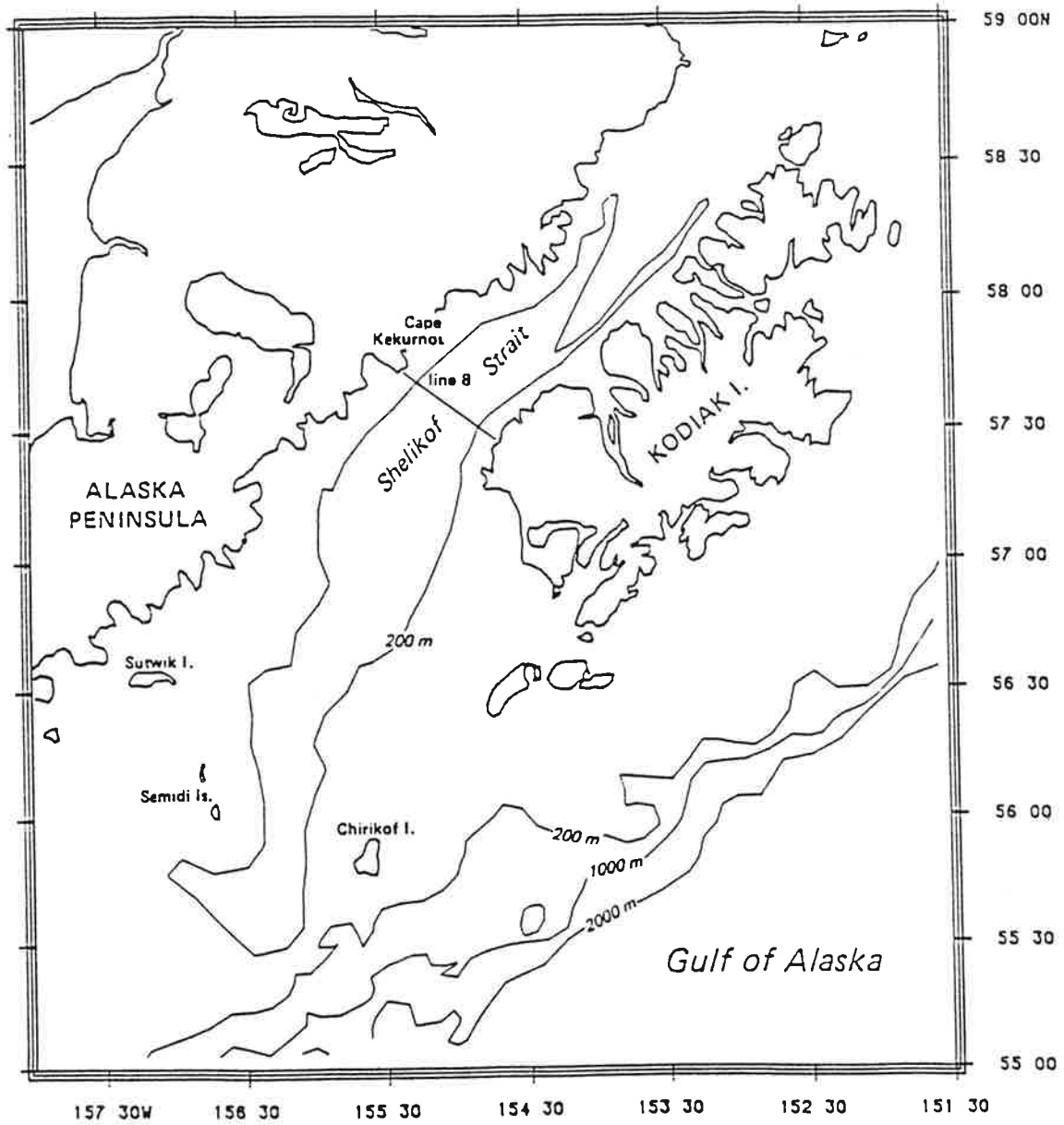


Figure 1. Geography and bathymetry of Shelikof Strait, northwestern Gulf of Alaska.

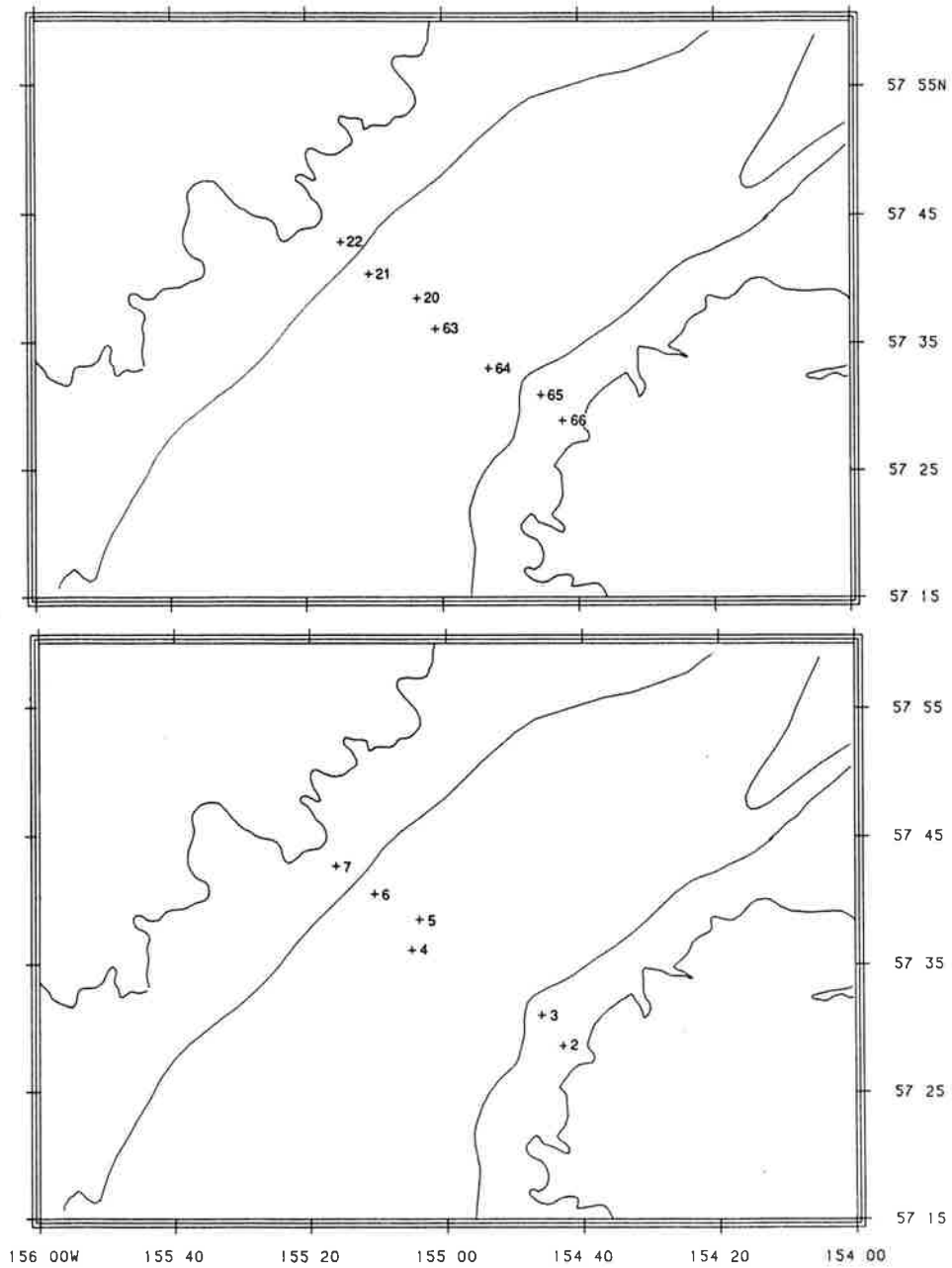


Figure 2. Stations sampled for zooplankton on line 8: a) cruise 1MF89, 5-16 April 1989 and b) cruise 2MF89, 19 April-5 May 1989.

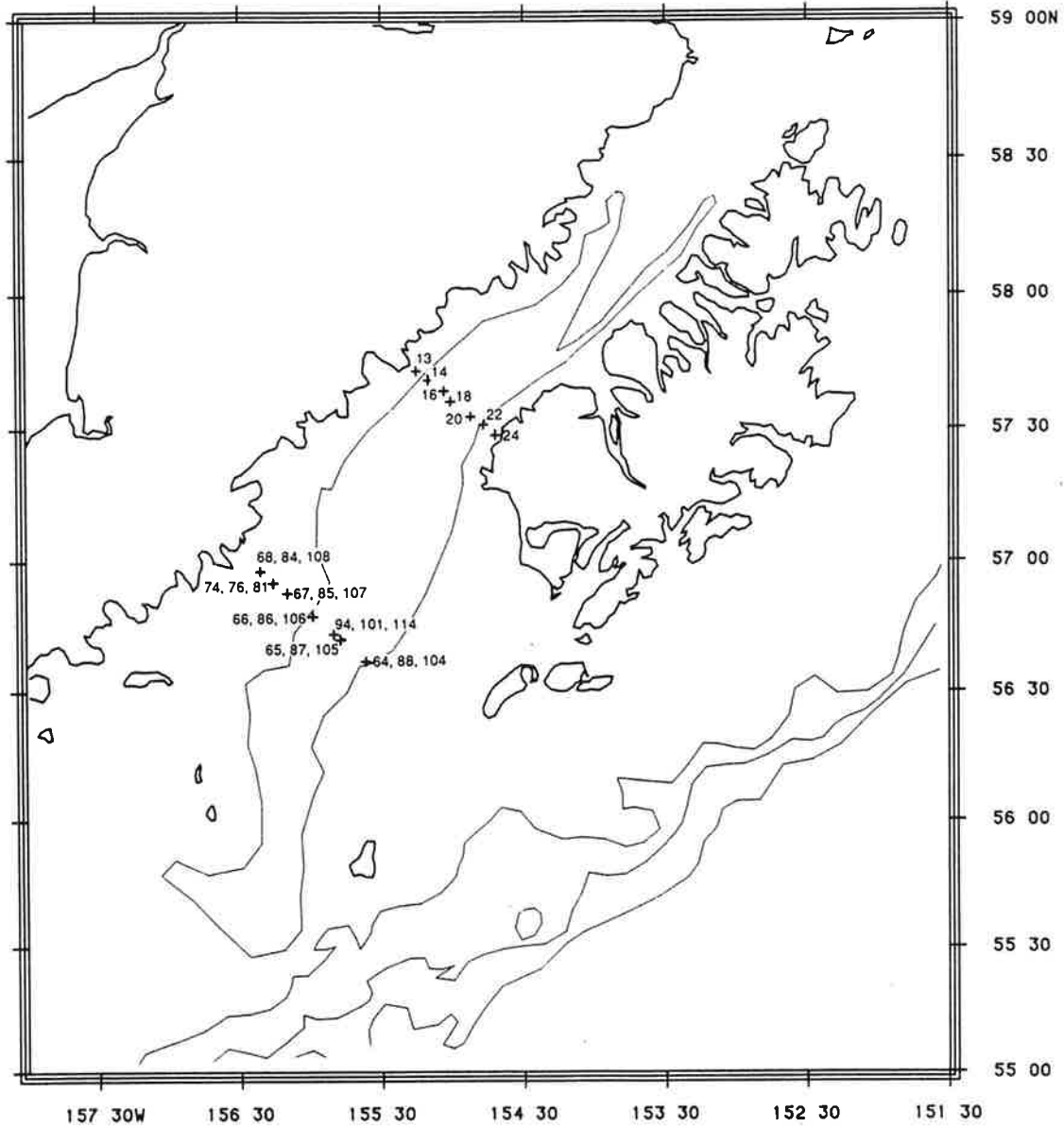


Figure 3. Stations sampled for zooplankton during cruise 3MF89, 9-25 May 1989. Commas separate station numbers when locations were sampled more than once.

Appendix 1. Abundance of zooplankton taxa at each station sampled during cruise 1MF89 in Shelikof Strait, 5-16 April 1989. Station numbers correspond to those used in Figure 2.

STA. G022B 57 42.9 N 155 14.9 W 12 Apr 89 20:38

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
302 0 - 298 388.6 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus spp. C-3	211	64.0	348	10495	22.9
Neocalanus spp. C-4	171	64.0	282	8506	18.6
Cirripedia - nauplius <5mm	155	64.0	255	7710	16.8
Neocalanus spp. C-2	57	64.0	94	2835	6.2
Ostracoda <5mm	50	64.0	82	2487	5.4
Teleostei - egg <5mm	50	64.0	82	2487	5.4
Invertebrata - egg <5mm	36	64.0	59	1791	3.9
Metridia pacifica C-5 M	34	64.0	56	1691	3.7
Metridia pacifica C-5 F	31	64.0	51	1542	3.4
Calanus pacificus C-5	109	12.8	36	1084	2.4
Metridia spp. - adult F	18	64.0	30	895	2.0
Metridia pacifica - adult M	56	12.8	18	557	1.2
Gammaridea <5mm	11	64.0	18	547	1.2
Thecosomata <5mm	7	64.0	12	348	0.8
Calanus marshallae - adult F	35	12.8	12	348	0.8
Metridia pacifica - adult F	34	12.8	11	338	0.7
Metridia spp. - adult M	5	64.0	8	249	0.5
Other Copepoda 2-5mm	5	64.0	8	249	0.5
Neocalanus cristatus C-3	5	64.0	8	249	0.5
Neocalanus cristatus C-4	59	4.0	6	183	0.4
Calanus marshallae - adult M	17	12.8	6	169	0.4
Neocalanus cristatus C-5	42	4.0	4	131	0.3
Calanus marshallae C-2	2	64.0	3	99	0.2
Larvacea	2	64.0	3	99	0.2
Cnidaria - medusa <5mm	2	64.0	3	99	0.2
Gammaridea >5mm	31	4.0	3	96	0.2
Chaetognatha 5-20mm	28	4.0	3	87	0.2
Teleostei - larva <5mm	1	64.0	2	50	0.1
Chaetognatha <5mm	1	64.0	2	50	0.1
Thysanoessa inermis A&J	15	4.0	2	47	0.1
Cnidaria - medusa >5mm	14	4.0	1	44	0.1
Neocalanus spp. C-5	4	12.8	1	40	0.1
Mysidacea >5mm	12	4.0	1	37	0.1
Mysidacea >5mm	12	4.0	1	37	0.1
Chaetognatha >20mm	6	4.0	1	19	< 0.1
Thysanoessa spinifera A&J	6	4.0	1	19	< 0.1
Eucalanus bungii - adult F	5	4.0	1	16	< 0.1
Polychaeta >5mm	3	4.0	< 1	9	< 0.1
Other Copepoda >5mm	3	4.0	< 1	9	< 0.1
Polychaeta >5mm	3	4.0	< 1	9	< 0.1
Siphonophora >5mm	2	4.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
Thysanoessa longipes A&J	1	4.0	< 1	3	< 0.1
			-----	-----	-----
			1516	45771	100.

STA. G022B 57 39.4 N 155 18.1 W 12 Apr 89 12:16

DEPTH 302 SAMPLING INTERVAL 0 - 298 VOLUME FILTERED 29.7 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Oithona spp.	151	64.0	3255	98304	22.9
Cirripedia - nauplius <5mm	127	64.0	2738	82679	19.3
Other Copepoda <2mm	103	64.0	2220	67055	15.6
Invertebrata - egg <5mm	62	64.0	1337	40363	9.4
Other Copepoda - nauplius	57	64.0	1229	37108	8.7
Pseudocalanus spp. - adult F	96	12.8	414	12500	2.9
?Pseudocalanus spp. C-3	77	12.8	332	10026	2.3
Acartia spp.	11	64.0	237	7161	1.7
?Pseudocalanus spp. C-2	11	64.0	237	7161	1.7
Metriididae C-1	9	64.0	194	5859	1.4
?Pseudocalanus spp. C-1	8	64.0	172	5208	1.2
Euphausiacea - nauplius	7	64.0	151	4557	1.1
Pseudocalanus spp. C-5 M	34	12.8	147	4427	1.0
Pseudocalanus spp. C-4 M	33	12.8	142	4297	1.0
Metriididae C-2	32	12.8	138	4167	1.0
Ostracoda <5mm	6	64.0	129	3906	0.9
Neocalanus spp. C-2	30	12.8	129	3906	0.9
Pseudocalanus spp. - adult M	26	12.8	112	3385	0.8
Pseudocalanus spp. C-5 F	26	12.8	112	3385	0.8
Metriididae C-3	24	12.8	103	3125	0.7
Polychaeta <5mm	4	64.0	86	2604	0.6
Pseudocalanus spp. C-4 F	17	12.8	73	2213	0.5
Neocalanus spp. C-1	16	12.8	69	2083	0.5
Teleostei - egg <5mm	3	64.0	65	1953	0.5
Foraminifera <5mm	3	64.0	65	1953	0.5
Bryozoa - cyphonantes <5mm	3	64.0	65	1953	0.5
Metridia pacifica C-4	12	12.8	52	1562	0.4
Euphausiacea - calyptopis 1	2	64.0	43	1302	0.3
Thecosomata <5mm	2	64.0	43	1302	0.3
Echinodermata - larva <5mm	1	64.0	22	651	0.2
Gammaridea <5mm	1	64.0	22	651	0.2
Invertebrata <5mm	1	64.0	22	651	0.2
Chaetognatha <5mm	1	64.0	22	651	0.2
Calanus marshallae C-1	4	12.8	17	521	0.1
Calanus marshallae C-2	1	12.8	4	130	< 0.1
Unidentified Calanoida C-1	1	12.8	4	130	< 0.1
			14202	428890	100.

STA. G021B 57 40.4 N 155 10.8 W 12 Apr 89 21:31

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
294 0 - 289 340.6 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-3	200	256.0	1503	44194	39.8
Neocalanus spp. C-4	109	256.0	819	24086	21.7
Neocalanus spp. C-2	51	256.0	383	11269	10.2
Cirripedia - nauplius <5mm	37	256.0	278	8176	7.4
Invertebrata - egg <5mm	18	256.0	135	3977	3.6
Teleostei - egg <5mm	16	256.0	120	3536	3.2
Ostracoda <5mm	14	256.0	105	3094	2.8
Thecosomata <5mm	7	256.0	53	1547	1.4
Metridia pacifica C-5 F	100	15.1	44	1303	1.2
Metridia pacifica C-5 M	93	15.1	41	1212	1.1
Calanus pacificus C-5	68	15.1	30	886	0.8
Other Copepoda 2-5mm	4	256.0	30	884	0.8
Metridia spp. - adult F	4	256.0	30	884	0.8
Larvacea	3	256.0	23	663	0.6
Chaetognatha <5mm	3	256.0	23	663	0.6
Metridia pacifica - adult M	46	15.1	20	600	0.5
Calanus marshallae - adult F	45	15.1	20	587	0.5
Foraminifera <5mm	2	256.0	15	442	0.4
Metridia pacifica - adult F	30	15.1	13	391	0.4
Chaetognatha 5-20mm	88	4.0	10	304	0.3
Neocalanus cristatus C-4	87	4.0	10	300	0.3
Invertebrata <5mm	1	256.0	8	221	0.2
Hyperidea <5mm	1	256.0	8	221	0.2
Neocalanus cristatus C-3	1	256.0	8	221	0.2
Natantia - larva	1	256.0	8	221	0.2
Calanus marshallae C-2	1	256.0	8	221	0.2
Calanus marshallae C-3	1	256.0	8	221	0.2
Neocalanus spp. C-5	11	15.1	5	143	0.1
Chaetognatha >20mm	28	4.0	3	97	0.1
Cnidaria - medusa >5mm	23	4.0	3	79	0.1
Thysanoessa inermis A&J	23	4.0	3	79	0.1
Gammaridea >5mm	19	4.0	2	66	0.1
Neocalanus cristatus C-5	19	4.0	2	66	0.1
Calanus pacificus - adult F	3	15.1	1	39	< 0.1
Calanus marshallae - adult M	2	15.1	1	26	< 0.1
Eucalanus bungii - adult F	7	4.0	1	24	< 0.1
Mysidacea >5mm	5	4.0	1	17	< 0.1
Siphonophora >5mm	4	4.0	< 1	14	< 0.1
Thysanoessa spinifera A&J	3	4.0	< 1	10	< 0.1
Other Copepoda >5mm	3	4.0	< 1	10	< 0.1
Hyperidea >5mm	2	4.0	< 1	7	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
			3776	111008	100.

STA. G021B 57 40.4 N 155 10.8 W 12 Apr 89 21:31

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

294 0 - 289 26.7 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	179	64.0	4293	126208	28.2
Cirripedia - nauplius <5mm	78	64.0	1871	54996	12.3
Other Copepoda <2mm	73	64.0	1751	51470	11.5
Other Copepoda - nauplius	61	64.0	1463	43009	9.6
Invertebrata - egg <5mm	49	64.0	1175	34549	7.7
Pseudocalanus spp. - adult F	26	64.0	624	18332	4.1
Neocalanus spp. C-2	21	64.0	504	14807	3.3
Metriididae C-1	14	64.0	336	9871	2.2
?Pseudocalanus spp. C-1	13	64.0	312	9166	2.0
?Pseudocalanus spp. C-3	60	12.8	288	8461	1.9
Acartia spp.	11	64.0	264	7756	1.7
Metriididae C-2	52	12.8	249	7333	1.6
?Pseudocalanus spp. C-2	9	64.0	216	6346	1.4
Neocalanus spp. C-1	7	64.0	168	4936	1.1
Euphausiacea - nauplius	7	64.0	168	4936	1.1
Metriididae C-3	34	12.8	163	4794	1.1
Pseudocalanus spp. C-5 M	30	12.8	144	4230	0.9
Metridia pacifica C-4	27	12.8	130	3807	0.8
Pseudocalanus spp. - adult M	5	64.0	120	3525	0.8
Ostracoda <5mm	5	64.0	120	3525	0.8
Polychaeta <5mm	5	64.0	120	3525	0.8
Pseudocalanus spp. C-4 F	22	12.8	106	3102	0.7
Pseudocalanus spp. C-4 M	21	12.8	101	2961	0.7
Bryozoa - cyphonautes <5mm	4	64.0	96	2820	0.6
Pseudocalanus spp. C-5 F	20	12.8	96	2820	0.6
Echinodermata - larva <5mm	3	64.0	72	2115	0.5
Thecosomata <5mm	3	64.0	72	2115	0.5
Teleostei - egg <5mm	3	64.0	72	2115	0.5
Calanus marshallae C-1	2	64.0	48	1410	0.3
Chaetognatha <5mm	2	64.0	48	1410	0.3
Mysidacea <5mm	2	64.0	48	1410	0.3
Euphausiacea - calyptopis 1	3	12.8	14	423	0.1
			15248	448285	100.

STA. G020B 57 38.5 N 155 03.7 W 12 Apr 89 22:18

DEPTH 260 SAMPLING INTERVAL 0 - 255 VOLUME FILTERED 380.4 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-3	220	64.0	370	9623	28.5
Neocalanus spp. C-4	167	64.0	281	7305	21.6
Neocalanus spp. C-2	63	64.0	106	2756	8.2
Teleostei - egg <5mm	61	64.0	103	2668	7.9
Ostracoda <5mm	48	64.0	81	2100	6.2
Metridia pacifica C-5 M	30	64.0	50	1312	3.9
Metridia pacifica C-5 F	27	64.0	45	1181	3.5
Invertebrata - egg <5mm	21	64.0	35	919	2.7
Metridia pacifica - adult M	15	64.0	25	656	1.9
Thecosomata <5mm	13	64.0	22	569	1.7
Metridia spp. - adult M	13	64.0	22	569	1.7
Metridia spp. - adult F	12	64.0	20	525	1.6
Neocalanus cristatus C-3	10	64.0	17	437	1.3
Calanus pacificus C-5	28	21.3	16	408	1.2
Metridia pacifica - adult F	9	64.0	15	394	1.2
Cirripedia - nauplius <5mm	8	64.0	13	350	1.0
Chaetognatha 5-20mm	79	4.0	8	216	0.6
Calanus marshallae - adult F	13	21.3	7	189	0.6
Hyperiidia <5mm	4	64.0	7	175	0.5
Mysidacea <5mm	4	64.0	7	175	0.5
Chaetognatha <5mm	4	64.0	7	175	0.5
Neocalanus cristatus C-4	53	4.0	6	145	0.4
Other Copepoda 2-5mm	3	64.0	5	131	0.4
Calanus marshallae - adult M	8	21.3	4	116	0.3
Larvacea	2	64.0	3	87	0.3
Siphonophora <5mm	2	64.0	3	87	0.3
Cnidaria - medusa >5mm	24	4.0	3	66	0.2
Chaetognatha >20mm	24	4.0	3	66	0.2
Calanus marshallae C-2	1	64.0	2	44	0.1
Calanus marshallae C-3	1	64.0	2	44	0.1
Cnidaria - medusa <5mm	1	64.0	2	44	0.1
Mysidacea >5mm	12	4.0	1	33	0.1
Thysanoessa inermis A&J	11	4.0	1	30	0.1
Neocalanus spp. C-5	2	21.3	1	29	0.1
Calanus pacificus - adult F	2	21.3	1	29	0.1
Neocalanus cristatus C-5	9	4.0	1	25	0.1
Gammaridea >5mm	9	4.0	1	25	0.1
Other Copepoda >5mm	7	4.0	1	19	0.1
Polychaeta >5mm	3	4.0	< 1	8	< 0.1
Siphonophora >5mm	3	4.0	< 1	8	< 0.1
Eucalanus bungii - adult F	2	4.0	< 1	5	< 0.1
Thysanoessa spinifera A&J	2	4.0	< 1	5	< 0.1
Tessarabrachion oculatum A&J	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
			1298	33752	100.

STA. G020B 57 38.5 N 155 03.7 W 12 Apr 89 22:18

DEPTH 260 SAMPLING INTERVAL 0 - 255 VOLUME FILTERED 29.8 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Oithona spp.	150	64.0	3227	83890	36.4
Cirripedia - nauplius <5mm	57	64.0	1226	31878	13.8
Other Copepoda <2mm	49	64.0	1054	27404	11.9
Other Copepoda - nauplius	38	64.0	817	21252	9.2
Invertebrata - egg <5mm	13	64.0	280	7270	3.2
Pseudocalanus spp. - adult F	110	7.1	262	6825	3.0
?Pseudocalanus spp. C-2	10	64.0	215	5593	2.4
Metriididae C-1	8	64.0	172	4474	1.9
?Pseudocalanus spp. C-1	8	64.0	172	4474	1.9
Metriididae C-2	61	7.1	146	3785	1.6
Metriididae C-3	58	7.1	138	3599	1.6
?Pseudocalanus spp. C-3	53	7.1	126	3288	1.4
Ostracoda <5mm	5	64.0	108	2796	1.2
Metridia pacifica C-4	37	7.1	88	2296	1.0
Teleostei - egg <5mm	4	64.0	86	2237	1.0
Euphausiacea - nauplius	4	64.0	86	2237	1.0
Thecosomata <5mm	4	64.0	86	2237	1.0
Chaetognatha <5mm	3	64.0	65	1678	0.7
Bryozoa - cyphonautes <5mm	3	64.0	65	1678	0.7
Polychaeta <5mm	3	64.0	65	1678	0.7
Neocalanus spp. C-2	27	7.1	64	1675	0.7
Pseudocalanus spp. C-4 M	21	7.1	50	1303	0.6
Pseudocalanus spp. C-5 M	20	7.1	48	1241	0.5
Acartia spp.	2	64.0	43	1119	0.5
Gammaridea <5mm	2	64.0	43	1119	0.5
Pseudocalanus spp. - adult M	13	7.1	31	807	0.4
Pseudocalanus spp. C-4 F	13	7.1	31	807	0.4
Other zooplankton <5mm	1	64.0	22	559	0.2
Pseudocalanus spp. C-5 F	7	7.1	17	434	0.2
Neocalanus spp. C-1	5	7.1	12	310	0.1
Calanus marshallae C-1	5	7.1	12	310	0.1
Calanus marshallae C-2	2	7.1	5	124	0.1
			8861	230376	100.

