



UNIVERSITY OF WASHINGTON DEPARTMENT OF OCEANOGRAPHY

Technical Report No. 160

NET ZOOPLANKTON DATA FROM
THE NORTHEAST PACIFIC OCEAN:
COLUMBIA RIVER EFFLUENT AREA, 1961, 1962

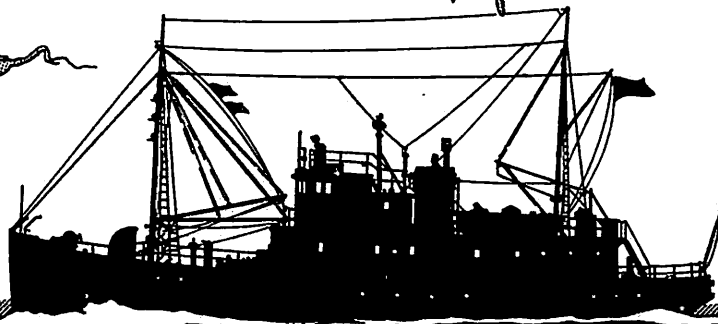
by

Willis K. Peterson and George C. Anderson

U.S. Atomic Energy Commission
Contracts No. AT(45-1)-1385
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Office of Naval Research
Contracts Nonr-477(10)
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Project NR 083 012

Reference M66-71
November 1966



SEATTLE, WASHINGTON 98105

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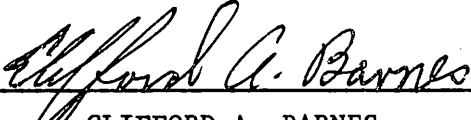
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RICHARD H. FLEMING
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ABSTRACT

This report contains tabulations of net zooplankton data from 434 quantitative samples collected during 1961 and 1962 on the Research Vessel *Brown Bear* off the Washington and Oregon coasts. The samples were collected in key areas in and around the Columbia River effluent to provide a description of seasonal variations of distribution and abundance of plankton associated with changes in the discharge of river water. Identification and enumeration of copepods was stressed.

FOREWORD

Since January 1961, intensive studies of plankton distribution and abundance and primary productivity have been carried out as part of a larger study of the Columbia River outflow and its effect on the Northeast Pacific Ocean. The area of study, physical characteristics of the ambient water structure, distributions of Columbia River water at sea, and other background information have been discussed by Budinger, Coachman, and Barnes (1964) and Duxbury, Morse, and McGary (1966). Distribution of nutrients (Stefánsson and Richards 1963) and studies of primary production (Anderson 1964) have been presented in various other reports and publications. The present report contains data from 434 quantitative zooplankton samples selected from a larger collection gathered on 13 cruises of the Research Vessel *Brown Bear* during 1961 and 1962 off the Washington and Oregon coasts. The samples were selected from key areas in and near the Columbia River effluent to provide a description of seasonal variations of distribution and abundance of plankton associated with changes in the discharge of river water:

Cruise No.	Date	Number of Zooplankton Stations	Number of Samples
BB 275	10-27 Jan 1961	9	31
BB 280	7-24 Mar 1961	9	30
BB 287	8-24 May 1961	12	36
BB 288	9-19 Jun 1961	3	7
BB 290	6-25 Jul 1961	9	25
BB 293	14 Sep-20 Oct 1961	10	40
BB 297	28 Nov-18 Dec 1961	9	34
BB 299	23 Jan-7 Feb 1962	2	8
BB 304	27 Mar-12 Apr 1962	13	46
BB 308	7-19 Jun 1962	11	31
BB 309	20 Jun-9 Jul 1962	16	58
BB 310	11-23 Jul 1962	8	32
BB 312	14 Sep-18 Oct 1962	<u>18</u>	<u>56</u>
		129	434

Standardized methods of sampling and counting were prepared in advance in order to minimize variations among individual workers. At sea, members of the hydrographic watch usually carried out the plankton samplings, which were done twice daily, near noon and near midnight, weather and time permitting. Four depths were sampled in the upper 100 m and at times samples were taken to 200 m.

The Clarke-Bumpus quantitative plankton sampler was used throughout the study (Clarke and Bumpus 1950). The flowmeters were calibrated by towing the samplers without nets at constant speed over a measured course. The calibration included runs of different speed (2-9 km/hour)

and assumed 100 percent acceptance of water by the sampler. During sampling, nylon nets of 0.110-mm mesh aperture (No. 12) were generally used but at times nets with 0.215-mm mesh aperture (No. 6) were used. Two or three samplers were fastened to the hydrographic wire for each haul and were towed horizontally at the selected depth for a period of 10-20 minutes. The angle of the hydrographic wire was maintained as close as possible to 45° while underway. The opening and closing gates of the sampler were activated at sample depth by messenger. Samples were preserved in 4 percent buffered formalin.

In the laboratory, all samples were processed by the senior author (WKP), Miss Gayle Heron, and Mr. Makoto Omori. Organisms considerably larger than adult copepods if present, were removed, placed in separate vials, and recorded as a direct count. These organisms were removed in order to reduce bias in subsequent measurements of settled volume and counts of organisms made from aliquots. Phytoplankton, when abundant, was recorded but no attempt was made to separate it from the zooplankton. Each sample was poured into a 100-ml graduated cylinder and the volume was adjusted to either 50 ml or 100 ml depending upon density of organisms. After at least 4 hours, settled volume of plankton was recorded and the content was poured into a 100-ml wide-neck flat-bottom extraction flask. The sample was thoroughly mixed by shaking and an aliquot was taken with a Stempel pipette and placed in a plastic dish, 7 × 6 × 1 cm, marked with a grid of 42 squares. The volume of the aliquot was large enough that at least 100 of the numerically dominant species were included. The aliquot was examined square by square with a binocular dissecting microscope, species identifications were made when possible, and the numbers of each were recorded. Identification of copepod species was stressed. Small, immature stages of large adult organisms were often present in aliquot samples, which sometimes resulted in the presence of a particular organism's being recorded in both the direct count and in the aliquot count.

The counts of organisms are expressed as numbers per cubic meter. Fractions are recorded to allow the reader to compute actual numbers of animals counted if so desired. At times, certain species were noticed in the original sample that were not included in either the aliquot or the direct counts. In this case, the record of occurrence is not quantitative but is recorded by a lower case "p" indicating presence. The category "unidentified copepods" in most instances represents stage I-IV copepodids. Differentiation between copepod and euphausiid nauplii was not made in all samples. For samples where information was missing or some malfunction occurred to prevent quantitative expression of the results, counts were nevertheless made and are included to provide information on the percentage composition and qualitative makeup of the plankton.

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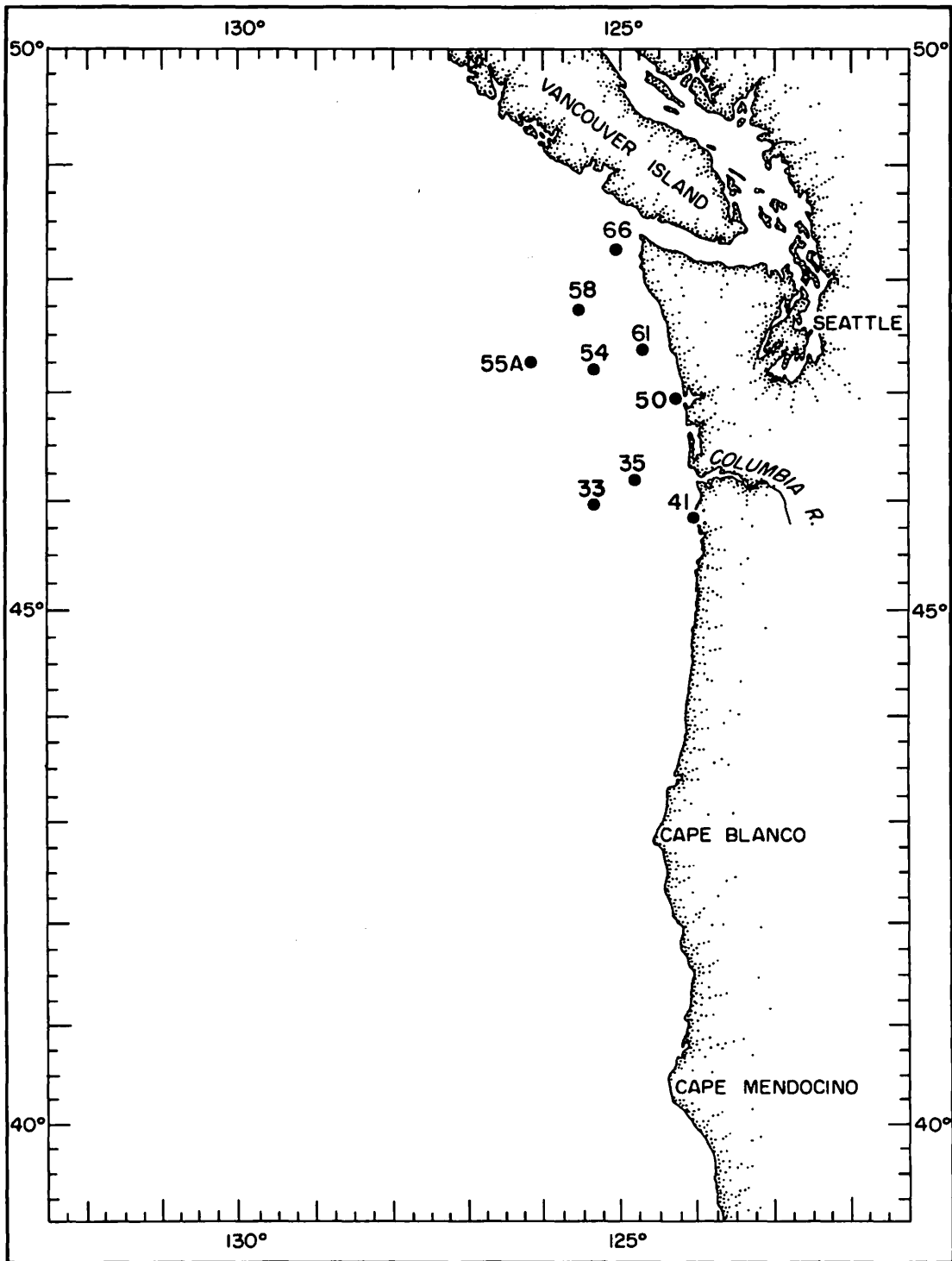


Fig. 1. Zooplankton sampling stations Brown Bear Cruise 275, 10 - 27 January 1961.

BB 275 22 January 1961 Station 33 45°58' N, 125°21' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7	0340-0350	1	2.74		12
25	0340-0350	2	1.87		12
50	0310-0320	6	10.26		12

Depth (m)

7 25 50

Aliquot count

CALANOIDA

<i>Acartia danae</i>	0.3	0.5	1
<i>A. longiremis</i>		0.5	0.2
<i>Aetideus</i> sp.			0.1
<i>Calanus pacificus</i>	1	1	3
<i>C. tenuicornis</i>	2	1	1
<i>Calocalanus styliremis</i>	6	2	12
<i>Clausocalanus arcuicornis</i> forma major	0.3		0.3
<i>C. arcuicornis</i> forma minor	12	93	43
<i>Ctenocalanus vanus</i>	7	4	49
<i>Euchirella</i> sp.			0.3
<i>Gaetanus</i> sp.			0.5
<i>Heterorhabdus tanneri</i>			0.3
<i>Lucicutia flavicornis</i>			0.4
<i>Metridia lucens</i>	5	1	2
<i>Paracalanus parvus</i>	1	2	0.4
<i>Paraeuchaeta elongata</i>	0.5	1	3
<i>Pleuromamma</i> sp.			0.2
<i>Pseudocalanus minutus</i>	160	78	105
<i>Scolecithricella minor</i>	1	0.5	4

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1406	1506	1124
<i>Oncaea conifera</i>		0.5	1
<i>Oncaea</i> sp.	29	59	12

HARPACTICOIDA

<i>Microsetella rosea</i>	1	0.5	0.4
Total unidentified Copepoda		37	29
Nauplii (Copepoda)	127	193	102

	Depth (m)		
	7	25	50
Aliquot count (cont.)			
OTHER GROUPS			
Amphipoda	0.5		
Appendicularia	2	27	25
Euphausiacea	3	0.5	1
Chaetognatha	1	1	1
Medusae			0.4
Pteropoda	11	0.5	0.6

BB 275 22 January 1961 Station 35 46°12' N, 124°47' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7	1126-1136	9	7.28		12
30	1126-1136	6	7.12		12
55	1049-1059	4	6.40		12
80	1049-1059	3	6.29		12

	Depth (m)			
	7	30	55	80
Aliquot count				

CALANOIDA				
<i>Acartia danae</i>	0.1	0.4	1	1
<i>A. longiremis</i>				0.2
<i>Calanus pacificus</i>	1	0.7		3
<i>C. tenuicornis</i>		0.4	1	0.5
<i>Calocalanus styliremis</i>	3	15	11	
<i>Clausocalanus arcuicornis</i> forma major	1			
<i>C. arcuicornis</i> forma minor	4	3	17	3
<i>C. pergens</i>	1		0.6	
<i>Ctenocalanus vanus</i>	0.4	20	104	13
<i>Metridia lucens</i>				32
<i>Paracalanus parvus</i>	0.5	6		0.2

	Depth (m)			
	7	30	55	80
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Pseudocalanus minutus</i>	628	39	98	24
<i>Scolecithricella minor</i>				0.8
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	9260	4806	1195	882
<i>Oncaea dentipes</i>				0.5
<i>Oncaea</i> sp. copepodid		8	6	13
HARPACTICOIDA				
<i>Microsetella rosea</i>		0.1	1	3
Total unidentified Copepoda	262	46	211	79
Nauplii (Copepoda)	934	94	102	151
OTHER GROUPS				
Amphipoda	0.3			0.2
Appendicularia	14	1	3	5
Chaetognatha	0.7	0.7	2	0.8
Euphausiacea		0.1		0.6
Fish eggs	0.1			
Fish larvae		0.1		
Polychaeta		0.4		0.5
Pteropoda	191	207	6	0.2

BB 275 23 January 1961 Station 41 45°52' N, 124°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7	0105-0115	4	3.30		12
20	0105-0115	3	5.99		12

Depth (m)

7 20

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	0.3	
<i>A. danae</i>		1
<i>A. longiremis</i>	60	
<i>Calanus pacificus</i>	7	1
<i>C. tenuicornis</i>	1	0.5
<i>Calocalanus styliremis</i>	0.3	26
<i>Clausocalanus arcuicornis</i> forma major	2	0.3
<i>C. arcuicornis</i> forma minor	329	43
<i>Ctenocalanus vanus</i>	14	31
<i>Metridia lucens</i>	6	1
<i>Paracalanus parvus</i>	78	1
<i>Pseudocalanus minutus</i>	2576	793

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1475	2191
Total unidentified Copepoda	49	12
Nauplii (Copepoda)	8070	342

OTHER GROUPS

Amphipoda	1	0.2
Appendicularia	127	13
Chaetognatha	0.6	9
Decapod larvae		1
Euphausiacea		0.6
Fish eggs	4	1
Fish larvae		0.2
Polychaeta	3	0.3
Pteropoda	20	122

BB 275 24 January 1961 Station 50 46°57' N, 124°18' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1210-1220	6	8.81	1	12
30	1210-1220	3	5.57	5	12

Depth (m)

5 30

Direct count

Chaetognatha	1.44
Euphausiacea	0.18
Fish larvae	1.26
Pteropoda	0.11

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	44	
<i>Calanus pacificus</i>		11
<i>Calocalanus styliremis</i>	p	p
<i>C. tenuis</i>	p	
<i>Calocalanus</i> sp.		p
<i>Clausocalanus arcuicornis</i> forma minor	33	22
<i>C. pergens</i>		11
<i>Ctenocalanus vanus</i>	45	71
<i>Metridia lucens</i>		22
<i>Paracalanus parvus</i>	67	14
<i>Pseudocalanus minutus</i>	1249	61

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	454	1813
Total unidentified Copepoda	215	25
Nauplii (Copepoda & Euphausiacea)	11794	219

OTHER GROUPS

Appendicularia	11	11
Barnacle nauplii	22	3
Chaetognatha	11	3
Foraminifera		3
Medusae		3
Pelecypoda		18
Polychaeta		14
Pteropoda		14

BB 275 24-25 January 1961 Station 54 47°13' N, 125°20' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0027-0037	4	5.75	5	12
29	0027-0037	5	8.07	5	12
52	2357-0007	6	7.68	5	12
76	2357-0007	4	8.38	2	12

Depth (m)

5 29 52 76

Direct count

Appendicularia	1.23	1.48	2.21	
Chaetognatha	0.17	1.11		0.36
Cumacea				0.60
Euphausiacea	0.17	7.41	0.52	0.12
Polychaeta				0.12
Pteropoda	0.52		0.52	