STA. G063B 57 36.1 N 155 01.0 W 12 Apr 89 22:58

DEPTH 243 SAMPLING INTERVAL 0 - 237 VOLUME FILTERED 366.2 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-3	159	128.0	556	13504	34.4
Neocalanus spp. C-4	83	128.0	290	7049	17.9
Neocalanus spp. C-2	37	128.0	129	3142	8.0
Metridia pacifica C-5 F	34	128.0	119	2888	7.4
Invertebrata - egg <5mm	27	128.0	94	2293	5.8
Teleostei - egg <5mm	20	128.0	70	1699	4.3
Ostracoda <5mm	13	128.0	45	1104	2.8
Metridia pacifica C-5 M	11	128.0	38	934	2.4
Metridia spp. - adult F	8	128.0	28	679	1.7
Larvacea	8	128.0	28	679	1.7
Calanus pacificus C-5	40	25.6	28	679	1.7
Calanus marshallae - adult F	37	25.6	26	628	1.6
Thecosomata <5mm	7	128.0	24	595	1.5
Cirripedia - nauplius <5mm	6	128.0	21	510	1.3
Metridia pacifica - adult M	28	25.6	20	476	1.2
Metridia pacifica - adult F	26	25.6	18	442	1.1
Metridia spp. - adult M	3	128.0	10	255	0.6
Calanus marshallae - adult M	14	25.6	10	238	0.6
Calanus marshallae C-2	2	128.0	7	170	0.4
Neocalanus cristatus C-3	2	128.0	7	170	0.4
Neocalanus cristatus C-4	48	4.0	5	127	0.3
Chaetognatha 5-20mm	38	4.0	4	101	0.3
Invertebrata <5mm	1	128.0	3	85	0.2
Foraminifera <5mm	1	128.0	3	85	0.2
Cnidaria - medusa <5mm	1	128.0	3	85	0.2
Neocalanus spp. C-5	5	25.6	3	85	0.2
Chaetognatha <5mm	1	128.0	3	85	0.2
Teleostei - larva <5mm	1	128.0	3	85	0.2
Hyperiidia <5mm	1	128.0	3	85	0.2
Other zooplankton <5mm	1	128.0	3	85	0.2
Cnidaria - medusa >5mm	21	4.0	2	56	0.1
Neocalanus cristatus C-5	14	4.0	2	37	0.1
Chaetognatha >20mm	10	4.0	1	27	0.1
Gammaridea >5mm	10	4.0	1	27	0.1
Calanus marshallae C-5	1	25.6	1	17	< 0.1
Thysanoessa inermis A&J	6	4.0	1	16	< 0.1
Mysidacea >5mm	5	4.0	1	13	< 0.1
Thysanoessa spinifera A&J	5	4.0	1	13	< 0.1
Eucalanus bungii - adult F	4	4.0	< 1	11	< 0.1
Other Copepoda >5mm	4	4.0	< 1	11	< 0.1
Eucalanus bungii - adult M	3	4.0	< 1	8	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	3	< 0.1
Hyperiidia >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
Thysanoessa longipes A&J	1	4.0	< 1	3	< 0.1
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			1617	39286	100.

STA. G063B 57 36.1 N 155 01.0 W 12 Apr 89 22:58

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
243 0 - 237 28.1 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Oithona spp.	166	64.0	3781	91885	35.5
Other Copepoda <2mm	89	64.0	2027	49263	19.0
Pseudocalanus spp. - adult F	31	64.0	706	17159	6.6
Other Copepoda - nauplius	27	64.0	615	14945	5.8
Cirripedia - nauplius <5mm	18	64.0	410	9963	3.9
?Pseudocalanus spp. C-1	17	64.0	387	9410	3.6
Euphausiacea - nauplius	12	64.0	273	6642	2.6
Invertebrata - egg <5mm	12	64.0	273	6642	2.6
Metriididae C-2	55	12.8	251	6089	2.4
Ostracoda <5mm	10	64.0	228	5535	2.1
?Pseudocalanus spp. C-2	49	12.8	223	5425	2.1
Neocalanus spp. C-2	40	12.8	182	4428	1.7
?Pseudocalanus spp. C-3	39	12.8	178	4317	1.7
Bryozoa - cyphonautes <5mm	5	64.0	114	2768	1.1
Pseudocalanus spp. C-5 M	24	12.8	109	2657	1.0
Metriididae C-3	21	12.8	96	2325	0.9
Pseudocalanus spp. C-4 F	20	12.8	91	2214	0.9
Pseudocalanus spp. C-4 M	17	12.8	77	1882	0.7
Metridia pacifica C-4	16	12.8	73	1771	0.7
Teleostei - egg <5mm	3	64.0	68	1661	0.6
Larvacea	3	64.0	68	1661	0.6
Thecosomata <5mm	3	64.0	68	1661	0.6
Neocalanus spp. C-1	12	12.8	55	1328	0.5
Cirripedia - cypris <5mm	2	64.0	46	1107	0.4
Acartia spp.	2	64.0	46	1107	0.4
Chaetognatha <5mm	2	64.0	46	1107	0.4
Metriididae C-1	10	12.8	46	1107	0.4
Pseudocalanus spp. C-5 F	10	12.8	46	1107	0.4
Pseudocalanus spp. - adult M	5	12.8	23	554	0.2
Mysidacea <5mm	1	64.0	23	554	0.2
Calanus marshallae C-2	2	12.8	9	221	0.1
Calanus marshallae C-1	1	12.8	5	111	< 0.1
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			10642	258605	100.

STA. G064B 57 33.0 N 154 53.3 W 12 Apr 89 23:51

DEPTH 232 SAMPLING INTERVAL 0 - 226 VOLUME FILTERED 309.8 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Invertebrata - egg <5mm	183	32.0	189	4386	18.2
Teleostei - egg <5mm	155	32.0	160	3715	15.4
Neocalanus spp. C-4	153	32.0	158	3667	15.2
Cirripedia - nauplius <5mm	99	32.0	102	2373	9.8
Neocalanus spp. C-3	96	32.0	99	2301	9.5
Metridia pacifica C-5 F	39	32.0	40	935	3.9
Metridia pacifica C-5 M	36	32.0	37	863	3.6
Neocalanus spp. C-2	27	32.0	28	647	2.7
Metridia pacifica - adult M	25	32.0	26	599	2.5
Calanus pacificus C-5	23	32.0	24	551	2.3
Thecosomata <5mm	18	32.0	19	431	1.8
Ostracoda <5mm	16	32.0	17	383	1.6
Metridia pacifica - adult F	15	32.0	15	359	1.5
Other Copepoda damaged	13	32.0	13	312	1.3
Calanus marshallae - adult M	11	32.0	11	264	1.1
Mysidacea <5mm	10	32.0	10	240	1.0
Neocalanus cristatus C-3	9	32.0	9	216	0.9
Calanus marshallae - adult F	9	32.0	9	216	0.9
Other Copepoda 2-5mm	8	32.0	8	192	0.8
Neocalanus cristatus C-4	61	4.0	8	183	0.8
Larvacea	6	32.0	6	144	0.6
Gammaridea <5mm	6	32.0	6	144	0.6
Chaetognatha <5mm	6	32.0	6	144	0.6
Chaetognatha 5-20mm	44	4.0	6	132	0.5
Hyperiidia <5mm	5	32.0	5	120	0.5
Chaetognatha >20mm	25	4.0	3	75	0.3
Cnidaria - medusa >5mm	20	4.0	3	60	0.2
Natantia - larva	2	32.0	2	48	0.2
Neocalanus spp. C-5	2	32.0	2	48	0.2
Neocalanus cristatus C-5	15	4.0	2	45	0.2
Gammaridea >5mm	10	4.0	1	30	0.1
Mysidacea >5mm	9	4.0	1	27	0.1
Calanus pacificus - adult M	1	32.0	1	24	0.1
Calanus marshallae C-2	1	32.0	1	24	0.1
Invertebrata <5mm	1	32.0	1	24	0.1
Teleostei - larva <5mm	1	32.0	1	24	0.1
Polychaeta <5mm	1	32.0	1	24	0.1
Neocalanus spp. - adult F	1	32.0	1	24	0.1
Cirripedia - cypris <5mm	1	32.0	1	24	0.1
Cnidaria - medusa <5mm	1	32.0	1	24	0.1
Anomura - larva	1	32.0	1	24	0.1
Thysanoessa inermis A&J	7	4.0	1	21	0.1
Siphonophora >5mm	5	4.0	1	15	0.1
Thysanoessa spinifera A&J	3	4.0	< 1	9	< 0.1
Eucalanus bungii - adult F	3	4.0	< 1	9	< 0.1
Other Copepoda >5mm	2	4.0	< 1	6	< 0.1
Eucalanus bungii - adult M	2	4.0	< 1	6	< 0.1

Thysanoessa longipes A&J	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
Polychaeta >5mm	1	4.0	< 1	3	< 0.1
Other zooplankton >5mm	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	3	1.0	< 1	2	< 0.1
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				1041	24141 100.

STA. G064B 57 33.0 N 154 53.3 W 12 Apr 89 23:51

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
232 0 - 226 18.8 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	166	32.0	2824	65513	24.8
Other Copepoda <2mm	100	32.0	1701	39465	14.9
Cirripedia - nauplius <5mm	91	32.0	1548	35914	13.6
Other Copepoda - nauplius	74	32.0	1259	29204	11.1
Invertebrata - egg <5mm	39	32.0	663	15392	5.8
Pseudocalanus spp. - adult F	29	32.0	493	11445	4.3
Neocalanus spp. C-2	27	32.0	459	10656	4.0
Teleostei - egg <5mm	17	32.0	289	6709	2.5
?Pseudocalanus spp. C-3	56	6.4	191	4420	1.7
Pseudocalanus spp. C-5 M	46	6.4	157	3631	1.4
Pseudocalanus spp. C-4 M	44	6.4	150	3473	1.3
Metridia pacifica C-4	43	6.4	146	3394	1.3
Metriididae C-1	8	32.0	136	3157	1.2
Euphausiacea - nauplius	8	32.0	136	3157	1.2
?Pseudocalanus spp. C-2	8	32.0	136	3157	1.2
Pseudocalanus spp. C-4 F	38	6.4	129	2999	1.1
Metriididae C-3	36	6.4	122	2842	1.1
Pseudocalanus spp. C-5 F	31	6.4	105	2447	0.9
Chaetognatha <5mm	6	32.0	102	2368	0.9
Metriididae C-2	30	6.4	102	2368	0.9
Polychaeta <5mm	5	32.0	85	1973	0.7
Pseudocalanus spp. - adult M	4	32.0	68	1579	0.6
?Pseudocalanus spp. C-1	4	32.0	68	1579	0.6
Bryozoa - cyphonautes <5mm	3	32.0	51	1184	0.4
Hyperiidea <5mm	2	32.0	34	789	0.3
Ostracoda <5mm	2	32.0	34	789	0.3
Cirripedia - cypris <5mm	2	32.0	34	789	0.3
Euphausiacea - calytopis 1	2	32.0	34	789	0.3
Thecosomata <5mm	2	32.0	34	789	0.3
Calanus marshallae C-1	7	6.4	24	553	0.2
Neocalanus spp. C-1	7	6.4	24	553	0.2
Gastropoda <5mm	1	32.0	17	395	0.1
Euphausiacea - calytopis 2	1	32.0	17	395	0.1
Calanus marshallae C-2	2	6.4	7	158	0.1
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			11380	264024	100.

STA. G065B 57 30.9 N 154 45.5 W 13 Apr 89 0:42

DEPTH 211 SAMPLING INTERVAL 0 - 205 VOLUME FILTERED 292.2 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-4	167	64.0	366	7718	23.0
Neocalanus spp. C-3	158	64.0	346	7302	21.8
Cirripedia - nauplius <5mm	56	64.0	123	2588	7.7
Invertebrata - egg <5mm	50	64.0	110	2311	6.9
Neocalanus spp. C-2	50	64.0	110	2311	6.9
Teleostei - egg <5mm	29	64.0	64	1340	4.0
Metridia spp. - adult F	28	64.0	61	1294	3.9
Metridia pacifica C-5 F	26	64.0	57	1202	3.6
Ostracoda <5mm	17	64.0	37	786	2.3
Metridia pacifica - adult F	16	64.0	35	739	2.2
Metridia pacifica C-5 M	14	64.0	31	647	1.9
Metridia pacifica - adult M	13	64.0	28	601	1.8
Thecosomata <5mm	12	64.0	26	555	1.7
Gammaridea <5mm	10	64.0	22	462	1.4
Calanus marshallae - adult F	28	21.3	20	431	1.3
Other Copepoda damaged	8	64.0	18	370	1.1
Calanus pacificus C-5	20	21.3	15	308	0.9
Metridia spp. - adult M	6	64.0	13	277	0.8
Chaetognatha >20mm	45	8.0	12	260	0.8
Neocalanus cristatus C-4	45	8.0	12	260	0.8
Calanus marshallae - adult M	12	21.3	9	185	0.6
Chaetognatha 5-20mm	27	8.0	7	156	0.5
Hyperiidia <5mm	3	64.0	7	139	0.4
Chaetognatha <5mm	2	64.0	4	92	0.3
Calanus pacificus - adult F	2	64.0	4	92	0.3
Mysidacea <5mm	2	64.0	4	92	0.3
Larvacea	2	64.0	4	92	0.3
Other Copepoda 2-5mm	2	64.0	4	92	0.3
Neocalanus spp. C-5	5	21.3	4	77	0.2
Mysidacea >5mm	12	8.0	3	69	0.2
Cnidaria - medusa >5mm	11	8.0	3	64	0.2
Teleostei - larva >5mm	10	8.0	3	58	0.2
Thysanoessa inermis A&J	10	8.0	3	58	0.2
Natantia - larva	1	64.0	2	46	0.1
Calanus marshallae C-2	1	64.0	2	46	0.1
Gastropoda <5mm	1	64.0	2	46	0.1
Teleostei - larva <5mm	1	64.0	2	46	0.1
Calanus marshallae C-5	1	64.0	2	46	0.1
Cirripedia - cypris <5mm	1	64.0	2	46	0.1
Metridia spp. C-4	1	64.0	2	46	0.1
Anomura - larva	1	64.0	2	46	0.1
Neocalanus cristatus C-3	1	64.0	2	46	0.1
Neocalanus cristatus C-5	4	8.0	1	23	0.1
Other Copepoda >5mm	3	8.0	1	17	0.1
Siphonophora >5mm	2	8.0	1	12	< 0.1
Thysanoessa spinifera A&J	1	8.0	< 1	6	< 0.1
Gammaridea >5mm	1	8.0	< 1	6	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
			1588	33512	100.

STA. G066B 57 28.9 N 154 42.4 W 13 Apr 89 1:26

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
72 0 - 67 8.2 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	514	4.0	2511	18076	65.3
Other Copepoda <2mm	57	4.0	278	2005	7.2
?Pseudocalanus spp. C-1	38	4.0	186	1336	4.8
Cirripedia - nauplius <5mm	34	4.0	166	1196	4.3
Other Copepoda - nauplius	21	4.0	103	739	2.7
?Pseudocalanus spp. C-2	18	4.0	88	633	2.3
Metriididae C-1	12	4.0	59	422	1.5
Chaetognatha <5mm	10	4.0	49	352	1.3
?Pseudocalanus spp. C-3	28	1.3	44	320	1.2
Thecosomata <5mm	9	4.0	44	317	1.1
Bryozoa - cyphonautes <5mm	9	4.0	44	317	1.1
Pseudocalanus spp. - adult F	20	1.3	32	229	0.8
Metriididae C-2	19	1.3	30	217	0.8
Neocalanus spp. C-2	18	1.3	29	206	0.7
Invertebrata - egg <5mm	5	4.0	24	176	0.6
Neocalanus spp. C-1	14	1.3	22	160	0.6
Pseudocalanus spp. C-4 F	13	1.3	21	149	0.5
Pseudocalanus spp. C-5 M	13	1.3	21	149	0.5
Gastropoda <5mm	3	4.0	15	106	0.4
Metriididae C-3	7	1.3	11	80	0.3
Metridia pacifica C-4	2	4.0	10	70	0.3
Pseudocalanus spp. C-4 M	6	1.3	10	69	0.2
Pseudocalanus spp. C-5 F	6	1.3	10	69	0.2
Euphausiacea - nauplius	1	4.0	5	35	0.1
Cnidaria - medusa <5mm	1	4.0	5	35	0.1
Invertebrata <5mm	1	4.0	5	35	0.1
Cirripedia - cypris <5mm	1	4.0	5	35	0.1
Hyperiididae <5mm	1	4.0	5	35	0.1
Polychaeta <5mm	1	4.0	5	35	0.1
Euphausiacea - calytopis 2	1	4.0	5	35	0.1
Pseudocalanus spp. - adult M	3	1.3	5	34	0.1
			3843	27668	100.

Appendix 2. Abundance of zooplankton taxa at each station sampled during cruise 2MF89 in Shelikof Strait, 19 April-5 May 1989. Station numbers correspond to those used in Figure 2.

STA. G002A 57 28.6 N 154 43.0 W 26 Apr 89 5:27

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

93 0 - 85 177.7 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-4	143	64.0	515	4790	24.8
Invertebrata - egg <5mm	109	64.0	393	3651	18.9
Cirripectida - nauplius <5mm	107	64.0	385	3584	18.6
Neocalanus spp. C-5	78	64.0	281	2613	13.5
Neocalanus spp. C-3	19	64.0	68	636	3.3
Metridia pacifica - adult F	26	32.0	47	435	2.3
Calanus marshallae - adult F	23	32.0	41	385	2.0
Metridia pacifica C-5 F	21	32.0	38	352	1.8
Calanus marshallae C-2	10	64.0	36	335	1.7
Larvacea	8	64.0	29	268	1.4
Metridia pacifica C-5 M	15	32.0	27	251	1.3
Thysanoessa inermis A&J	117	4.0	26	245	1.3
Other Copepoda damaged	7	64.0	25	234	1.2
Calanus marshallae - adult M	14	32.0	25	234	1.2
Chaetognatha <5mm	5	64.0	18	167	0.9
Hyperiidia <5mm	4	64.0	14	134	0.7
Metridia pacifica - adult M	5	32.0	9	84	0.4
Other Copepoda 2-5mm	2	64.0	7	67	0.3
Calanus marshallae C-3	2	64.0	7	67	0.3
Calanus pacificus C-4	2	64.0	7	67	0.3
Teleostei - egg <5mm	2	64.0	7	67	0.3
Thecosomata <5mm	2	64.0	7	67	0.3
Metridia spp. C-5 F	2	64.0	7	67	0.3
Chaetognatha 5-20mm	28	4.0	6	59	0.3
Calanus marshallae C-4	3	32.0	5	50	0.3
Neocalanus cristatus C-4	17	4.0	4	36	0.2
Cnidaria - medusa <5mm	1	64.0	4	33	0.2
Anomura - larva	1	64.0	4	33	0.2
Calanus pacificus - adult M	2	32.0	4	33	0.2
Teleostei - larva <5mm	1	64.0	4	33	0.2
Natantia - larva	1	64.0	4	33	0.2
Cirripectida - cypris <5mm	1	64.0	4	33	0.2
Gastropoda <5mm	1	64.0	4	33	0.2
Cnidaria - medusa >5mm	15	4.0	3	31	0.2
Thysanoessa spinifera A&J	12	4.0	3	25	0.1
Calanus pacificus - adult F	1	32.0	2	17	0.1
Euphausia pacifica A&J	5	4.0	1	10	0.1
Eucalanus bungii - adult F	5	4.0	1	10	0.1
Neocalanus cristatus C-5	4	4.0	1	8	< 0.1
Thysanoessa longipes A&J	2	4.0	< 1	4	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	2	< 0.1
Teleostei - larva >5mm	1	4.0	< 1	2	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	2	< 0.1
Hyperiidia >5mm	1	4.0	< 1	2	< 0.1
Gammaridea >5mm	1	4.0	< 1	2	< 0.1
			2075	19300	100.

STA. G002A 57 28.6 N 154 43.0 W 26 Apr 89 5:27

DEPTH 93 SAMPLING INTERVAL 0 - 85 VOLUME FILTERED 11.3 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Invertebrata - egg <5mm	382	64.0	21618	201046	54.9
Oithona spp.	88	64.0	4980	46314	12.6
Other Copepoda - nauplius	67	64.0	3792	35262	9.6
Other Copepoda <2mm	28	64.0	1585	14736	4.0
?Pseudocalanus spp. C-1	22	64.0	1245	11579	3.2
?Pseudocalanus spp. C-2	21	64.0	1188	11052	3.0
Cirripedia - nauplius <5mm	19	64.0	1075	10000	2.7
Euphausiacea - nauplius	14	64.0	792	7368	2.0
?Pseudocalanus spp. C-3	64	7.1	402	3737	1.0
Pseudocalanus spp. - adult F	57	7.1	358	3328	0.9
Bryozoa - cyphonautes <5mm	6	64.0	340	3158	0.9
Metriididae C-2	48	7.1	301	2803	0.8
Polychaeta <5mm	5	64.0	283	2631	0.7
Metriididae C-1	4	64.0	226	2105	0.6
Pseudocalanus spp. C-4 F	33	7.1	207	1927	0.5
Metriididae C-3	31	7.1	195	1810	0.5
Thecosomata <5mm	3	64.0	170	1579	0.4
Pseudocalanus spp. C-5 M	19	7.1	119	1109	0.3
Metridia pacifica C-4	18	7.1	113	1051	0.3
Pseudocalanus spp. C-4 M	18	7.1	113	1051	0.3
Pseudocalanus spp. C-5 F	10	7.1	63	584	0.2
Chaetognatha <5mm	1	64.0	57	526	0.1
Pseudocalanus spp. - adult M	7	7.1	44	409	0.1
Calanus marshallae C-2	7	7.1	44	409	0.1
Calanus marshallae C-1	6	7.1	38	350	0.1
Neocalanus spp. C-2	4	7.1	25	234	0.1
Unidentified Calanoida C-2	3	7.1	19	175	< 0.1
Unidentified Calanoida C-1	1	7.1	6	58	< 0.1
Euphausiacea - calyptopis 1	1	7.1	6	58	< 0.1
			39403	366449	100.

STA. G003A 57 31.0 N 154 46.1 W 26 Apr 89 9:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

211 0 - 206 267.0 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	66	128.0	316	6676	13.8
Neocalanus spp. C-5	52	128.0	249	5260	10.8
Neocalanus spp. C-4	46	128.0	221	4653	9.6
Metridia pacifica C-5 M	43	128.0	206	4350	9.0
Calanus marshallae - adult F	42	128.0	201	4249	8.8
Invertebrata - egg <5mm	41	128.0	197	4147	8.5
Metridia pacifica - adult F	35	128.0	168	3540	7.3
Metridia pacifica C-5 F	23	128.0	110	2327	4.8
Metridia spp. - adult F	15	128.0	72	1517	3.1
Thecosomata <5mm	10	128.0	48	1012	2.1
Other Copepoda damaged	9	128.0	43	910	1.9
Larvacea	9	128.0	43	910	1.9
Metridia pacifica - adult M	8	128.0	38	809	1.7
Ostracoda <5mm	8	128.0	38	809	1.7
Neocalanus spp. C-3	8	128.0	38	809	1.7
Calanus marshallae - adult M	8	128.0	38	809	1.7
Metridia spp. - adult M	6	128.0	29	607	1.3
Unidentified Calanoida C-2	6	128.0	29	607	1.3
Teleostei - egg <5mm	5	128.0	24	506	1.0
Calanus marshallae C-2	5	128.0	24	506	1.0
Calanus marshallae C-3	4	128.0	19	405	0.8
Neocalanus cristatus C-4	56	8.0	17	354	0.7
Chaetognatha >20mm	56	8.0	17	354	0.7
Thysanoessa inermis A&J	53	8.0	16	335	0.7
Teleostei - larva <5mm	3	128.0	14	303	0.6
Other Copepoda 2-5mm	2	128.0	10	202	0.4
Hyperiidia <5mm	2	128.0	10	202	0.4
Foraminifera <5mm	2	128.0	10	202	0.4
Siphonophora <5mm	2	128.0	10	202	0.4
Chaetognatha 5-20mm	25	8.0	7	158	0.3
Thysanoessa spinifera A&J	19	8.0	6	120	0.2
Mysidacea <5mm	1	128.0	5	101	0.2
Calanus pacificus C-5	1	128.0	5	101	0.2
Gammaridea <5mm	1	128.0	5	101	0.2
Echinodermata <5mm	1	128.0	5	101	0.2
Neocalanus cristatus C-5	15	8.0	4	95	0.2
Cnidaria - medusa >5mm	7	8.0	2	44	0.1
Eucalanus bungii - adult F	4	8.0	1	25	0.1
Siphonophora >5mm	3	8.0	1	19	< 0.1
Gammaridea >5mm	3	8.0	1	19	< 0.1
Hyperiidia >5mm	2	8.0	1	13	< 0.1
Gymnosomata >5mm	2	8.0	1	13	< 0.1
Mysidacea >5mm	1	8.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	6	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	6	< 0.1
Thysanoessa raschii A&J	1	8.0	< 1	6	< 0.1
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			2299	48510	100.

STA. G003A 57 31.0 N 154 46.1 W 26 Apr 89 9:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
211 0 - 206 25.9 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	163	128.0	8061	170096	26.6
Oithona spp.	109	128.0	5391	113745	17.8
Other Copepoda <2mm	66	128.0	3264	68873	10.8
Invertebrata - egg <5mm	66	128.0	3264	68873	10.8
?Pseudocalanus spp. C-1	38	128.0	1879	39654	6.2
?Pseudocalanus spp. C-2	31	128.0	1533	32350	5.1
Euphausiacea - nauplius	24	128.0	1187	25045	3.9
Metriididae C-1	17	128.0	841	17740	2.8
Cirripedia - nauplius <5mm	16	128.0	791	16697	2.6
Pseudocalanus spp. - adult F	58	25.6	574	12105	1.9
Bryozoa - cyphonautes <5mm	8	128.0	396	8348	1.3
?Pseudocalanus spp. C-3	37	25.6	366	7722	1.2
Metriididae C-2	7	128.0	346	7305	1.1
Ostracoda <5mm	6	128.0	297	6261	1.0
Metridia pacifica C-4	29	25.6	287	6052	0.9
Pseudocalanus spp. C-4 F	29	25.6	287	6052	0.9
Metriididae C-3	27	25.6	267	5635	0.9
Teleostei - egg <5mm	4	128.0	198	4174	0.7
Pseudocalanus spp. C-5 F	20	25.6	198	4174	0.7
Acartia spp.	3	128.0	148	3131	0.5
Thecosomata <5mm	3	128.0	148	3131	0.5
Pseudocalanus spp. C-5 M	13	25.6	129	2713	0.4
Pseudocalanus spp. C-4 M	13	25.6	129	2713	0.4
Calanus marshallae C-2	10	25.6	99	2087	0.3
Pseudocalanus spp. - adult M	9	25.6	89	1878	0.3
Calanus marshallae C-1	7	25.6	69	1461	0.2
Chaetognatha <5mm	1	128.0	49	1044	0.2
Unidentified Calanoida C-1	3	25.6	30	626	0.1
Neocalanus spp. C-2	2	25.6	20	417	0.1
			30337	640103	100.

STA. G004A 57 36.1 N 155 05.1 W 26 Apr 89 15:44

DEPTH 255 SAMPLING INTERVAL 0 - 250 VOLUME FILTERED 337.7 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-5	240	32.0	227	5799	19.8
Neocalanus spp. C-4	149	32.0	141	3600	12.3
Metridia pacifica - adult M	118	32.0	112	2851	9.7
Metridia pacifica C-5 M	108	32.0	102	2610	8.9
Ostracoda <5mm	101	32.0	96	2440	8.3
Metridia pacifica C-5 F	92	32.0	87	2223	7.6
Metridia pacifica - adult F	78	32.0	74	1885	6.4
Cirripedia - nauplius <5mm	66	32.0	63	1595	5.4
Invertebrata - egg <5mm	45	32.0	43	1087	3.7
Calanus pacificus C-5	32	32.0	30	773	2.6
Teleostei - egg <5mm	26	32.0	25	628	2.1
Neocalanus spp. C-3	20	32.0	19	483	1.7
Calanus marshallae - adult F	15	32.0	14	362	1.2
Thecosomata <5mm	14	32.0	13	338	1.2
Mysidacea <5mm	11	32.0	10	266	0.9
Gammaridea <5mm	11	32.0	10	266	0.9
Metridia spp. - adult F	10	32.0	9	242	0.8
Neocalanus spp. C-2	7	32.0	7	169	0.6
Neocalanus cristatus C-4	54	4.0	6	163	0.6
Chaetognatha >20mm	53	4.0	6	160	0.5
Metridia spp. - adult M	6	32.0	6	145	0.5
Gammaridea >5mm	36	4.0	4	109	0.4
Chaetognatha 5-20mm	33	4.0	4	100	0.3
Other Copepoda 2-5mm	4	32.0	4	97	0.3
Neocalanus cristatus C-5	32	4.0	4	97	0.3
Teleostei - larva <5mm	4	32.0	4	97	0.3
Metridia spp. C-5 M	4	32.0	4	97	0.3
Calanus marshallae - adult M	3	32.0	3	72	0.2
Hyperiidia <5mm	3	32.0	3	72	0.2
Thysanoessa inermis A&J	23	4.0	3	69	0.2
Cnidaria - medusa >5mm	22	4.0	3	66	0.2
Chaetognatha <5mm	2	32.0	2	48	0.2
Brachyura - larva	2	32.0	2	48	0.2
Larvacea	2	32.0	2	48	0.2
Metridia spp. C-5 F	2	32.0	2	48	0.2
Natantia - larva	2	32.0	2	48	0.2
Cirripedia - cypris <5mm	1	32.0	1	24	0.1
Mysidacea >5mm	6	4.0	1	18	0.1
Other Copepoda >5mm	3	4.0	< 1	9	< 0.1
Thysanoessa spinifera A&J	2	4.0	< 1	6	< 0.1
Siphonophora >5mm	2	4.0	< 1	6	< 0.1
Hyperiidia >5mm	2	4.0	< 1	6	< 0.1
Thysanoessa inspinata A&J	1	4.0	< 1	3	< 0.1
Polychaeta >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
			1148	29284	100.

STA. G004A 57 36.1 N 155 05.1 W 26 Apr 89 15:44

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

255 0 - 250 32.2 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	199	32.0	1976	50388	26.1
Oithona spp.	128	32.0	1271	32411	16.8
Invertebrata - egg <5mm	121	32.0	1201	30638	15.9
Other Copepoda <2mm	114	32.0	1132	28866	15.0
Euphausiacea - nauplius	30	32.0	298	7596	3.9
?Pseudocalanus spp. C-1	25	32.0	248	6330	3.3
?Pseudocalanus spp. C-2	24	32.0	238	6077	3.2
Pseudocalanus spp. - adult F	36	10.7	120	3048	1.6
Metriididae C-2	35	10.7	116	2963	1.5
?Pseudocalanus spp. C-3	32	10.7	106	2709	1.4
Metriididae C-1	9	32.0	89	2279	1.2
Acartia spp.	9	32.0	89	2279	1.2
Cirripedia - nauplius <5mm	8	32.0	79	2026	1.1
Metridia pacifica C-4	21	10.7	70	1778	0.9
Metriididae C-3	19	10.7	63	1609	0.8
Pseudocalanus spp. C-4 F	17	10.7	56	1439	0.7
Bryozoa - cyphonautes <5mm	5	32.0	50	1266	0.7
Pseudocalanus spp. C-4 M	14	10.7	46	1185	0.6
Pseudocalanus spp. C-5 M	12	10.7	40	1016	0.5
Thecosomata <5mm	4	32.0	40	1013	0.5
Pseudocalanus spp. C-5 F	11	10.7	37	931	0.5
Chaetognatha <5mm	3	32.0	30	760	0.4
Calanus marshallae C-1	8	10.7	27	677	0.4
Echinodermata - larva <5mm	2	32.0	20	506	0.3
Ostracoda <5mm	2	32.0	20	506	0.3
Neocalanus spp. C-3	5	10.7	17	423	0.2
Pseudocalanus spp. - adult M	4	10.7	13	339	0.2
Polychaeta <5mm	1	32.0	10	253	0.1
Teleostei - egg <5mm	1	32.0	10	253	0.1
Teleostei - larva <5mm	1	32.0	10	253	0.1
Gastropoda <5mm	1	32.0	10	253	0.1
Gammaridea <5mm	1	32.0	10	253	0.1
Mysidacea <5mm	1	32.0	10	253	0.1
Invertebrata <5mm	1	32.0	10	253	0.1
Unidentified Calanoida C-2	1	10.7	3	85	< 0.1
			7565	192917	100.

STA. G005A 57 38.5 N 155 04.0 W 26 Apr 89 17:39

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

259 0 - 255 349.7 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Teleostei - egg <5mm	116	256.0	849	21991	25.0
Mysidacea <5mm	39	256.0	285	7394	8.4
Neocalanus spp. C-5	39	256.0	285	7394	8.4
Metridia pacifica C-5 M	34	256.0	249	6446	7.3
Ostracoda <5mm	30	256.0	220	5687	6.5
Neocalanus spp. C-4	30	256.0	220	5687	6.5
Metridia pacifica C-5 F	27	256.0	198	5119	5.8
Larvacea	26	256.0	190	4929	5.6
Metridia pacifica - adult F	17	256.0	124	3223	3.7
Cirripedia - nauplius <5mm	16	256.0	117	3033	3.5
Metridia pacifica - adult M	16	256.0	117	3033	3.5
Thecosomata <5mm	12	256.0	88	2275	2.6
Gammaridea <5mm	11	256.0	81	2085	2.4
Calanus pacificus C-5	29	51.2	42	1100	1.3
Neocalanus spp. C-3	28	51.2	41	1062	1.2
Calanus marshallae C-2	27	51.2	40	1024	1.2
Calanus marshallae C-3	24	51.2	35	910	1.0
Metridia spp. - adult F	3	256.0	22	569	0.6
Hyperiidia <5mm	3	256.0	22	569	0.6
Chaetognatha <5mm	3	256.0	22	569	0.6
Gastropoda <5mm	2	256.0	15	379	0.4
Unidentified Calanoida C-3	8	51.2	12	303	0.3
Chaetognatha >20mm	39	8.0	9	231	0.3
Calanus marshallae C-4	6	51.2	9	227	0.3
Unidentified Calanoida C-2	6	51.2	9	227	0.3
Chaetognatha 5-20mm	34	8.0	8	201	0.2
Calanus marshallae - adult F	5	51.2	7	190	0.2
Polychaeta <5mm	1	256.0	7	190	0.2
Metridia spp. - adult M	1	256.0	7	190	0.2
Natantia - larva	1	256.0	7	190	0.2
Other Copepoda 2-5mm	1	256.0	7	190	0.2
Teleostei - larva <5mm	1	256.0	7	190	0.2
Metridia spp. C-5 F	1	256.0	7	190	0.2
Neocalanus cristatus C-4	27	8.0	6	160	0.2
Neocalanus cristatus C-5	21	8.0	5	124	0.1
Cnidaria - medusa >5mm	16	8.0	4	95	0.1
Gammaridea >5mm	13	8.0	3	77	0.1
Mysidacea >5mm	13	8.0	3	77	0.1
Euphausiacea - furcilia	2	51.2	3	76	0.1
Calanus marshallae C-5	2	51.2	3	76	0.1
Thysanoessa inermis A&J	12	8.0	3	71	0.1
Other Copepoda >5mm	7	8.0	2	41	< 0.1
Siphonophora >5mm	4	8.0	1	24	< 0.1
Hyperiidia >5mm	2	8.0	< 1	12	< 0.1
Thysanoessa spinifera A&J	2	8.0	< 1	12	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	6	< 0.1
			3392	87858	100.

STA. G005A 57 38.5 N 155 04.0 W 26 Apr 89 17:39

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

259 0 - 255 29.9 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	161	64.0	3447	89285	20.7
Oithona spp.	143	64.0	3062	79303	18.4
Other Copepoda - nauplius	135	64.0	2891	74867	17.4
Euphausiacea - nauplius	89	64.0	1906	49357	11.5
Other Copepoda <2mm	81	64.0	1734	44920	10.4
?Pseudocalanus spp. C-2	36	64.0	771	19964	4.6
?Pseudocalanus spp. C-1	30	64.0	642	16637	3.9
Ostracoda <5mm	15	64.0	321	8319	1.9
Metriididae C-1	9	64.0	193	4991	1.2
?Pseudocalanus spp. C-3	40	12.8	171	4437	1.0
Bryozoa - cyphonautes <5mm	8	64.0	171	4437	1.0
Pseudocalanus spp. - adult F	40	12.8	171	4437	1.0
Pseudocalanus spp. C-4 F	31	12.8	133	3438	0.8
Cirripedia - nauplius <5mm	6	64.0	128	3327	0.8
Metridia pacifica C-4	29	12.8	124	3216	0.7
Chaetognatha <5mm	5	64.0	107	2773	0.6
Pseudocalanus spp. C-5 M	22	12.8	94	2440	0.6
Thecosomata <5mm	4	64.0	86	2218	0.5
Calanus marshallae C-1	16	12.8	69	1775	0.4
Metriididae C-3	16	12.8	69	1775	0.4
Pseudocalanus spp. C-5 F	15	12.8	64	1664	0.4
Pseudocalanus spp. C-4 M	13	12.8	56	1442	0.3
Metriididae C-2	9	12.8	39	998	0.2
Pseudocalanus spp. - adult M	8	12.8	34	887	0.2
Euphausiacea - calytopis 3	5	12.8	21	555	0.1
Acartia spp.	1	64.0	21	555	0.1
Echinodermata - larva <5mm	1	64.0	21	555	0.1
Cirripedia - cypris <5mm	1	64.0	21	555	0.1
Invertebrata <5mm	1	64.0	21	555	0.1
Calanus marshallae C-2	3	12.8	13	333	0.1
Euphausiacea - calytopis 2	2	12.8	9	222	0.1
Euphausiacea - calytopis 1	2	12.8	9	222	0.1
Neocalanus spp. C-2	1	12.8	4	111	< 0.1
			16624	430566	100.

STA. G006A 57 40.5 N 155 10.6 W 26 Apr 89 19:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
292 0 - 289 375.7 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Invertebrata - egg <5mm	98	256.0	668	19499	19.5
Cirripedia - nauplius <5mm	87	256.0	593	17311	17.3
Neocalanus spp. C-4	40	256.0	273	7959	8.0
Metridia pacifica C-5 M	35	256.0	238	6964	7.0
Metridia pacifica C-5 F	34	256.0	232	6765	6.8
Neocalanus spp. C-5	34	256.0	232	6765	6.8
Ostracoda <5mm	31	256.0	211	6168	6.2
Neocalanus spp. C-3	23	256.0	157	4576	4.6
Metridia pacifica - adult M	23	256.0	157	4576	4.6
Calanus marshallae C-2	16	256.0	109	3184	3.2
Metridia pacifica - adult F	16	256.0	109	3184	3.2
Calanus pacificus C-5	35	51.2	48	1393	1.4
Thecosomata <5mm	5	256.0	34	995	1.0
Metridia spp. - adult M	5	256.0	34	995	1.0
Teleostei - egg <5mm	4	256.0	27	796	0.8
Calanus marshallae C-3	4	256.0	27	796	0.8
Calanus marshallae C-4	19	51.2	26	756	0.8
Chaetognatha >20mm	107	8.0	23	665	0.7
Euphausiacea - furcilia	16	51.2	22	637	0.6
Mysidacea <5mm	3	256.0	20	597	0.6
Neocalanus cristatus C-4	73	8.0	16	454	0.5
Teleostei - larva <5mm	2	256.0	14	398	0.4
Metridia spp. - adult F	2	256.0	14	398	0.4
Calanus marshallae C-5	10	51.2	14	398	0.4
Natantia - larva	2	256.0	14	398	0.4
Neocalanus spp. C-2	2	256.0	14	398	0.4
Metridia spp. C-5 F	2	256.0	14	398	0.4
Larvacea	2	256.0	14	398	0.4
Calanus marshallae - adult F	8	51.2	11	318	0.3
Chaetognatha 5-20mm	44	8.0	9	274	0.3
Chaetognatha <5mm	1	256.0	7	199	0.2
Foraminifera <5mm	1	256.0	7	199	0.2
Polychaeta <5mm	1	256.0	7	199	0.2
Other zooplankton <5mm	1	256.0	7	199	0.2
Neocalanus spp. - adult F	1	256.0	7	199	0.2
Neocalanus cristatus C-5	19	8.0	4	118	0.1
Mysidacea >5mm	14	8.0	3	87	0.1
Calanus pacificus - adult F	2	51.2	3	80	0.1
Gammaridea >5mm	7	8.0	1	44	< 0.1
Calanus marshallae - adult M	1	51.2	1	40	< 0.1
Cnidaria - medusa >5mm	5	8.0	1	31	< 0.1
Thysanoessa inermis A&J	4	8.0	1	25	< 0.1
Other Copepoda >5mm	2	8.0	< 1	12	< 0.1
Natantia A&J >5mm	2	8.0	< 1	12	< 0.1
Hyperidea >5mm	2	8.0	< 1	12	< 0.1
Polychaeta >5mm	1	8.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	6	< 0.1
			3421	99880	100.

STA. G006A 57 40.5 N 155 10.6 W 26 Apr 89 19:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
292 0 - 289 33.8 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda <2mm	165	64.0	3127	91304	24.9
Oithona spp.	109	64.0	2066	60316	16.5
Other Copepoda - nauplius	103	64.0	1952	56996	15.6
Cirripedia - nauplius <5mm	72	64.0	1364	39842	10.9
?Pseudocalanus spp. C-1	30	64.0	569	16601	4.5
Invertebrata - egg <5mm	22	64.0	417	12174	3.3
?Pseudocalanus spp. C-2	18	64.0	341	9960	2.7
Metriididae C-1	12	64.0	227	6640	1.8
Acartia spp.	11	64.0	208	6087	1.7
Euphausiacea - nauplius	11	64.0	208	6087	1.7
Metridia pacifica C-4	53	12.8	201	5866	1.6
Ostracoda <5mm	9	64.0	171	4980	1.4
Euphausiacea - calyptopis 1	39	12.8	148	4316	1.2
?Pseudocalanus spp. C-3	37	12.8	140	4095	1.1
Pseudocalanus spp. - adult F	36	12.8	136	3984	1.1
Echinodermata - larva <5mm	7	64.0	133	3874	1.1
Metriididae C-3	34	12.8	129	3763	1.0
Pseudocalanus spp. C-5 M	31	12.8	117	3431	0.9
Pseudocalanus spp. C-4 M	25	12.8	95	2767	0.8
Pseudocalanus spp. C-4 F	24	12.8	91	2656	0.7
Pseudocalanus spp. - adult M	23	12.8	87	2545	0.7
Metriididae C-2	22	12.8	83	2435	0.7
Pseudocalanus spp. C-5 F	21	12.8	80	2324	0.6
Polychaeta <5mm	4	64.0	76	2213	0.6
Euphausiacea - calyptopis 2	17	12.8	64	1881	0.5
Euphausiacea - calyptopis 3	14	12.8	53	1549	0.4
Calanus marshallae C-1	11	12.8	42	1217	0.3
Unidentified Calanoida C-2	10	12.8	38	1107	0.3
Thecosomata <5mm	2	64.0	38	1107	0.3
Gastropoda <5mm	2	64.0	38	1107	0.3
Neocalanus spp. C-2	5	12.8	19	553	0.2
Mysidacea <5mm	1	64.0	19	553	0.2
Cirripedia - cypris <5mm	1	64.0	19	553	0.2
Hyperiidea <5mm	1	64.0	19	553	0.2
Calanus marshallae C-2	4	12.8	15	443	0.1
Unidentified Calanoida C-1	2	12.8	8	221	0.1
Eucalanus bungii C-1	1	12.8	4	111	< 0.1
Neocalanus spp. C-1	1	12.8	4	111	< 0.1
			12545	366322	100.

STA. G007A 57 42.7 N 155 16.2 W 26 Apr 89 21:47

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
237 0 - 234 370.4 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	207	256.0	1431	33910	32.2
Neocalanus spp. C-4	103	256.0	712	16873	16.0
Metridia pacifica C-5 F	52	256.0	359	8518	8.1
Neocalanus spp. C-5	38	256.0	263	6225	5.9
Invertebrata - egg <5mm	35	256.0	242	5734	5.5
Metridia pacifica C-5 M	35	256.0	242	5734	5.5
Neocalanus spp. C-3	33	256.0	228	5406	5.1
Metridia pacifica - adult F	30	256.0	207	4915	4.7
Larvacea	11	256.0	76	1802	1.7
Calanus marshallae C-3	11	256.0	76	1802	1.7
Calanus marshallae C-2	10	256.0	69	1638	1.6
Metridia pacifica - adult M	7	256.0	48	1147	1.1
Thecosomata <5mm	7	256.0	48	1147	1.1
Neocalanus spp. C-2	7	256.0	48	1147	1.1
Cirripedia - cypris <5mm	5	256.0	35	819	0.8
Ostracoda <5mm	5	256.0	35	819	0.8
Metridia spp. - adult F	4	256.0	28	655	0.6
Other Copepoda damaged	4	256.0	28	655	0.6
Neocalanus cristatus C-4	123	8.0	27	630	0.6
Calanus marshallae C-4	29	28.4	22	527	0.5
Siphonophora <5mm	3	256.0	21	491	0.5
Teleostei - egg <5mm	3	256.0	21	491	0.5
Natantia - larva	3	256.0	21	491	0.5
Chaetognatha 5-20mm	67	8.0	14	343	0.3
Invertebrata <5mm	2	256.0	14	328	0.3
Other Copepoda 2-5mm	2	256.0	14	328	0.3
Chaetognatha <5mm	2	256.0	14	328	0.3
Polychaeta <5mm	2	256.0	14	328	0.3
Calanus marshallae - adult F	18	28.4	14	327	0.3
Calanus marshallae C-5	10	28.4	8	182	0.2
Euphausiacea - furcilia	10	28.4	8	182	0.2
Teleostei - larva <5mm	1	256.0	7	164	0.2
Mysidacea <5mm	1	256.0	7	164	0.2
Metridia spp. - adult M	1	256.0	7	164	0.2
Hyperiidia <5mm	1	256.0	7	164	0.2
Metridia spp. C-5 F	1	256.0	7	164	0.2
Neocalanus cristatus C-5	15	8.0	3	77	0.1
Calanus pacificus - adult F	4	28.4	3	73	0.1
Calanus marshallae - adult M	4	28.4	3	73	0.1
Calanus pacificus C-5	3	28.4	2	55	0.1
Chaetognatha >20mm	10	8.0	2	51	< 0.1
Cnidaria - medusa >5mm	10	8.0	2	51	< 0.1
Thysanoessa inermis A&J	6	8.0	1	31	< 0.1
Gammaridea >5mm	3	8.0	1	15	< 0.1
Hyperiidia >5mm	3	8.0	1	15	< 0.1
Thysanoessa spinifera A&J	1	8.0	< 1	5	< 0.1
Polychaeta >5mm	1	8.0	< 1	5	< 0.1

Other Copepoda >5mm	1	8.0	< 1	5	< 0.1
Siphonophora >5mm	1	8.0	< 1	5	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
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		4439		105201	100.

STA. G007A 57 42.7 N 155 16.2 W 26 Apr 89 21:47

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
237 0 - 234 35.4 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	158	128.0	5713	135410	24.8
Other Copepoda - nauplius	120	128.0	4339	102843	18.8
Invertebrata - egg <5mm	73	128.0	2640	62563	11.5
Cirripedia - nauplius <5mm	60	128.0	2170	51421	9.4
Other Copepoda <2mm	56	128.0	2025	47993	8.8
Euphausiacea - nauplius	29	128.0	1049	24854	4.6
?Pseudocalanus spp. C-1	22	128.0	796	18855	3.5
?Pseudocalanus spp. C-2	20	128.0	723	17140	3.1
Metridia pacifica C-4	53	25.6	383	9084	1.7
Pseudocalanus spp. - adult F	50	25.6	362	8570	1.6
?Pseudocalanus spp. C-3	46	25.6	333	7885	1.4
Metriididae C-1	8	128.0	289	6856	1.3
Metriididae C-3	35	25.6	253	5999	1.1
Echinodermata - larva <5mm	7	128.0	253	5999	1.1
Polychaeta <5mm	7	128.0	253	5999	1.1
Metriididae C-2	34	25.6	246	5828	1.1
Pseudocalanus spp. C-4 M	20	25.6	145	3428	0.6
Pseudocalanus spp. C-4 F	19	25.6	137	3257	0.6
Pseudocalanus spp. C-5 F	17	25.6	123	2914	0.5
Calanus marshallae C-1	16	25.6	116	2742	0.5
Euphausiacea - calytopis 1	16	25.6	116	2742	0.5
Pseudocalanus spp. C-5 M	12	25.6	87	2057	0.4
Euphausiacea - calytopis 2	10	25.6	72	1714	0.3
Thecosomata <5mm	2	128.0	72	1714	0.3
Calanus marshallae C-2	10	25.6	72	1714	0.3
Cirripedia - cypris <5mm	2	128.0	72	1714	0.3
Pseudocalanus spp. - adult M	8	25.6	58	1371	0.3
Euphausiacea - calytopis 3	5	25.6	36	857	0.2
Chaetognatha <5mm	1	128.0	36	857	0.2
Bryozoa - cyphonautes <5mm	1	128.0	36	857	0.2
Neocalanus spp. C-2	4	25.6	29	686	0.1
			23035	545924	100.

Appendix 3. Abundance of zooplankton taxa at each station sampled during cruise 3MF89 in Shelikof Strait, 9-25 May 1989. Station numbers correspond to those used in Figure 2.

STA. G013B 57 43.1 N 155 15.3 W 10 May 89 7:55

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

200 0 - 165 258.0 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-5	107	256.0	1062	21231	19.1
Cirripedia - nauplius <5mm	98	256.0	972	19446	17.5
Larvacea	46	256.0	456	9128	8.2
Metridia pacifica - adult F	35	256.0	347	6945	6.2
Invertebrata - egg <5mm	28	256.0	278	5556	5.0
Euphausiacea - furcilia	56	128.0	278	5556	5.0
Metridia pacifica C-5 M	28	256.0	278	5556	5.0
Calanus marshallae C-2	26	256.0	258	5159	4.6
Calanus marshallae C-3	25	256.0	248	4961	4.5
Neocalanus spp. C-4	43	128.0	213	4266	3.8
Calanus marshallae C-4	20	256.0	198	3968	3.6
Cirripedia - cypris <5mm	15	256.0	149	2976	2.7
Metridia pacifica C-5 F	14	256.0	139	2778	2.5
Gastropoda <5mm	9	256.0	89	1786	1.6
Natantia - larva	8	256.0	79	1587	1.4
Thecosomata <5mm	7	256.0	69	1389	1.2
Chaetognatha <5mm	6	256.0	60	1191	1.1
Metridia spp. - adult F	6	256.0	60	1191	1.1
Calanus marshallae - adult F	5	256.0	50	992	0.9
Calanus marshallae C-5	5	256.0	50	992	0.9
Calanus marshallae - adult M	3	256.0	30	595	0.5
Cnidaria - medusa <5mm	3	256.0	30	595	0.5
Echinodermata - larva <5mm	3	256.0	30	595	0.5
Neocalanus spp. C-3	5	128.0	25	496	0.4
Polychaeta <5mm	2	256.0	20	397	0.4
Metridia pacifica - adult M	2	256.0	20	397	0.4
Chaetognatha 5-20mm	76	4.0	12	236	0.2
Neocalanus cristatus C-5	72	4.0	11	223	0.2
Teleostei - egg <5mm	1	256.0	10	198	0.2
Mysidacea <5mm	1	256.0	10	198	0.2
Ostracoda <5mm	1	256.0	10	198	0.2
Neocalanus spp. C-2	1	128.0	5	99	0.1
Unidentified Calanoida C-2	1	128.0	5	99	0.1
Thysanoessa inermis A&J	32	4.0	5	99	0.1
Cnidaria - medusa >5mm	19	4.0	3	59	0.1
Chaetognatha >20mm	18	4.0	3	56	0.1
Mysidacea >5mm	8	4.0	1	25	< 0.1
Teleostei - larva >5mm	6	4.0	1	19	< 0.1
Gammaridea >5mm	6	4.0	1	19	< 0.1
Neocalanus cristatus C-4	5	4.0	1	16	< 0.1
Hyperiidia >5mm	4	4.0	1	12	< 0.1
Eucalanus bungii - adult F	3	4.0	< 1	9	< 0.1
Polychaeta >5mm	2	4.0	< 1	6	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Other Copepoda >5mm	1	4.0	< 1	3	< 0.1
			5565	111307	100.

STA. G013B 57 43.1 N 155 15.5 W 10 May 89 7:55

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

200 0 - 165 20.6 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Oithona spp.	124	128.0	7716	154310	25.0
Other Copepoda - nauplius	71	128.0	4418	88355	14.3
Cirripedia - nauplius <5mm	65	128.0	4044	80888	13.1
Invertebrata - egg <5mm	29	128.0	1804	36089	5.8
Other Copepoda <2mm	22	128.0	1369	27378	4.4
?Pseudocalanus spp. C-3	184	14.2	1270	25402	4.1
?Pseudocalanus spp. C-2	20	128.0	1244	24889	4.0
?Pseudocalanus spp. C-1	16	128.0	996	19911	3.2
Euphausiacea - nauplius	16	128.0	996	19911	3.2
Pseudocalanus spp. C-4 M	94	14.2	649	12977	2.1
Pseudocalanus spp. C-4 F	92	14.2	635	12701	2.1
Pseudocalanus spp. C-5 M	92	14.2	635	12701	2.1
Pseudocalanus spp. - adult F	91	14.2	628	12563	2.0
Pseudocalanus spp. C-5 F	78	14.2	538	10768	1.7
Other zooplankton <5mm	7	128.0	436	8711	1.4
Echinodermata - larva <5mm	7	128.0	436	8711	1.4
Pseudocalanus spp. - adult M	52	14.2	359	7179	1.2
Metriididae C-3	49	14.2	338	6765	1.1
Metriididae C-2	47	14.2	324	6489	1.0
Chaetognatha <5mm	4	128.0	249	4978	0.8
Metridia pacifica C-4	32	14.2	221	4418	0.7
Euphausiacea - calyptopis 1	31	14.2	214	4280	0.7
Gastropoda <5mm	3	128.0	187	3733	0.6
Euphausiacea - calyptopis 2	24	14.2	166	3313	0.5
Calanus marshallae C-2	22	14.2	152	3037	0.5
Bryozoa - cyphonautes <5mm	2	128.0	124	2489	0.4
Cirripedia - cypris <5mm	2	128.0	124	2489	0.4
Metriididae C-1	2	128.0	124	2489	0.4
Calanus marshallae C-1	12	14.2	83	1657	0.3
Euphausiacea - calyptopis 3	10	14.2	69	1381	0.2
Polychaeta <5mm	1	128.0	62	1244	0.2
Acartia spp.	1	128.0	62	1244	0.2
Bivalvia <5mm	1	128.0	62	1244	0.2
Foraminifera <5mm	1	128.0	62	1244	0.2
Thecosomata <5mm	1	128.0	62	1244	0.2
Unidentified Calanoida C-1	4	14.2	28	552	0.1
Eucalanus bungii C-1	1	14.2	7	138	< 0.1
Eucalanus bungii C-2	1	14.2	7	138	< 0.1
			30901	618011	100.