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	3			
<i>A. danae</i>			2	6
<i>Calanus pacificus</i>			5	24
<i>C. plumchrus</i>	3	7		
<i>C. tenuicornis</i>				6
<i>Calocalanus styliremis</i>	3	4	9	
<i>C. tenuis</i>	3	p		
<i>Calocalanus</i> sp.	p	p	5	p
<i>Clausocalanus arcuicornis</i> <i>forma major</i>		2		
<i>C. arcuicornis</i> <i>forma minor</i>	3	2	2	
<i>C. pergens</i>		2		
<i>Ctenocalanus vanus</i>	7	33	36	
<i>Euchirella pulchra</i>			p	
<i>Lucicutia flavicornis</i>			7	
<i>Metridia lucens</i>	10	8		36
<i>Microcalanus pusillus</i>	3	2		
<i>Paracalanus parvus</i>	14	18	2	6
<i>Paraeuchaeta elongata</i>		2	17	
<i>Pseudocalanus minutus</i>	80	437	64	18
<i>Scolecithricella minor</i>			12	6

	Depth (m)			
	5	29	52	76
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1179	1827	1216	1032
<i>Oncaea conifera</i>	3			
<i>O. tenella pacifica</i>	3	22	33	
Total unidentified Copepoda	45	42	132	6
Nauplii (Copepoda & Euphausiacea)	24	145	129	48
OTHER GROUPS				
Appendicularia		9	2	
Chaetognatha			5	
Echinoderm larvae			5	
Foraminifera	7	2	10	
Gastropod larvae				6
Isopoda				6
Pelecypod larvae	3			
Pteropoda		56	2	

BB 275 25 January 1961 Station 55A 47°17' N, 126°10' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1221-1231	6	5.51	1	12
29	1221-1231	3	0.90	2	12
52	1154-1204	1	6.00	4	12
76	1154-1204	2	6.69	4	12

Depth (m)

5 29 52 76

Direct count

Amphipoda			0.17	
Appendicularia		3.33		
Chaetognatha		5.56	1.00	0.60
Euphausiacea		1.11		

Aliquot count

CALANOIDA

<i>Acartia danae</i>		55		
<i>Calanus pacificus</i>				11
<i>C. tenuicornis</i>			13	
<i>Calocalanus gracilis</i>				P
<i>C. styliremis</i>	18	55	17	
<i>C. tenuis</i>		P		
<i>Calocalanus</i> sp.		P	P	
<i>Clausocalanus pergens</i>			4	
<i>Ctenocalanus vanus</i>			17	29
<i>Microcalanus pusillus</i>				3
<i>Paracalanus parvus</i>	18		8	14
<i>Pseudocalanus minutus</i>	327		17	11
<i>Scolecithricella minor</i>			4	

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4991	11333	467	518
<i>Oncaea media</i>				3
<i>O. tenella pacifica</i>			29	11
Total unidentified Copepoda	145	722	100	41
Nauplii (Copepoda & Euphausiacea)	490	667	83	41

	Depth (m)			
	5	29	52	76
Aliquot count (cont.)				
OTHER GROUPS				
Appendicularia	54	55	4	
Ctenophora			4	
Foraminifera	18		17	
Gastropod larvae			4	
Medusae			4	
Ostracoda				3
Polychaeta		55		
Pteropoda	309	722	8	7
Siphonophora			4	

BB 275 26 January 1961 Station 58 47°43' N, 125°33' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0147-0157	4	8.42	1	12
29	0147-0157	4	13.23	1	12
52	0114-0124	2	8.07	2	12
76	0114-0124	2	8.38	5	12

	Depth (m)			
	5	29	52	76
Direct count				
Amphipoda				0.12
Appendicularia	1.43	0.38	0.12	0.12
Chaetognatha	0.71	0.60	0.25	0.12
Euphausiacea	0.36	0.30	0.25	0.12
Medusae			0.12	
Pteropoda	0.12	0.08	0.12	
Aliquot count				

CALANOIDA

<i>Acartia danae</i>		6	2
<i>Calanus pacificus</i>	7		

	Depth (m)			
	5	29	52	76
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Calanus tenuicornis</i>			6	
<i>Calocalanus styliremis</i>	p		12	
<i>Calocalanus</i> sp.	p		6	
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	12			
<i>C. pergens</i>	12	14	6	2
<i>Ctenocalanus vanus</i>		7		2
<i>Gaetanus</i> sp.				2
<i>Gaidius pungens</i>			6	2
<i>Metridia lucens</i>	12			14
<i>Paracalanus parvus</i>	24			2
<i>Paraeuchaeta</i> sp.			6	2
<i>Pseudocalanus minutus</i>	60	37	12	2
<i>Scaphocalanus curtus</i>				2
<i>Scolecithricella minor</i>			30	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1746	969	444	239
<i>Oncaea tenella pacifica</i>		30	12	7
HARPACTICOIDA				
<i>Microsetella norvegica</i>				2
Total unidentified Copepoda	83	98	49	2
Nauplii (Copepoda)	237	68	12	17
OTHER GROUPS				
Appendicularia	24	7		
Chaetognatha				2
Echinoderm larvae		7		2
Foraminifera	24	30	24	
Gastropod larvae	12	7		
Isopoda				2
Pteropoda	59	15		
Radiolaria				33

BB 275 26 January 1961 Station 61 47°24' N, 124°42' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1142-1152	4	4.97	1	12
33	1142-1152	3	6.20	2	12
61	1117-1127	2	4.58	4	12
90	1117-1127	2	5.95	4	12

Depth (m)

5	33	61	90
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Direct count

Appendicularia			0.87	2.69
Chaetognatha	2.82	2.42	1.75	1.68
Euphausiacea		0.16		0.34

Aliquot count

CALANOIDA

<i>Acartia danae</i>		16		4
<i>A. tonsa</i>	20			
<i>Calanus pacificus</i>	20			
<i>Calocalanus gracilis</i>				21
<i>C. styliremis</i>	20	8	21	p
<i>C. tenuis</i>	p	p		p
<i>Calocalanus</i> sp.	p	p	p	
<i>Clausocalanus arcuicornis</i> <i>forma major</i>		16		
<i>C. arcuicornis</i> <i>forma minor</i>		48	10	8
<i>C. pergens</i>		24	103	34
<i>Ctenocalanus vanus</i>		64	69	34
<i>Metridia lucens</i>		32	60	29
<i>Microcalanus pusillus</i>		8		
<i>Paracalanus parvus</i>		8	60	8
<i>Pseudocalanus minutus</i>	40	72	65	29

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	3662	1806	1250	521
<i>Oncaea tenella pacifica</i>		8		8
Total unidentified Copepoda	262	322	147	17
Nauplii (Copepoda)	523	209	175	92

	Depth (m)			
	5	33	61	90
Aliquot count (cont.)				
OTHER GROUPS				
Appendicularia	40	48	22	29
Echinoderm larvae			5	
Foraminifera	161		27	8
Pteropoda	40	153	16	8

BB 275 27 January 1961 Station 66 48°17' N, 125°03' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0055-0105	3	6.16	5	12
33	0055-0105	4	3.74	5	12
61	0030-0040	2	1.18	5	12
90	0030-0040	1	4.60	5	12

	Depth (m)			
	5	33	61	90
Direct count				
Appendicularia			0.80	3.39
Chaetognatha	0.49		1.34	4.24
Euphausiacea			0.27	1.69
Pteropoda			0.27	0.87
Aliquot count				

CALANOIDA

<i>Acartia danae</i>	3			
<i>Calanus pacificus</i>	6			
<i>C. plumehrus</i>				13
<i>Calocalanus styliremis</i>	6	32	p	4
<i>C. tenuis</i>	p	p	17	4
<i>Calocalanus</i> sp.	p	p	p	
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>		32	119	

	Depth (m)			
	5	33	61	90
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Clausocalanus pergens</i>	13	42	68	34
<i>Ctenocalanus vanus</i>	64	36	204	13
<i>Eucalanus bungii</i>				4
<i>californicus</i>				4
<i>Euchaeta</i> sp. copepodid				17
<i>Metridia lucens</i>	13	31	68	17
<i>Microcalanus pusillus</i>				13
<i>Paracalanus parvus</i>	3	21	51	78
<i>Pseudocalanus minutus</i>	249	288	779	8
<i>Scolecithricella minor</i>				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2094	3182	6678	956
<i>Oncaea tenella pacifica</i>	10	16		4
Total unidentified Copepoda	36	160	373	52
Nauplii (Copepoda)	107	230	254	57
OTHER GROUPS				
Appendicularia	19	21	17	
Foraminifera	49	86	169	17
Pelecypod larvae		5		
Pteropoda	78	91	203	17
Tintinnida	3			

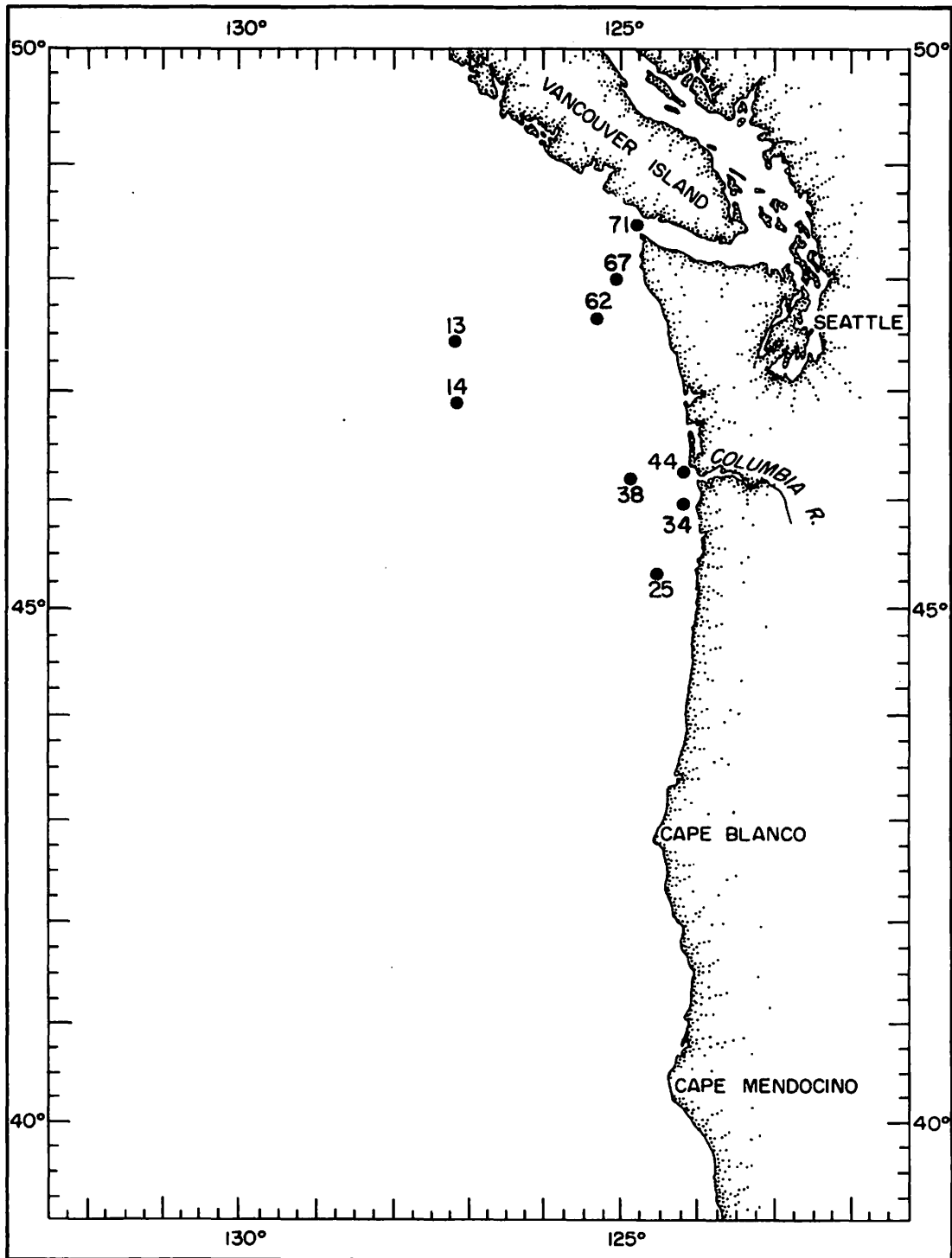


Fig. 2. Zooplankton sampling stations Brown Bear Cruise 280, 7 - 24 March 1961.

BB 280 10 March 1961 Station 13 47°25' N, 127°10' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1151-1201	2	10.09	2	12
34	1151-1201	1	9.60	20	12
63	1120-1130	0.5	6.89	4	12
91	1120-1130	+	0.19	100	12

Depth (m)

5	34	63	91
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Direct count

Amphipoda	0.20		
Euphausiacea		0.15	
Pteropoda	1.19	8.33	3.48

Aliquot count

CALANOIDA

<i>Calanus pacificus</i>		10	8	5
<i>C. tenuicornis</i>	20	1	4	
<i>Calocalanus styliremis</i>	10	3	4	
<i>Clausocalanus arcuicornis</i> forma major	p			
<i>C. arcuicornis</i> forma minor		1		
<i>Paracalanus parvus</i>		1	4	
<i>Pseudocalanus minutus</i>	20	2	8	5
<i>Tortanus discaudatus</i>				5

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1160	436	682	368
<i>Oncaea tenella pacifica</i>			4	5

HARPACTICOIDA

<i>Microsetella norvegica</i>				5
Total unidentified Copepoda	79	6	22	63
Nauplii (Copepoda)	322	40	116	89

	Depth (m)			
	5	34	63	91
Aliquot count (cont.)				
OTHER GROUPS				
Appendicularia	20	1		
Echinoderm larvae	5	4		
Foraminifera	99	12	7	53
Pteropoda	30	10	14	11
Radiolaria	5	1		5
Siphonophora		2	7	

BB 280 10 March 1961 Station 14 46°52' N, 127°08' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
63	2334-?	1	6.49		12
91*	2334-?	0.5			12

		Depth (m)	
		63	91*
Aliquot count			

CALANOIDA

<i>Acartia danae</i>	0.5	
<i>Aetideus</i> sp. copepodid	4	
<i>Calanus plumchrus</i>	2	p
<i>Calocalanus styliremis</i>	1	
<i>Candacia</i> sp. copepodid	0.5	
<i>Clausocalanus arcuicornis</i> forma minor	1	
<i>Ctenocalanus vanus</i>	1	
<i>Euchirella</i> sp.	0.5	
<i>Heterorhabdus tanneri</i> ?	0.5	p
<i>Lucicutia flavicornis</i>	1	p
<i>Metridia lucens</i>	2	p
<i>Paracalanus parvus</i>	0.5	p
<i>Paraeuchaeta elongata</i>	3	p
<i>Pseudocalanus minutus</i>	1	p
<i>Scolecithricella minor</i>	1	

	Depth (m)	
	63	91*
<hr/>		
	Aliquot count (cont.)	
<hr/>		
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	154	p
<i>Oncaea</i> sp. copepodid	28	
HARFRACTICOIDA		
<i>Microsetella rosea</i>	1	
Total unidentified Copepoda		p
Nauplii (Copepoda)	45	
OTHER GROUPS		
Appendicularia	3	
Chaetognatha	1	
Decapod larvae	1	
Isopoda	0.5	
Pteropoda	0.5	

*Flowmeter malfunctioned.

BB 280 15 March 1961 Station 25 45°19' N, 124°30' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1032-1042	2	7.37		12
34	1032-1042	2	2.66		12
63	1100-1110	3	7.54		12
91	1100-1110	2	8.51		12

Depth (m)

5	34	63	91
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Aliquot count

CALANOIDA

<i>Acartia danae</i>				1
<i>A. longiremis</i>	0.1			
<i>Calanus pacificus</i>			0.5	0.5
<i>C. plumchrus</i>	10	10	45	28
<i>C. tenuicornis</i>	0.3	5	3	1
<i>Calocalanus styliremis</i>	0.6	4	3	26
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>		2		0.5
<i>C. pergens</i>	0.6	158	16	0.5
<i>Ctenocalanus vanus</i>	26	21	69	59
<i>Eucalanus bungii bungii</i>		9		0.5
<i>Metridia lucens</i>				0.5
<i>Paracalanus parvus</i>	4	11	7	0.5
<i>Pseudocalanus minutus</i>	101	1962	41	112

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1234	3143	1907	1687
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HARPACTICOIDA

<i>Clytemnestra rostrata</i>				0.5
<i>Microsetella rosea</i>				0.5

Total unidentified Copepoda	395	472	159	294
Nauplii (Copepoda)	163	752	305	42

OTHER GROUPS

Appendicularia	1	1	0.5	
Chaetognatha	1	3	3	2
Decapod larvae			0.5	
Fish eggs			0.5	
Pteropoda	1	3	16	1

BB 280 17 March 1961 Station 34 45°57' N, 124°11' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1110-1120	8	9.54		6
55*	1110-1126	13	14.67		6

Depth (m)

5 55*

Aliquot count

CALANOIDA

<i>Acartia danae</i>		0.5
<i>A. longiremis</i>	0.5	
<i>A. tonsa</i>	0.5	
<i>Calanus pacificus</i>	1	33
<i>C. plumchrus</i>	5	
<i>C. tenuicornis</i>	0.5	2
<i>Calocalanus styliremis</i>	19	44
<i>Centropages abdominalis</i>	0.5	
<i>Clausocalanus arcuicornis</i> forma major		0.5
<i>C. arcuicornis</i> forma minor	1	189
<i>Ctenocalanus vanus</i>		17
<i>Metridia lucens</i>		16
<i>Paracalanus parvus</i>	29	21
<i>Pseudocalanus minutus</i>	913	2629
<i>Scolecithricella minor</i>		0.5
<i>Tortanus discaudatus</i>	0.5	

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3654	3465
<i>Oncaea</i> sp. copepodid		21
Total unidentified Copepoda	294	710
Nauplii (Copepoda)	4015	2646

OTHER GROUPS

Amphipoda	0.5	
Appendicularia	556	491
Chaetognatha	0.5	7
Decapod larvae	0.5	0.3
Euphausiacea		0.1
Fish eggs	3	
Fish larvae	0.5	
Polychaeta	0.5	17
Pteropoda	0.5	613

*Sampler did not close with second messenger.