STA. G014A 57 41.0 N 155 10.3 W 10 May 89 10:30

DEPTH 296 SAMPLING INTERVAL 0 - 290 VOLUME FILTERED 414.2 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-5	136	128.0	420	12440	20.5
Invertebrata - egg <5mm	121	128.0	374	11068	18.2
Metridia pacifica C-5 M	58	128.0	179	5305	8.7
Cirripedia - nauplius <5mm	46	128.0	142	4208	6.9
Metridia pacifica - adult M	34	128.0	105	3110	5.1
Larvacea	30	128.0	93	2744	4.5
Metridia pacifica C-5 F	28	128.0	87	2561	4.2
Neocalanus spp. C-4	27	128.0	83	2470	4.1
Metridia pacifica - adult F	24	128.0	74	2195	3.6
Ostracoda <5mm	22	128.0	68	2012	3.3
Calanus marshallae C-4	18	128.0	56	1647	2.7
Calanus marshallae C-3	17	128.0	53	1555	2.6
Calanus marshallae C-2	15	128.0	46	1372	2.3
Calanus marshallae C-5	14	128.0	43	1281	2.1
Echinodermata - larva <5mm	9	128.0	28	823	1.4
Thecosomata <5mm	6	128.0	19	549	0.9
Euphausiacea - furcilia	26	25.6	16	476	0.8
Polychaeta <5mm	5	128.0	15	457	0.8
Gammaridea <5mm	5	128.0	15	457	0.8
Metridia spp. - adult F	5	128.0	15	457	0.8
Calanus pacificus C-5	22	25.6	14	402	0.7
Neocalanus spp. C-3	4	128.0	12	366	0.6
Chaetognatha <5mm	3	128.0	9	274	0.5
Calanus marshallae - adult M	3	128.0	9	274	0.5
Calanus marshallae - adult F	3	128.0	9	274	0.5
Natantia - larva	3	128.0	9	274	0.5
Neocalanus cristatus C-5	90	4.0	9	257	0.4
Chaetognatha >20mm	89	4.0	9	254	0.4
Mysidacea <5mm	2	128.0	6	183	0.3
Neocalanus spp. - adult M	2	128.0	6	183	0.3
Chaetognatha 5-20mm	48	4.0	5	137	0.2
Gymnosomata <5mm	1	128.0	3	91	0.2
Anomura - larva	1	128.0	3	91	0.2
Unidentified Calanoida C-3	1	128.0	3	91	0.2
Thysanoessa inermis A&J	32	4.0	3	91	0.2
Cnidaria - medusa >5mm	15	4.0	1	43	0.1
Mysidacea >5mm	13	4.0	1	37	0.1
Gammaridea >5mm	13	4.0	1	37	0.1
Neocalanus cristatus C-4	13	4.0	1	37	0.1
Other Copepoda >5mm	7	4.0	1	20	< 0.1
Siphonophora >5mm	3	4.0	< 1	9	< 0.1
Hyperiidia >5mm	3	4.0	< 1	9	< 0.1
Eucalanus bungii - adult F	3	4.0	< 1	9	< 0.1
Thysanoessa spinifera A&J	2	4.0	< 1	6	< 0.1
Euphausia pacifica A&J	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	2	1.0	< 1	1	< 0.1
			2049	60649	100.

STA. G016A 57 38.6 N 155 03.7 W 10 May 89 12:36

DEPTH 261 SAMPLING INTERVAL 0 - 253 VOLUME FILTERED 339.2 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	74	128.0	279	7289	14.8
Neocalanus spp. C-5	63	128.0	238	6206	12.6
Metridia pacifica C-5 M	52	128.0	196	5122	10.4
Metridia pacifica - adult F	50	128.0	189	4925	10.0
Metridia pacifica C-5 F	48	128.0	181	4728	9.6
Calanus marshallae C-3	33	128.0	125	3251	6.6
Ostracoda <5mm	24	128.0	91	2364	4.8
Metridia pacifica - adult M	22	128.0	83	2167	4.4
Calanus marshallae C-4	174	14.2	73	1901	3.9
Calanus marshallae C-5	18	128.0	68	1773	3.6
Calanus marshallae C-2	16	128.0	60	1576	3.2
Larvacea	13	128.0	49	1281	2.6
Thecosomata <5mm	10	128.0	38	985	2.0
Invertebrata - egg <5mm	10	128.0	38	985	2.0
Neocalanus spp. C-4	48	14.2	20	525	1.1
Metridia spp. - adult F	4	128.0	15	394	0.8
Calanus pacificus C-5	35	14.2	15	382	0.8
Natantia - larva	3	128.0	11	296	0.6
Chaetognatha <5mm	3	128.0	11	296	0.6
Calanus marshallae - adult F	3	128.0	11	296	0.6
Euphausiacea - furcilia	20	14.2	8	219	0.4
Neocalanus spp. - adult M	2	128.0	8	197	0.4
Metridia spp. - adult M	2	128.0	8	197	0.4
Neocalanus spp. C-3	2	128.0	8	197	0.4
Teleostei - larva >5mm	63	4.0	7	194	0.4
Chaetognatha 5-20mm	49	4.0	6	151	0.3
Neocalanus cristatus C-5	45	4.0	5	139	0.3
Chaetognatha >20mm	42	4.0	5	129	0.3
Thysanoessa inermis A&J	35	4.0	4	108	0.2
Gymnosomata <5mm	1	128.0	4	99	0.2
Invertebrata <5mm	1	128.0	4	99	0.2
Calanus marshallae - adult M	1	128.0	4	99	0.2
Cirripedia - cypris <5mm	1	128.0	4	99	0.2
Mysidacea <5mm	1	128.0	4	99	0.2
Neocalanus spp. C-2	1	128.0	4	99	0.2
Hyperiidia <5mm	1	128.0	4	99	0.2
Teleostei - egg >5mm	30	4.0	4	92	0.2
Cnidaria - medusa >5mm	23	4.0	3	71	0.1
Neocalanus cristatus C-4	20	4.0	2	62	0.1
Hyperiidia >5mm	8	4.0	1	25	< 0.1
Mysidacea >5mm	8	4.0	1	25	< 0.1
Eucalanus bungii C-4 F	1	14.2	< 1	11	< 0.1
Natantia A&J >5mm	3	4.0	< 1	9	< 0.1
Polychaeta >5mm	2	4.0	< 1	6	< 0.1
Gammaridea >5mm	2	4.0	< 1	6	< 0.1
Siphonophora >5mm	2	4.0	< 1	6	< 0.1
Thysanoessa spinifera A&J	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	3	1.0	< 1	2	< 0.1
			1888	49278	100.

STA. G016A 57 38.6 N 155 03.7 W 10 May 89 12:36

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
261 0 - 253 29.2 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Oithona spp.	115	64.0	2517	65702	23.3
Other Copepoda <2mm	77	64.0	1686	43992	15.6
Euphausiacea - nauplius	66	64.0	1445	37707	13.4
Invertebrata - egg <5mm	38	64.0	832	21710	7.7
Pseudocalanus spp. - adult M	26	64.0	569	14854	5.3
Pseudocalanus spp. - adult F	19	64.0	416	10855	3.9
Metriididae C-2	68	12.8	298	7770	2.8
?Pseudocalanus spp. C-3	64	12.8	280	7313	2.6
Metriididae C-3	57	12.8	250	6513	2.3
Metriididae C-1	11	64.0	241	6285	2.2
Pseudocalanus spp. C-4 M	52	12.8	228	5942	2.1
Euphausiacea - calytopis 1	47	12.8	206	5370	1.9
Cirripedia - nauplius <5mm	9	64.0	197	5142	1.8
Metridia pacifica C-4	42	12.8	184	4799	1.7
Pseudocalanus spp. C-5 M	41	12.8	179	4685	1.7
?Pseudocalanus spp. C-2	8	64.0	175	4571	1.6
?Pseudocalanus spp. C-1	7	64.0	153	3999	1.4
Chaetognatha <5mm	7	64.0	153	3999	1.4
Pseudocalanus spp. C-4 F	34	12.8	149	3885	1.4
Pseudocalanus spp. C-5 F	34	12.8	149	3885	1.4
Cirripedia - cypris <5mm	6	64.0	131	3428	1.2
Thecosomata <5mm	4	64.0	88	2285	0.8
Polychaeta <5mm	4	64.0	88	2285	0.8
Bryozoa - cyphonautes <5mm	2	64.0	44	1143	0.4
Euphausiacea - calytopis 2	10	12.8	44	1143	0.4
Calanus marshallae C-2	9	12.8	39	1028	0.4
Calanus marshallae C-1	6	12.8	26	686	0.2
Echinodermata - larva <5mm	1	64.0	22	571	0.2
Euphausiacea - calytopis 3	2	12.8	9	229	0.1
Neocalanus spp. C-2	1	12.8	4	114	< 0.1
			10800	281891	100.

STA. G018A 57 36.2 N 155 01.0 W 10 May 89 15:45

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

245 0 - 216 329.9 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Neocalanus spp. C-5	100	256.0	776	19010	17.9
Invertebrata - egg <5mm	95	256.0	737	18059	17.0
Larvacea	45	256.0	349	8554	8.1
Cirripedia - nauplius <5mm	40	256.0	310	7604	7.2
Metridia pacifica C-5 M	38	256.0	295	7224	6.8
Metridia pacifica - adult M	36	256.0	279	6843	6.4
Calanus marshallae C-4	30	256.0	233	5703	5.4
Metridia pacifica C-5 F	24	256.0	186	4562	4.3
Ostracoda <5mm	22	256.0	171	4182	3.9
Cirripedia - cypris <5mm	18	256.0	140	3422	3.2
Metridia pacifica - adult F	17	256.0	132	3232	3.0
Calanus marshallae C-3	78	51.2	121	2966	2.8
Thecosomata <5mm	13	256.0	101	2471	2.3
Calanus marshallae C-5	13	256.0	101	2471	2.3
Chaetognatha <5mm	9	256.0	70	1711	1.6
Calanus marshallae C-2	43	51.2	67	1635	1.5
Polychaeta <5mm	6	256.0	47	1141	1.1
Hyperiidia <5mm	4	256.0	31	760	0.7
Calanus pacificus C-5	14	51.2	22	532	0.5
Mysidacea <5mm	2	256.0	16	380	0.4
Siphonophora <5mm	2	256.0	16	380	0.4
Neocalanus spp. - adult M	2	256.0	16	380	0.4
Natantia - larva	2	256.0	16	380	0.4
Neocalanus spp. C-4	2	256.0	16	380	0.4
Chaetognatha 5-20mm	103	4.0	12	306	0.3
Neocalanus cristatus C-5	96	4.0	12	285	0.3
Brachyura - larva	1	256.0	8	190	0.2
Metridia spp. - adult F	1	256.0	8	190	0.2
Calanus marshallae - adult M	1	256.0	8	190	0.2
Other Copepoda 2-5mm	1	256.0	8	190	0.2
Metridia spp. C-5 M	1	256.0	8	190	0.2
Chaetognatha >20mm	46	4.0	6	137	0.1
Euphausiacea - furcilia	3	51.2	5	114	0.1
Neocalanus spp. C-3	3	51.2	5	114	0.1
Thysanoessa inermis A&J	26	4.0	3	77	0.1
Neocalanus spp. C-2	1	51.2	2	38	< 0.1
Unidentified Calanoida C-2	1	51.2	2	38	< 0.1
Neocalanus cristatus C-4	10	4.0	1	30	< 0.1
Cnidaria - medusa >5mm	10	4.0	1	30	< 0.1
Gammaridea >5mm	9	4.0	1	27	< 0.1
Mysidacea >5mm	6	4.0	1	18	< 0.1
Hyperiidia >5mm	5	4.0	1	15	< 0.1
Siphonophora >5mm	3	4.0	< 1	9	< 0.1
Other Copepoda >5mm	3	4.0	< 1	9	< 0.1
Eucalanus bungii - adult F	2	4.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	3	< 0.1
Natantia A&J >5mm	1	1.0	< 1	1	< 0.1
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			4334	106189	100.

STA. G018A 57 36.2 N 155 01.0 W 10 May 89 15:45

DEPTH 245 SAMPLING INTERVAL 0 - 216 VOLUME FILTERED 28.0 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Oithona spp.	142	64.0	3243	79456	18.8
Euphausiacea - nauplius	122	64.0	2786	68265	16.1
Other Copepoda - nauplius	100	64.0	2284	55955	13.2
Invertebrata - egg <5mm	75	64.0	1713	41966	9.9
Other Copepoda <2mm	55	64.0	1256	30775	7.3
?Pseudocalanus spp. C-3	69	21.3	524	12849	3.0
Pseudocalanus spp. - adult F	22	64.0	502	12310	2.9
?Pseudocalanus spp. C-2	21	64.0	480	11750	2.8
Pseudocalanus spp. - adult M	18	64.0	411	10072	2.4
Pseudocalanus spp. C-5 M	17	64.0	388	9512	2.2
Pseudocalanus spp. C-4 F	17	64.0	388	9512	2.2
Pseudocalanus spp. C-5 F	16	64.0	365	8953	2.1
?Pseudocalanus spp. C-1	16	64.0	365	8953	2.1
Pseudocalanus spp. C-4 M	14	64.0	320	7834	1.8
Metriididae C-2	40	21.3	304	7449	1.8
Metriididae C-3	38	21.3	289	7077	1.7
Metridia pacifica C-4	35	21.3	266	6518	1.5
Cirripedia - nauplius <5mm	10	64.0	228	5595	1.3
Metriididae C-1	9	64.0	206	5036	1.2
Euphausiacea - calyptopis 1	25	21.3	190	4656	1.1
Polychaeta <5mm	8	64.0	183	4476	1.1
Calanus marshallae C-1	19	21.3	144	3538	0.8
Ostracoda <5mm	4	64.0	91	2238	0.5
Acartia spp.	4	64.0	91	2238	0.5
Bryozoa - cyphonautes <5mm	2	64.0	46	1119	0.3
Chaetognatha <5mm	2	64.0	46	1119	0.3
Calanus marshallae C-2	6	21.3	46	1117	0.3
Euphausiacea - calyptopis 2	5	21.3	38	931	0.2
Euphausiacea - calyptopis 3	1	64.0	23	560	0.1
Thecosomata <5mm	1	64.0	23	560	0.1
Echinodermata - larva <5mm	1	64.0	23	560	0.1
Gastropoda <5mm	1	64.0	23	560	0.1
Unidentified Calanoida C-1	1	21.3	8	186	< 0.1
			17294	423693	100.

STA. G020A 57 32.8 N 154 52.5 W 10 May 89 17:54

DEPTH 236 SAMPLING INTERVAL 0 - 215 VOLUME FILTERED 297.5 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	552	512.0	9499	224167	62.3
Cirripedia - cypris <5mm	86	512.0	1480	34925	9.7
Neocalanus spp. C-5	59	512.0	1015	23960	6.7
Invertebrata - egg <5mm	41	512.0	706	16650	4.6
Euphausiacea - furcilia	40	512.0	688	16244	4.5
Metridia pacifica C-5 M	39	170.7	224	5280	1.5
Calanus marshallae C-3	28	170.7	161	3791	1.1
Neocalanus spp. C-4	24	170.7	138	3249	0.9
Metridia pacifica C-5 F	24	170.7	138	3249	0.9
Chaetognatha <5mm	8	512.0	138	3249	0.9
Ostracoda <5mm	8	512.0	138	3249	0.9
Metridia pacifica - adult M	22	170.7	126	2979	0.8
Calanus marshallae C-2	21	170.7	120	2843	0.8
Metridia pacifica - adult M	19	170.7	109	2572	0.7
Polychaeta <5mm	6	512.0	103	2437	0.7
Calanus marshallae C-4	15	170.7	86	2031	0.6
Larvacea	5	512.0	86	2031	0.6
Echinodermata - larva <5mm	3	512.0	52	1218	0.3
Calanus marshallae - adult F	5	170.7	29	677	0.2
Calanus marshallae C-5	5	170.7	29	677	0.2
Neocalanus spp. C-3	4	170.7	23	542	0.2
Metridia spp. - adult M	1	512.0	17	406	0.1
Natantia - larva	1	512.0	17	406	0.1
Teleostei - egg <5mm	1	512.0	17	406	0.1
Other Copepoda damaged	1	512.0	17	406	0.1
Calanus pacificus - adult F	1	512.0	17	406	0.1
Mysidacea <5mm	1	512.0	17	406	0.1
Calanus pacificus C-5	2	170.7	11	271	0.1
Neocalanus cristatus C-5	71	4.0	10	225	0.1
Chaetognatha 5-20mm	69	4.0	9	219	0.1
Unidentified Calanoida C-2	1	170.7	6	135	< 0.1
Calanus marshallae - adult M	1	170.7	6	135	< 0.1
Chaetognatha >20mm	22	4.0	3	70	< 0.1
Teleostei - larva >5mm	18	4.0	2	57	< 0.1
Gammaridea >5mm	16	4.0	2	51	< 0.1
Cnidaria - medusa >5mm	11	4.0	1	35	< 0.1
Mysidacea >5mm	11	4.0	1	35	< 0.1
Neocalanus cristatus C-4	9	4.0	1	29	< 0.1
Other Copepoda >5mm	4	4.0	1	13	< 0.1
Eucalanus bungii - adult F	3	4.0	< 1	10	< 0.1
Hyperiidia >5mm	3	4.0	< 1	10	< 0.1
Siphonophora >5mm	3	4.0	< 1	10	< 0.1
Thysanoessa spinifera A&J	2	4.0	< 1	6	< 0.1
Eucalanus bungii C-5 M	2	4.0	< 1	6	< 0.1
Thysanoessa inermis A&J	2	4.0	< 1	6	< 0.1
Gastropoda >5mm	1	4.0	< 1	3	< 0.1
			15245	359782	100.

STA. G020A 57 32.8 N 154 52.5 W 10 May 89 17:54

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

236 0 - 215 25.5 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	145	128.0	7268	171527	23.7
Other Copepoda - nauplius	135	128.0	6767	159697	22.1
Invertebrata - egg <5mm	92	128.0	4611	108831	15.1
Oithona spp.	58	128.0	2907	68611	9.5
Other Copepoda <2mm	32	128.0	1604	37854	5.2
Euphausiacea - nauplius	16	128.0	802	18927	2.6
Cirripedia - cypris <5mm	13	128.0	652	15378	2.1
Metriididae C-1	13	128.0	652	15378	2.1
?Pseudocalanus spp. C-3	110	14.2	612	14436	2.0
?Pseudocalanus spp. C-1	12	128.0	601	14195	2.0
?Pseudocalanus spp. C-2	9	128.0	451	10646	1.5
Pseudocalanus spp. C-4 F	60	14.2	334	7874	1.1
Pseudocalanus spp. C-4 M	59	14.2	328	7743	1.1
Pseudocalanus spp. C-5 M	54	14.2	300	7087	1.0
Pseudocalanus spp. C-5 F	53	14.2	295	6955	1.0
Pseudocalanus spp. - adult F	51	14.2	284	6693	0.9
Chaetognatha <5mm	5	128.0	251	5915	0.8
Euphausiacea - calyptopis 2	42	14.2	234	5512	0.8
Euphausiacea - calyptopis 3	32	14.2	178	4199	0.6
Acartia spp.	3	128.0	150	3549	0.5
Calanus marshallae C-2	26	14.2	145	3412	0.5
Pseudocalanus spp. - adult M	25	14.2	139	3281	0.5
Metriididae C-2	21	14.2	117	2756	0.4
Metridia pacifica C-4	20	14.2	111	2625	0.4
Euphausiacea - calyptopis 1	19	14.2	106	2493	0.3
Calanus marshallae C-1	19	14.2	106	2493	0.3
Thecosomata <5mm	2	128.0	100	2366	0.3
Polychaeta <5mm	2	128.0	100	2366	0.3
Echinodermata - larva <5mm	2	128.0	100	2366	0.3
Ostracoda <5mm	2	128.0	100	2366	0.3
Metriididae C-3	14	14.2	78	1837	0.3
Bryozoa - cyphonautes <5mm	1	128.0	50	1183	0.2
Larvacea	1	128.0	50	1183	0.2
Gastropoda <5mm	1	128.0	50	1183	0.2
			30632	722917	100.

STA. G022B 57 31.0 N 154 47.0 W 10 May 89 21:01

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
219 0 - 207 304.4 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	379	256.0	3187	69799	53.1
Invertebrata - egg <5mm	89	256.0	748	16391	12.5
Cirripedia - cypris <5mm	73	256.0	614	13444	10.2
Neocalanus spp. C-5	29	256.0	244	5341	4.1
Larvacea	22	256.0	185	4052	3.1
Ostracoda <5mm	12	256.0	101	2210	1.7
Metridia pacifica - adult F	215	14.2	100	2196	1.7
Metridia spp. - adult F	9	256.0	76	1657	1.3
Calanus marshallae C-2	157	14.2	73	1604	1.2
Metridia pacifica C-5 F	153	14.2	71	1563	1.2
Metridia pacifica - adult M	137	14.2	64	1400	1.1
Chaetognatha <5mm	7	256.0	59	1289	1.0
Metridia spp. - adult M	6	256.0	50	1105	0.8
Calanus marshallae C-3	106	14.2	49	1083	0.8
Neocalanus spp. C-4	102	14.2	48	1042	0.8
Echinodermata - larva <5mm	5	256.0	42	921	0.7
Metridia pacifica C-5 M	84	14.2	39	858	0.7
Calanus marshallae C-4	62	14.2	29	633	0.5
Gastropoda <5mm	3	256.0	25	552	0.4
Polychaeta <5mm	3	256.0	25	552	0.4
Calanus marshallae - adult F	51	14.2	24	521	0.4
Euphausiacea - furcilia	41	14.2	19	419	0.3
Calanus pacificus C-5	30	14.2	14	306	0.2
Chaetognatha 5-20mm	85	4.0	11	245	0.2
Teleostei - egg <5mm	1	256.0	8	184	0.1
Natantia - larva	1	256.0	8	184	0.1
Brachyura - larva	1	256.0	8	184	0.1
Hyperiidia <5mm	1	256.0	8	184	0.1
Cnidaria - medusa <5mm	1	256.0	8	184	0.1
Metridia spp. C-5 M	1	256.0	8	184	0.1
Gammaridea <5mm	1	256.0	8	184	0.1
Calanus marshallae - adult M	17	14.2	8	174	0.1
Calanus marshallae C-5	16	14.2	7	163	0.1
Neocalanus spp. C-3	13	14.2	6	133	0.1
Neocalanus cristatus C-5	34	4.0	4	98	0.1
Chaetognatha >20mm	26	4.0	3	75	0.1
Gammaridea >5mm	24	4.0	3	69	0.1
Unidentified Calanoida C-2	6	14.2	3	61	< 0.1
Neocalanus cristatus C-4	18	4.0	2	52	< 0.1
Other Copepoda >5mm	15	4.0	2	43	< 0.1
Neocalanus spp. C-2	4	14.2	2	41	< 0.1
Cnidaria - medusa >5mm	14	4.0	2	40	< 0.1
Calanus pacificus - adult F	3	14.2	1	31	< 0.1
Teleostei - larva >5mm	9	4.0	1	26	< 0.1
Mysidacea >5mm	6	4.0	1	17	< 0.1
Eucalanus bungii - adult F	5	4.0	1	14	< 0.1
Eucalanus bungii - adult M	4	4.0	1	12	< 0.1

Siphonophora >5mm	4	4.0	1	12	< 0.1
Thysanoessa inermis A&J	2	4.0	< 1	6	< 0.1
Eucalanus bungii C-5 M	2	4.0	< 1	6	< 0.1
Hyperiidia >5mm	1	4.0	< 1	3	< 0.1
Gastropoda >5mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 F	1	4.0	< 1	3	< 0.1
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			6007	131553	100.

STA. G022B 57 31.0 N 154 47.0 W 10 May 89 21:01

DEPTH 219 SAMPLING INTERVAL 0 - 207 VOLUME FILTERED 25.2 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Invertebrata - egg <5mm	154	128.0	7830	171470	29.1
Other Copepoda - nauplius	137	128.0	6965	152541	25.9
Euphausiacea - nauplius	52	128.0	2644	57899	9.8
Cirripedia - nauplius <5mm	41	128.0	2085	45651	7.7
Other Copepoda <2mm	38	128.0	1932	42311	7.2
Oithona spp.	36	128.0	1830	40084	6.8
Metriididae C-1	13	128.0	661	14475	2.5
Pseudocalanus spp. C-5 M	35	18.3	254	5572	0.9
?Pseudocalanus spp. C-1	5	128.0	254	5567	0.9
Pseudocalanus spp. - adult F	34	18.3	247	5412	0.9
Pseudocalanus spp. C-5 F	33	18.3	240	5253	0.9
?Pseudocalanus spp. C-3	26	18.3	189	4139	0.7
Calanus marshallae C-1	23	18.3	167	3661	0.6
Pseudocalanus spp. C-4 F	22	18.3	160	3502	0.6
Larvacea	3	128.0	153	3340	0.6
?Pseudocalanus spp. C-2	3	128.0	153	3340	0.6
Cirripedia - cypris <5mm	3	128.0	153	3340	0.6
Pseudocalanus spp. C-4 M	19	18.3	138	3025	0.5
Metriididae C-3	16	18.3	116	2547	0.4
Metriididae C-2	15	18.3	109	2388	0.4
Euphausiacea - calyptopis 1	15	18.3	109	2388	0.4
Acartia spp.	2	128.0	102	2227	0.4
Pseudocalanus spp. - adult M	12	18.3	87	1910	0.3
Metridia pacifica C-4	10	18.3	73	1592	0.3
Chaetognatha <5mm	1	128.0	51	1113	0.2
Ostracoda <5mm	1	128.0	51	1113	0.2
Polychaeta <5mm	1	128.0	51	1113	0.2
Echinodermata - larva <5mm	1	128.0	51	1113	0.2
Calanus marshallae C-2	5	18.3	36	796	0.1
Euphausiacea - calyptopis 2	5	18.3	36	796	0.1
Euphausiacea - calyptopis 3	1	18.3	7	159	< 0.1
Unidentified Calanoida C-1	1	18.3	7	159	< 0.1
			26941	589998	100.