BB 280

18 March 1961

Station 38

46°12' N, 124°49' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0130-0140	6	8.31		12
34	0130-0140	6	10.18		12
63	0100-0110	2	7.33		12
91	0100-0110	3	2.66		12

Depth (m)

5	34	63	91
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Aliquot count

CALANOIDA

<i>Acartia danae</i>	0.5	0.4	0.4	3
<i>Calanus pacificus</i>	3	1	1	2
<i>C. plumchrus</i>	84	14	4	2
<i>C. tenuicornis</i>	0.4	0.2	0.2	0.5
<i>Calocalanus styliremis</i>	1	6	16	
<i>Clausocalanus arcuicornis</i> <i>forma major</i>		148		
<i>C. arcuicornis forma minor</i>	73	67	3	4
<i>C. pergens</i>	188		32	21
<i>Ctenocalanus vanus</i>	8	5	16	32
<i>Eucalanus bungii bungii</i>		0.4	0.4	0.5
<i>Euchirella</i> sp.		2	1	7
<i>Gaetanus</i> sp.		0.1		3
<i>Heterorhabdus papilliger</i>			0.2	
<i>Lucicutia flavicornis</i>	0.5		0.4	4
<i>Metridia lucens</i>	14	13	16	92
<i>Paracalanus parvus</i>	12		0.2	
<i>Paraeuchaeta elongata</i>	2	3	2	3
<i>Pleuromamma</i> sp.	0.5	0.2	1	2
<i>Pseudocalanus minutus</i>	243	55	23	62
<i>Scolecithricella minor</i>	1	1	0.5	7

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3544	1883	2103	1730
<i>Oncaea conifera</i>		1		5
<i>Oncaea</i> sp. copepodid		20	87	41

HARPACTICOIDA

<i>Microsetella rosea</i>		0.1	0.4	4
Total unidentified Copepoda	243	206	573	188
Nauplii (Copepoda)	457	392	709	602

	Depth (m)			
	5	34	63	91
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda		0.1		
Appendicularia	7	1	27	1
Chaetognatha		0.1	2	1
Decapod larvae	0.5			
Euphausiacea	2	2	0.4	1
Fish larvae		0.1		
Isopoda				3
Medusae	0.5	0.1	0.4	
Polychaeta	0.5	0.1		0.5
Pteropoda	84	121		0.5

BB 280 18 March 1961 Station 44 46°15' N, 124°11' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2157-2207	10	9.59		12
20	2157-2207	4	13.83		12

Depth (m)	
5	20
Aliquot count	

CALANOIDA	
<i>Acartia tonsa</i>	0.4
<i>Calanus pacificus</i>	7 0.2
<i>C. plumchrus</i>	0.6
<i>C. tenuicornis</i>	0.4 0.1
<i>Calocalanus styliremis</i>	1 4
<i>Centropages abdominalis</i>	0.2
<i>Clausocalanus arcuicornis</i> forma minor	17 0.2
<i>C. pergens</i>	71
<i>Ctenocalanus vanus</i>	27 0.7
<i>Eucalanus bungii bungii</i>	0.4

	Depth (m)	
	5	20
<hr/>		
Aliquot count (cont.)		
<hr/>		
CALANOIDA (cont.)		
<i>Metridia lucens</i>	7	0.7
<i>Paracalanus parvus</i>	20	2
<i>Pseudocalanus minutus</i>	2606	283
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3168	1001
<i>Oncaea</i> sp. copepodid		0.3
HARPACTICOIDA		
<i>Clytemnestra rostrata</i>	0.2	
Total unidentified Copepoda	460	37
Nauplii (Copepoda)	1893	123
OTHER GROUPS		
Amphipoda	0.2	
Appendicularia	250	87
Branchiura		2
Chaetognatha	7	1
Decapod larvae	1	
Fish eggs	3	
Polychaeta	6	10
Pteropoda	3	

BB 280 22 March 1961 Station 62 47°38' N, 125°19' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1059-1109	4	9.85	2	12
34	1059-1109	0.5	5.17	4	12
63	1032-1042	2	8.58	2	12
91*	1032-1042	+	9.39	100	12

Depth (m)				
	5	34	63	91*
Direct count				
Pteropoda		29.20	26.22	
Aliquot count				

CALANOIDA

<i>Calanus pacificus</i>	5			p
<i>C. tenuicornis</i>	35	19	70	p
<i>Calocalanus styliremis</i>	10	5		p
<i>Ctenocalanus vanus</i>			6	
<i>Paracalanus parvus</i>			6	
<i>Pseudocalanus minutus</i>	162		6	p

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	1914	1765	1754	p
Total unidentified Copepoda	15	14	29	
Nauplii (Copepoda & Euphausiacea)	695	179	87	p

OTHER GROUPS

Appendicularia	15		6	
Echinoderm larvae		10	6	
Foraminifera	46	48	35	p
Gastropod larvae				p
Isopoda				p
Pteropoda	66	232	105	p

*Due to hole discovered in sampler cup, the sample probably was not quantitative.

BB 280 22-23 March 1961 Station 67 47°58' N, 125°02' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2349-0003	6	11.62	1	12
34	2349-0003	9	9.15	1	12
63	2319-2329	5	7.78	1	12
91	2319-2329	3	7.40	2	12

Depth (m)

5	34	63	91
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Direct count

Pteropoda 1.89

Aliquot count

CALANOIDA

<i>Acartia danae</i>				7
<i>Calanus pacificus</i>	17	44	51	
<i>C. tenuicornis</i>	9	66	13	34
<i>Calocalanus styliremis</i>	17	11	39	
<i>C. tenuis</i>	9		P	
<i>Clausocalanus arcuicornis</i>				
<i>forma minor</i>	9			7
<i>C. pergens</i>	43	66		34
<i>Ctenocalanus vanus</i>	95	44	52	102
<i>Metridia lucens</i>	9		13	14
<i>Paracalanus parvus</i>	26	22	39	
<i>Pseudocalanus minutus</i>	163	808	630	243
<i>Scolecithricella minor</i>				7

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3483	4142	2211	1196
<i>Oncaea tenella pacifica</i>	9	11	13	34
Total unidentified Copepoda		251	116	68
Nauplii (Copepoda)	1023	1683	977	189

OTHER GROUPS

Appendicularia	26	65	13	27
Foraminifera	249	306	77	34
Gastropod larvae	9			7
Medusae	9			

	Depth (m)			
	5	34	63	91
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Pelecypod larvae		22	13	
Polychaeta				7
Pteropoda	77	153	244	47
Tintinnida			13	

BB 280 23 March 1961 Station 71 48°27' N, 124°45' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1212-1222	6	6.13	1	12
34	1212-1222	4	6.37	1	12
63	1144-1154	4	8.39	1	12
91*	1144-1154	3		1	12

Depth (m)				
Direct count				
Chaetognatha			6.28	p
Aliquot count				

CALANOIDA

<i>Calanus pacificus</i>	98			
<i>C. tenuicornis</i>	33	31	12	p
<i>Calocalanus styliremis</i>	16	p	12	p
<i>C. tenuis</i>	16	p		p
<i>Clausocalanus pergens</i>		16	12	p
<i>Ctenocalanus varus</i>	98	16	119	p
<i>Paracalanus parvus</i>		63	12	p
<i>Pseudocalanus minutus</i>	2284	1177	1216	p

	Depth (m)			
	5	36	63	91*
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Corycaeus anglicus</i>				p
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1941	1868	1609	p
<i>Oncaea tenella pacifica</i>	16		12	p
Total unidentified Copepoda		597	870	p
Nauplii (Copepoda)	3931	1758	1097	p
OTHER GROUPS				
Actinotroch larvae	16			
Appendicularia	359	110	59	
Chaetognatha		31	59	p
Decapod larvae	49		12	
Echinoderm larvae		31	48	p
Foraminifera	82		12	p
Isopoda			12	
Pelecypod larvae	228	157	167	
Polychaeta	16	31		p
Pteropoda	33	110	119	p

*Records inadequate concerning number of flowmeter revolutions.

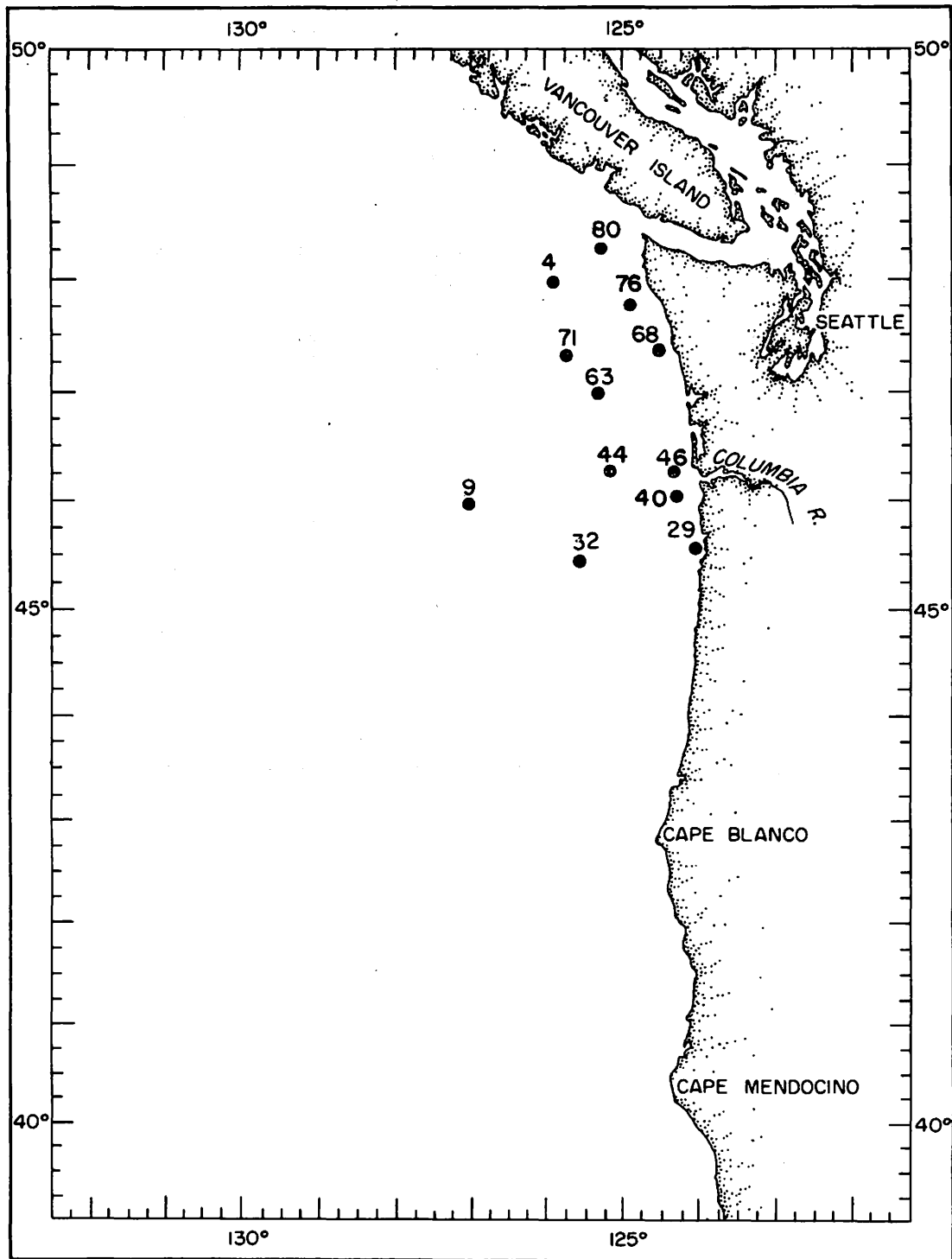


Fig. 3. Zooplankton sampling stations Brown Bear Cruise 287, 8 - 24 May 1961.

BB 287 9 May 1961 Station 4 48°00' N, 125°51' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1340-1350	+	9.78	100	12
30*	1340-1350	3	10.80	5	12
60*	1312-1322	+	7.03	100	12
100*	1312-1322	2	7.24	10	12

Depth (m)

5* 30* 60* 100*

Direct count

Chaetognatha				0.14
Euphausiacea			3.89	0.14
Fish larvae			0.09	
Pteropoda			8.23	6.69
				1.52

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	0.4			
<i>A. danae</i>			0.1	
<i>A. longiremis</i>	7		0.1	
<i>Calanus cristatus</i>				1
<i>C. pacificus</i>	0.4	42	7	
<i>C. tenuicornis</i>			0.4	
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	0.6			
<i>C. arcuicornis forma minor</i>				1
<i>C. pergens</i>				1
<i>Ctenocalanus vanus</i>		4	1	3
<i>Eucalanus bungii bungii</i>		2	0.3	
<i>Lucicutia flavicornis</i>				1
<i>Metridia lucens</i>				14
<i>Paracalanus parvus</i>	0.1			
<i>Paraeuchaeta elongata</i>		2		
<i>Pseudocalanus minutus</i>	22	7	5	29
<i>Scolecithricella minor</i>	0.1	2	2	4

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.2		0.3	7
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	0.1	298	3	95
Total unidentified Copepoda				3
Nauplii (Copepoda)				1

	Depth (m)			
	5*	30*	60*	100*
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	2			
Barnacle nauplii			0.7	10
Cladocera	0.1			
Cyphonautes larvae	0.1			
Decapod larvae				1
Echinoderm larvae		5		
Euphausiacea	9		1	14
Fish larvae		2		
Ostracoda				1
Pteropoda		109	98	1
Radiolaria				4

*Screens on sampler cups six mesh.

BB 287 11 May 1961 Station 9 46°00' N, 127°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0*	0336-0346	20	11.36		12
25*	0307-0317	18	8.89		12
47*	0307-0317	15	8.97		12

	Depth (m)		
	0*	25*	47*
Aliquot count			

CALANOIDA

<i>Acartia danae</i>		0.1	0.2
<i>A. longiremis</i>	1	1	0.4
<i>Calanus cristatus</i>	0.3	0.4	4
<i>C. pacificus</i>	0.1	0.2	0.6
<i>C. plumchrus</i>	135	147	108
<i>C. tenuicornis</i>	0.2	1	3
<i>Calocalanus styliremis</i>		0.1	1

	Depth (m)		
	0*	25*	47*
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Clausocalanus arcuicornis</i>			
<i>forma major</i>	0.4		
<i>C. arcuicornis forma minor</i>	10	16	13
<i>C. pergens</i>			P
<i>Ctenocalanus vanus</i>	1	15	3
<i>Eucalanus bungii bungii</i>	0.1	2	2
<i>Euchirella</i> sp.		0.1	0.1
<i>Heterorhabdus tanneri</i>		0.2	0.2
<i>Lucicutia flavicornis</i>	0.1	1	5
<i>Metridia lucens</i>	1	19	20
<i>Paracalanus parvus</i>	2	0.3	p
<i>Paraeuchaeta elongata</i>	0.2	0.1	3
<i>Pseudocalanus minutus</i>	23	33	25
<i>Scolecithricella minor</i>	0.6	2	8
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	433	209	399
<i>Oncaea conifera</i>			0.3
Total unidentified Copepoda			1
Nauplii (Copepoda)	4	10	3
OTHER GROUPS			
Amphipoda	11	0.4	1
Appendicularia			0.2
Chaetognatha		2	0.2
Decapod larvae	0.1		0.3
Euphausiacea	0.8	2	2
Fish larvae			0.1
Medusae	1	2	
Pteropoda	7	52	27

*Screens on sampler cups six mesh.

BB 287 15 May 1961 Station 29 45°34' N, 124°02' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
4	1333-1343	19	6.24		12
30	1313-1323	12	4.90		12
45	1313-1323	12	6.72		12

Depth (m)

4	30	45
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Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	1	0.4	
<i>Calanus pacificus</i>	98	49	46
<i>C. plumchrus</i>	12	2	12
<i>C. tenuicornis</i>		4	2
<i>Calocalanus styliremis</i>		0.2	0.4
<i>Centropages abdominalis</i>	4		
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	1	19	36
<i>Ctenocalanus vanus</i>		8	17
<i>Eucalanus bungii bungii</i>			0.1
<i>Metridia lucens</i>	0.2	0.6	10
<i>Paracalanus parvus</i>	390		
<i>Pseudocalanus minutus</i>	1339	2489	209

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2302	1918	790
<i>Oncaea</i> sp.		4	0.4

HARPACTICOIDA

<i>Microsetella</i> sp.		0.2	
Total unidentified Copepoda	0.5	0.4	82
Nauplii (Copepoda)	3744	632	1043

OTHER GROUPS

Amphipoda		0.2	
Appendicularia	496	68	343
Chaetognatha	3	4	10
Ctenophora	0.3	0.2	2
Decapod larvae	0.5		0.3
Euphausiacea		5	0.3
Fish eggs	0.2		0.1

	Depth (m)		
	4	30	45
Aliquot count (cont.)			
OTHER GROUPS (cont.)			
Fish larvae			0.1
Medusae	1	0.2	0.4
Polychaeta		2	
Pteropoda	44	279	2970

BB 287 16 May 1961 Station 32 45°27' N, 125°34' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	0548-0603	23	9.34		12
21	0548-0603	33	7.50		12
50*	0453-0508	11	8.37		12

	Depth (m)		
	0	21	50*
Aliquot count			

CALANOIDA

<i>Calanus cristatus</i>			0.1
<i>C. pacificus</i>	1	1	11
<i>C. plumchrus</i>	77	56	7
<i>C. tenuicornis</i>	2		11
<i>Calocalanus styliremis</i>		21	5
<i>Clausocalanus arcuicornis</i>			
forma major	2	1	0.2
<i>C. arcuicornis</i> forma minor	32	55	76
<i>C. pergens</i>	1	0.1	
<i>Ctenocalanus vanus</i>	1	1	51
<i>Eucalanus bungii bungii</i>			0.6
<i>Lucicutia flavicornis</i>			0.3
<i>Metridia lucens</i>		0.1	29
<i>Paracalanus parvus</i>	74	40	

	Depth (m)		
	0	21	50*
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Paraeuchaeta elongata</i>			0.2
<i>Pseudocalanus minutus</i>	4195	2938	556
<i>Scolecithricella minor</i>			4
<i>Scolecithrix</i> sp.			0.1
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4965	4982	1978
<i>Oncaea conifera</i>		0.4	8
<i>Oncaea</i> sp. copepodid		13	202
HARPACTICOIDA			
<i>Clytemnestra rostrata</i>			0.1
<i>Microsetella rosea</i>		0.4	0.4
Total unidentified Copepoda	749	1490	321
Nauplii (Copepoda)	5243	4815	440
OTHER GROUPS			
Amphipoda	14		0.1
Appendicularia	428	718	287
Cephalopoda		0.1	
Chaetognatha	0.1	1	3
Decapod larvae	1	0.3	0.1
Euphausiacea	5	293	14
Fish eggs	4	0.1	
Fish larvae		0.5	
Medusae	0.1	2	4
Ostracoda			0.2
Polychaeta	2	2	17
Pteropoda	1073	905	3793
Salpida		85	7

*Depth varied from 35 to 65 meters.

BB 287

17 May 1966

Station 40

46°04' N, 124°18' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1215-1223	6	11.73		12
10	1215-1223	13	13.37		12
25*	1140-1150	10	9.76		12
75*	1140-1150	13	8.99		12

Depth (m)				
	0	10	25*	75*

Aliquot count				
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CALANOIDA				
<i>Acartia clausii</i>	37	0.3		0.3
<i>A. danae</i>		0.2		
<i>A. longiremis</i>	1	0.1	0.5	0.4
<i>A. tonsa</i>	0.5			0.1
<i>Calanus pacificus</i>		69	107	33
<i>C. plumchrus</i>	4	0.5	15	6
<i>C. tenuicornis</i>		0.1	1	0.2
<i>Calocalanus styliremis</i>		0.2		2
<i>Centropages abdominalis</i>	32			0.1
<i>Clausocalanus arcuicornis</i>				
<i>forma minor</i>	0.4	1	5	24
<i>C. pergens</i>		1		
<i>Ctenocalanus vanus</i>	0.3	9	0.3	8
<i>Eucalanus bungii bungii</i>			0.1	
<i>Heterorhabdus tanneri</i>			0.3	
<i>Metridia lucens</i>		0.1	5	
<i>Paracalanus parvus</i>	53	0.8	0.4	0.3
<i>Paraeuchaeta elongata</i>			0.5	
<i>Pseudocalanus minutus</i>	548	1376	469	1596
<i>Scolecithricella minor</i>			0.8	

CYCLOPOIDA				
<i>Corycaeus anglicus</i>				0.1
<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	97	6748	1340	9089
<i>Oncaea conifera</i>			0.1	
<i>Oncaea</i> sp. copepodid			0.3	4

	Depth (m)			
	0	10	25*	75*
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Clytemnestra rostrata</i>			0.1	
<i>Microsetella rosea</i>			0.3	
Total unidentified Copepoda	859	960	12	422
Nauplii (Copepoda)	9784	623	357	1865
OTHER GROUPS				
Amphipoda				0.1
Appendicularia	22	5	10	6
Branchiura	0.3			
Chaetognatha	1	5	2	10
Decapod larvae		0.2	0.2	9
Euphausiacea	1	9	0.4	3
Fish larvae		0.1		
Ostracoda			0.3	
Polychaeta	0.3			0.2
Pteropoda	130	963	53	4636

*Sampler did not close with second messenger.

BB 287

18 May 1961

Station 44

46°18' N, 125°09' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1703-1717	47	13.49		12
15	1703-1717	20	3.63		12
30	1558-1614	23	7.05		12
45	1558-1614	1	0.47		12

Depth (m)

0	15	30	45
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Aliquot count

CALANOIDA

<i>Acartia danae</i>			0.1	
<i>Calanus pacificus</i>	0.4	0.6	0.5	2
<i>C. plumchrus</i>	209	36	114	
<i>Calocalanus styliremis</i>	2	1	9	
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	0.4		2	4
<i>C. pergens</i>	0.1			
<i>Ctenocalanus vanus</i>		12	4	17
<i>Eucalanus bungii bungii</i>		0.3	0.3	
<i>Paracalanus parvus</i>	13	3	2	
<i>Pseudocalanus minutus</i>	89	94	457	142

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2665	4440	1548	939
<i>Oncaea conifera</i>			0.3	
<i>Oncaea</i> sp. copepodid				9

HARPACTICOIDA

<i>Microsetella rosea</i>		8	0.8	2
Total unidentified Copepoda	96	272		86
Nauplii (Copepoda)	992	1760	1108	172

OTHER GROUPS

Amphipoda	5	11	5	
Appendicularia	96	413	142	150
Branchiura		0.3		
Cephalopoda		0.3		
Chaetognatha	0.6	0.3	1	
Decapod larvae		1	0.1	
Euphausiacea	0.6	41	7	21

	Depth (m)			
	0	15	30	45
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Fish eggs		10		
Fish larvae		1	0.1	
Medusae		7	0.1	
Polychaeta		0.6	9	6
Pteropoda	1204	0.3	496	7865
Salpida	0.7	248	1065	9

BB 287 19 May 1961 Station 46 46°17' N, 124°21' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	0036-0046	3	7.12		12
15	0036-0046	13	9.97		12

	Depth (m)	
	0	15
Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>	0.2	11
<i>Calanus pacificus</i>	16	172
<i>C. plumchrus</i>	2	0.3
<i>Clausocalanus arcuicornis forma minor</i>	1	4
<i>Ctenocalanus vanus</i>	3	7
<i>Metridia lucens</i>	0.5	2
<i>Paracalanus parvus</i>	15	8
<i>Pseudocalanus minutus</i>	463	4874

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	193	4088
<i>Oncaea</i> sp. copepodid		0.5

	Depth (m)	
	0	15
Aliquot count (cont.)		
HARPACTICOIDA		
<i>Microsetella rosea</i>	0.7	0.5
Total unidentified Copepoda	1	420
Nauplii (Copepoda)	64	1840
OTHER GROUPS		
Amphipoda	0.1	0.2
Appendicularia	1	10
Chaetognatha	0.1	0.7
Ctenophora		0.1
Euphausiacea	0.1	11
Fish eggs	0.1	
Pteropoda	0.1	

BB 287 21 May 1961 Station 63 47°01' N, 125°19' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1332-1342	4	6.57	1	12
15	1332-1342	2	9.13	5	12

	Depth (m)	
	5	15
Direct count		
Chaetognatha		0.11
Pteropoda	0.30	0.22
Siphonophora	0.30	

	Depth (m)	
	5	15
	Aliquot count	
CALANOIDA		
<i>Calanus pacificus</i>		9
<i>C. tenuicornis</i>		2
<i>Calocalanus styliremis</i>	P	P
<i>C. tenuis</i>	P	
<i>Clausocalanus arcuicornis</i>		2
<i>C. pergens</i>		6
<i>Ctenocalanus vanus</i>	76	13
<i>Pseudocalanus minutus</i>	213	36
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4140	432
<i>Oncaea tenella pacifica</i>		90
Total unidentified Copepoda	76	158
Nauplii (Copepoda)	426	153
OTHER GROUPS		
Appendicularia		2
Chaetognatha		2
Echinoderm larvae	61	77
Euphausiacea	61	155
Pteropoda	304	110

BB 287 22 May 1961 Station 68 47°23' N, 124°30' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0*	0059-0109	56	1.81	1	12
6*	0059-0109	49	5.64	1	12
15*	0059-0109	16	6.85	1	12

Depth (m)

0* 6* 15*

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	276		
<i>A. longiremis</i>	55	18	
<i>Calanus pacificus</i>		35	
<i>C. tenuicornis</i>			14
<i>Centropages</i> sp. copepodid	442		
<i>Paracalanus parvus</i>	221		14
<i>Pseudocalanus minutus</i>	110	2057	1212

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2597	425	788
Total unidentified Copepoda	221		
Nauplii (Copepoda & Euphausiacea)	4917	1223	730

OTHER GROUPS

Appendicularia	4365	887	1241
Barnacle nauplii		18	
Polychaeta		35	58
Pteropoda	829	1986	29
Tintinnida		18	

*Contains large amount of phytoplankton.

BB 287 22 May 1961 Station 71 47°19' N, 125°43' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1225-1236	7	10.94	1	12
15	1225-1236	12	11.84	1	12
61	1155-1205	5	7.20	2	12
92	1155-1205	8	7.10	2	12

Depth (m)

0 15 61 92

Direct count

Chaetognatha	0.08	0.14
Decapod larvae	0.59	
Fish eggs	0.08	
Pteropoda	6.25	1.97

Aliquot count

CALANOIDA

<i>Calanus pacificus</i>		21	56
<i>Clausocalanus pergens</i>			14
<i>Ctenocalanus vanus</i>	8		28
<i>Eucalanus bungii</i>			7
<i>californicus</i>			7
<i>Heterorhabdus papilliger</i>			7
<i>Lucicutia flavicornis</i>			7
<i>Microcalanus pusillus</i>		14	
<i>Paracalanus parvus</i>		21	
<i>Pseudocalanus minutus</i>	18	177	14
<i>Scolecithricella minor</i>			7

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	1910	6698	799	570
<i>Oncaea conifera</i>				7
<i>O. tenella pacifica</i>				14

HARPACTICOIDA

<i>Microsetella norvegica</i>	9	8		7
Total unidentified Copepoda	27			
Nauplii (Copepoda)	119	321	21	49

	Depth (m)			
	0	15	61	92
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda			7	
Appendicularia	18	17		
Euphausiacea		1672	528	873
Foraminifera		8		14
Pelecypod larvae				7
Polychaeta			21	14
Pteropoda		10017	882	479
Radiolaria				7
Tintinnida		591		

BB 287 23 May 1961 Station 76 47°47' N, 124°53' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	0133-0143	3	10.04	5	12
18	0133-0143	7	9.43	1	12
36	0133-0143	2	11.32	5	12

Depth (m)		
0	18	36

Direct count	
Chaetognatha	0.11
Ctenophora	0.11
Medusae	0.09
Pteropoda	3.00

Aliquot count	
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CALANOIDA			
<i>Acartia longiremis</i>		11	
<i>Calanus pacificus</i>	62	22	3
<i>C. plumchrus</i>			3
<i>Ctenocalanus vanus</i>	8	117	5

	Depth (m)		
	0	18	36
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Metridia lucens</i>			2
<i>Pseudocalanus minutus</i>	38	498	12
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	345	2226	330
<i>Oncaea tenella pacifica</i>			2
Total unidentified Copepoda		21	11
Nauplii (Copepoda)	24	170	44
OTHER GROUPS			
Echinoderm larvae			2
Euphausiacea			2
Pteropoda		64	19
Tintinnida		53	19

BB 287 23 May 1961 Station 80 48°17' N, 125°15' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1346-1358	23	11.87	1	12

Depth (m)

0

Direct count

Chaetognatha	2.86
Ctenophora	0.17
Fish larvae	0.08

	Depth (m)
	0
	Aliquot count
CALANOIDA	
<i>Acartia clausii</i>	143
<i>A. longiremis</i>	573
<i>Calanus pacificus</i>	524
<i>Ctenocalanus vanus</i>	8
<i>Microcalanus pusillus</i>	8
<i>Pseudocalanus minutus</i>	252
Total unidentified Copepoda	51
Nauplii (Copepoda)	573
OTHER GROUPS	
Barnacle nauplii	8
Chaetognatha	8
Euphausiacea	8

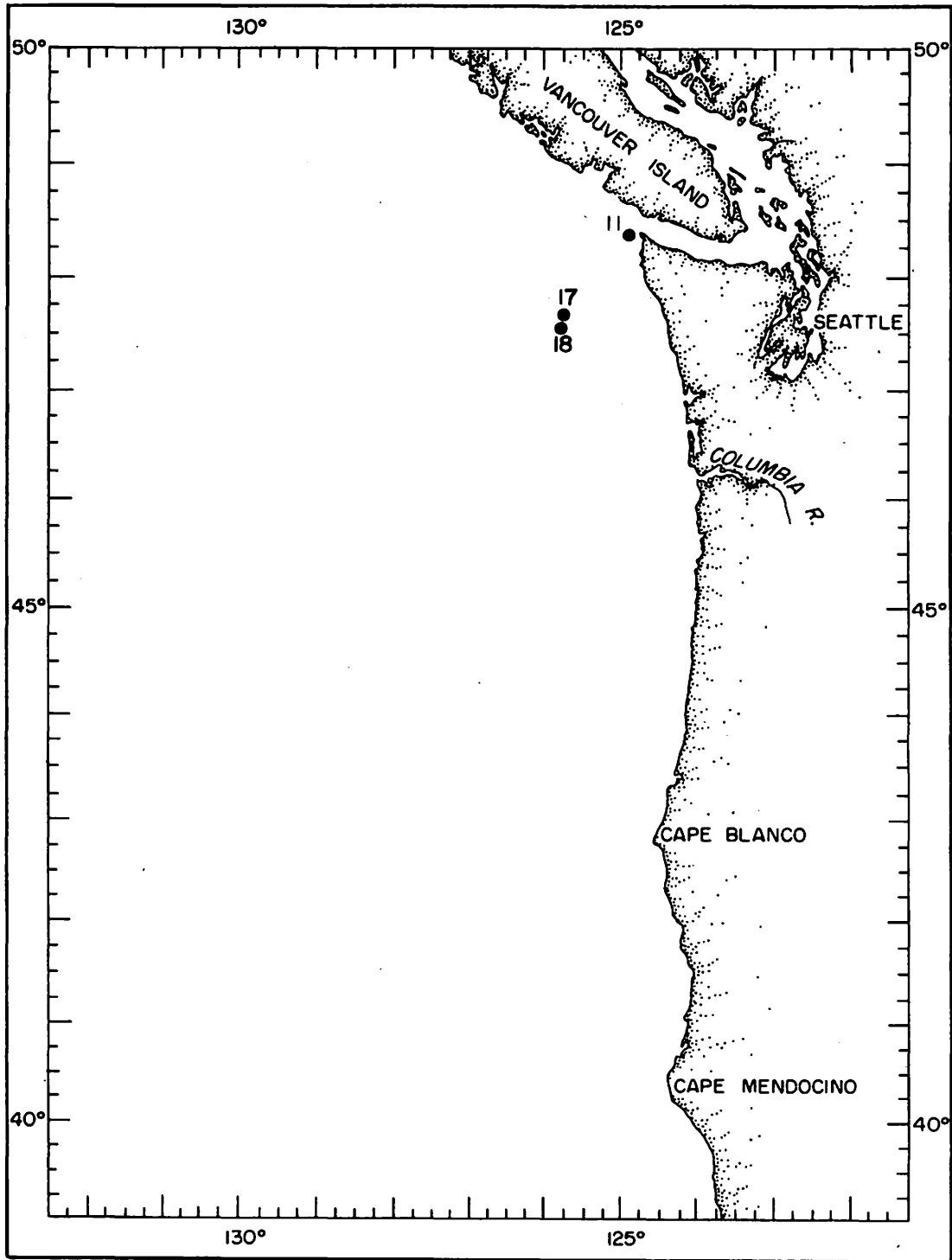


Fig. 4. Zooplankton sampling stations Brown Bear Cruise 288, 9 - 19 June 1961.