STA. G024A 57 28.6 N 154 42.0 W 10 May 89 22:50

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
65 0 - 48 96.1 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	514	1024.0	54768	355990	81.6
Cirripedia - cypris <5mm	109	1024.0	11614	75492	17.3
Calanus marshallae C-2	47	31.0	152	985	0.2
Larvacea	1	1024.0	107	693	0.2
Gastropoda <5mm	1	1024.0	107	693	0.2
Anomura - larva	1	1024.0	107	693	0.2
Calanus marshallae C-3	20	31.0	65	419	0.1
Neocalanus spp. C-5	137	3.5	50	324	0.1
Chaetognatha 5-20mm	196	2.0	41	265	0.1
Neocalanus spp. C-4	92	3.5	34	218	< 0.1
Calanus marshallae - adult F	69	3.5	25	163	< 0.1
Calanus marshallae C-4	68	3.5	25	161	< 0.1
Neocalanus spp. C-3	5	31.0	16	105	< 0.1
Metridia pacifica C-5 M	20	3.5	7	47	< 0.1
Neocalanus spp. C-2	2	31.0	6	42	< 0.1
Euphausiacea - furcilia	17	3.5	6	40	< 0.1
Teleostei - larva >5mm	29	2.0	6	39	< 0.1
Metridia pacifica - adult F	15	3.5	5	36	< 0.1
Cnidaria - medusa >5mm	15	2.0	3	20	< 0.1
Metridia pacifica C-5 F	7	3.5	3	17	< 0.1
Chaetognatha >20mm	10	2.0	2	14	< 0.1
Metridia pacifica - adult M	3	3.5	1	7	< 0.1
Calanus marshallae C-5	3	3.5	1	7	< 0.1
Calanus pacificus - adult F	3	3.5	1	7	< 0.1
Thysanoessa inermis A&J	5	2.0	1	7	< 0.1
Eucalanus bungii - adult F	4	2.0	1	5	< 0.1
Calanus marshallae - adult M	2	3.5	1	5	< 0.1
Calanus pacificus C-5	2	3.5	1	5	< 0.1
Neocalanus cristatus C-5	3	2.0	1	4	< 0.1
Eucalanus bungii C-3	1	3.5	< 1	2	< 0.1
Calanus pacificus - adult M	1	3.5	< 1	2	< 0.1
Eucalanus bungii C-5 M	1	2.0	< 1	1	< 0.1
Neocalanus cristatus C-4	1	2.0	< 1	1	< 0.1
			67155	436510	100.

STA. G024A 57 28.6 N 154 42.0 W 10 May 89 22:50

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
65 0 - 48 7.8 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	350	128.0	57346	372747	52.5
Other Copepoda - nauplius	108	128.0	17695	115019	16.2
Invertebrata - egg <5mm	78	128.0	12780	83069	11.7
Euphausiacea - nauplius	27	128.0	4424	28755	4.0
Cirripedia - cypris <5mm	27	128.0	4424	28755	4.0
Oithona spp.	19	128.0	3113	20235	2.8
Polychaeta <5mm	14	128.0	2294	14910	2.1
Other zooplankton <5mm	5	128.0	819	5325	0.7
Acartia spp.	5	128.0	819	5325	0.7
Other Copepoda <2mm	5	128.0	819	5325	0.7
?Pseudocalanus spp. C-3	73	7.5	701	4555	0.6
Pseudocalanus spp. C-5 M	55	7.5	528	3432	0.5
Pseudocalanus spp. - adult F	46	7.5	442	2870	0.4
Pseudocalanus spp. C-4 M	45	7.5	432	2808	0.4
?Pseudocalanus spp. C-1	2	128.0	328	2130	0.3
Thecosomata <5mm	2	128.0	328	2130	0.3
Pseudocalanus spp. C-4 F	33	7.5	317	2059	0.3
Pseudocalanus spp. C-5 F	30	7.5	288	1872	0.3
Euphausiacea - calyptopis 1	30	7.5	288	1872	0.3
Calanus marshallae C-1	27	7.5	259	1685	0.2
Pseudocalanus spp. - adult M	23	7.5	221	1435	0.2
Calanus marshallae C-2	21	7.5	202	1310	0.2
?Pseudocalanus spp. C-2	1	128.0	164	1065	0.1
Chaetognatha <5mm	1	128.0	164	1065	0.1
Metriididae C-2	3	7.5	29	187	< 0.1
Metriididae C-3	2	7.5	19	125	< 0.1
Metridia pacifica C-4	1	7.5	10	62	< 0.1
Unidentified Calanoida C-1	1	7.5	10	62	< 0.1
			109260	710191	100.

STA. Z064A 56 37.0 N 155 36.8 W 17 May 89 17:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
220 0 - 119 210.6 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - cypris <5mm	138	64.0	419	9228	20.2
Cirripedia - nauplius <5mm	113	64.0	343	7556	16.5
Neocalanus spp. C-5	101	64.0	307	6754	14.8
Calanus marshallae C-3	53	64.0	161	3544	7.7
Metridia pacifica - adult F	53	64.0	161	3544	7.7
Calanus marshallae C-4	41	64.0	125	2742	6.0
Calanus marshallae C-2	41	64.0	125	2742	6.0
Metridia pacifica C-5 M	37	64.0	112	2474	5.4
Metridia pacifica C-5 F	19	64.0	58	1270	2.8
Calanus marshallae C-5	15	64.0	46	1003	2.2
Thecosomata <5mm	15	64.0	46	1003	2.2
Euphausiacea - furcilia	32	21.3	32	712	1.6
Larvacea	10	64.0	30	669	1.5
Neocalanus spp. - adult M	7	64.0	21	468	1.0
Neocalanus spp. C-4	18	21.3	18	401	0.9
Calanus marshallae - adult F	4	64.0	12	267	0.6
Polychaeta <5mm	4	64.0	12	267	0.6
Chaetognatha 5-20mm	116	2.0	11	242	0.5
Calanus marshallae - adult M	3	64.0	9	201	0.4
Neocalanus cristatus C-5	74	2.0	7	155	0.3
Hyperiidia <5mm	2	64.0	6	134	0.3
Chaetognatha <5mm	2	64.0	6	134	0.3
Siphonophora <5mm	1	64.0	3	67	0.1
Calanus pacificus C-5	2	21.3	2	45	0.1
Chaetognatha >20mm	16	2.0	2	33	0.1
Cnidaria - medusa >5mm	13	2.0	1	27	0.1
Thysanoessa inermis A&J	13	2.0	1	27	0.1
Eucalanus bungii C-3	1	21.3	1	22	< 0.1
Eucalanus bungii - adult F	8	2.0	1	17	< 0.1
Siphonophora >5mm	2	2.0	< 1	4	< 0.1
Eucalanus bungii C-5 M	1	2.0	< 1	2	< 0.1
Eucalanus bungii - adult M	1	2.0	< 1	2	< 0.1
Eucalanus bungii C-5 F	1	2.0	< 1	2	< 0.1
Neocalanus cristatus C-4	1	2.0	< 1	2	< 0.1
			2080	45759	100.

STA. Z064A 56 37.0 N 155 36.8 W 17 May 89 17:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
220 0 - 119 15.4 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	138	128.0	11483	252627	27.6
Oithona spp.	61	128.0	5076	111669	12.2
Invertebrata - egg <5mm	51	128.0	4244	93362	10.2
Metriididae C-1	27	128.0	2247	49427	5.4
Pseudocalanus spp. C-5 F	23	128.0	1914	42105	4.6
Euphausiacea - nauplius	22	128.0	1831	40274	4.4
Pseudocalanus spp. - adult F	20	128.0	1664	36613	4.0
Pseudocalanus spp. C-5 M	18	128.0	1498	32951	3.6
?Pseudocalanus spp. C-2	14	128.0	1165	25629	2.8
Pseudocalanus spp. - adult M	14	128.0	1165	25629	2.8
Cirripedia - nauplius <5mm	12	128.0	999	21968	2.4
Pseudocalanus spp. C-4 M	11	128.0	915	20137	2.2
Other Copepoda <2mm	11	128.0	915	20137	2.2
?Pseudocalanus spp. C-3	52	25.6	865	19039	2.1
?Pseudocalanus spp. C-1	10	128.0	832	18306	2.0
Cirripedia - cypris <5mm	7	128.0	582	12814	1.4
Calanus marshallae C-1	32	25.6	533	11716	1.3
Pseudocalanus spp. C-4 F	31	25.6	516	11350	1.2
Calanus marshallae C-2	28	25.6	466	10252	1.1
Metriididae C-2	25	25.6	416	9153	1.0
Euphausiacea - calyptopis 1	24	25.6	399	8787	1.0
Acartia spp.	4	128.0	333	7323	0.8
Other zooplankton <5mm	3	128.0	250	5492	0.6
Echinodermata - larva <5mm	3	128.0	250	5492	0.6
Euphausiacea - calyptopis 2	13	25.6	216	4760	0.5
Metridia pacifica C-4	10	25.6	166	3661	0.4
Chaetognatha <5mm	2	128.0	166	3661	0.4
Euphausiacea - calyptopis 3	8	25.6	133	2929	0.3
Metriididae C-3	6	25.6	100	2197	0.2
Thecosomata <5mm	1	128.0	83	1831	0.2
Bryozoa - cyphonautes <5mm	1	128.0	83	1831	0.2
Gastropoda <5mm	1	128.0	83	1831	0.2
Cnidaria - medusa <5mm	1	128.0	83	1831	0.2
			41672	916781	100.

STA. Z065A 56 42.0 N 155 47.6 W 17 May 89 20:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
280 0 - 109 202.3 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	126	256.0	1594	44646	26.9
Cirripedia - nauplius <5mm	108	256.0	1367	38268	23.1
Calanus marshallae C-2	39	256.0	494	13819	8.3
Neocalanus spp. C-5	35	256.0	443	12402	7.5
Calanus marshallae C-3	30	256.0	380	10630	6.4
Calanus marshallae C-4	28	256.0	354	9921	6.0
Invertebrata - egg <5mm	22	256.0	278	7795	4.7
Larvacea	11	256.0	139	3898	2.4
Metridia pacifica C-5 M	87	28.4	122	3420	2.1
Calanus marshallae C-5	9	256.0	114	3189	1.9
Echinodermata - larva <5mm	9	256.0	114	3189	1.9
Chaetognatha <5mm	7	256.0	89	2480	1.5
Thecosomata <5mm	7	256.0	89	2480	1.5
Euphausiacea - furcilia	48	28.4	67	1887	1.1
Polychaeta <5mm	5	256.0	63	1772	1.1
Metridia pacifica C-5 F	29	28.4	41	1140	0.7
Neocalanus spp. C-4	22	28.4	31	865	0.5
Anomura - larva	2	256.0	25	709	0.4
Calanus marshallae - adult F	2	256.0	25	709	0.4
Metridia pacifica - adult F	17	28.4	24	668	0.4
Chaetognatha 5-20mm	100	4.0	20	554	0.3
Natantia - larva	1	256.0	13	354	0.2
Hyperiidia <5mm	1	256.0	13	354	0.2
Neocalanus cristatus C-5	36	4.0	7	199	0.1
Cnidaria - medusa >5mm	21	4.0	4	116	0.1
Teleostei - larva >5mm	16	4.0	3	89	0.1
Calanus pacificus C-5	2	28.4	3	79	< 0.1
Chaetognatha >20mm	13	4.0	3	72	< 0.1
Eucalanus bungii C-4 F	1	28.4	1	39	< 0.1
Thysanoessa inermis A&J	7	4.0	1	39	< 0.1
Eucalanus bungii - adult F	7	4.0	1	39	< 0.1
Neocalanus cristatus C-4	2	4.0	< 1	11	< 0.1
Hyperiidia >5mm	1	4.0	< 1	6	< 0.1
			5923	165836	100.

STA. Z065A 56 42.0 N 155 47.6 W 17 May 89 20:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
280 0 - 109 15.3 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	222	128.0	18564	519799	37.9
Invertebrata - egg <5mm	68	128.0	5686	159218	11.6
Oithona spp.	55	128.0	4599	128779	9.4
Euphausiacea - nauplius	38	128.0	3178	88975	6.5
Cirripedia - cypris <5mm	37	128.0	3094	86633	6.3
Euphausiacea - calyptopis 1	45	42.7	1255	35149	2.6
?Pseudocalanus spp. C-2	14	128.0	1171	32780	2.4
Pseudocalanus spp. C-5 M	34	42.7	948	26557	1.9
?Pseudocalanus spp. C-3	33	42.7	921	25776	1.9
?Pseudocalanus spp. C-1	11	128.0	920	25756	1.9
Pseudocalanus spp. C-5 F	31	42.7	865	24214	1.8
Calanus marshallae C-1	30	42.7	837	23433	1.7
Other Copepoda <2mm	10	128.0	836	23414	1.7
Pseudocalanus spp. C-4 M	24	42.7	670	18746	1.4
Pseudocalanus spp. - adult F	24	42.7	670	18746	1.4
Calanus marshallae C-2	21	42.7	586	16403	1.2
Cirripedia - nauplius <5mm	7	128.0	585	16390	1.2
Pseudocalanus spp. C-4 F	20	42.7	558	15622	1.1
Pseudocalanus spp. - adult M	18	42.7	502	14060	1.0
Metriididae C-1	5	128.0	418	11707	0.9
Other zooplankton <5mm	5	128.0	418	11707	0.9
Polychaeta <5mm	4	128.0	334	9366	0.7
Euphausiacea - calyptopis 2	11	42.7	307	8592	0.6
Metriididae C-2	6	42.7	167	4687	0.3
Acartia spp.	2	128.0	167	4683	0.3
Gastropoda <5mm	2	128.0	167	4683	0.3
Bryozoa - cyphonautes <5mm	2	128.0	167	4683	0.3
Larvacea	2	128.0	167	4683	0.3
Euphausiacea - calyptopis 3	3	42.7	84	2343	0.2
Metridia pacifica C-4	3	42.7	84	2343	0.2
Unidentified Calanoida C-1	2	42.7	56	1562	0.1
Unidentified Calanoida C-2	1	42.7	28	781	0.1
Metriididae C-3	1	42.7	28	781	0.1
			49037	1373049	100.

STA. Z066A 56 47.4 N 155 59.2 W 17 May 89 23:10

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
292 0 - 104 198.2 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	233	256.0	3009	87872	33.4
Cirripedia - nauplius <5mm	88	256.0	1137	33188	12.6
Larvacea	73	256.0	943	27531	10.5
Calanus marshallae C-2	60	256.0	775	22628	8.6
Invertebrata - egg <5mm	42	256.0	542	15840	6.0
Calanus marshallae C-3	39	256.0	504	14708	5.6
Neocalanus spp. C-5	38	256.0	491	14331	5.5
Chaetognatha <5mm	25	256.0	323	9428	3.6
Calanus marshallae C-4	22	256.0	284	8297	3.2
Bryozoa - cyphonautes <5mm	15	256.0	194	5657	2.2
Euphausiacea - furcilia	60	51.2	155	4526	1.7
Polychaeta <5mm	11	256.0	142	4148	1.6
Metridia pacifica - adult F	8	256.0	103	3017	1.1
Metridia pacifica C-5 F	6	256.0	77	2263	0.9
Metridia pacifica C-5 M	4	256.0	52	1509	0.6
Chaetognatha 5-20mm	121	8.0	49	1426	0.5
Thecosomata <5mm	2	256.0	26	754	0.3
Neocalanus spp. C-4	2	256.0	26	754	0.3
Gastropoda <5mm	2	256.0	26	754	0.3
Teleostei - larva <5mm	2	256.0	26	754	0.3
Calanus marshallae C-5	2	256.0	26	754	0.3
Hyperiidia <5mm	2	256.0	26	754	0.3
Brachyura - larva	1	256.0	13	377	0.1
Metridia pacifica - adult M	1	256.0	13	377	0.1
Neocalanus cristatus C-5	25	8.0	10	295	0.1
Cnidaria - medusa >5mm	18	8.0	7	212	0.1
Calanus pacificus C-5	2	51.2	5	151	0.1
Thysanoessa raschii A&J	10	8.0	4	118	< 0.1
Chaetognatha >20mm	9	8.0	4	106	< 0.1
Eucalanus bungii C-3	1	51.2	3	75	< 0.1
Calanus pacificus - adult M	1	51.2	3	75	< 0.1
Eucalanus bungii C-4 F	1	51.2	3	75	< 0.1
Neocalanus cristatus C-4	3	8.0	1	35	< 0.1
Polychaeta >5mm	3	8.0	1	35	< 0.1
Gammaridea >5mm	2	8.0	1	24	< 0.1
Euphausia pacifica A&J	2	8.0	1	24	< 0.1
Siphonophora >5mm	1	8.0	< 1	12	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	12	< 0.1
			9004	262909	100.

STA. Z066A 56 47.4 N 155 59.2 W 17 May 89 23:10

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
299 0 - 104 13.0 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	440	128.0	43224	129239	49.2
Oithona spp.	80	128.0	7859	234981	8.9
Invertebrata - egg <5mm	74	128.0	7269	217358	8.3
Euphausiacea - nauplius	64	128.0	6287	187985	7.2
Euphausiacea - calytopis 1	26	128.0	2554	76369	2.9
?Pseudocalanus spp. C-2	20	128.0	1965	58745	2.2
Calanus marshallae C-1	50	42.7	1639	48993	1.9
?Pseudocalanus spp. C-1	14	128.0	1375	41122	1.6
Pseudocalanus spp. C-5 F	39	42.7	1278	38214	1.5
Pseudocalanus spp. C-4 M	37	42.7	1213	36255	1.4
Other Copepoda <2mm	12	128.0	1179	35247	1.3
?Pseudocalanus spp. C-3	33	42.7	1081	32335	1.2
Metriididae C-1	11	128.0	1081	32310	1.2
Pseudocalanus spp. C-5 M	32	42.7	1049	31355	1.2
Calanus marshallae C-2	28	42.7	918	27436	1.0
Cirripectida - cypris <5mm	8	128.0	786	23498	0.9
Euphausiacea - calytopis 2	8	128.0	786	23498	0.9
Metriididae C-2	22	42.7	721	21557	0.8
Pseudocalanus spp. - adult F	21	42.7	688	20577	0.8
Acartia spp.	7	128.0	688	20561	0.8
Polychaeta <5mm	7	128.0	688	20561	0.8
Pseudocalanus spp. - adult M	20	42.7	655	19597	0.7
Cirripectida - nauplius <5mm	5	128.0	491	14686	0.6
Other zooplankton <5mm	4	128.0	393	11749	0.4
Pseudocalanus spp. C-4 F	11	42.7	360	10778	0.4
Euphausiacea - calytopis 3	3	128.0	295	8812	0.3
Echinodermata - larva <5mm	3	128.0	295	8812	0.3
Bryozoa - cyphonautes <5mm	3	128.0	295	8812	0.3
Metriididae C-3	6	42.7	197	5879	0.2
Gastropoda <5mm	2	128.0	196	5875	0.2
Metridia pacifica C-4	4	42.7	131	3919	0.1
Thecosomata <5mm	1	128.0	98	2937	0.1
Chaetognatha <5mm	1	128.0	98	2937	0.1
			87831	2626146	100.

STA. Z067A 56 52.8 N 156 09.9 W 18 May 89 2:02

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
194 0 - 116 189.1 333

Taxon	Number counted	Sub/ fac	No. / 10m3	No. / m2	%
Euphausiacea - furcilia	147	128.0	995	19307	29.0
Larvacea	90	128.0	609	11820	17.7
Calanus marshallae C-2	52	128.0	352	6830	10.2
Cirripedia - cypris <5mm	36	128.0	244	4728	7.1
Cirripedia - nauplius <5mm	36	128.0	244	4728	7.1
Calanus marshallae C-3	31	128.0	210	4071	6.1
Neocalanus spp. C-5	31	128.0	210	4071	6.1
Calanus marshallae C-4	74	25.6	100	1944	2.9
Echinodermata - larva <5mm	8	128.0	54	1051	1.6
Metridia pacifica - adult F	39	25.6	53	1024	1.5
Metridia pacifica C-5 F	38	25.6	51	998	1.5
Chaetognatha <5mm	7	128.0	47	919	1.4
Thecosomata <5mm	7	128.0	47	919	1.4
Metridia pacifica C-5 M	33	25.6	45	867	1.3
Gastropoda <5mm	4	128.0	27	525	0.8
Calanus marshallae C-5	17	25.6	23	447	0.7
Neocalanus spp. C-4	15	25.6	20	394	0.6
Chaetognatha 5-20mm	74	4.0	16	304	0.5
Polychaeta <5mm	2	128.0	14	263	0.4
Anomura - larva	2	128.0	14	263	0.4
Teleostei - larva >5mm	59	4.0	12	242	0.4
Calanus marshallae - adult F	6	25.6	8	158	0.2
Neocalanus cristatus C-5	36	4.0	8	148	0.2
Natantia - larva	1	128.0	7	131	0.2
Hyperiidia <5mm	1	128.0	7	131	0.2
Teleostei - larva <5mm	1	128.0	7	131	0.2
Calanus pacificus C-5	3	25.6	4	79	0.1
Cnidaria - medusa >5mm	18	4.0	4	74	0.1
Calanus marshallae - adult M	2	25.6	3	53	0.1
Eucalanus bungii - adult F	7	4.0	1	29	< 0.1
Metridia pacifica - adult M	1	25.6	1	26	< 0.1
Neocalanus cristatus C-4	3	4.0	1	12	< 0.1
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			3438	66688	100.

STA. Z067A 56 52.8 N 156 09.9 W 18 May 89 2:02

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
194 0 - 116 15.9 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	152	128.0	12247	237582	26.4
Oithona spp.	76	128.0	6123	118791	13.2
Cirripedia - nauplius <5mm	52	128.0	4190	81278	9.0
Invertebrata - egg <5mm	48	128.0	3867	75026	8.3
Euphausiacea - nauplius	32	128.0	2578	50017	5.6
Cirripedia - cypris <5mm	22	128.0	1773	34387	3.8
Other Copepoda <2mm	19	128.0	1531	29698	3.3
Metriididae C-1	17	128.0	1370	26572	3.0
?Pseudocalanus spp. C-3	42	42.7	1129	21900	2.4
Euphausiacea - calyptopis 1	34	42.7	914	17728	2.0
?Pseudocalanus spp. C-2	11	128.0	886	17193	1.9
Pseudocalanus spp. C-4 M	32	42.7	860	16685	1.9
Pseudocalanus spp. C-5 F	28	42.7	753	14600	1.6
Pseudocalanus spp. C-5 M	27	42.7	726	14078	1.6
Calanus marshallae C-1	25	42.7	672	13036	1.5
?Pseudocalanus spp. C-1	8	128.0	645	12504	1.4
Pseudocalanus spp. - adult F	21	42.7	564	10950	1.2
Pseudocalanus spp. - adult M	19	42.7	511	9907	1.1
Pseudocalanus spp. C-4 F	19	42.7	511	9907	1.1
Acartia spp.	6	128.0	483	9378	1.0
Calanus marshallae C-2	17	42.7	457	8864	1.0
Echinodermata - larva <5mm	5	128.0	403	7815	0.9
Gastropoda <5mm	5	128.0	403	7815	0.9
Polychaeta <5mm	5	128.0	403	7815	0.9
Euphausiacea - calyptopis 2	14	42.7	376	7300	0.8
Hyperiidia <5mm	4	128.0	322	6252	0.7
Metriididae C-2	11	42.7	296	5736	0.6
Metridia pacifica C-4	10	42.7	269	5214	0.6
Metriididae C-3	9	42.7	242	4693	0.5
Bryozoa - cyphonautes <5mm	3	128.0	242	4689	0.5
Chaetognatha <5mm	3	128.0	242	4689	0.5
Euphausiacea - calyptopis 3	7	42.7	188	3650	0.4
Teleostei - egg <5mm	1	128.0	81	1563	0.2
Unidentified Calanoida C-1	2	42.7	54	1043	0.1
Unidentified Calanoida C-2	1	42.7	27	521	0.1
			46334	898878	100.

STA. Z068A 56 57.8 N 156 21.3 W 18 May 89 4:12

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
102 0 - 72 145.7 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	266	128.0	2336	23829	45.3
Cirripedia - cypris <5mm	143	128.0	1256	12811	24.4
Calanus marshallae C-2	29	128.0	255	2598	4.9
Neocalanus spp. C-5	27	128.0	237	2419	4.6
Calanus marshallae C-4	111	25.6	195	1989	3.8
Euphausiacea - furcilia	104	25.6	183	1863	3.5
Calanus marshallae C-3	19	128.0	167	1702	3.2
Larvacea	11	128.0	97	985	1.9
Metridia pacifica C-5 F	35	25.6	61	627	1.2
Neocalanus spp. C-4	26	25.6	46	466	0.9
Calanus marshallae C-5	25	25.6	44	448	0.9
Chaetognatha <5mm	5	128.0	44	448	0.9
Calanus marshallae - adult F	20	25.6	35	358	0.7
Hyperiidia <5mm	4	128.0	35	358	0.7
Metridia pacifica C-5 M	18	25.6	32	323	0.6
Polychaeta <5mm	3	128.0	26	269	0.5
Chaetognatha 5-20mm	89	4.0	24	249	0.5
Neocalanus spp. - adult M	2	128.0	18	179	0.3
Teleostei - larva >5mm	63	4.0	17	176	0.3
Thysanoessa inermis A&J	60	4.0	16	168	0.3
Metridia pacifica - adult F	5	25.6	9	90	0.2
Neocalanus cristatus C-5	25	4.0	7	70	0.1
Cnidaria - medusa >5mm	17	4.0	5	48	0.1
Calanus pacificus C-5	2	25.6	4	36	0.1
Calanus pacificus - adult F	1	25.6	2	18	< 0.1
Polychaeta >5mm	5	4.0	1	14	< 0.1
Chaetognatha >20mm	4	4.0	1	11	< 0.1
Eucalanus bungii - adult F	2	4.0	1	6	< 0.1
			5153	52558	100.

STA. Z068A 56 57.8 N 156 21.3 W 18 May 89 4:12

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
102 0 - 72 12.4 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	109	64.0	5631	57433	21.8
Oithona spp.	62	64.0	3203	32668	12.4
Invertebrata - egg <5mm	54	64.0	2789	28453	10.8
Euphausiacea - calyptopis 1	30	64.0	1550	15807	6.0
Euphausiacea - nauplius	28	64.0	1446	14753	5.6
?Pseudocalanus spp. C-1	24	64.0	1240	12646	4.8
Euphausiacea - calyptopis 2	22	64.0	1136	11592	4.4
Metriididae C-1	20	64.0	1033	10538	4.0
?Pseudocalanus spp. C-3	98	12.8	1012	10327	3.9
Pseudocalanus spp. C-5 M	63	12.8	651	6639	2.5
Polychaeta <5mm	11	64.0	568	5796	2.2
Euphausiacea - calyptopis 3	10	64.0	517	5269	2.0
Cirripedia - nauplius <5mm	10	64.0	517	5269	2.0
Calanus marshallae C-1	47	12.8	486	4953	1.9
Pseudocalanus spp. C-4 F	46	12.8	475	4848	1.8
Echinodermata - larva <5mm	9	64.0	465	4742	1.8
Pseudocalanus spp. C-4 M	44	12.8	455	4637	1.8
Pseudocalanus spp. C-5 F	43	12.8	444	4531	1.7
?Pseudocalanus spp. C-2	8	64.0	413	4215	1.6
Pseudocalanus spp. - adult F	33	12.8	341	3478	1.3
Calanus marshallae C-2	31	12.8	320	3267	1.2
Metriididae C-2	30	12.8	310	3161	1.2
Pseudocalanus spp. - adult M	21	12.8	217	2213	0.8
Cirripedia - cypris <5mm	4	64.0	207	2108	0.8
Metriididae C-3	13	12.8	134	1370	0.5
Metridia pacifica C-4	10	12.8	103	1054	0.4
Bryozoa - cyphonautes <5mm	2	64.0	103	1054	0.4
Other Copepoda <2mm	1	64.0	52	527	0.2
Chaetognatha <5mm	1	64.0	52	527	0.2
Unidentified Calanoida C-1	1	12.8	10	105	< 0.1
			25880	263979	100.