BB 288 10 June 1961 Station 11 48°23' N, 124°52' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1104-1119	25	6.16	1	12
15*	1104-1119	16	8.95	1	12
38	1104-1119	5	7.86	5	12

Depth (m)

5* 15* 38

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	308	11	26
<i>A. longiremis</i>	244	570	21
<i>Acartia</i> sp. copepodid	260		
<i>Calanus pacificus</i>	178	514	81
<i>C. plumchrus</i>			3
<i>C. tenuicornis</i>			8
<i>Centropages abdominalis</i>		22	
<i>Ctenocalanus vanus</i>		11	
<i>Metridia lucens</i>		22	
<i>Microcalanus pusillus</i>			10
<i>Paracalanus parvus</i>	114	570	
<i>Pseudocalanus minutus</i>	65	45	267

CYCLOPOIDA

<i>Corycaeus anglicus</i>		11	8
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	503	1117	153
<i>Oncaea tenella pacifica</i>			5

HARPACTICOIDA

<i>Microsetella norvegica</i>			3
Total unidentified Copepoda	2419	1106	61
Nauplii (Copepoda & Euphausiacea)	12500	5363	117

OTHER GROUPS

Appendicularia	1396	2167	
Barnacle nauplii	81	56	
Chaetognatha	16	11	3
Cladocera	48	56	
Echinoderm larvae	97	89	

	Depth (m)		
	5*	15*	38
Aliquot count (cont.)			
OTHER GROUPS (cont.)			
Pelecypoda			3
Pteropoda	828	1039	3
Rotifera	812	22	
Tintinnida	49	22	

*Contains large amount of phytoplankton.

BB 288 11 June 1961 Station 17 47°39' N, 125°45' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
46	1503-1515	+	7.27	10	12

		Depth (m)
		46
		Direct count
Amphipoda		0.14
Medusae		0.14
Polychaeta		3.58
Pteropoda		863
		Aliquot count

CALANOIDA

<i>Calanus pacificus</i>	1
<i>C. tenuicornis</i>	7
<i>Clausocalanus pergens</i>	1
<i>Euchirella rostrata</i>	1
<i>Pseudocalanus minutus</i>	10

	Depth (m)
	46
<u>Aliquot count (cont.)</u>	
CYCLOPOIDA	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	250
<i>Oncaea conifera</i>	1
<i>O. tenella pacifica</i>	4
Total unidentified Copepoda	5
Nauplii (Copepoda & Euphausiacea)	34
OTHER GROUPS	
Amphipoda	1
Appendicularia	5
Cyphonautes larvae	1
Euphausiacea	3
Medusae	1
Tintinnida	3
Polychaeta	22

BB 288 11 June 1961 Station 18 47°34' N, 125°47' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
40	1545-1600	4	2.27	1	20
100	1545-1600	+	5.69	100	20
225	1545-1600	+	10.04	100	20

	Depth (m)		
	40	100	225
	<u>Direct count</u>		
Amphipoda	11.45		
Pteropoda	2.20		

	Depth (m)		
	40	100	225
Aliquot count			
CALANOIDA			
<i>Calanus pacificus</i>		2	0.1
<i>C. plumchrus</i>	88		
<i>Clausocalanus arcuicornis</i>		0.4	0.2
<i>Lucicutia flavicornis</i>		0.2	
<i>Metridia lucens</i>			0.5
<i>Microcalanus pusillus</i>			7
<i>Mimocalanus cultrifer</i>			0.1
<i>Paraeuchaeta elongata</i>			0.1
<i>Pseudocalanus minutus</i>	264	0.2	
<i>Racovitzanus antarcticus</i>			0.7
<i>Scolecithricella minor</i>			0.3
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	7665	38	22
<i>Oncaea conifera</i>			0.7
<i>O. media</i>		0.2	14
<i>O. tenella pacifica</i>	308	7	22
HARPACTICOIDA			
<i>Microsetella norvegica</i>	529	5	6
Total unidentified Copepoda	44	1	0.6
Nauplii (Copepoda & Euphausiacea)	705	10	3
OTHER GROUPS			
Amphipoda			0.1
Appendicularia	132	0.4	
Chaetognatha			0.1
Cyphonautes larvae		0.2	
Echinoderm larvae	44		
Euphausiacea	44		
Foraminifera			0.1
Ostracoda		0.6	0.8
Polychaeta		1	0.3
Pteropoda	661	139	34
Radiolaria			0.2
Siphonophora			0.1
Tintinnida	176		0.4

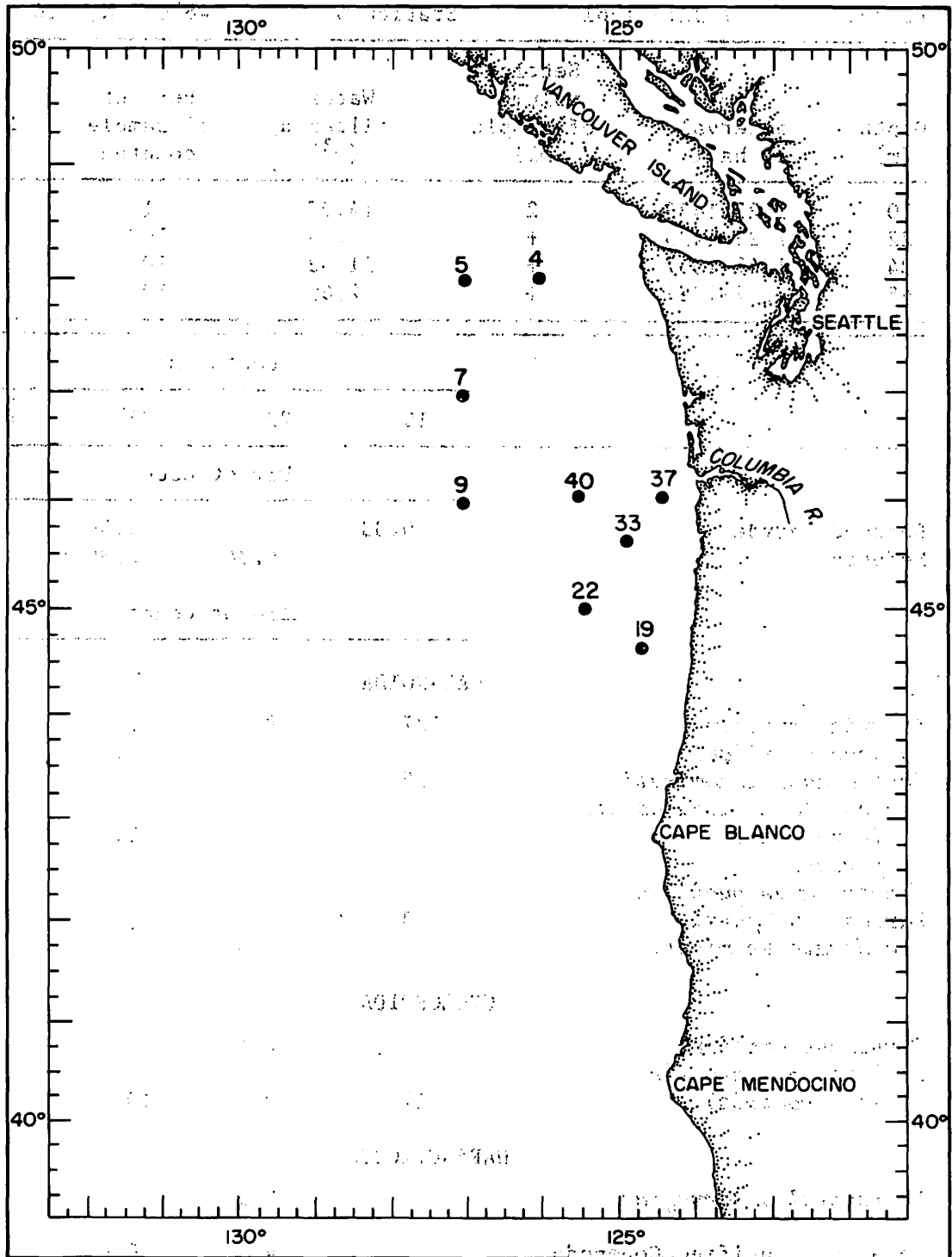


Fig. 5. Zooplankton sampling stations Brown Bear Cruise 290, 6 - 25 July 1961.

BB 290 7 July 1961 Station 4 48°01' N, 126°03' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	1423-1433	2	14.97	10	6
22	1423-1433	+	1.89	100	6
34	1347-1357	+	11.52	100	6
45	1347-1357	+	2.69	100	6

Depth (m)

10	22	34	45
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Direct count

Decapod larvae	0.33	0.34	
Medusae	6.34	2.86	

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	127	8	7	2
<i>Calanus pacificus</i>		2	0.8	0.5
<i>Centropages abdominalis</i>	15			0.5
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>			0.3	
<i>C. pergens</i>			0.2	1
<i>Microcalanus pusillus</i>	2		0.1	
<i>Paracalanus parvus</i>	3			
<i>Pseudocalanus minutus</i>		0.5		

CYCLOPOIDA

<i>Corycaeus anglicus</i>		0.5		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	17	9	10	3

HARPACTICOIDA

<i>Microsetella norvegica</i>		0.5		0.5
Total unidentified Copepoda		4	0.4	
Nauplii (Copepoda)	5	3	2	2

OTHER GROUPS

Amphipoda		3	0.6	
Appendicularia	1			
Barnacle nauplii	1			
Ctenophora	1			
Cyphonautes larvae	1		0.4	

	Depth (m)			
	10	22	34	45
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Echinoderm larvae			0.2	
Euphausiacea		2	0.7	1
Foraminifera			0.3	
Medusae	1			
Pteropoda			0.1	
Radiolaria				0.5
Siphonophora			1	6

BB 290 7 July 1961 Station 5 47°59' N, 127°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	2254-2306	3	11.15	10	6
16	2254-2306	3	12.07	10	6
31	2220-2230	1	8.40	10	6
45	2220-2230	5	7.01	5	6

	Depth (m)			
	10	16	31	45
Direct count				
Amphipoda	0.90	0.08	0.36	18.12
Euphausiacea	0.27	1.66	3.21	7.56
Medusae	0.90		0.48	0.14
Polychaeta	0.09			
Pteropoda			0.48	
Salpida	0.27		0.24	

	Depth (m)			
	10	16	31	45
Aliquot count				
CALANOIDA				
<i>Acartia longiremis</i>			1	9
<i>A. negligens</i>		1		
<i>Calanus cristatus</i>				6
<i>C. pacificus</i>	179	7	60	17
<i>C. tenuicornis</i>	5	70	1	
<i>Clausocalanus arcuicornis</i> forma major	15			
<i>C. arcuicornis</i> forma minor	16	10	5	6
<i>C. pergens</i>	13	4	10	3
<i>Eucalanus</i> sp. copepodid	1			25
<i>Euchirella rostrata</i>		p	1	
<i>Heterorhabdus norvegicus</i>		p		
<i>Lucicutia flavicornis</i>				p
<i>Metridia lucens</i>	3	20	8	70
<i>Paracalanus parvus</i>	45	8	5	
<i>Paraeuchaeta elongata</i>		1		
<i>Pleuromamma siphias</i>		1		
<i>Pseudocalanus minutus</i>	12	2	8	161
<i>Scolecithricella minor</i>		2	2	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	159	51	60	172
<i>Oncaea conifera</i>				p
HARPACTICOIDA				
<i>Microsetella norvegica</i>	3	6		
Total unidentified Copepoda	24	2		25
Nauplii (Copepoda)	7		4	
OTHER GROUPS				
Amphipoda	9	2		34
Appendicularia	4	2	2	3
Chaetognatha	1		8	
Ctenophora	2			
Cyphonautes larvae			1	
Decapod larvae	1			
Euphausiacea	4	12	96	56
Fish eggs	7	40		
Fish larvae			1	
Isopoda	11			

	Depth (m)			
	10	16	31	45
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Medusae	1	1	8	11
Polychaeta	11	12		3
Pteropoda	4	2	16	14
Unidentified eggs			156	

BB 290 8 July 1961 Station 7 46°59' N, 127°03' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	1133-1143	4	6.94	10	6
27	1133-1143	0.5	7.68	10	6
42	1049-1059	11	7.03	2	6
60	1049-1059	4	7.25	10	6

	Depth (m)			
	10	27	42	60
Aliquot count				

CALANOIDA

<i>Acartia danae</i>	p			1
<i>A. longiremis</i>				
<i>Calanus pacificus</i>	177	9	275	40
<i>C. tenuicornis</i>	3		7	4
<i>Calocalanus styliremis</i>	4		21	
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	5	6	28	18
<i>C. pergens</i>	3		7	12
<i>Eucalanus bungii bungii</i>	1		21	
<i>E. bungii californicus</i>		1		22
<i>Heterorhabdus</i> sp. copepodid				1
<i>Metridia lucens</i>	7			32
<i>Paracalanus parvus</i>	103	8	379	1
<i>Pseudocalanus minutus</i>	52	20	1126	275
<i>Scolecithricella minor</i>				7

	Depth (m)			
	10	27	42	60
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	464	12	1252	110
HARPACTICOIDA				
<i>Microsetella norvegica</i>	4	3		1
Total unidentified Copepoda	8	1	14	3
Nauplii (Copepoda)	3		56	
OTHER GROUPS				
Amphipoda	1	1		11
Appendicularia	7		7	
Chaetognatha	8		21	1
Euphausiacea	141	1	77	7
Fish eggs	16	9		
Fish larvae	1			
Medusae	6		14	14
Pteropoda	1	3	49	3
Unidentified eggs		150		

BB 290

9 July 1961

Station 9

45°58' N, 127°03' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
22	0226-0236	10	10.33		6
34*	0311-0321	10	9.53		6
45	0311-0321	9	10.71		6

Depth (m)

22	34*	45

Aliquot count

CALANOIDA

<i>Acartia danae</i>	0.3	0.1	
<i>Calanus pacificus</i>	17	15	28
<i>C. plumchrus</i>			0.1
<i>C. tenuicornis</i>	10	13	14
<i>Candacia bipinnata</i>	0.4	4	
<i>Clausocalanus arcuicornis</i> forma major	3		
<i>C. arcuicornis</i> forma minor	17	25	54
<i>C. pergens</i>	0.5		
<i>Ctenocalanus vanus</i>		19	5
<i>Eucalanus bungii bungii</i>			0.2
<i>Euchirella rostrata</i>	0.1		0.1
<i>Heterorhabdus papilliger</i>	0.1		0.2
<i>Lucicutia flavicornis</i>			0.1
<i>Metridia lucens</i>	177	6	10
<i>Paracalanus parvus</i>	29	36	68
<i>Pseudocalanus minutus</i>		6	55
<i>Scolecithricella minor</i>	0.7		5

CYCLOPOIDA

<i>Corycaeus anglicus</i>	1	0.7	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	15	2	14

HARPACTICOIDA

<i>Clytemmestra rostrata</i>	0.1		
Nauplii (Copepoda)	2		16

OTHER GROUPS

Amphipoda	1	1	1
Appendicularia		2	9
Branchiura		2	

	Depth (m)		
	22	34*	45
Aliquot count (cont.)			
OTHER GROUPS (cont.)			
Chaetognatha	7	7	3
Decapod larvae	3	0.4	0.1
Euphausiacea	2	8	19
Fish eggs	0.2		0.1
Fish larvae	2	0.2	0.6
Medusae	1	8	13
Polychaeta	2	2	0.5
Pteropoda			0.4
Salpida	119	15	24

*Sampler slipped to 45 meters at some time during haul.

BB 290 11 July 1961 Station 19 44°38' N, 124°41' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	1520-1530	23	13.28		6
13	1520-1530	6	5.02		6

Depth (m)	
10	13
Aliquot count	

CALANOIDA

<i>Acartia longiremis</i>	283	289
<i>Calanus pacificus</i>	75	40
<i>C. tenuicornis</i>		105
<i>Calocalanus styliremis</i>	0.4	
<i>Centropages abdominalis</i>	0.6	0.8
<i>Clausocalanus arcuicornis forma minor</i>		3
<i>Ctenocalanus vanus</i>		0.2
<i>Eucalanus bungii bungii</i>	0.1	
<i>Paracalanus parvus</i>	278	89
<i>Pseudocalanus minutus</i>	230	140

	Depth (m)	
	10	13
Aliquot count (cont.)		
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1030	7
Nauplii (Copepoda)	0.4	0.4
OTHER GROUPS		
Appendicularia	33	4
Chaetognatha	0.1	
Euphausiacea		0.2
Fish eggs	0.2	
Polychaeta		0.2
Unidentified eggs	757	2040

BB 290 12 July 1961 Station 22 45°02' N, 125°27' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
15	1220-1230	2	1.20		6

Depth (m)	
15	
Aliquot count	

CALANOIDA	
<i>Acartia danae</i>	14
<i>A. longiremis</i>	6
<i>Calanus pacificus</i>	1
<i>C. tenuicornis</i>	388
<i>Candacia</i> sp. copepodid	1
<i>Clausocalanus arcuicornis</i> forma major	5
<i>C. arcuicornis</i> forma minor	149
<i>Ctenocalanus vanus</i>	33
<i>Metridia lucens</i>	1
<i>Paracalanus parvus</i>	71
<i>Pseudocalanus minutus</i>	21

	Depth (m)
	15
<u>Aliquot count (cont.)</u>	
CYCLOPOIDA	
<i>Corycaeus anglicus</i>	3
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	9
Total unidentified Copepoda	17
Nauplii (Copepoda)	8
OTHER GROUPS	
Amphipoda	3
Appendicularia	484
Chaetognatha	52
Euphausiacea	63
Fish eggs	4
Fish larvae	19
Medusae	21
Salpida	5

BB 290 14 July 1961 Station 33 45°38' N, 124°53' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
24	1322-1332	5	9.62		6

Depth (m)

24

Aliquot count

CALANOIDA	
<i>Acartia longiremis</i>	10
<i>Calanus pacificus</i>	21
<i>Calocalanus styliremis</i>	5
<i>Clausocalanus arcuicornis</i> forma minor	57
<i>Ctenocalanus vanus</i>	42
<i>Eucalanus bungii bungii</i>	0.3

	Depth (m)
	24
	<u>Aliquot count (cont.)</u>
CALANOIDA (cont.)	
<i>Metridia lucens</i>	0.1
<i>Paracalanus parvus</i>	42
<i>Pseudocalanus minutus</i>	338
CYCLOPOIDA	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	489
Nauplii (Copepoda)	3
OTHER GROUPS	
Appendicularia	13
Branchiura	5
Chaetognatha	3
Euphausiacea	42
Fish larvae	0.3
Medusae	0.3

BB 290 15 July 1961 Station 37 46°01' N, 124°26' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	0143-0153	94	10.93		6
13	0143-0153	26	7.27		6

Depth (m)

10 13

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	938	580
<i>A. longiremis</i>	9224	2750
<i>Calanus pacificus</i>	1748	828
<i>C. plumchrus</i>		0.1
<i>Candacia</i> sp. copepodid		0.3
<i>Centropages abdominalis</i>	789	193
<i>Ctenocalanus vanus</i>	110	
<i>Eucalanus bungii bungii</i>		0.3
<i>Metridia lucens</i>		0.5
<i>Paracalanus parvus</i>	469	87
<i>Pseudocalanus minutus</i>	2190	1270

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	110	40
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OTHER GROUPS

Amphipoda		0.6
Appendicularia	37	0.4
Chaetognatha	3	6
Decapod larvae		0.1
Euphausiacea	48	34
Fish larvae	0.1	
Medusae	0.1	
Polychaeta		0.1
Pteropoda		7

BB 290

15 July 1961

Station 40

46°02' N, 125°31' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	1358-1408	3	11.55		6
16	1358-1408	6	2.91		6
22	1424-1434	6	11.31		6
28	1424-1434	3	5.06		6

Depth (m)				
	10	16	22	28

Aliquot count				

CALANOIDA

<i>Acartia clausii</i>	0.4	48	5	
<i>A. longiremis</i>	17	103	12	36
<i>Calanus pacificus</i>	0.2	465	4	40
<i>C. plumchrus</i>				2
<i>C. tenuicornis</i>	0.3	48	14	16
<i>Candacia</i> sp. copepodid			0.1	
<i>Centropages abdominalis</i>	0.4	27		6
<i>Clausocalanus arcuicornis</i>				
<i>forma major</i>		7	4	4
<i>C. arcuicornis</i> <i>forma minor</i>	12	69	116	28
<i>Ctenocalanus varus</i>		96	91	46
<i>Epilabidocera amphitrites</i>		0.3		
<i>Eucalanus bungii bungii</i>		2	5	8
<i>Metridia lucens</i>			0.1	8
<i>Paracalanus parvus</i>	5	21	26	14
<i>Pseudocalanus minutus</i>	0.3	378	11	115
<i>Tortanus discaudatus</i>				2

CYCLOPOIDA

<i>Corycaeus anglicus</i>	1	0.3		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	21	7	14	10

HARPACTICOIDA

<i>Clytemnestra rostrata</i>		0.3		
<i>Microsetella rosea</i>	0.1		2	

Total unidentified Copepoda 2

	Depth (m)			
	10	16	22	28
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda		15	4	6
Appendicularia	2	34	5	4
Chaetognatha	3	31	17	36
Decapod larvae			0.1	
Euphausiacea	1	28	21	28
Fish eggs	0.1	0.7	0.4	
Fish larvae	0.3	2	0.3	
Medusae	5	14	23	59
Polychaeta				2
Pteropoda	0.1	0.3		
Salpida			0.2	

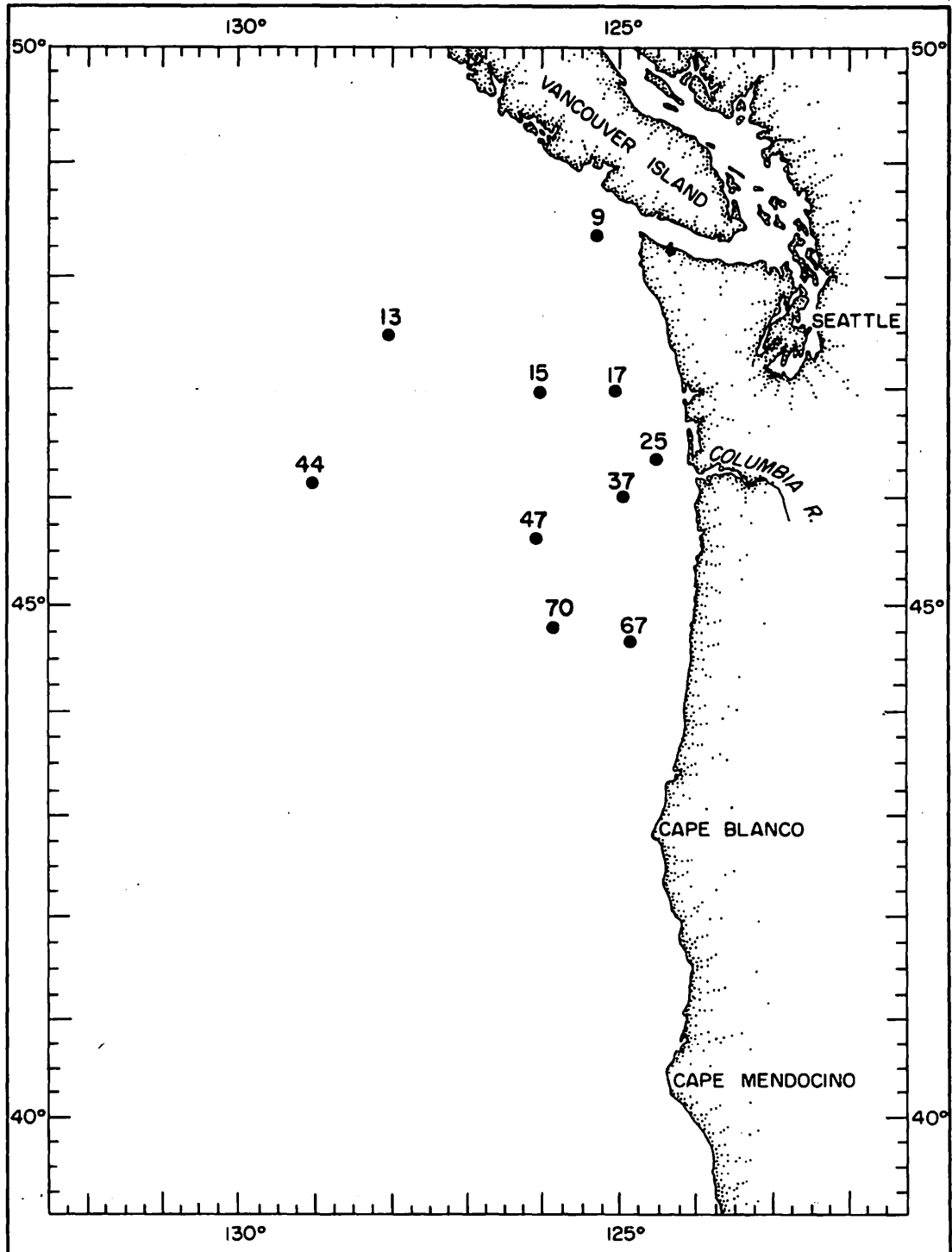


Fig. 6. Zooplankton sampling stations Brown Bear Cruise 293, 14 September - 20 October 1961.

BB 293 15 September 1961 Station 9 48°21' N, 125°16' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0*	1237-1247	8		2	6
30*	1237-1247	+		100	6
60	1313-1323	2	7.48	10	6
80	1313-1323	+	7.13	100	6

Depth (m)

0* 30* 60 80

Direct count

Amphipoda	p	0.27	0.28
Chaetognatha	p	1.60	3.93
Euphausiacea	p	0.27	0.28

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	p	p	8	
<i>A. longiremis</i>	p	p	107	1
<i>Calanus pacificus</i>	p	p	13	1
<i>C. tenuicornis</i>				0.3
<i>Paracalanus parvus</i>	p	p	73	0.1
<i>Pseudocalanus minutus</i>	p	p	120	85
<i>Scolecithricella minor</i>		p	1	1
<i>Tortanus discaudatus</i>				0.1

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	p	p	20	12
Total unidentified Copepoda				0.1
Nauplii (Copepoda)				0.1

OTHER GROUPS

Barnacle cypris				0.4
Euphausiacea				0.3

*Records inadequate concerning revolutions of flow meter.

BB 293 16 September 1961 Station 13 47°29' N, 128°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0*	1214-1224	43	3.69	5	6
30*	1214-1224	19	4.22	5	6
61	1240-1250	5	7.72	5	6
80	1240-1250	3	6.84	5	6

Depth (m)

0* 30* 61 80

Direct count

Chaetognatha	2.13	1.68	0.73
Euphausiacea	4.03	1.55	0.29
Fish larvae		0.13	
Medusae		0.91	1.46
Polychaeta			0.29
Salpida		0.13	

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	16	146	3	3
<i>Calanus pacificus</i>	5	9	18	6
<i>Calocalanus styliremis</i>		9		
<i>Centropages abdominalis</i>	5			
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	5			3
<i>Eucalanus bungii californicus</i>		5		
<i>Lucicutia flavicornis</i>				3
<i>Metridia lucens</i>			10	
<i>Microcalanus pusillus</i>			3	53
<i>Paracalanus parvus</i>	908	10	5	
<i>Pseudocalanus minutus</i>	44	261	29	59
<i>Scolecithricella minor</i>				6

CYCLOPOIDA

<i>Corycaeus anglicus</i>	5			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	743	517	1225	1000
<i>Oncaea media</i>			5	
<i>O. tenella pacifica</i>				6
<i>Oncaea</i> sp. copepodid				175

	Depth (m)			
	0*	30*	61	80
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>				3
<i>M. rosea</i>			3	6
Total unidentified Copepoda			114	117
Nauplii (Copepoda)	38	9	207	102
OTHER GROUPS				
Amphipoda		5		
Appendicularia	190	24	8	
Cyphonautes larvae			3	
Euphausiacea		28		
Foraminifera	22	24	16	26
Isopoda			3	
Medusae	22	9		
Ostracoda			3	6
Pelecypoda				3
Polychaeta				3
Pteropoda		24	3	12
Radiolaria				12
Siphonophora	5	24	3	

*Contains large amount of phytoplankton.

BB 293

17 September 1961

Station 15

46°58' N, 125°59' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	0232-0242	5	8.98	2	6
30	0232-0242	18	8.91	2	6
61	0300-0310	+	7.66	100	6
80	0300-0310	+	9.90	100	6

	Depth (m)			
	0	30	61	80
	Direct count			
Amphipoda	2.56	0.22		0.10
Chaetognatha	0.33	1.68	0.26	0.51
Euphausiacea	9.80	3.25	1.70	0.51
Medusae	14.92	0.56		0.30
Polychaeta	0.22	0.34	0.26	0.20
Pteropoda				0.10
Salpida	0.11			

	Aliquot count			
	0	30	61	80
CALANOIDA				
<i>Acartia longiremis</i>			1	0.1
<i>Calanus pacificus</i>		6		
<i>Calocalanus styliremis</i>	6			
<i>Candacia</i> sp. copepodid			0.1	
<i>Clausocalanus arcuicornis</i> forma minor	211	28		
<i>C. pergens</i>			0.4	0.5
<i>Eucalanus bungii bungii</i>		6	0.4	0.1
<i>Gaetanus armiger</i>			1	1
<i>Heterorhabdus norvegicus</i>			0.3	0.1
<i>Lucicutia flavicornis</i>			1	0.6
<i>Metridia lucens</i>	56	28	4	0.6
<i>Microcalanus pusillus</i>	12			
<i>Paracalanus parvus</i>	34		1	0.1
<i>Paraeuchaeta</i> sp. copepodid			0.4	1
<i>Pleuromamma</i> sp. copepodid				0.1
<i>Pseudocalanus minutus</i>	17	421	0.1	0.1
<i>Racovitzanus antarcticus</i>				1
<i>Scolecithricella minor</i>		33	7	2

	Depth (m)			
	0	30	61	80
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2194	20	9	4
<i>Oncaea conifera</i>		17		
<i>O. tenella pacifica</i>	145	376		
HARPACTICOIDA				
<i>Microsetella norvegica</i>	67	449	0.8	0.1
<i>M. rosea</i>	6	73		
Total unidentified Copepoda	729	421	1	1
Nauplii (Copepoda)	111	1094		
OTHER GROUPS				
Amphipoda	6		0.3	0.2
Appendicularia	150	50		
Chaetognatha	6			
Cyphonautes larvae		22		
Euphausiacea	11	297	0.5	0.3
Foraminifera	39	168	2	0.3
Gastropod larvae		62		
Medusae	17		0.3	0.2
Ostracoda		6	2	1
Pelecypoda		17	0.5	0.1
Polychaeta	17	23	0.3	
Pteropoda	67	73	4	1
Radiolaria		112	0.7	3
Siphonophora				0.1

BB 293 17 September 1961 Station 17 46°58' N, 125°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1233-1243	60	11.34	5	6
35	1233-1243	1	8.96	20	6
65	1207-1217	1	5.33	100	6
85	1207-1217	1	8.84	10	6

Depth (m)				
	5*	35	65	85

Direct count				
Amphipoda		0.56	0.75	
Appendicularia			0.19	
Chaetognatha			0.19	2.04
Ctenophora	1.32		0.38	
Euphausiacea		0.67	0.94	0.45
Medusae		0.11	0.75	
Pteropoda				0.11
Siphonophora				0.68

CALANOIDA				
<i>Acartia clausii</i>			0.2	
<i>A. longiremis</i>	4	0.6	17	13
<i>Calanus pacificus</i>	4		1	3
<i>Clausocalanus arcuicornis</i> forma major			0.4	
<i>C. arcuicornis</i> forma minor		1		
<i>C. pergens</i>		2	0.2	
<i>Ctenocalanus vanus</i>			0.2	
<i>Eucalanus bungii bungii</i>			0.2	
<i>E. bungii californicus</i>				1
<i>Lucicutia flavicornis</i>			3	
<i>Metridia lucens</i>		1		3
<i>Paracalanus parvus</i>	750	4	2	
<i>Parasuchaeta</i> sp. copepodid			0.2	7
<i>Pseudocalanus minutus</i>	14		58	53
<i>Scolecithricella minor</i>	2		1	14
<i>Tortanus discaudatus</i>			2	

CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	129	93	5	28
<i>Oncaea</i> sp. copepodid		0.6		

	Depth (m)			
	5*	35	65	85
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>	18	5	0.6	2
<i>M. rosea</i>	2			
Total unidentified Copepoda	18	6	0.8	2
Nauplii (Copepoda)	41	0.6	0.4	
OTHER GROUPS				
Amphipoda		0.6	0.2	
Appendicularia	527	1	0.6	
Cyphonautes larvae			0.6	
Echinoderm larvae		0.6		1
Euphausiacea			2	10
Foraminifera	37	5	0.2	1
Medusae	4			
Ostracoda			0.2	1
Polychaeta	23	0.6	1	
Pteropoda	9	6	2	1
Radiolaria		0.6	0.6	7
Rotifera	12			
Siphonophora	2		0.4	

*Contains large amount of phytoplankton.