STA. Z074A 56 55.1 N 156 15.9 W 18 May 89 18:23

DEPTH 182 SAMPLING INTERVAL 0 - 162 VOLUME FILTERED 277.4 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	109	512.0	2012	36610	21.8
Cirripedia - cypris <5mm	101	512.0	1864	33923	20.2
Neocalanus spp. C-5	43	512.0	794	14442	8.6
Euphausiacea - furcilia	36	512.0	664	12091	7.2
Metridia pacifica - adult F	27	512.0	498	9069	5.4
Larvacea	25	512.0	461	8397	5.0
Metridia pacifica - adult M	23	512.0	424	7725	4.6
Calanus marshallae C-4	20	512.0	369	6717	4.0
Metridia pacifica C-5 F	17	512.0	314	5710	3.4
Metridia pacifica C-5 M	11	512.0	203	3695	2.2
Calanus marshallae C-3	31	170.7	191	3471	2.1
Thecosomata <5mm	9	512.0	166	3023	1.8
Calanus marshallae C-2	23	170.7	142	2576	1.5
Neocalanus spp. - adult M	7	512.0	129	2351	1.4
Calanus marshallae - adult F	6	512.0	111	2015	1.2
Calanus marshallae C-5	6	512.0	111	2015	1.2
Ostracoda <5mm	4	512.0	74	1343	0.8
Bryozoa - cyphonautes <5mm	4	512.0	74	1343	0.8
Chaetognatha <5mm	4	512.0	74	1343	0.8
Metridia spp. - adult F	4	512.0	74	1343	0.8
Hyperiidia <5mm	3	512.0	55	1008	0.6
Natantia - larva	3	512.0	55	1008	0.6
Neocalanus spp. C-4	3	512.0	55	1008	0.6
Other Copepoda 2-5mm	3	512.0	55	1008	0.6
Polychaeta <5mm	3	512.0	55	1008	0.6
Calanus marshallae - adult M	2	512.0	37	672	0.4
Chaetognatha 5-20mm	128	8.0	37	672	0.4
Neocalanus cristatus C-5	84	8.0	24	441	0.3
Teleostei - egg <5mm	1	512.0	18	336	0.2
Invertebrata <5mm	1	512.0	18	336	0.2
Anomura - larva	1	512.0	18	336	0.2
Teleostei - larva <5mm	1	512.0	18	336	0.2
Metridia spp. - adult M	1	512.0	18	336	0.2
Cnidaria - medusa >5mm	16	8.0	5	84	0.1
Chaetognatha >20mm	8	8.0	2	42	< 0.1
Thysanoessa inermis A&J	6	8.0	2	31	< 0.1
Neocalanus cristatus C-4	4	8.0	1	21	< 0.1
Eucalanus bungii - adult F	3	8.0	1	16	< 0.1
Gammaridea >5mm	2	8.0	1	10	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	5	< 0.1
Siphonophora >5mm	1	8.0	< 1	5	< 0.1
			9226	167921	100.

STA. Z074A 56 55.1 N 156 15.9 W 18 May 89 18:23

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
181 0 - 162 24.5 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	127	128.0	6638	120152	24.9
Oithona spp.	61	128.0	3188	57711	12.0
Invertebrata - egg <5mm	44	128.0	2300	41628	8.6
Euphausiacea - nauplius	42	128.0	2195	39735	8.2
Metriididae C-1	27	128.0	1411	25544	5.3
Other Copepoda <2mm	23	128.0	1202	21760	4.5
Cirripedia - nauplius <5mm	20	128.0	1045	18922	3.9
Metriididae C-2	44	42.7	767	13887	2.9
Pseudocalanus spp. - adult F	41	42.7	715	12940	2.7
Polychaeta <5mm	13	128.0	680	12299	2.5
Pseudocalanus spp. C-5 F	35	42.7	610	11046	2.3
?Pseudocalanus spp. C-2	10	128.0	523	9461	2.0
Pseudocalanus spp. - adult M	29	42.7	506	9153	1.9
Cirripedia - cypris <5mm	9	128.0	470	8515	1.8
Pseudocalanus spp. C-5 M	25	42.7	436	7890	1.6
?Pseudocalanus spp. C-1	8	128.0	418	7569	1.6
Pseudocalanus spp. C-4 F	21	42.7	366	6628	1.4
?Pseudocalanus spp. C-3	20	42.7	349	6312	1.3
Pseudocalanus spp. C-4 M	19	42.7	331	5997	1.2
Calanus marshallae C-1	19	42.7	331	5997	1.2
Calanus marshallae C-2	16	42.7	279	5050	1.0
Metriididae C-3	15	42.7	262	4734	1.0
Euphausiacea - calyptopis 1	14	42.7	244	4418	0.9
Euphausiacea - calyptopis 3	13	42.7	227	4103	0.9
Euphausiacea - calyptopis 2	13	42.7	227	4103	0.9
Metridia pacifica C-4	12	42.7	209	3787	0.8
Acartia spp.	4	128.0	209	3784	0.8
Echinodermata - larva <5mm	3	128.0	157	2838	0.6
Bryozoa - cyphonautes <5mm	3	128.0	157	2838	0.6
Gastropoda <5mm	2	128.0	105	1892	0.4
Thecosomata <5mm	1	128.0	52	946	0.2
Other zooplankton <5mm	1	128.0	52	946	0.2
			26662	482584	100.

STA. Z076A 56 55.2 N 156 16.2 W 18 May 89 23:29

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
181 0 - 100 183.5 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - nauplius <5mm	224	256.0	3124	56550	51.9
Larvacea	37	256.0	516	9341	8.6
Calanus marshallae C-2	32	256.0	446	8079	7.4
Cirripedia - cypris <5mm	29	256.0	404	7321	6.7
Calanus marshallae C-3	27	256.0	377	6816	6.3
Neocalanus spp. C-5	66	51.2	184	3332	3.1
Euphausiacea - furcilia	59	51.2	165	2979	2.7
Echinodermata - larva <5mm	11	256.0	153	2777	2.5
Calanus marshallae C-4	48	51.2	134	2424	2.2
Metridia pacifica - adult F	27	51.2	75	1363	1.3
Metridia pacifica C-5 F	26	51.2	73	1313	1.2
Metridia pacifica C-5 M	23	51.2	64	1161	1.1
Calanus marshallae C-5	16	51.2	45	808	0.7
Thecosomata <5mm	3	256.0	42	757	0.7
Neocalanus spp. C-4	11	51.2	31	555	0.5
Chaetognatha <5mm	2	256.0	28	505	0.5
Teleostei - larva <5mm	2	256.0	28	505	0.5
Metridia pacifica - adult M	2	256.0	28	505	0.5
Other Copepoda damaged	2	256.0	28	505	0.5
Chaetognatha 5-20mm	167	2.0	18	329	0.3
Natantia - larva	1	256.0	14	252	0.2
Anomura - larva	1	256.0	14	252	0.2
Calanus marshallae - adult F	2	51.2	6	101	0.1
Neocalanus cristatus C-5	46	2.0	5	91	0.1
Cnidaria - medusa >5mm	26	2.0	3	51	< 0.1
Calanus marshallae - adult M	1	51.2	3	50	< 0.1
Eucalanus bungii C-4 F	1	51.2	3	50	< 0.1
Eucalanus bungii C-3	1	51.2	3	50	< 0.1
Eucalanus bungii C-4 M	1	51.2	3	50	< 0.1
Calanus pacificus - adult F	1	51.2	3	50	< 0.1
Eucalanus bungii - adult F	4	2.0	< 1	8	< 0.1
Teleostei - larva >5mm	3	2.0	< 1	6	< 0.1
Eucalanus bungii C-5 M	2	2.0	< 1	4	< 0.1
Thysanoessa inermis A&J	1	2.0	< 1	2	< 0.1
Eucalanus bungii - adult M	1	2.0	< 1	2	< 0.1
			6019	108947	100.

STA. Z076A 56 55.2 N 156 16.2 W 18 May 89 23:29

DEPTH 181 SAMPLING INTERVAL 0 - 100 VOLUME FILTERED 16.3 NET MESH 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	168	64.0	6606	119575	21.3
Oithona spp.	82	64.0	3225	58364	10.4
Invertebrata - egg <5mm	72	64.0	2831	51246	9.1
Metriididae C-1	42	64.0	1652	29894	5.3
?Pseudocalanus spp. C-3	30	64.0	1180	21353	3.8
?Pseudocalanus spp. C-1	24	64.0	944	17082	3.0
Euphausiacea - calyptopis 1	23	64.0	904	16370	2.9
Pseudocalanus spp. - adult F	23	64.0	904	16370	2.9
?Pseudocalanus spp. C-2	21	64.0	826	14947	2.7
Euphausiacea - calyptopis 3	20	64.0	786	14235	2.5
Cirripedia - nauplius <5mm	20	64.0	786	14235	2.5
Other Copepoda <2mm	20	64.0	786	14235	2.5
Pseudocalanus spp. C-5 M	19	64.0	747	13523	2.4
Pseudocalanus spp. C-5 F	19	64.0	747	13523	2.4
Euphausiacea - nauplius	19	64.0	747	13523	2.4
Pseudocalanus spp. - adult M	18	64.0	708	12812	2.3
Pseudocalanus spp. C-4 M	18	64.0	708	12812	2.3
Pseudocalanus spp. C-4 F	17	64.0	668	12100	2.2
Polychaeta <5mm	16	64.0	629	11388	2.0
Euphausiacea - calyptopis 2	15	64.0	590	10676	1.9
Other zooplankton <5mm	13	64.0	511	9253	1.6
Calanus marshallae C-1	60	12.8	472	8541	1.5
Metriididae C-2	59	12.8	464	8399	1.5
Calanus marshallae C-2	53	12.8	417	7545	1.3
Cirripedia - cypris <5mm	10	64.0	393	7118	1.3
Chaetognatha <5mm	9	64.0	354	6406	1.1
Echinodermata - larva <5mm	9	64.0	354	6406	1.1
Acartia spp.	8	64.0	315	5694	1.0
Metriididae C-3	28	12.8	220	3986	0.7
Gastropoda <5mm	5	64.0	197	3559	0.6
Bryozoa - cyphonautes <5mm	4	64.0	157	2847	0.5
Metridia pacifica C-4	19	12.8	149	2705	0.5
Unidentified Calanoida C-1	3	12.8	24	427	0.1
Unidentified Calanoida C-2	1	12.8	8	142	< 0.1
			31010	561290	100.

STA. Z081A 56 55.3 N 156 15.9 W 19 May 89 8:25

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
185 0 - 115 183.9 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	139	128.0	968	17901	19.0
Cirripedia - cypris <5mm	99	128.0	689	12749	13.5
Euphausiacea - furcilia	94	128.0	654	12105	12.8
Larvacea	80	128.0	557	10303	10.9
Neocalanus spp. C-5	50	128.0	348	6439	6.8
Calanus marshallae C-2	43	128.0	299	5538	5.9
Calanus marshallae C-4	37	128.0	258	4765	5.0
Calanus marshallae C-3	36	128.0	251	4636	4.9
Metridia pacifica - adult F	32	128.0	223	4121	4.4
Metridia pacifica C-5 M	17	128.0	118	2189	2.3
Thecosomata <5mm	13	128.0	90	1674	1.8
Polychaeta <5mm	13	128.0	90	1674	1.8
Metridia pacifica C-5 F	12	128.0	84	1545	1.6
Calanus marshallae C-5	10	128.0	70	1288	1.4
Metridia pacifica - adult M	7	128.0	49	901	1.0
Chaetognatha 5-20mm	107	8.0	47	861	0.9
Echinodermata - larva <5mm	6	128.0	42	773	0.8
Calanus marshallae - adult F	5	128.0	35	644	0.7
Gastropoda <5mm	5	128.0	35	644	0.7
Natantia - larva	4	128.0	28	515	0.5
Cnidaria - medusa <5mm	4	128.0	28	515	0.5
Chaetognatha <5mm	4	128.0	28	515	0.5
Neocalanus spp. C-4	19	14.2	15	271	0.3
Neocalanus cristatus C-5	33	8.0	14	266	0.3
Teleostei - larva >5mm	32	8.0	14	258	0.3
Hyperiidia <5mm	2	128.0	14	258	0.3
Other Copepoda damaged	2	128.0	14	258	0.3
Other Copepoda 2-5mm	2	128.0	14	258	0.3
Cnidaria - medusa >5mm	16	8.0	7	129	0.1
Other zooplankton <5mm	1	128.0	7	129	0.1
Invertebrata <5mm	1	128.0	7	129	0.1
Eucalanus bungii C-5 M	5	8.0	2	40	< 0.1
Thysanoessa inermis A&J	4	8.0	2	32	< 0.1
Eucalanus bungii - adult F	4	8.0	2	32	< 0.1
Calanus pacificus - adult F	2	14.2	2	29	< 0.1
Eucalanus bungii C-5 F	2	8.0	1	16	< 0.1
Eucalanus bungii C-3	1	14.2	1	14	< 0.1
Polychaeta >5mm	1	8.0	< 1	8	< 0.1
Chaetognatha >20mm	1	8.0	< 1	8	< 0.1
			5104	94429	100.

STA. Z081A 56 55.3 N 156 15.9 W 19 May 89 8:25

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
185 0 - 115 15.7 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	144	128.0	11706	216566	28.2
Oithona spp.	42	128.0	3414	63165	8.2
Invertebrata - egg <5mm	28	128.0	2276	42110	5.5
Cirripedia - nauplius <5mm	25	128.0	2032	37598	4.9
Euphausiacea - calytopis 1	23	128.0	1870	34590	4.5
Euphausiacea - calytopis 2	21	128.0	1707	31583	4.1
Pseudocalanus spp. - adult F	36	64.0	1463	27071	3.5
Cirripedia - cypris <5mm	16	128.0	1301	24063	3.1
Euphausiacea - nauplius	14	128.0	1138	21055	2.7
Pseudocalanus spp. C-5 M	28	64.0	1138	21055	2.7
?Pseudocalanus spp. C-2	14	128.0	1138	21055	2.7
?Pseudocalanus spp. C-3	27	64.0	1097	20303	2.6
Polychaeta <5mm	13	128.0	1057	19551	2.5
Other Copepoda <2mm	12	128.0	976	18047	2.4
Metriididae C-1	12	128.0	976	18047	2.4
?Pseudocalanus spp. C-1	11	128.0	894	16543	2.2
Pseudocalanus spp. C-5 F	20	64.0	813	15039	2.0
Metriididae C-2	18	64.0	732	13535	1.8
Pseudocalanus spp. C-4 M	17	64.0	691	12783	1.7
Euphausiacea - calytopis 3	8	128.0	650	12031	1.6
Echinodermata - larva <5mm	7	128.0	569	10528	1.4
Calanus marshallae C-1	13	64.0	528	9776	1.3
Pseudocalanus spp. C-4 F	13	64.0	528	9776	1.3
Pseudocalanus spp. - adult M	13	64.0	528	9776	1.3
Calanus marshallae C-2	10	64.0	406	7520	1.0
Other Copepoda damaged	5	128.0	406	7520	1.0
Bryozoa - cyphonautes <5mm	5	128.0	406	7520	1.0
Metriididae C-3	7	64.0	285	5264	0.7
Gastropoda <5mm	3	128.0	244	4512	0.6
Unidentified Calanoida C-1	4	64.0	163	3008	0.4
Acartia spp.	1	128.0	81	1504	0.2
Metridia pacifica C-4	2	64.0	81	1504	0.2
Siphonophora <5mm	1	128.0	81	1504	0.2
Thecosomata <5mm	1	128.0	81	1504	0.2
			41460	767005	100.

STA. Z084A 56 58.0 N 156 21.2 W 19 May 89 17:27

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
83 0 - 63 130.3 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Neocalanus spp. C-5	122	64.0	599	4974	18.2
Calanus marshallae C-3	74	64.0	364	3017	11.1
Euphausiacea - furcilia	69	64.0	339	2813	10.3
Calanus marshallae C-2	67	64.0	329	2732	10.0
Calanus marshallae C-4	63	64.0	309	2569	9.4
Larvacea	44	64.0	216	1794	6.6
Metridia pacifica - adult F	41	64.0	201	1672	6.1
Metridia pacifica C-5 F	34	64.0	167	1386	5.1
Cirripedia - nauplius <5mm	29	64.0	142	1182	4.3
Calanus marshallae C-5	22	64.0	108	897	3.3
Metridia pacifica C-5 M	22	64.0	108	897	3.3
Cirripedia - cypris <5mm	21	64.0	103	856	3.1
Thecosomata <5mm	12	64.0	59	489	1.8
Neocalanus spp. - adult M	7	64.0	34	285	1.0
Calanus marshallae - adult F	7	64.0	34	285	1.0
Polychaeta <5mm	6	64.0	29	245	0.9
Neocalanus cristatus C-5	88	4.0	27	224	0.8
Chaetognatha <5mm	5	64.0	25	204	0.7
Metridia pacifica - adult M	5	64.0	25	204	0.7
Teleostei - larva >5mm	58	4.0	18	148	0.5
Natantia - larva	2	64.0	10	82	0.3
Chaetognatha 5-20mm	32	4.0	10	82	0.3
Cnidaria - medusa >5mm	29	4.0	9	74	0.3
Anomura - larva	1	64.0	5	41	0.1
Hyperiidia <5mm	1	64.0	5	41	0.1
Calanus pacificus - adult F	1	64.0	5	41	0.1
Neocalanus spp. C-4	30	1.9	4	36	0.1
Eucalanus bungii - adult F	3	4.0	1	8	< 0.1
Eucalanus bungii C-3	4	1.9	1	5	< 0.1
Thysanoessa inermis A&J	1	4.0	< 1	3	< 0.1
Chaetognatha >20mm	1	4.0	< 1	3	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	3	< 0.1
Neocalanus cristatus C-4	1	4.0	< 1	3	< 0.1
Calanus pacificus C-5	2	1.9	< 1	2	< 0.1
			3289	27296	100.

STA. Z084A 56 58.0 N 156 21.2 W 19 May 89 17:27

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

83 0 - 63 11.1 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	162	128.0	18654	154831	28.2
Invertebrata - egg <5mm	96	128.0	11054	91752	16.7
Oithona spp.	65	128.0	7485	62124	11.3
Metriididae C-1	27	128.0	3109	25805	4.7
?Pseudocalanus spp. C-2	18	128.0	2073	17203	3.1
?Pseudocalanus spp. C-1	18	128.0	2073	17203	3.1
Euphausiacea - nauplius	16	128.0	1842	15292	2.8
Other Copepoda <2mm	15	128.0	1727	14336	2.6
Cirripectida - cypris <5mm	15	128.0	1727	14336	2.6
Polychaeta <5mm	12	128.0	1382	11469	2.1
Pseudocalanus spp. C-5 M	35	42.7	1344	11159	2.0
?Pseudocalanus spp. C-3	34	42.7	1306	10840	2.0
Pseudocalanus spp. - adult F	31	42.7	1191	9884	1.8
Metriididae C-2	9	128.0	1036	8602	1.6
Echinodermata - larva <5mm	9	128.0	1036	8602	1.6
Pseudocalanus spp. - adult M	24	42.7	922	7652	1.4
Pseudocalanus spp. C-4 F	24	42.7	922	7652	1.4
Calanus marshallae C-1	23	42.7	884	7333	1.3
Pseudocalanus spp. C-5 F	23	42.7	884	7333	1.3
Calanus marshallae C-2	21	42.7	807	6695	1.2
Euphausiacea - calytopis 1	20	42.7	768	6377	1.2
Pseudocalanus spp. C-4 M	19	42.7	730	6058	1.1
Metriididae C-3	12	42.7	461	3826	0.7
Cirripectida - nauplius <5mm	4	128.0	461	3823	0.7
Metridia pacifica C-4	10	42.7	384	3188	0.6
Euphausiacea - calytopis 3	6	42.7	230	1913	0.3
Acartia spp.	2	128.0	230	1911	0.3
Chaetognatha <5mm	2	128.0	230	1911	0.3
Other zooplankton <5mm	2	128.0	230	1911	0.3
Thecosomata <5mm	2	128.0	230	1911	0.3
Euphausiacea - calytopis 2	5	42.7	192	1594	0.3
Foraminifera <5mm	1	128.0	115	956	0.2
Bryozoa - cyphonautes <5mm	1	128.0	115	956	0.2
Hyperiidia <5mm	1	128.0	115	956	0.2
Gastropoda <5mm	1	128.0	115	956	0.2
			66066	548352	100.

STA. Z085A 56 53.0 N 156 10.0 W 19 May 89 20:19

DEPTH 183 SAMPLING INTERVAL 0 - 109 VOLUME FILTERED 179.2 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	231	512.0	6600	120783	47.1
Cirripedia - nauplius <5mm	73	512.0	2086	38170	14.9
Neocalanus spp. C-5	36	512.0	1029	18823	7.3
Calanus marshallae C-3	27	512.0	771	14118	5.5
Calanus marshallae C-2	23	512.0	657	12026	4.7
Larvacea	20	512.0	571	10457	4.1
Calanus marshallae C-4	17	512.0	486	8889	3.5
Euphausiacea - furcilia	77	102.4	440	8052	3.1
Calanus marshallae C-5	11	512.0	314	5752	2.2
Cladocera <5mm	4	512.0	114	2091	0.8
Cnidaria - medusa <5mm	4	512.0	114	2091	0.8
Chaetognatha <5mm	3	512.0	86	1569	0.6
Metridia pacifica - adult F	13	102.4	74	1359	0.5
Natantia - larva	2	512.0	57	1046	0.4
Teleostei - larva <5mm	2	512.0	57	1046	0.4
Invertebrata - egg <5mm	2	512.0	57	1046	0.4
Metridia pacifica C-5 M	10	102.4	57	1046	0.4
Thecosomata <5mm	2	512.0	57	1046	0.4
Bryozoa - cyphonautes <5mm	2	512.0	57	1046	0.4
Polychaeta <5mm	2	512.0	57	1046	0.4
Metridia pacifica C-5 F	9	102.4	51	941	0.4
Chaetognatha 5-20mm	202	4.0	45	825	0.3
Hyperiidia <5mm	1	512.0	29	523	0.2
Neocalanus spp. C-4	1	512.0	29	523	0.2
Neocalanus spp. - adult M	1	512.0	29	523	0.2
Anomura - larva	1	512.0	29	523	0.2
Calanus marshallae - adult M	1	512.0	29	523	0.2
Metridia pacifica - adult M	2	102.4	11	209	0.1
Neocalanus cristatus C-5	36	4.0	8	147	0.1
Eucalanus bungii C-4 F	1	102.4	6	105	< 0.1
Cnidaria - medusa >5mm	18	4.0	4	74	< 0.1
Chaetognatha >20mm	3	4.0	1	12	< 0.1
Eucalanus bungii - adult F	3	4.0	1	12	< 0.1
Thysanoessa inermis A&J	2	4.0	< 1	8	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	4	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	4	< 0.1
Siphonophora >5mm	1	4.0	< 1	4	< 0.1
Polychaeta >5mm	1	4.0	< 1	4	< 0.1
			14015	256465	100.

STA. Z085A 56 53.0 N 156 10.0 W 19 May 89 20:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
183 0 - 109 14.1 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	165	128.0	15020	274865	32.7
Oithona spp.	85	128.0	7738	141597	16.8
Cirripedia - cypris <5mm	31	128.0	2822	51641	6.1
Euphausiacea - nauplius	29	128.0	2640	48310	5.7
Invertebrata - egg <5mm	26	128.0	2367	43312	5.2
Cirripedia - nauplius <5mm	24	128.0	2185	39980	4.8
?Pseudocalanus spp. C-1	15	128.0	1365	24988	3.0
?Pseudocalanus spp. C-2	13	128.0	1183	21656	2.6
?Pseudocalanus spp. C-3	51	25.6	929	16992	2.0
Other Copepoda <2mm	9	128.0	819	14993	1.8
Pseudocalanus spp. C-4 M	44	25.6	801	14659	1.7
Pseudocalanus spp. C-5 M	42	25.6	765	13993	1.7
Pseudocalanus spp. - adult F	39	25.6	710	12994	1.5
Pseudocalanus spp. C-5 F	38	25.6	692	12660	1.5
Euphausiacea - calyptopis 1	36	25.6	655	11994	1.4
Pseudocalanus spp. - adult M	26	25.6	473	8662	1.0
Bryozoa - cyphonautes <5mm	5	128.0	455	8329	1.0
Polychaeta <5mm	5	128.0	455	8329	1.0
Pseudocalanus spp. C-4 F	23	25.6	419	7663	0.9
Calanus marshallae C-1	21	25.6	382	6997	0.8
Calanus marshallae C-2	20	25.6	364	6663	0.8
Other zooplankton <5mm	4	128.0	364	6663	0.8
Metriididae C-1	17	25.6	310	5664	0.7
Euphausiacea - calyptopis 2	16	25.6	291	5331	0.6
Acartia spp.	3	128.0	273	4998	0.6
Metriididae C-2	15	25.6	273	4998	0.6
Echinodermata - larva <5mm	3	128.0	273	4998	0.6
Euphausiacea - calyptopis 3	14	25.6	255	4664	0.6
Chaetognatha <5mm	2	128.0	182	3332	0.4
Thecosomata <5mm	2	128.0	182	3332	0.4
Metridia pacifica C-4	9	25.6	164	2999	0.4
Metriididae C-3	7	25.6	127	2332	0.3
Unidentified Calanoida C-1	1	25.6	18	333	< 0.1
			45952	840922	100.

STA. Z086A 56 47.4 N 155 58.9 W 19 May 89 22:43

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
293 0 - 112 183.7 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Unidentified Calanoida C-2	75	256.0	1045	30616	15.3
Larvacea	69	256.0	961	28167	14.1
Cirripedia - cypris <5mm	52	256.0	724	21227	10.6
Euphausiacea - furcilia	46	256.0	641	18778	9.4
Bryozoa - cyphonautes <5mm	38	256.0	529	15512	7.8
Neocalanus spp. C-5	33	256.0	460	13471	6.7
Calanus marshallae C-3	32	256.0	446	13063	6.5
Chaetognatha <5mm	26	256.0	362	10614	5.3
Polychaeta <5mm	22	256.0	307	8981	4.5
Cirripedia - nauplius <5mm	18	256.0	251	7348	3.7
Echinodermata - larva <5mm	18	256.0	251	7348	3.7
Calanus marshallae C-4	53	51.2	148	4327	2.2
Invertebrata - egg <5mm	9	256.0	125	3674	1.8
Thecosomata <5mm	6	256.0	84	2449	1.2
Chaetognatha 5-20mm	166	8.0	72	2118	1.1
Metridia pacifica C-5 F	25	51.2	70	2041	1.0
Hyperiidia <5mm	4	256.0	56	1633	0.8
Metridia pacifica C-5 M	19	51.2	53	1551	0.8
Neocalanus spp. C-4	17	51.2	47	1388	0.7
Metridia pacifica - adult F	15	51.2	42	1225	0.6
Calanus marshallae C-5	14	51.2	39	1143	0.6
Gastropoda <5mm	2	256.0	28	816	0.4
Ostracoda <5mm	2	256.0	28	816	0.4
Calanus marshallae - adult F	6	51.2	17	490	0.2
Teleostei - egg <5mm	1	256.0	14	408	0.2
Neocalanus cristatus C-5	14	8.0	6	179	0.1
Cnidaria - medusa >5mm	12	8.0	5	153	0.1
Eucalanus bungii - adult F	8	8.0	3	102	0.1
Chaetognatha >20mm	7	8.0	3	89	< 0.1
Eucalanus bungii C-3	1	51.2	3	82	< 0.1
Calanus pacificus - adult F	1	51.2	3	82	< 0.1
Calanus pacificus - adult M	1	51.2	3	82	< 0.1
Calanus pacificus C-5	1	51.2	3	82	< 0.1
			6828	200053	100.