BB 293 18 September 1961 Station 25 46°21' N, 124°28' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1133-1143	2	7.39		6
30	1133-1143	7	7.76		6
60	1102-1112	2	7.03		6
80	1102-1112	1	6.46		6

Depth (m)

0	30	60	80
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Aliquot count

CALANOIDA

<i>Acartia clausii</i>	5			
<i>A. longiremis</i>	84	446	93	12
<i>Aetideus</i> sp. copepodid				0.5
<i>Calanus pacificus</i>	2	67	9	5
<i>Centropages abdominalis</i>	4			
<i>Eucalanus bungii bungii</i>		7		0.1
<i>Lucicutia</i> sp.				0.3
<i>Metridia lucens</i>				1
<i>Paracalanus parvus</i>	145	15		
<i>Paraeuchaeta elongata</i>			0.1	0.1
<i>Pseudocalanus minutus</i>	22	639	27	15
<i>Scolecithricella minor</i>	0.1		2	4

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.4			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	5	119	20	28
Total unidentified Copepoda		39		3
Nauplii (Copepoda)	41			

OTHER GROUPS

Amphipoda	5	0.4	0.1	0.3
Appendicularia		0.1	0.3	0.6
Branchiura	0.3			
Chaetognatha	3	4	1	2
Euphausiacea		0.8	0.1	
Fish eggs	0.1			0.1
Isopoda		0.1		
Medusae		3		0.1
Polychaeta	0.4		0.1	
Pteropoda		1	2	0.1
Unidentified eggs		4	3	9

BB 293 19 September 1961 Station 37 46°02' N, 124°54' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1211-1221	4	6.73		6
35	1211-1221	5	13.28		6
65	1241-1251	1	6.51		12
83	1241-1251	4	7.84		12

Depth (m)

5	35	65	83
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Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	2	38	0.3	0.4
<i>A. negligens</i>	1			
<i>A. tonsa</i>		0.6		
<i>Calanus pacificus</i>	0.6		0.5	1
<i>C. tenuicornis</i>	1	0.1	0.2	1
<i>Candacia</i> sp. copepodid	0.3			
<i>Centropages abdominalis</i>		0.1		
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	0.5			1
<i>C. arcuicornis forma minor</i>	9	3	3	42
<i>C. pergens</i>			0.2	
<i>Ctenocalanus vanus</i>	6	4	9	64
<i>Eucalanus bungii bungii</i>	0.1			1
<i>Heterorhabdus papilliger</i>			0.5	
<i>Lucicutia flavicornis</i>			0.7	17
<i>Metridia lucens</i>	0.1		1	10
<i>Paracalanus parvus</i>	3	77	0.6	0.1
<i>Paraeuchaeta elongata</i>				0.3
<i>Pseudocalanus minutus</i>	14	0.5	0.2	38
<i>Racovitzanus antarcticus</i>				0.3
<i>Scolecithricella minor</i>			0.2	4

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.4	4	0.2	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	40	90	32	182
<i>Oncaea conifera</i>				0.6

	Depth (m)			
	5	35	65	83
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella</i> sp.	19	17		
Total unidentified Copepoda	36	128		0.1
Nauplii (Copepoda)	0.1	17	0.6	13
OTHER GROUPS				
Amphipoda	5		0.3	
Appendicularia		4		
Branchiura	8			0.3
Chaetognatha	8	0.1	0.8	6
Euphausiacea		0.2	0.3	2
Fish eggs		0.4		
Medusae	3		0.6	
Ostracoda			0.2	2
Polychaeta		0.2		
Pteropoda				0.6
Salpida	3		0.2	

BB 293 21 September 1961 Station 44 46°10' N, 129°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1337-1347	1	7.45		6
35	1337-1347	4	10.21		6
65	1400-1410	5	6.00		12
85	1400-1410	2	6.14		12

Depth (m)

5 35 65 85

Aliquot count

CALANOIDA

<i>Acartia danae</i>	0.5	15		
<i>A. longiremis</i>		0.1		
<i>A. negligens</i>	0.1	0.2		
<i>Calanus pacificus</i>		0.4		
<i>C. tenuicornis</i>			2	
<i>Calocalanus styliremis</i>			33	
<i>Candacia</i> sp.		0.2	0.3	
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	12	5		
<i>C. arcuicornis</i> <i>forma minor</i>		34	134	0.3
<i>C. pergens</i>				41
<i>Ctenocalanus vanus</i>		0.4	7	
<i>Eucalanus bungii bungii</i>			0.7	0.2
<i>Lucicutia flavicornis</i>			0.7	
<i>Metridia lucens</i>			0.7	1
<i>Paracalanus parvus</i>	0.3			
<i>Pseudocalanus minutus</i>			0.5	0.7
<i>Racovitzanus antarcticus</i>				0.2
<i>Scolecithricella minor</i>	0.2	0.1		10

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	0.7	0.3	2404	100
<i>Oncaea borealis</i>			0.5	0.3
<i>Oncaea</i> sp. copepodid			33	

HARPACTICOIDA

<i>Clytemmestra rostrata</i>		0.6	0.2	
<i>Microsetella rosea</i>			2	0.2
Total unidentified Copepoda			676	179
Nauplii (Copepoda)	0.1	0.8	351	41

	Depth (m)			
	5	35	65	85
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda			0.2	
Appendicularia	7			
Branchiura		0.1		
Chaetognatha		15	4	0.5
Euphausiacea		0.3	0.3	
Medusae		0.2	3	
Polychaeta		0.2		0.2
Pteropoda	0.1		459	0.3
Salpida	1			

BB 293 22 September 1961 Station 47 45°38' N, 126°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1253-1303	14	6.41		12
35	1253-1303	8	8.56		12
65	1315-1325	2	6.46		6
85	1315-1325	1	7.16		6

	Depth (m)			
	5	35	65	85
Aliquot count				

CALANOIDA				
<i>Acartia clausii</i>			0.8	
<i>A. danae</i>	0.5			
<i>A. longiremis</i>	2	16	19	8
<i>Aetideus armatus</i>			0.2	0.6
<i>Calanus pacificus</i>		0.2	0.7	0.1
<i>C. tenuicornis</i>		0.8		
<i>Candacia</i> sp. copepodid				0.6
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	0.2			

	Depth (m)			
	5	35	65	85
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	1	13	1	
<i>C. pergens</i>				0.1
<i>Ctenocalanus vanus</i>		0.1	2	0.7
<i>Epilabidocera amphitrites</i>	0.2			
<i>Eucalanus bungii bungii</i>		0.5	0.6	0.3
<i>Heterorhabdus</i> sp. copepodid			0.6	0.1
<i>Lucicutia flavicornis</i>		3	2	2
<i>Metridia lucens</i>	0.2	11	36	9
<i>Paracalanus parvus</i>	320			
<i>Paraeuchaeta elongata</i>				0.3
<i>Pseudocalanus minutus</i>		30	81	1
<i>Racovitzanus antarcticus</i>				1
<i>Scolecithricella minor</i>		3	7	15
<i>S. subdentata</i>			0.2	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	3	0.1	0.3	0.1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2293	344	18	16
<i>Oncaea borealis</i>		0.2		
HARPACTICOIDA				
<i>Microsetella rosea</i>	0.3	5		0.1
Total unidentified Copepoda	2434	98	2	1
Nauplii (Copepoda)	10	9		
OTHER GROUPS				
Amphipoda		0.2		
Appendicularia	359	1	0.5	0.1
Chaetognatha	3	4	1	0.4
Euphausiacea		1	0.5	
Fish eggs	0.3			
Fish larvae			0.2	
Medusae	1	0.2		0.3
Ostracoda				14
Pelecypod larvae		0.6		
Polychaeta		1		0.3
Pteropoda	7	0.4		0.7

BB 293

27 September 1961

Station 67

44°40' N, 124°47' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
18	0043-0053	7	16.68		6
25*	0043-0053	1	0.18		6
50	0137-0147	3	5.05		6
91	0137-0147	1	2.33		6

Depth (m)

18	25*	50	91
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Aliquot count

CALANOIDA

<i>Acartia clausii</i>			0.2	
<i>A. longiremis</i>	564	240	348	43
<i>A. tonsa</i>	0.2		0.4	
<i>Calanus pacificus</i>	5	55	10	0.4
<i>Candacia</i> sp. copepodid			0.2	0.4
<i>Centropages abdominalis</i>			0.4	
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	0.1	6	1	
<i>Ctenocalanus vanus</i>		6		
<i>Heterorhabdus</i> sp. copepodid			0.2	
<i>Lucicutia flavicornis</i>	0.1		0.2	
<i>Metridia lucens</i>	3	16	7	18
<i>Paracalanus parvus</i>	126	11	14	0.8
<i>Paraeuchaeta elongata</i>	0.1		0.2	1
<i>Pseudocalanus minutus</i>	454	934	149	3
<i>Scolecithricella minor</i>			5	12
<i>Spinocalanus?</i>				5

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	121	2850	57	386
<i>Oncaea conifera</i>				2
<i>Oncaea</i> sp. copepodid				0.4

HARPACTICOIDA

<i>Microsetella</i> sp. copepodid		11		
Total unidentified Copepoda				6
Nauplii (Copepoda)		327		6

	Depth (m)			
	18	25*	50	91
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	1		0.8	
Cephalopoda				0.4
Chaetognatha	0.1		0.2	3
Decapod larvae	1			
Euphausiacea	6	11	1	0.4
Pteropoda	0.1			

*Probable sampler malfunction.

BB 293 27 September 1961 Station 70 44°48' N, 125°51' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7	1257-1307	5	6.44		6
18	1257-1307	23	6.22		6
50	1233-1243	3	4.77		6
91	1233-1243	1	5.49		6

	Depth (m)			
	7	18	50	91
Aliquot count				

CALANOIDA				
<i>Acartia danae</i>			0.3	
<i>A. longiremis</i>	158		5	62
<i>A. tonsa</i>	9		0.5	
<i>Aetideus</i> sp. copepodid				1
<i>Calanus pacificus</i>	0.2	10	2	0.2
<i>C. tenuicornis</i>		21	9	
<i>Calocalanus styliremis</i>		6		
<i>Candacia bipinnata</i>		0.2		0.4
<i>Clausocalanus arcuicornis</i>				
<i>forma minor</i>		5		2
<i>Ctenocalanus vanus</i>		23	2	2

	Depth (m)			
	7	18	50	91
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Epilabidocera amphitrites</i>	0.3			
<i>Eucalanus bungii bungii</i>		0.6	0.6	0.7
<i>Heterorhabdus</i> sp. copepodid				1
<i>Lucicutia flavicornis</i>			0.2	3
<i>Metridia lucens</i>				95
<i>Paracalanus parvus</i>	374	56	3	4
<i>Pseudocalanus minutus</i>		53	212	262
<i>Racovitzanus antarcticus</i>				1
<i>Scolecithricella minor</i>			0.2	5
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	0.2		0.2	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	40	12591	113	625
<i>Oncaea</i> sp. copepodid				40
HARPACTICOIDA				
<i>Microsetella rosea</i>		2		0.2
Total unidentified Copepoda		2238		66
Nauplii (Copepoda)	0.5	3623		262
OTHER GROUPS				
Amphipoda		2		0.7
Appendicularia	127	435	8	6
Chaetognatha		2	3	0.5
Euphausiacea		3	1	
Heteropoda			0.2	
Medusae		0.2		0.1
Ostracoda				2
Polychaeta		2	2	4
Pteropoda			9	2
Salpida		11	0.2	
Unidentified eggs		13		

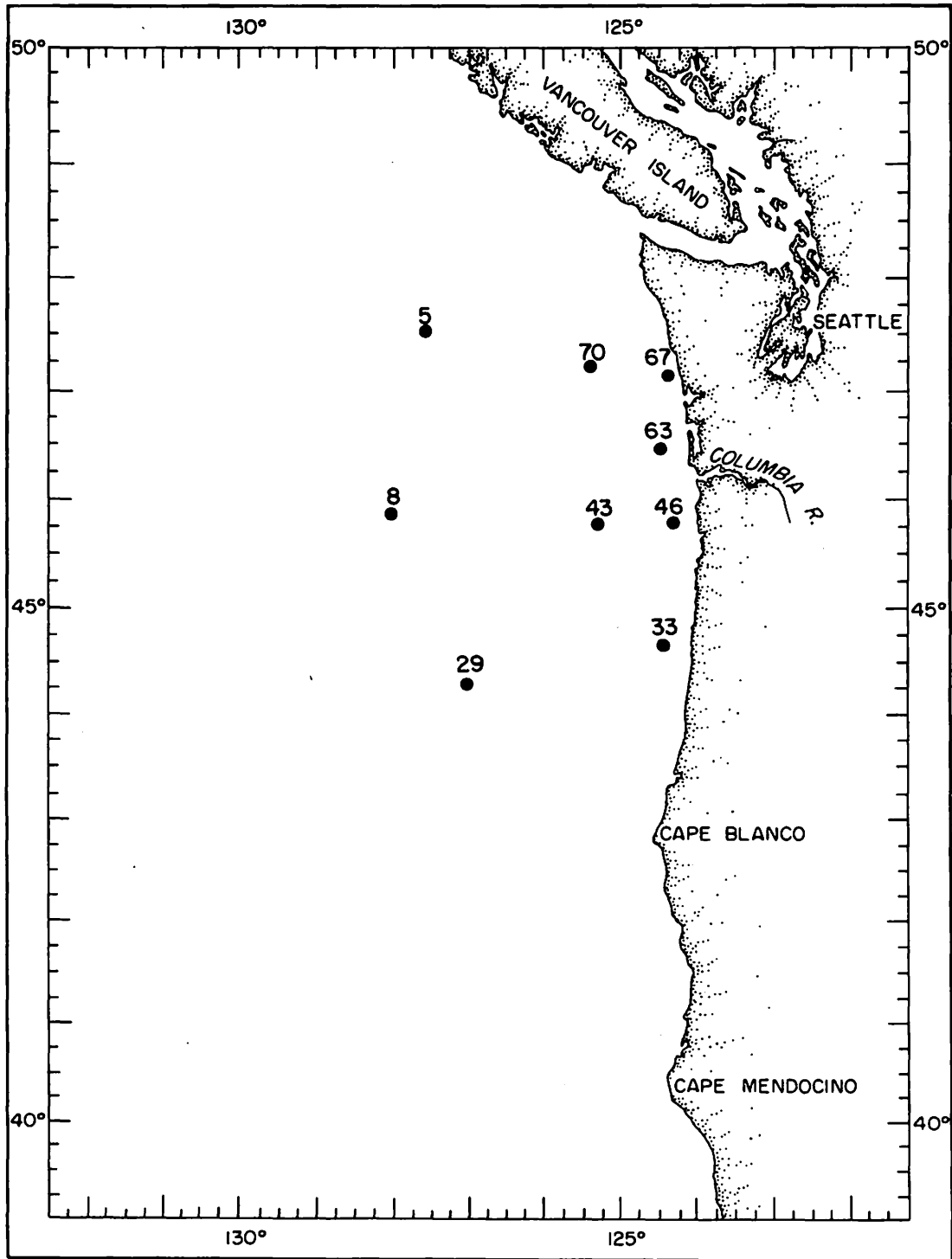


Fig. 7. Zooplankton sampling stations Brown Bear Cruise 297.
28 November - 18 December 1961.

BB 297

30 November 1961

Station 5

47°35' N, 127°32' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
0	1306-1316	1	9.41	100	6
20	1306-1316	2	5.59	10	6
40	1238-1248	2	9.78	10	6
60	1238-1248	+	1.34	100	6

Depth (m)

0	20	40	60
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Aliquot count

CALANOIDA

<i>Acartia clausii</i>		2		
<i>A. longiremis</i>	15	27	19	2
<i>Calanus pacificus</i>	0.3	4	12	
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	0.3	4	2	
<i>C. arcuicornis forma minor</i>		7	3	
<i>C. pergens</i>		5		
<i>Metridia lucens</i>	0.7	18	13	4
<i>Microcalanus pusillus</i>			1	
<i>Paracalanus parvus</i>	0.5			
<i>Paraeuchaeta</i> sp. copepodid				1
<i>Pseudocalanus minutus</i>	6	198	163	6
<i>Scolecithricella minor</i>	0.4		9	4

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.3			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	49	70	46	30
Total unidentified Copepoda	2	36	11	14

OTHER GROUPS

Amphipoda			1	
Appendicularia	4	2	2	
Chaetognatha		2	1	1
Cyphonautes larvae				2
Echinoderm larvae	0.1			
Euphausiacea			4	
Foraminifera	1			
Medusae				1

	Depth (m)			
	0	20	40	60
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Ostracoda		2	1	1
Pteropoda	1	2		1
Radiolaria			1	2

BB 297 1 December 1961 Station 8 45°55' N, 128°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1223-1233	5	7.92		12
27	1223-1233	9	8.77		12
50	1153-1203	6	6.74		12
72*	1153-1203	+	0.16		12

Depth (m)				
	5	27	50	72*
Aliquot count				

CALANOIDA

<i>Acartia danae</i>	46	233	98	
<i>A. longiremis</i>	12		0.1	
<i>Calanus pacificus</i>				p
<i>C. tenuicornis</i>		0.3	0.7	p
<i>Colocalanus styliremis</i>	25	23	28	p
<i>Candacia bipinnata</i>	0.1	0.3	0.3	
<i>Centropages bradyi</i>		0.5		
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	1	33	0.8	p
<i>C. arcuicornis forma minor</i>	5	165	86	p
<i>Ctenocalanus vanus</i>	8	45	23	p
<i>Eucalanus bungii bungii</i>	0.3	2	1	
<i>Heterorhabdus papilliger</i>				p
<i>Lucicutia flavicornis</i>				p
<i>Metridia lucens</i>		16	1	p
<i>Paracalanus parvus</i>	39	137	62	p

	Depth (m)			
	5	27	50	72*
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Paraeuchaeta elongata</i>				p
<i>Pseudocalanus minutus</i>	0.2	0.6	0.4	p
<i>Scolecithricella minor</i>			0.1	p
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	0.1			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	290	689	43	p
<i>Oncaea</i> sp. copepodid	38	0.7	39	
HARPACTICOIDA				
<i>Clytemnestra rostrata</i>		0.1	1	
<i>Microsetella rosea</i>	0.8			p
Total unidentified Copepoda	33	149	39	p
Nauplii (Copepoda)	25	75	110	p
OTHER GROUPS				
Amphipoda		1	0.6	p
Appendicularia	22	23	18	p
Branchiura	0.6	0.6	0.1	
Chaetognatha	3	23	6	p
Cladocera		0.2		
Decapod larvae	0.1			
Euphausiacea		0.5		p
Medusae	0.1	0.6	0.6	
Ostracoda				p
Polychaeta		1	0.3	p
Pteropoda		0.1	2	p
Salpida	2	11	4	

*Flowmeter malfunctioned.