STA. Z086A 56 47.4 N 155 58.9 W 19 May 89 22:43

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
293 0 - 112 13.7 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	297	128.0	27649	810119	47.1
Oithona spp.	75	128.0	6982	204575	11.9
Euphausiacea - nauplius	30	128.0	2793	81830	4.8
Invertebrata - egg <5mm	20	128.0	1862	54553	3.2
Euphausiacea - calyptopis 2	19	128.0	1769	51826	3.0
Metriididae C-1	17	128.0	1583	46370	2.7
?Pseudocalanus spp. C-2	15	128.0	1396	40915	2.4
Euphausiacea - calyptopis 1	15	128.0	1396	40915	2.4
Calanus marshallae C-2	61	25.6	1136	33278	1.9
?Pseudocalanus spp. C-3	59	25.6	1099	32187	1.9
?Pseudocalanus spp. C-1	11	128.0	1024	30004	1.7
Polychaeta <5mm	11	128.0	1024	30004	1.7
Pseudocalanus spp. C-5 M	49	25.6	912	26731	1.6
Pseudocalanus spp. - adult F	48	25.6	894	26186	1.5
Calanus marshallae C-1	43	25.6	801	23458	1.4
Pseudocalanus spp. C-4 F	43	25.6	801	23458	1.4
Pseudocalanus spp. C-5 F	39	25.6	726	21276	1.2
Cirripedia - cypris <5mm	7	128.0	652	19094	1.1
Other Copepoda <2mm	6	128.0	559	16366	1.0
Pseudocalanus spp. C-4 M	29	25.6	540	15821	0.9
Pseudocalanus spp. - adult M	27	25.6	503	14729	0.9
Other zooplankton <5mm	5	128.0	465	13638	0.8
Bryozoa - cyphonautes <5mm	4	128.0	372	10911	0.6
Echinodermata - larva <5mm	4	128.0	372	10911	0.6
Metriididae C-2	19	25.6	354	10365	0.6
Acartia spp.	3	128.0	279	8183	0.5
Chaetognatha <5mm	3	128.0	279	8183	0.5
Euphausiacea - calyptopis 3	2	128.0	186	5455	0.3
Metriididae C-3	9	25.6	168	4910	0.3
Metridia pacifica C-4	3	25.6	56	1637	0.1
Unidentified Calanoida C-1	2	25.6	37	1091	0.1
			58668	1718979	100.

STA. Z087A 56 42.1 N 155 47.5 W 20 May 89 2:05

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
279 0 - 106 186.1 333

Taxon	Number counted	Sub/ fac	No. / 10m3	No. / m2	%
Cirripedia - cypris <5mm	88	128.0	605	16885	20.7
Larvacea	83	128.0	571	15926	19.6
Echinodermata - larva <5mm	32	128.0	220	6140	7.5
Neocalanus spp. C-5	30	128.0	206	5756	7.1
Invertebrata - egg <5mm	19	128.0	131	3646	4.5
Cirripedia - nauplius <5mm	19	128.0	131	3646	4.5
Bryozoa - cyphonantes <5mm	18	128.0	124	3454	4.2
Euphausiacea - furcilia	85	25.6	117	3262	4.0
Calanus marshallae C-2	83	25.6	114	3185	3.9
Calanus marshallae C-4	81	25.6	111	3108	3.8
Chaetognatha <5mm	13	128.0	89	2494	3.1
Chaetognatha 5-20mm	156	8.0	67	1871	2.3
Calanus marshallae C-3	45	25.6	62	1727	2.1
Thecosomata <5mm	6	128.0	41	1151	1.4
Calanus marshallae C-5	28	25.6	39	1075	1.3
Neocalanus spp. C-4	27	25.6	37	1036	1.3
Polychaeta <5mm	5	128.0	34	959	1.2
Gastropoda <5mm	4	128.0	28	768	0.9
Neocalanus spp. C-3	2	256.0	28	768	0.9
Calanus marshallae - adult F	18	25.6	25	691	0.8
Metridia pacifica C-5 F	17	25.6	23	652	0.8
Metridia pacifica - adult F	15	25.6	21	576	0.7
Metridia pacifica C-5 M	15	25.6	21	576	0.7
Cnidaria - medusa <5mm	2	128.0	14	384	0.5
Teleostei - larva >5mm	18	8.0	8	216	0.3
Neocalanus cristatus C-5	18	8.0	8	216	0.3
Hyperiidia <5mm	1	128.0	7	192	0.2
Natantia - larva	1	128.0	7	192	0.2
Other Copepoda 2-5mm	1	128.0	7	192	0.2
Calanus marshallae - adult M	5	25.6	7	192	0.2
Cnidaria - medusa >5mm	15	8.0	6	180	0.2
Calanus pacificus C-5	4	25.6	6	154	0.2
Calanus pacificus - adult F	2	25.6	3	77	0.1
Chaetognatha >20mm	3	8.0	1	36	< 0.1
Polychaeta >5mm	1	8.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	12	< 0.1
			2918	81405	100.

STA. Z087A 56 42.1 N 155 47.5 W 20 May 89 2:05

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
279 0 - 106 15.5 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	225	128.0	18534	517087	40.6
Invertebrata - egg <5mm	80	128.0	6590	183853	14.4
Oithona spp.	56	128.0	4613	128697	10.1
Metriididae C-1	33	128.0	2718	75839	6.0
Euphausiacea - nauplius	16	128.0	1318	36771	2.9
Euphausiacea - calyptopis 1	73	25.6	1203	33553	2.6
?Pseudocalanus spp. C-1	13	128.0	1071	29876	2.3
Cirripedia - cypris <5mm	11	128.0	906	25280	2.0
Calanus marshallae C-1	51	25.6	840	23441	1.8
Polychaeta <5mm	10	128.0	824	22982	1.8
?Pseudocalanus spp. C-3	46	25.6	758	21143	1.7
?Pseudocalanus spp. C-2	9	128.0	741	20683	1.6
Pseudocalanus spp. C-5 F	34	25.6	560	15628	1.2
Pseudocalanus spp. C-4 M	33	25.6	544	15168	1.2
Metriididae C-2	33	25.6	544	15168	1.2
Pseudocalanus spp. C-5 M	32	25.6	527	14708	1.2
Pseudocalanus spp. - adult F	26	25.6	428	11950	0.9
Echinodermata - larva <5mm	5	128.0	412	11491	0.9
Other Copepoda <2mm	5	128.0	412	11491	0.9
Calanus marshallae C-2	24	25.6	395	11031	0.9
Euphausiacea - calyptopis 2	23	25.6	379	10572	0.8
Pseudocalanus spp. - adult M	20	25.6	329	9193	0.7
Pseudocalanus spp. C-4 F	20	25.6	329	9193	0.7
Acartia spp.	3	128.0	247	6894	0.5
Unidentified Calanoida C-1	6	25.6	99	2758	0.2
Euphausiacea - calyptopis 3	5	25.6	82	2298	0.2
Chaetognatha <5mm	1	128.0	82	2298	0.2
Cirripedia - nauplius <5mm	1	128.0	82	2298	0.2
Metriididae C-3	5	25.6	82	2298	0.2
Metridia pacifica C-4	2	25.6	33	919	0.1
			45683	1274562	100.

STA. Z088A 56 36.9 N 155 37.0 W 20 May 89 4:32

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
210 0 - 113 184.8 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	145	128.0	1004	21093	25.5
Cirripedia - nauplius <5mm	101	128.0	700	14692	17.8
Calanus marshallae C-2	44	128.0	305	6401	7.8
Neocalanus spp. C-5	114	42.7	263	5532	6.7
Larvacea	37	128.0	256	5382	6.5
Euphausiacea - furcilia	30	128.0	208	4364	5.3
Calanus marshallae C-3	30	128.0	208	4364	5.3
Calanus marshallae C-4	22	128.0	152	3200	3.9
Chaetognatha <5mm	21	128.0	145	3055	3.7
Invertebrata - egg <5mm	21	128.0	145	3055	3.7
Metridia pacifica - adult F	42	42.7	97	2038	2.5
Echinodermata - larva <5mm	12	128.0	83	1746	2.1
Calanus marshallae C-5	12	128.0	83	1746	2.1
Metridia pacifica C-5 M	21	42.7	49	1019	1.2
Metridia pacifica C-5 F	20	42.7	46	971	1.2
Neocalanus spp. C-4	15	42.7	35	728	0.9
Polychaeta <5mm	5	128.0	35	727	0.9
Chaetognatha 5-20mm	115	4.0	25	523	0.6
Bryozoa - cyphonautes <5mm	2	128.0	14	291	0.4
Calanus marshallae - adult F	2	128.0	14	291	0.4
Thecosomata <5mm	2	128.0	14	291	0.4
Teleostei - larva >5mm	43	4.0	9	195	0.2
Neocalanus cristatus C-5	38	4.0	8	173	0.2
Other Copepoda 2-5mm	1	128.0	7	145	0.2
Invertebrata <5mm	1	128.0	7	145	0.2
Eucalanus bungii C-3	2	42.7	5	97	0.1
Cnidaria - medusa >5mm	21	4.0	5	95	0.1
Thysanoessa inermis A&J	14	4.0	3	64	0.1
Chaetognatha >20mm	12	4.0	3	55	0.1
Calanus pacificus - adult F	1	42.7	2	49	0.1
Eucalanus bungii - adult F	5	4.0	1	23	< 0.1
Neocalanus cristatus C-4	1	4.0	< 1	5	< 0.1
Polychaeta >5mm	1	4.0	< 1	5	< 0.1
			3931	82557	100.

STA. Z088A 56 36.9 N 155 37.0 W 20 May 89 4:32

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
210 0 - 113 16.0 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	236	64.0	9445	198337	26.8
Oithona spp.	132	64.0	5283	110934	15.0
Invertebrata - egg <5mm	59	64.0	2361	49584	6.7
Euphausiacea - nauplius	42	64.0	1681	35297	4.8
Cirripedia - cypris <5mm	39	64.0	1561	32776	4.4
?Pseudocalanus spp. C-3	30	64.0	1201	25212	3.4
?Pseudocalanus spp. C-2	28	64.0	1121	23532	3.2
Euphausiacea - calyptopis 2	24	64.0	960	20170	2.7
Euphausiacea - calyptopis 1	23	64.0	920	19329	2.6
?Pseudocalanus spp. C-1	22	64.0	880	18489	2.5
Pseudocalanus spp. C-4 M	20	64.0	800	16808	2.3
Cirripedia - nauplius <5mm	20	64.0	800	16808	2.3
Metriididae C-1	19	64.0	760	15968	2.2
Pseudocalanus spp. C-5 M	34	32.0	680	14287	1.9
Other Copepoda <2mm	15	64.0	600	12606	1.7
Pseudocalanus spp. - adult M	30	32.0	600	12606	1.7
Pseudocalanus spp. C-4 F	15	64.0	600	12606	1.7
Pseudocalanus spp. C-5 F	29	32.0	580	12186	1.6
Polychaeta <5mm	14	64.0	560	11766	1.6
Calanus marshallae C-1	27	32.0	540	11346	1.5
Calanus marshallae C-2	26	32.0	520	10925	1.5
Pseudocalanus spp. - adult F	24	32.0	480	10085	1.4
Euphausiacea - calyptopis 3	9	64.0	360	7564	1.0
Echinodermata - larva <5mm	7	64.0	280	5883	0.8
Chaetognatha <5mm	7	64.0	280	5883	0.8
Acartia spp.	6	64.0	240	5042	0.7
Other zooplankton <5mm	6	64.0	240	5042	0.7
Metriididae C-2	10	32.0	200	4202	0.6
Bryozoa - cyphonautes <5mm	5	64.0	200	4202	0.6
Cnidaria - medusa <5mm	4	64.0	160	3362	0.5
Thecosomata <5mm	3	64.0	120	2521	0.3
Metriididae C-3	5	32.0	100	2101	0.3
Metridia pacifica C-4	3	32.0	60	1261	0.2
			35177	738723	100.

STA. Z094A 56 43.3 N 155 50.5 W 20 May 89 18:09

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
289 0 - 104 195.8 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	140	256.0	1831	52909	27.0
Larvacea	77	256.0	1007	29100	14.9
Calanus marshallae C-2	57	256.0	745	21542	11.0
Cirripedia - nauplius <5mm	52	256.0	680	19652	10.0
Euphausiacea - furcilia	27	256.0	353	10204	5.2
Neocalanus spp. C-5	27	256.0	353	10204	5.2
Calanus marshallae C-3	26	256.0	340	9826	5.0
Calanus marshallae C-4	24	256.0	314	9070	4.6
Invertebrata - egg <5mm	23	256.0	301	8692	4.4
Echinodermata - larva <5mm	15	256.0	196	5669	2.9
Polychaeta <5mm	7	256.0	92	2645	1.4
Bryozoa - cyphonautes <5mm	6	256.0	78	2268	1.2
Thecosomata <5mm	6	256.0	78	2268	1.2
Chaetognatha 5-20mm	175	8.0	72	2067	1.1
Chaetognatha <5mm	5	256.0	65	1890	1.0
Metridia pacifica C-5 M	32	28.4	46	1342	0.7
Metridia pacifica C-5 F	22	28.4	32	922	0.5
Natantia - larva	2	256.0	26	756	0.4
Calanus marshallae C-5	2	256.0	26	756	0.4
Calanus marshallae - adult F	2	256.0	26	756	0.4
Teleostei - larva <5mm	2	256.0	26	756	0.4
Neocalanus spp. C-4	14	28.4	20	587	0.3
Metridia pacifica - adult F	11	28.4	16	461	0.2
Teleostei - egg <5mm	1	256.0	13	378	0.2
Echinodermata <5mm	1	256.0	13	378	0.2
Neocalanus cristatus C-5	16	8.0	7	189	0.1
Cnidaria - medusa >5mm	12	8.0	5	142	0.1
Teleostei - larva >5mm	9	8.0	4	106	0.1
Chaetognatha >20mm	5	8.0	2	59	< 0.1
Eucalanus bungii C-4 F	1	28.4	1	42	< 0.1
Metridia pacifica - adult M	1	28.4	1	42	< 0.1
Thysanoessa inermis A&J	3	8.0	1	35	< 0.1
Siphonophora >5mm	1	8.0	< 1	12	< 0.1
Eucalanus bungii - adult F	1	8.0	< 1	12	< 0.1
Eucalanus bungii C-5 M	1	8.0	< 1	12	< 0.1
			6773	195747	100.

STA. Z094A 56 43.3 N 155 50.5 W 20 May 89 18:09

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

289 0 - 104 16.3 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	143	128.0	11246	325014	32.4
Oithona spp.	48	128.0	3775	109096	10.9
Euphausiacea - nauplius	23	128.0	1809	52275	5.2
Metriididae C-1	19	128.0	1494	43184	4.3
Invertebrata - egg <5mm	18	128.0	1416	40911	4.1
Euphausiacea - calyptopis 1	18	128.0	1416	40911	4.1
Cirripectida - cypris <5mm	17	128.0	1337	38638	3.9
Pseudocalanus spp. - adult F	55	25.6	865	25001	2.5
Calanus marshallae C-1	47	25.6	739	21365	2.1
Pseudocalanus spp. C-4 F	47	25.6	739	21365	2.1
Other Copepoda <2mm	9	128.0	708	20455	2.0
Euphausiacea - calyptopis 2	9	128.0	708	20455	2.0
Metriididae C-2	45	25.6	708	20455	2.0
?Pseudocalanus spp. C-2	9	128.0	708	20455	2.0
Pseudocalanus spp. C-5 M	44	25.6	692	20001	2.0
Pseudocalanus spp. - adult M	40	25.6	629	18183	1.8
?Pseudocalanus spp. C-3	39	25.6	613	17728	1.8
Pseudocalanus spp. C-5 F	37	25.6	582	16819	1.7
?Pseudocalanus spp. C-1	7	128.0	551	15910	1.6
Euphausiacea - calyptopis 3	7	128.0	551	15910	1.6
Acartia spp.	7	128.0	551	15910	1.6
Chaetognatha <5mm	5	128.0	393	11364	1.1
Pseudocalanus spp. C-4 M	24	25.6	377	10910	1.1
Calanus marshallae C-2	22	25.6	346	10000	1.0
Echinodermata - larva <5mm	4	128.0	315	9091	0.9
Other zooplankton <5mm	4	128.0	315	9091	0.9
Polychaeta <5mm	4	128.0	315	9091	0.9
Cirripectida - nauplius <5mm	3	128.0	236	6818	0.7
Bryozoa - cyphonautes <5mm	2	128.0	157	4546	0.5
Gastropoda <5mm	2	128.0	157	4546	0.5
Hyperiididae <5mm	1	128.0	79	2273	0.2
Metridia pacifica C-4	4	25.6	63	1818	0.2
Unidentified Calanoida C-1	3	25.6	47	1364	0.1
Metriididae C-3	2	25.6	31	909	0.1
			34667	1001862	100.

STA. Z101A 56 43.6 N 155 50.3 W 21 May 89 10:03

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
293 0 - 110 198.5 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	306	256.0	3947	115648	46.3
Cirripedia - nauplius <5mm	55	256.0	709	20786	8.3
Larvacea	51	256.0	658	19275	7.7
Euphausiacea - furcilia	49	256.0	632	18519	7.4
Cladocera <5mm	26	256.0	335	9826	3.9
Calanus marshallae C-2	23	256.0	297	8692	3.5
Metridia pacifica - adult F	94	51.2	242	7105	2.8
Neocalanus spp. C-5	82	51.2	212	6198	2.5
Calanus marshallae C-3	13	256.0	168	4913	2.0
Calanus marshallae C-4	59	51.2	152	4460	1.8
Chaetognatha <5mm	11	256.0	142	4157	1.7
Echinodermata - larva <5mm	8	256.0	103	3023	1.2
Ostracoda <5mm	7	256.0	90	2646	1.1
Metridia spp. - adult F	7	256.0	90	2646	1.1
Chaetognatha 5-20mm	99	16.0	80	2338	0.9
Metridia pacifica C-5 M	26	51.2	67	1965	0.8
Thecosomata <5mm	5	256.0	64	1890	0.8
Metridia pacifica C-5 F	25	51.2	64	1890	0.8
Bryozoa - cyphonautes <5mm	4	256.0	52	1512	0.6
Calanus marshallae C-5	18	51.2	46	1361	0.5
Neocalanus spp. C-4	17	51.2	44	1285	0.5
Polychaeta <5mm	2	256.0	26	756	0.3
Invertebrata - egg <5mm	2	256.0	26	756	0.3
Gammaridea <5mm	2	256.0	26	756	0.3
Calanus marshallae - adult F	10	51.2	26	756	0.3
Metridia spp. C-5 M	2	256.0	26	756	0.3
Metridia spp. C-5 F	2	256.0	26	756	0.3
Thysanoessa inermis A&J	23	16.0	19	543	0.2
Neocalanus cristatus C-5	23	16.0	19	543	0.2
Unidentified Calanoida C-2	1	256.0	13	378	0.2
Gastropoda <5mm	1	256.0	13	378	0.2
Metridia spp. - adult M	1	256.0	13	378	0.2
Unidentified Calanoida C-3	1	256.0	13	378	0.2
Teleostei - larva <5mm	1	256.0	13	378	0.2
Anomura - larva	1	256.0	13	378	0.2
Other Copepoda damaged	1	256.0	13	378	0.2
Gammaridea >5mm	14	16.0	11	331	0.1
Chaetognatha >20mm	12	16.0	10	283	0.1
Cnidaria - medusa >5mm	6	16.0	5	142	0.1
Other Copepoda >5mm	5	16.0	4	118	< 0.1
Eucalanus bungii - adult F	5	16.0	4	118	< 0.1
Mysidacea >5mm	4	16.0	3	94	< 0.1
Calanus pacificus C-5	1	51.2	3	76	< 0.1
Calanus marshallae - adult M	1	51.2	3	76	< 0.1
Neocalanus spp. - adult M	1	51.2	3	76	< 0.1
Calanus pacificus - adult F	1	51.2	3	76	< 0.1
Neocalanus cristatus C-4	2	16.0	2	47	< 0.1

Eucalanus bungii - adult M	1	16.0	1	24	< 0.1
Thysanoessa longipes A&J	1	16.0	1	24	< 0.1
Polychaeta >5mm	1	16.0	1	24	< 0.1
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			8529	249909	100.

STA. Z101A 56 43.6 N 155 50.3 W 21 May 89 10:03

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
293 0 - 110 16.1 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	291	64.0	11544	338228	32.0
Oithona spp.	88	64.0	3491	102282	9.7
Invertebrata - egg <5mm	56	64.0	2221	65088	6.2
Metriididae C-1	45	64.0	1785	52303	5.0
Euphausiacea - nauplius	41	64.0	1626	47654	4.5
Cirripedia - cypris <5mm	37	64.0	1468	43005	4.1
Euphausiacea - calyptopis 1	36	64.0	1428	41843	4.0
?Pseudocalanus spp. C-2	25	64.0	992	29057	2.8
Cirripedia - nauplius <5mm	23	64.0	912	26733	2.5
Metriididae C-2	46	32.0	912	26733	2.5
Euphausiacea - calyptopis 2	22	64.0	873	25570	2.4
?Pseudocalanus spp. C-1	22	64.0	873	25570	2.4
Calanus marshallae C-1	21	64.0	833	24408	2.3
?Pseudocalanus spp. C-3	37	32.0	734	21502	2.0
Calanus marshallae C-2	17	64.0	674	19759	1.9
Pseudocalanus spp. C-5 F	30	32.0	595	17434	1.7
Pseudocalanus spp. C-4 M	28	32.0	555	16272	1.5
Euphausiacea - calyptopis 3	13	64.0	516	15110	1.4
Other Copepoda <2mm	13	64.0	516	15110	1.4
Echinodermata - larva <5mm	13	64.0	516	15110	1.4
Pseudocalanus spp. C-5 M	24	32.0	476	13948	1.3
Pseudocalanus spp. - adult F	24	32.0	476	13948	1.3
Pseudocalanus spp. - adult M	22	32.0	436	12785	1.2
Acartia spp.	10	64.0	397	11623	1.1
Polychaeta <5mm	10	64.0	397	11623	1.1
Pseudocalanus spp. C-4 F	19	32.0	377	11042	1.0
Unidentified Calanoida C-1	3	64.0	119	3487	0.3
Bryozoa - cyphonautes <5mm	2	64.0	79	2325	0.2
Metriididae C-3	4	32.0	79	2325	0.2
Thecosomata <5mm	1	64.0	40	1162	0.1
Metridia pacifica C-4	1	64.0	40	1162	0.1
Unidentified Calanoida C-2	1	64.0	40	1162	0.1
Ostracoda <5mm	1	64.0	40	1162	0.1
			36059	1056525	100.

STA. Z104A 56 36.7 N 155 37.0 W 21 May 89 17:29

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
217 0 - 121 194.3 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Euphausiacea - furcilia	177	64.0	583	12649	23.9
Calanus marshallae C-2	106	64.0	349	7575	14.3
Cirripedia - cypris <5mm	69	64.0	227	4931	9.3
Neocalanus spp. C-5	66	64.0	217	4717	8.9
Calanus marshallae C-3	43	64.0	142	3073	5.8
Metridia pacifica - adult F	40	64.0	132	2859	5.4
Cirripedia - nauplius <5mm	34	64.0	112	2430	4.6
Calanus marshallae C-4	32	64.0	105	2287	4.3
Larvacea	27	64.0	89	1929	3.6
Echinodermata - larva <5mm	23	64.0	76	1644	3.1
Metridia pacifica C-5 F	19	64.0	63	1358	2.6
Calanus marshallae C-5	17	64.0	56	1215	2.3
Metridia pacifica C-5 M	17	64.0	56	1215	2.3
Chaetognatha <5mm	16	64.0	53	1143	2.2
Chaetognatha 5-20mm	183	4.0	38	817	1.5
Bryozoa - cyphonautes <5mm	8	64.0	26	572	1.1
Neocalanus cristatus C-5	84	4.0	17	375	0.7
Calanus marshallae - adult F	5	64.0	16	357	0.7
Unidentified Calanoida C-2	5	64.0	16	357	0.7
Teleostei - larva >5mm	49	4.0	10	219	0.4
Thecosomata <5mm	3	64.0	10	214	0.4
Neocalanus spp. C-4	21	7.1	8	166	0.3
Neocalanus spp. - adult M	2	64.0	7	143	0.3
Invertebrata - egg <5mm	2	64.0	7	143	0.3
Polychaeta <5mm	1	64.0	3	71	0.1
Cnidaria - medusa <5mm	1	64.0	3	71	0.1
Gastropoda <5mm	1	64.0	3	71	0.1
Metridia pacifica - adult M	1	64.0	3	71	0.1
Unidentified Calanoida C-3	1	64.0	3	71	0.1
Neocalanus spp. C-3	1	64.0	3	71	0.1
Cnidaria - medusa >5mm	13	4.0	3	58	0.1
Chaetognatha >20mm	7	4.0	1	31	0.1
Calanus pacificus C-5	3	7.1	1	24	< 0.1
Eucalanus bungii C-4 F	3	7.1	1	24	< 0.1
Eucalanus bungii C-3	2	7.1	1	16	< 0.1
Neocalanus cristatus C-4	3	4.0	1	13	< 0.1
Eucalanus bungii - adult F	2	4.0	< 1	9	< 0.1
Hyperiidia >5mm	1	4.0	< 1	4	< 0.1
Thysanoessa inermis A&J	1	4.0	< 1	4	< 0.1
Eucalanus bungii C-5 M	1	4.0	< 1	4	< 0.1
Siphonophora >5mm	1	4.0	< 1	4	< 0.1
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			2443	53009	100.

STA. Z104A 56 36.7 N 155 37.0 W 21 May 89 17:29

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
217 0 - 121 16.7 150

Taxon	Number counted	Sub/ fac	No. / 10m3	No. / m2	%
Other Copepoda - nauplius	222	128.0	16999	368874	35.3
Oithona spp.	79	128.0	6049	131266	12.6
Metriididae C-1	26	128.0	1991	43201	4.1
Invertebrata - egg <5mm	25	128.0	1914	41540	4.0
Calanus marshallae C-1	22	128.0	1685	36555	3.5
Euphausiacea - calyptopis 1	22	128.0	1685	36555	3.5
Euphausiacea - nauplius	22	128.0	1685	36555	3.5
?Pseudocalanus spp. C-3	20	128.0	1531	33232	3.2
?Pseudocalanus spp. C-2	16	128.0	1225	26586	2.5
Pseudocalanus spp. - adult M	12	128.0	919	19939	1.9
Pseudocalanus spp. C-5 M	12	128.0	919	19939	1.9
Calanus marshallae C-2	12	128.0	919	19939	1.9
Pseudocalanus spp. - adult F	12	128.0	919	19939	1.9
Pseudocalanus spp. C-4 M	11	128.0	842	18278	1.8
Cirripedia - cypris <5mm	11	128.0	842	18278	1.8
Euphausiacea - calyptopis 2	11	128.0	842	18278	1.8
Other Copepoda <2mm	11	128.0	842	18278	1.8
Pseudocalanus spp. C-4 F	9	128.0	689	14954	1.4
Polychaeta <5mm	9	128.0	689	14954	1.4
Pseudocalanus spp. C-5 F	8	128.0	613	13293	1.3
Metriididae C-2	40	25.6	613	13293	1.3
?Pseudocalanus spp. C-1	8	128.0	613	13293	1.3
Thecosomata <5mm	5	128.0	383	8308	0.8
Cirripedia - nauplius <5mm	5	128.0	383	8308	0.8
Other zooplankton <5mm	5	128.0	383	8308	0.8
Echinodermata - larva <5mm	4	128.0	306	6646	0.6
Metriididae C-3	19	25.6	291	6314	0.6
Metridia pacifica C-4	17	25.6	260	5649	0.5
Euphausiacea - calyptopis 3	3	128.0	230	4985	0.5
Unidentified Calanoida C-1	3	128.0	230	4985	0.5
Acartia spp.	3	128.0	230	4985	0.5
Bryozoa - cyphonautes <5mm	3	128.0	230	4985	0.5
Chaetognatha <5mm	2	128.0	153	3323	0.3
			48102	1043814	100.

STA. Z105A 56 42.2 N 155 47.7 W 21 May 89 20:26

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
272 0 - 104 193.4 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	309	128.0	2045	55628	45.7
Cirripedia - nauplius <5mm	59	128.0	390	10621	8.7
Calanus marshallae C-2	58	128.0	384	10441	8.6
Calanus marshallae C-3	57	128.0	377	10261	8.4
Larvacea	35	128.0	232	6301	5.2
Calanus marshallae C-4	28	128.0	185	5041	4.1
Neocalanus spp. C-5	76	42.7	168	4564	3.8
Euphausiacea - furcilia	58	42.7	128	3483	2.9
Chaetognatha <5mm	19	128.0	126	3420	2.8
Echinodermata - larva <5mm	11	128.0	73	1980	1.6
Chaetognatha 5-20mm	296	4.0	61	1665	1.4
Polychaeta <5mm	8	128.0	53	1440	1.2
Bryozoa - cyphonantes <5mm	5	128.0	33	900	0.7
Metridia pacifica C-5 M	12	42.7	26	721	0.6
Metridia pacifica C-5 F	12	42.7	26	721	0.6
Calanus marshallae C-5	4	128.0	26	720	0.6
Unidentified Calanoida C-2	3	128.0	20	540	0.4
Natantia - larva	3	128.0	20	540	0.4
Invertebrata - egg <5mm	3	128.0	20	540	0.4
Neocalanus spp. C-4	6	42.7	13	360	0.3
Calanus pacificus - adult F	2	128.0	13	360	0.3
Calanus marshallae - adult F	1	128.0	7	180	0.1
Hyperiidia <5mm	1	128.0	7	180	0.1
Thecosomata <5mm	1	128.0	7	180	0.1
Neocalanus spp. C-3	1	128.0	7	180	0.1
Teleostei - larva >5mm	29	4.0	6	163	0.1
Calanus pacificus C-5	2	42.7	4	120	0.1
Cnidaria - medusa >5mm	21	4.0	4	118	0.1
Neocalanus cristatus C-5	12	4.0	2	68	0.1
Metridia pacifica - adult F	1	42.7	2	60	< 0.1
Eucalanus bungii C-3	1	42.7	2	60	< 0.1
Chaetognatha >20mm	4	4.0	1	23	< 0.1
Eucalanus bungii - adult F	3	4.0	1	17	< 0.1
Polychaeta >5mm	1	4.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	6	< 0.1
			4471	121609	100.

STA. Z105A 56 42.2 N 155 47.7 W 21 May 89 20:26

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
272 0 - 104 16.6 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	162	128.0	12501	340030	27.0
Oithona spp.	86	128.0	6636	180510	14.4
Cirripedia - cypris <5mm	57	128.0	4399	119640	9.5
Invertebrata - egg <5mm	54	128.0	4167	113343	9.0
?Pseudocalanus spp. C-1	19	128.0	1466	39880	3.2
Metriididae C-1	18	128.0	1389	37781	3.0
Euphausiacea - calyptopis 1	85	25.6	1312	35682	2.8
?Pseudocalanus spp. C-2	17	128.0	1312	35682	2.8
Euphausiacea - nauplius	17	128.0	1312	35682	2.8
Other Copepoda <2mm	13	128.0	1003	27286	2.2
?Pseudocalanus spp. C-3	65	25.6	1003	27286	2.2
Calanus marshallae C-1	52	25.6	803	21829	1.7
Calanus marshallae C-2	49	25.6	756	20570	1.6
Pseudocalanus spp. C-5 M	47	25.6	725	19730	1.6
Polychaeta <5mm	9	128.0	695	18891	1.5
Pseudocalanus spp. - adult M	43	25.6	664	18051	1.4
Metriididae C-2	42	25.6	648	17631	1.4
Pseudocalanus spp. - adult F	39	25.6	602	16372	1.3
Euphausiacea - calyptopis 2	38	25.6	586	15952	1.3
Pseudocalanus spp. C-4 F	37	25.6	571	15532	1.2
Pseudocalanus spp. C-5 F	35	25.6	540	14693	1.2
Pseudocalanus spp. C-4 M	33	25.6	509	13853	1.1
Bryozoa - cyphonautes <5mm	4	128.0	309	8396	0.7
Cirripedia - nauplius <5mm	4	128.0	309	8396	0.7
Acartia spp.	4	128.0	309	8396	0.7
Other zooplankton <5mm	4	128.0	309	8396	0.7
Chaetognatha <5mm	4	128.0	309	8396	0.7
Euphausiacea - calyptopis 3	13	25.6	201	5457	0.4
Metriididae C-3	11	25.6	170	4618	0.4
Thecosomata <5mm	2	128.0	154	4198	0.3
Gastropoda <5mm	2	128.0	154	4198	0.3
Echinodermata - larva <5mm	2	128.0	154	4198	0.3
Metridia pacifica C-4	7	25.6	108	2939	0.2
Bivalvia <5mm	1	128.0	77	2099	0.2
Unidentified Calanoida C-1	4	25.6	62	1679	0.1
Unidentified Calanoida C-2	1	25.6	15	420	< 0.1
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			46239	1257691	100.

STA. Z106A 56 47.5 N 155 59.0 W 21 May 89 23:26

DEPTH 293 SAMPLING INTERVAL 0 - 109 VOLUME FILTERED 195.5 NET MESH 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	362	128.0	2370	69440	38.8
Cirripedia - nauplius <5mm	107	128.0	701	20525	11.5
Calanus marshallae C-2	87	128.0	570	16689	9.3
Echinodermata - larva <5mm	53	128.0	347	10167	5.7
Calanus marshallae C-3	48	128.0	314	9208	5.1
Invertebrata - egg <5mm	46	128.0	301	8824	4.9
Calanus marshallae C-4	38	128.0	249	7289	4.1
Neocalanus spp. C-5	30	128.0	196	5755	3.2
Larvacea	26	128.0	170	4987	2.8
Metridia pacifica - adult F	65	42.7	142	4159	2.3
Calanus marshallae C-5	19	128.0	124	3645	2.0
Euphausiacea - furcilia	36	42.7	79	2304	1.3
Bryozoa - cyphonautes <5mm	12	128.0	79	2302	1.3
Chaetognatha <5mm	10	128.0	65	1918	1.1
Metridia pacifica C-5 M	29	42.7	63	1856	1.0
Thecosomata <5mm	9	128.0	59	1726	1.0
Metridia pacifica C-5 F	23	42.7	50	1472	0.8
Polychaeta <5mm	7	128.0	46	1343	0.7
Calanus marshallae - adult F	6	128.0	39	1151	0.6
Unidentified Calanoida C-2	4	128.0	26	767	0.4
Other Copepoda 2-5mm	3	128.0	20	575	0.3
Chaetognatha 5-20mm	155	2.0	16	465	0.3
Teleostei - larva <5mm	2	128.0	13	384	0.2
Calanus pacificus - adult F	2	128.0	13	384	0.2
Neocalanus cristatus C-5	82	2.0	8	246	0.1
Neocalanus spp. C-4	3	42.7	7	192	0.1
Unidentified Calanoida C-3	1	128.0	7	192	0.1
Neocalanus spp. - adult M	1	128.0	7	192	0.1
Brachyura - larva	1	128.0	7	192	0.1
Natantia - larva	1	128.0	7	192	0.1
Teleostei - egg <5mm	1	128.0	7	192	0.1
Eucalanus bungii C-4 F	2	42.7	4	128	0.1
Cnidaria - medusa >5mm	35	2.0	4	105	0.1
Calanus pacificus C-5	1	42.7	2	64	< 0.1
Eucalanus bungii - adult F	7	2.0	1	21	< 0.1
Polychaeta >5mm	3	2.0	< 1	9	< 0.1
Chaetognatha >20mm	3	2.0	< 1	9	< 0.1
Neocalanus cristatus C-4	1	2.0	< 1	3	< 0.1
			6112	179069	100.

STA. Z106A 56 47.5 N 155 59.0 W 21 May 89 23:26

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
293 0 - 109 16.0 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	265	128.0	21173	620358	32.2
Invertebrata - egg <5mm	128	128.0	10227	299645	15.6
Oithona spp.	84	128.0	6711	196642	10.2
Cirripedia - cypris <5mm	35	128.0	2796	81934	4.3
Metriididae C-1	34	128.0	2716	79593	4.1
Pseudocalanus spp. - adult F	27	128.0	2157	63206	3.3
Acartia spp.	24	128.0	1918	56183	2.9
?Pseudocalanus spp. C-1	24	128.0	1918	56183	2.9
Euphausiacea - nauplius	23	128.0	1838	53842	2.8
Pseudocalanus spp. C-5 M	21	128.0	1678	49160	2.6
Pseudocalanus spp. - adult M	20	128.0	1598	46819	2.4
?Pseudocalanus spp. C-2	17	128.0	1358	39797	2.1
Calanus marshallae C-1	16	128.0	1278	37456	1.9
Pseudocalanus spp. C-5 F	15	128.0	1198	35115	1.8
?Pseudocalanus spp. C-3	65	25.6	1039	30433	1.6
Metriididae C-2	57	25.6	911	26687	1.4
Calanus marshallae C-2	11	128.0	879	25751	1.3
Pseudocalanus spp. C-4 M	37	25.6	591	17323	0.9
Pseudocalanus spp. C-4 F	35	25.6	559	16387	0.9
Euphausiacea - calyptopis 2	6	128.0	479	14046	0.7
Echinodermata - larva <5mm	5	128.0	399	11705	0.6
Euphausiacea - calyptopis 1	25	25.6	399	11705	0.6
Other Copepoda <2mm	4	128.0	320	9364	0.5
Polychaeta <5mm	4	128.0	320	9364	0.5
Unidentified Calanoida C-2	3	128.0	240	7023	0.4
Cirripedia - nauplius <5mm	3	128.0	240	7023	0.4
Metriididae C-3	12	25.6	192	5618	0.3
Chaetognatha <5mm	2	128.0	160	4682	0.2
Euphausiacea - calyptopis 3	2	128.0	160	4682	0.2
Metridia pacifica C-4	9	25.6	144	4214	0.2
Eucalanus bungii C-1	1	128.0	80	2341	0.1
			65675	1924280	100.

STA. Z107A 56 52.7 N 156 10.2 W 22 May 89 2:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
196 0 - 110 183.8 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	688	512.0	19162	375572	66.4
Cirripedia - nauplius <5mm	118	512.0	3286	64415	11.4
Larvacea	43	512.0	1198	23473	4.1
Calanus marshallae C-2	40	512.0	1114	21836	3.9
Calanus marshallae C-3	32	512.0	891	17468	3.1
Neocalanus spp. C-5	80	102.4	446	8734	1.5
Echinodermata - larva <5mm	15	512.0	418	8188	1.4
Chaetognatha <5mm	14	512.0	390	7642	1.4
Calanus marshallae C-4	66	102.4	368	7206	1.3
Polychaeta <5mm	10	512.0	279	5459	1.0
Euphausiacea - furcilia	38	102.4	212	4149	0.7
Bryozoa - cyphonautes <5mm	7	512.0	195	3821	0.7
Invertebrata - egg <5mm	6	512.0	167	3275	0.6
Gastropoda <5mm	5	512.0	139	2729	0.5
Chaetognatha 5-20mm	314	8.0	137	2678	0.5
Calanus marshallae C-5	18	102.4	100	1965	0.3
Calanus marshallae - adult F	13	102.4	72	1419	0.3
Thecosomata <5mm	2	512.0	56	1092	0.2
Metridia pacifica C-5 M	8	102.4	45	873	0.2
Neocalanus spp. C-4	6	102.4	33	655	0.1
Cnidaria - medusa <5mm	1	512.0	28	546	0.1
Hyperiidia <5mm	1	512.0	28	546	0.1
Metridia pacifica C-5 F	4	102.4	22	437	0.1
Metridia pacifica - adult F	4	102.4	22	437	0.1
Calanus marshallae - adult M	4	102.4	22	437	0.1
Neocalanus cristatus C-5	27	8.0	12	230	< 0.1
Cnidaria - medusa >5mm	15	8.0	7	128	< 0.1
Eucalanus bungii C-4 F	1	102.4	6	109	< 0.1
Eucalanus bungii C-3	1	102.4	6	109	< 0.1
Calanus pacificus - adult F	1	102.4	6	109	< 0.1
Calanus pacificus C-5	1	102.4	6	109	< 0.1
Chaetognatha >20mm	4	8.0	2	34	< 0.1
Polychaeta >5mm	4	8.0	2	34	< 0.1
Eucalanus bungii - adult M	1	8.0	< 1	9	< 0.1
Eucalanus bungii C-5 F	1	8.0	< 1	9	< 0.1
Eucalanus bungii C-5 M	1	8.0	< 1	9	< 0.1
Hyperiidia >5mm	1	8.0	< 1	9	< 0.1
			28875	565951	100.

STA. Z107A 56 52.7 N 156 10.2 W 22 May 89 2:19

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
196 0 - 110 15.7 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	163	128.0	13250	259698	31.7
Oithona spp.	73	128.0	5934	116306	14.2
Cirripedia - cypris <5mm	45	128.0	3658	71696	8.7
Invertebrata - egg <5mm	40	128.0	3252	63729	7.8
Pseudocalanus spp. C-5 M	71	25.6	1154	22624	2.8
Euphausiacea - nauplius	14	128.0	1138	22305	2.7
?Pseudocalanus spp. C-3	65	25.6	1057	20712	2.5
Pseudocalanus spp. - adult F	58	25.6	943	18482	2.3
Cirripedia - nauplius <5mm	11	128.0	894	17526	2.1
?Pseudocalanus spp. C-2	11	128.0	894	17526	2.1
Metriididae C-1	10	128.0	813	15932	1.9
?Pseudocalanus spp. C-1	10	128.0	813	15932	1.9
Calanus marshallae C-1	49	25.6	797	15614	1.9
Calanus marshallae C-2	49	25.6	797	15614	1.9
Pseudocalanus spp. C-4 M	48	25.6	780	15295	1.9
Pseudocalanus spp. C-5 F	40	25.6	650	12746	1.6
Chaetognatha <5mm	7	128.0	569	11153	1.4
Euphausiacea - calyptopis 1	35	25.6	569	11153	1.4
Pseudocalanus spp. - adult M	30	25.6	488	9559	1.2
Metriididae C-2	30	25.6	488	9559	1.2
Pseudocalanus spp. C-4 F	29	25.6	471	9241	1.1
Echinodermata - larva <5mm	5	128.0	406	7966	1.0
Other Copepoda <2mm	5	128.0	406	7966	1.0
Euphausiacea - calyptopis 2	23	25.6	374	7329	0.9
Euphausiacea - calyptopis 3	15	25.6	244	4780	0.6
Acartia spp.	3	128.0	244	4780	0.6
Thecosomata <5mm	3	128.0	244	4780	0.6
Polychaeta <5mm	2	128.0	163	3186	0.4
Bryozoa - cyphonautes <5mm	2	128.0	163	3186	0.4
Unidentified Calanoida C-1	5	25.6	81	1593	0.2
Metriididae C-3	4	25.6	65	1275	0.2
Metridia pacifica C-4	2	25.6	33	637	0.1
Unidentified Calanoida C-2	1	25.6	16	319	< 0.1
			41847	820199	100.

STA. Z108A 56 57.7 N 156 20.8 W 22 May 89 4:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
108 0 - 80 153.1 333

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Cirripedia - nauplius <5mm	139	256.0	2324	25101	21.6
Cirripedia - cypris <5mm	71	256.0	1187	12822	11.0
Calanus marshallae C-2	67	256.0	1120	12099	10.4
Larvacea	50	256.0	836	9029	7.8
Neocalanus spp. C-5	48	256.0	803	8668	7.5
Calanus marshallae C-3	38	256.0	635	6862	5.9
Calanus marshallae C-4	35	256.0	585	6321	5.4
Euphausiacea - furcilia	33	256.0	552	5959	5.1
Bryozoa - cyphonautes <5mm	22	256.0	368	3973	3.4
Chaetognatha 5-20mm	157	32.0	328	3544	3.1
Echinodermata - larva <5mm	19	256.0	318	3431	3.0
Calanus marshallae C-5	19	256.0	318	3431	3.0
Thecosomata <5mm	15	256.0	251	2709	2.3
Polychaeta <5mm	13	256.0	217	2348	2.0
Metridia pacifica - adult F	43	51.2	144	1553	1.3
Invertebrata - egg <5mm	7	256.0	117	1264	1.1
Natantia - larva	7	256.0	117	1264	1.1
Metridia pacifica C-5 M	24	51.2	80	867	0.7
Metridia pacifica C-5 F	23	51.2	77	831	0.7
Neocalanus cristatus C-5	24	32.0	50	542	0.5
Metridia pacifica - adult M	15	51.2	50	542	0.5
Cnidaria - medusa >5mm	20	32.0	42	451	0.4
Calanus marshallae - adult F	2	256.0	33	361	0.3
Anomura - larva	2	256.0	33	361	0.3
Teleostei - egg <5mm	2	256.0	33	361	0.3
Unidentified Calanoida C-2	2	256.0	33	361	0.3
Teleostei - larva >5mm	15	32.0	31	339	0.3
Neocalanus spp. C-4	7	51.2	23	253	0.2
Calanus marshallae - adult M	1	256.0	17	181	0.2
Neocalanus spp. C-3	1	256.0	17	181	0.2
Eucalanus bungii - adult F	1	32.0	2	23	< 0.1
Hyperiidia >5mm	1	32.0	2	23	< 0.1
Chaetognatha >20mm	1	32.0	2	23	< 0.1
			10748	116076	100.

STA. Z108A 56 57.7 N 156 20.8 W 22 May 89 4:42

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
108 0 - 80 12.8 150

Taxon	Number counted	Sub/ fac	No./ 10m3	No./ m2	%
Other Copepoda - nauplius	153	128.0	15263	164837	30.4
Oithona spp.	76	128.0	7581	81880	15.1
Euphausiacea - nauplius	34	128.0	3392	36630	6.7
Invertebrata - egg <5mm	31	128.0	3092	33398	6.2
Euphausiacea - calyptopis 1	30	128.0	2993	32321	6.0
?Pseudocalanus spp. C-1	21	128.0	2095	22625	4.2
Other zooplankton <5mm	15	128.0	1496	16160	3.0
?Pseudocalanus spp. C-2	13	128.0	1297	14006	2.6
Cirripedia - cypris <5mm	12	128.0	1197	12928	2.4
Cirripedia - nauplius <5mm	10	128.0	998	10774	2.0
Euphausiacea - calyptopis 2	10	128.0	998	10774	2.0
Calanus marshallae C-1	39	25.6	778	8403	1.5
Pseudocalanus spp. C-4 M	35	25.6	698	7542	1.4
Pseudocalanus spp. C-5 M	34	25.6	678	7326	1.3
Chaetognatha <5mm	6	128.0	599	6464	1.2
Bryozoa - cyphonautes <5mm	6	128.0	599	6464	1.2
Metriididae C-1	6	128.0	599	6464	1.2
Pseudocalanus spp. - adult M	29	25.6	579	6249	1.2
?Pseudocalanus spp. C-3	29	25.6	579	6249	1.2
Pseudocalanus spp. C-5 F	28	25.6	559	6033	1.1
Pseudocalanus spp. C-4 F	26	25.6	519	5602	1.0
Polychaeta <5mm	5	128.0	499	5387	1.0
Pseudocalanus spp. - adult F	23	25.6	459	4956	0.9
Calanus marshallae C-2	21	25.6	419	4525	0.8
Euphausiacea - calyptopis 3	4	128.0	399	4309	0.8
Acartia spp.	3	128.0	299	3232	0.6
Metriididae C-2	12	25.6	239	2586	0.5
Hyperiididae <5mm	2	128.0	200	2155	0.4
Echinodermata - larva <5mm	2	128.0	200	2155	0.4
Thecosomata <5mm	2	128.0	200	2155	0.4
Other Copepoda <2mm	2	128.0	200	2155	0.4
Cnidaria - medusa <5mm	1	128.0	100	1077	0.2
Metridia pacifica C-4	5	25.6	100	1077	0.2
Gastropoda <5mm	1	128.0	100	1077	0.2
Gymnosomata <5mm	1	128.0	100	1077	0.2
Metriididae C-3	4	25.6	80	862	0.2
Unidentified Calanoida C-1	4	25.6	80	862	0.2
Unidentified Calanoida C-2	1	25.6	20	215	< 0.1
			50277	542992	100.

STA. Z114A 56 43.4 N 155 50.7 W 22 May 89 18:22

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH

290 0 - 116 196.2 333

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Cirripedia - cypris <5mm	192	64.0	626	18164	24.1
Calanus marshallae C-2	89	64.0	290	8420	11.2
Neocalanus spp. C-5	86	64.0	281	8136	10.8
Echinodermata - larva <5mm	56	64.0	183	5298	7.0
Calanus marshallae C-3	49	64.0	160	4636	6.2
Cirripedia - nauplius <5mm	44	64.0	144	4163	5.5
Calanus marshallae C-4	39	64.0	127	3690	4.9
Larvacea	36	64.0	117	3406	4.5
Euphausiacea - furcilia	34	64.0	111	3217	4.3
Bryozoa - cyphonautes <5mm	24	64.0	78	2271	3.0
Calanus marshallae C-5	22	64.0	72	2081	2.8
Metridia pacifica C-5 F	21	64.0	69	1987	2.6
Chaetognatha <5mm	17	64.0	55	1608	2.1
Metridia pacifica C-5 M	14	64.0	46	1324	1.8
Thecosomata <5mm	14	64.0	46	1324	1.8
Chaetognatha 5-20mm	179	4.0	36	1058	1.4
Invertebrata - egg <5mm	10	64.0	33	946	1.3
Polychaeta <5mm	8	64.0	26	757	1.0
Unidentified Calanoida C-2	5	64.0	16	473	0.6
Cnidaria - medusa <5mm	3	64.0	10	284	0.4
Gastropoda <5mm	3	64.0	10	284	0.4
Calanus marshallae - adult F	3	64.0	10	284	0.4
Natantia - larva	3	64.0	10	284	0.4
Teleostei - larva >5mm	41	4.0	8	242	0.3
Neocalanus cristatus C-5	32	4.0	7	189	0.3
Neocalanus spp. C-4	57	1.9	6	160	0.2
Metridia pacifica - adult F	51	1.9	5	143	0.2
Unidentified Calanoida C-3	1	64.0	3	95	0.1
Hyperiidia <5mm	1	64.0	3	95	0.1
Calanus marshallae - adult M	1	64.0	3	95	0.1
Cnidaria - medusa >5mm	10	4.0	2	59	0.1
Eucalanus bungii - adult F	6	4.0	1	35	< 0.1
Neocalanus cristatus C-4	4	4.0	1	24	< 0.1
Calanus pacificus - adult F	8	1.9	1	22	< 0.1
Chaetognatha >20mm	3	4.0	1	18	< 0.1
Eucalanus bungii C-5 M	2	4.0	< 1	12	< 0.1
Eucalanus bungii C-4 M	3	1.9	< 1	8	< 0.1
Thysanoessa inermis A&J	1	4.0	< 1	6	< 0.1
Eucalanus bungii - adult M	1	4.0	< 1	6	< 0.1
Eucalanus bungii C-3	2	1.9	< 1	6	< 0.1
Calanus pacificus C-5	2	1.9	< 1	6	< 0.1
Metridia pacifica - adult M	1	1.9	< 1	3	< 0.1
Eucalanus bungii C-4 F	1	1.9	< 1	3	< 0.1
			2597	75320	100.

STA. Z114A 56 43.4 N 155 50.7 W 22 May 89 18:22

DEPTH SAMPLING INTERVAL VOLUME FILTERED NET MESH
290 0 - 116 21.5 150

Taxon	Number counted	Sub/fac	No./10m3	No./m2	%
Other Copepoda - nauplius	206	64.0	6132	177816	26.0
Oithona spp.	112	64.0	3334	96677	14.1
Metriididae C-1	54	64.0	1607	46612	6.8
Euphausiacea - nauplius	37	64.0	1101	31938	4.7
Euphausiacea - calyptopis 1	36	64.0	1072	31075	4.5
Invertebrata - egg <5mm	32	64.0	952	27622	4.0
Metriididae C-2	53	32.0	789	22874	3.3
Pseudocalanus spp. - adult F	26	64.0	774	22443	3.3
?Pseudocalanus spp. C-3	43	32.0	640	18558	2.7
Acartia spp.	19	64.0	566	16400	2.4
Other Copepoda <2mm	16	64.0	476	13811	2.0
Pseudocalanus spp. - adult M	16	64.0	476	13811	2.0
Euphausiacea - calyptopis 2	15	64.0	446	12948	1.9
Calanus marshallae C-1	27	32.0	402	11653	1.7
?Pseudocalanus spp. C-2	13	64.0	387	11221	1.6
Pseudocalanus spp. C-5 M	24	32.0	357	10358	1.5
Cirripedia - cypris <5mm	12	64.0	357	10358	1.5
Echinodermata - larva <5mm	11	64.0	327	9495	1.4
?Pseudocalanus spp. C-1	11	64.0	327	9495	1.4
Pseudocalanus spp. C-4 F	22	32.0	327	9495	1.4
Pseudocalanus spp. C-4 M	20	32.0	298	8632	1.3
Other zooplankton <5mm	10	64.0	298	8632	1.3
Polychaeta <5mm	9	64.0	268	7769	1.1
Pseudocalanus spp. C-5 F	18	32.0	268	7769	1.1
Chaetognatha <5mm	8	64.0	238	6905	1.0
Bryozoa - cyphonautes <5mm	8	64.0	238	6905	1.0
Metriididae C-3	16	32.0	238	6905	1.0
Calanus marshallae C-2	13	32.0	193	5611	0.8
Metridia pacifica C-4	12	32.0	179	5179	0.8
Gastropoda <5mm	5	64.0	149	4316	0.6
Cirripedia - nauplius <5mm	4	64.0	119	3453	0.5
Thecosomata <5mm	4	64.0	119	3453	0.5
Euphausiacea - calyptopis 3	2	64.0	60	1726	0.3
Cnidaria - medusa <5mm	1	64.0	30	863	0.1
Unidentified Calanoida C-2	2	32.0	30	863	0.1
Unidentified Calanoida C-1	2	32.0	30	863	0.1
			23604	684505	100.