BB 297 8 December 1961 Station 29 44°19' N, 127°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1138-1148	13	7.84		12
17*	1138-1148	2	1.07		12
29	1047-1057	13	5.25		12
41**	1047-1057	1	0.53		12

Depth (m)

5	17*	29	41**
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Aliquot count

CALANOIDA

<i>Acartia danae</i>	1		0.6	4
<i>A. longiremis</i>	1	6	5	26
<i>Aetideus</i> sp. copepodid			0.4	2
<i>Calanus pacificus</i>			0.2	2
<i>C. tenuicornis</i>	0.3		2	
<i>Calocalanus styliremis</i>	0.3			
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	41	71	47	26
<i>C. pergens</i>			13	
<i>Ctenocalanus vanus</i>	149	87	61	41
<i>Lucicutia flavicornis</i>	0.1	1		
<i>Metridia lucens</i>	0.3	7	8	24
<i>Paracalanus parvus</i>	264	134	334	11
<i>Pseudocalanus minutus</i>	490	313	249	92
<i>Scolecithricella minor</i>	0.1	1	1	154

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.1	1		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	6980	4126	7719	2132
<i>Oncaea</i> sp. copepodid	191	2	248	

HARPACTICOIDA

<i>Microsetella rosea</i>		1		4
Total unidentified Copepoda	343	140	840	47
Nauplii (Copepoda)	1308	560	317	526

	Depth (m)			
	5	17*	29	41**
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	0.6	4	0.1	
Appendicularia	127	28	134	38
Chaetognatha	3	1	8	11
Euphausiacea				4
Fish eggs			0.8	
Ostracoda				4
Polychaeta			0.2	2
Pteropoda	6		4	

*Sampler came up open. It probably did not open until the second messenger and presumably sampled from 17 meters to the surface.

**Probable sampler malfunction.

BB 297 9 December 1961 Station 33 44°40' N, 124°26' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1238-1248	3	7.94		12
15*	1238-1248	+	0.87		12
25	1215-1225	3	6.40		12
36*	1215-1225	+	0.07		12

	Depth (m)			
	5	15*	25	36*
Aliquot count				

CALANOIDA				
<i>Acartia danae</i>		1	2	
<i>A. longiremis</i>	83	23	16	42
<i>Calanus tenuicornis</i>			0.8	14
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	0.7		1	

	Depth (m)			
	5	15*	25	36*
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Ctenocalanus vanus</i>	56	23	33	
<i>Paracalanus parvus</i>	50	6	3	
<i>Pseudocalanus minutus</i>	83	51	52	319
<i>Tortanus discaudatus</i>	0.1			
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3385	1566	2776	3019
<i>Oncaea</i> sp. copepodid	28		156	
HARPACTICOIDA				
<i>Microsetella rosea</i>				42
Total unidentified Copepoda	403	34	156	360
Nauplii (Copepoda)	769	276	296	194
OTHER GROUPS				
Amphipoda	0.4		0.2	
Appendicularia			1	
Chaetognatha	3	3	1	
Pteropoda	0.3		0.5	

*Probable sampler or flowmeter malfunction.

BB 297 11 December 1961 Station 43 45°48' N, 125°17' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1250-1300	6	10.05		12
16**	1250-1300	2	0.96		12
29*	1206-1216	9	7.29		12
40**	1206-1216	1	0.71		12

Depth (m)

5*	16**	29*	40**
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Aliquot count

CALANOIDA

<i>Acartia danae</i>				1
<i>A. longiremis</i>	3	12	2	
<i>Calanus pacificus</i>	0.2	1	3	1
<i>C. tenuicornis</i>		1	0.6	
<i>Calocalanus styliremis</i>				1
<i>Candacia</i> sp. copepodid				1
<i>Clausocalanus arcuicornis</i> forma major			0.1	
<i>C. arcuicornis</i> forma minor	20	73	3	1
<i>Ctenocalanus vanus</i>	20	15	23	
<i>Epilabidocera amphitrites</i>		1		
<i>Metridia lucens</i>			1	10
<i>Paracalanus parvus</i>	1	35	16	
<i>Pseudocalanus minutus</i>	51	316	140	23
<i>Scolecithricella minor</i>	0.1		3	13

CYCLOPOIDA

<i>Corycaeus anglicus</i>	0.1			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2430	1743	2617	518
<i>Oncaea</i> sp. copepodid	100		178	1

HARPACTICOIDA

<i>Microsetella rosea</i>	0.2	8	21	7
Total unidentified Copepoda	20	2	130	6
Nauplii (Copepoda)	470	313	678	11

	Depth (m)			
	5*	16**	29*	40**
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda		7		1
Appendicularia	2	21	2	1
Chaetognatha	0.1	2	0.4	
Fish eggs	0.2			
Medusae				1
Ostracoda			1	3
Polychaeta	0.1		0.4	
Pteropoda	70	19	0.1	

*Due to small hole in cod end of net, samples probably not quantitative.

**Probable sampler malfunctions.

BB 297 11 December 1961 Station 46 45°48' N, 124°19' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2235-2245	8	8.12		12
21	2235-2245	12	8.74		12
38	2210-2220	7	5.29		12
55	2210-2220	3	6.42		12

Depth (m)			
5	21	38	55

Aliquot count				
CALANOIDA				
<i>Acartia danae</i>	0.2		0.6	0.6
<i>A. longiremis</i>	2	25	13	15
<i>A. negligens</i>			0.4	
<i>Calanus pacificus</i>		2	0.6	0.5
<i>C. tenuicornis</i>	0.2	1		0.1
<i>Calocalanus styliremis</i>	0.1	0.1	0.4	

	Depth (m)			
	5	21	38	55
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Candacia columbiae</i>				0.2
<i>Clausocalanus arcuicornis</i>				
<i>forma major</i>		0.1		
<i>C. arcuicornis forma minor</i>	12	34	5	12
<i>C. pergens</i>		2		
<i>Ctenocalanus vanus</i>	13	14	18	70
<i>Epilabidocera amphitrites</i>			0.2	
<i>Eucalanus bungii bungii</i>	0.1	0.1		
<i>Lucicutia flavicornis</i>				0.2
<i>Metridia lucens</i>	0.7	13	2	161
<i>Paracalanus parvus</i>	14	131	2	
<i>Pseudocalanus minutus</i>	20	194	124	113
<i>Scolecithricella minor</i>		3		3
<i>Tortanus discaudatus</i>	0.1			
CYCLOPOIDA				
<i>Corycaeus anglicus</i>		0.3	0.4	1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1174	1696	1104	909
<i>Oncaea conifera</i>				0.2
<i>Oncaea</i> sp. copepodid	135	68	11	0.3
HARPACTICOIDA				
<i>Microsetella rosea</i>	0.2	0.2	0.8	
Total unidentified Copepoda	258	114	133	63
Nauplii (Copepoda)	886	958	3	
OTHER GROUPS				
Amphipoda	0.1	0.5		1
Appendicularia	62	171	95	1
Chaetognatha	62	42	39	1
Euphausiacea		3	2	0.8
Fish eggs		0.1		
Fish larvae				0.6
Isopoda		0.1		
Medusae	0.2		0.6	
Ostracoda				0.2
Polychaeta	0.7	0.8	8	3
Pteropoda	9	14	4	1

BB 297 14 December 1961 Station 63 46°28' N, 124°26' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2349-2359	4	7.51		12
26*	2349-2359	0.5	0.63		12
46	2317-2327	5	5.68		12
67**	2317-2327	+			12

Depth (m)

5	26*	46	67**
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Aliquot count

CALANOIDA

<i>Acartia danae</i>	0.1		5	
<i>A. longiremis</i>	3	6	6	
<i>Calanus pacificus</i>	0.5		1	
<i>C. tenuicornis</i>	2	2	2	
<i>Calocalanus styliremis</i>	1			
<i>Clausocalanus arcuicornis</i> <i>forma major</i>		18		
<i>C. arcuicornis forma minor</i>	43	14	46	p
<i>Ctenocalanus vanus</i>	13	5	60	p
<i>Eucalanus bungii bungii</i>			0.2	
<i>Heterorhabdus papilliger</i>	0.1			p
<i>Lucicutia flavicornis</i>	1		0.4	
<i>Metridia lucens</i>	4	3	126	p
<i>Paracalanus parvus</i>	59	56	11	p
<i>Paraeuchaeta elongata</i>			0.2	
<i>Pleuromamma</i> sp. copepodid	0.1			
<i>Pseudocalanus minutus</i>	867	219	48	p
<i>Scolecithricella minor</i>			1	p

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	1003	555	3210	p
<i>Oncaea</i> sp. copepodid	21		18	

HARPACTICOIDA

<i>Microsetella rosea</i>	0.3	5		p
Total unidentified Copepoda	107	275	88	p
Nauplii (Copepoda)	412	64	106	p

	Depth (m)			
	5	26*	46	67**
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	0.1		0.2	
Appendicularia	16	5	5	
Chaetognatha	0.3		5	P
Decapod larvae		2		
Euphausiacea	0.3		0.2	
Medusae	0.1			
Polychaeta	0.3		1	
Pteropoda	6	2	0.4	

*Probable sampler or flowmeter malfunction.

**Records inadequate concerning revolutions of flowmeter.

BB 297 15 December 1961 Station 67 47°11' N, 124°19' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1050-1100	9	9.47	1	12
20	1050-1100	2	9.89	1	12

Depth (m)	
5	20
Aliquot count	

CALANOIDA

<i>Acartia clausii</i>	21	10
<i>A. longiremis</i>	243	20
<i>Calanus pacificus</i>	11	
<i>Centropages abdominalis</i>	11	10
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	43	
<i>Metridia lucens</i>	21	
<i>Paracalanus aculeatus</i>	11	
<i>P. parvus</i>	11	20
<i>Pseudocalanus minutus</i>	1267	121
<i>Tortanus discaudatus</i>	11	10

	Depth (m)	
	5	20
	Aliquot count (cont.)	
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spirostris</i>)	327	910
<i>Oncaea media</i>	11	
Total unidentified Copepoda	1678	455
Nauplii (Copepoda)	3411	617
OTHER GROUPS		
Appendicularia	739	30
Chaetognatha	32	10
Cladocera	32	
Cyphonautes larvae	32	
<i>Noctiluca</i> sp.	85	
Polychaeta	21	10
Pteropoda	11	

BB 297 15 December 1961 Station 70 47°13' N, 125°23' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2324-2334	4	8.88	1	12
22*	2324-2334	6	10.42	1	12
39	2236-2246	5	6.28	5	12
55**	2236-2246	+	0.24	20	12

Depth (m)

5	22*	39	55**
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Direct count

Amphipoda	2.14	
Appendicularia	0.56	0.77
Chaetognatha	1.01	0.58
Euphausiacea	19.03	8.35
Decapoda		0.10

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>		10	3	21
<i>Calanus pacificus</i>		10	6	62
<i>Calocalanus styliremis</i>	56	19	6	
<i>Clausocalanus arcuicornis</i> forma major	11	29		21
<i>C. arcuicornis</i> forma minor	56		3	21
<i>Lucicutia flavicornis</i>		10	10	21
<i>Metridia lucens</i>		19		21
<i>Microcalanus pusillus</i>		10	10	
<i>Paracalanus parvus</i>	11		3	21
<i>Paraeuchaeta</i> sp. copepodid				21
<i>Pseudocalanus minutus</i>	304	279	340	83

CYCLOPOIDA

<i>Corycaeus anglicus</i>			86	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1059	1152	1226	979
<i>Oncaea conifera</i>	11	58		42

HARPACTICOIDA

<i>Microsetella norvegica</i>		10		
Total unidentified Copepoda	462	393	382	167
Nauplii (Copepoda)	158	288	220	396

	Depth (m)			
	5	22*	39	55**
Aliquot count (cont.)				
OTHER GROUPS				
Appendicularia			6	
Chaetognatha			3	
Echinoderm larvae		10	3	
Polychaeta			3	
Pteropoda	56		3	21
Radiolaria			6	
Unidentified eggs			16	

*Sampler did not close with second messenger.

**Probable sampler or flowmeter malfunction.

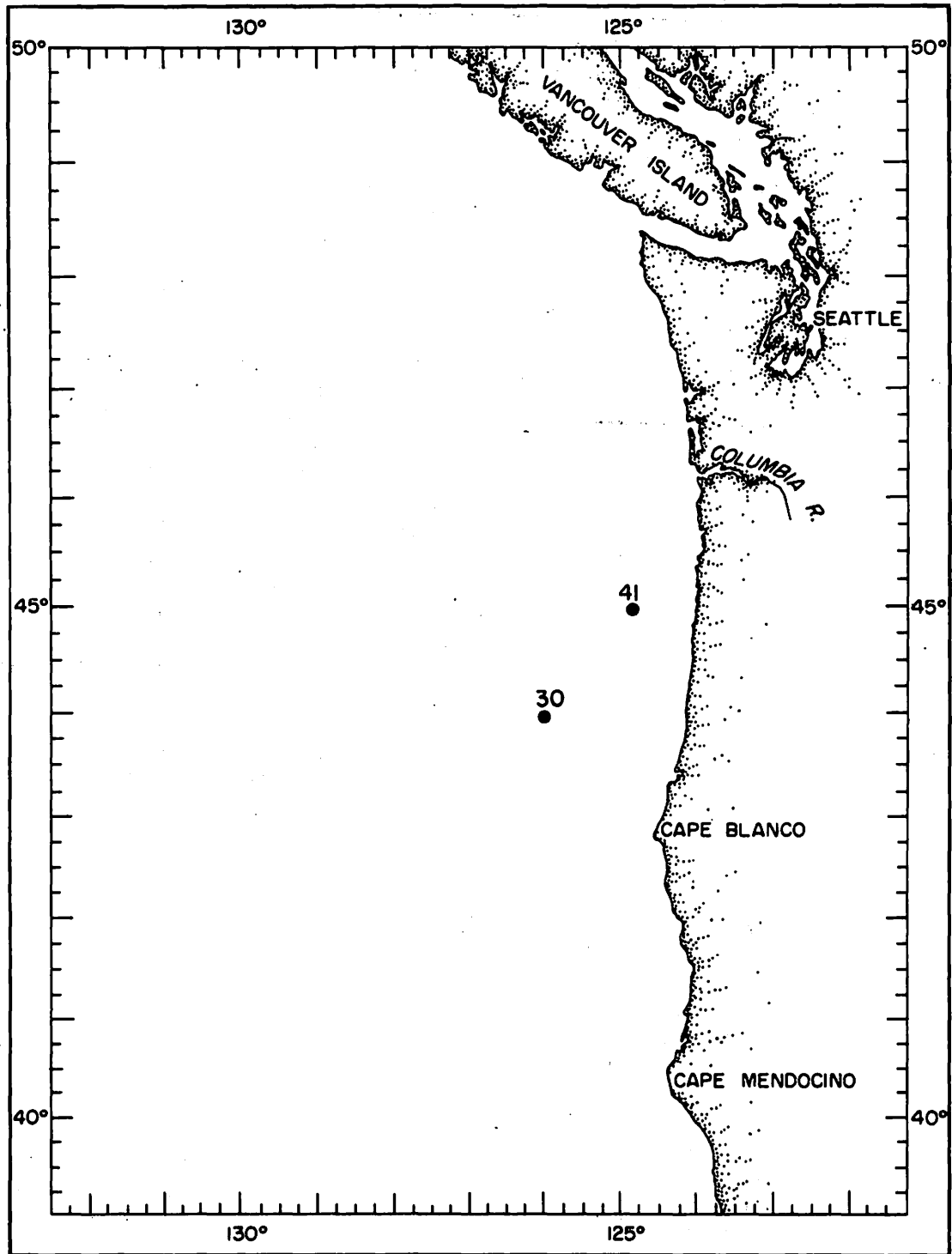


Fig. 8. Zooplankton sampling stations Brown Bear Cruise 299,
23 January - 7 February 1962.

BB 299 29 January 1962 Station 30 43°58' N, 126°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0200-0218	1	10.32	20	12
50	0200-0218	1	6.50	20	12
100	0130-0145	0.5	5.59	100	12
200	0130-0145	1	11.62	20	12

	Depth (m)			
	5	50	100	200
	Direct count			
Amphipoda	0.10			
Chaetognatha	0.29	0.62	3.22	0.34
Euphausiacea	0.10	0.92	0.18	0.17
Fish larvae		0.15		
Medusae	0.48	0.31	0.36	
Ostracoda			1.07	
Polychaeta		0.92	0.18	0.09
Salpida	0.10	0.15	0.54	
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>	1	0.8		0.5
<i>A. longiremis</i>	p		2	
<i>Aetideus armatus</i>			0.2	
<i>Calanus pacificus</i>			0.2	
<i>C. tenuicornis</i>	1	4		
<i>Calocalanus styliremis</i>		0.8		p
<i>Canadacia</i> sp. copepodid			0.2	
<i>Clausocalanus arcuicornis</i>	16	17	2	3
<i>C. pergens</i>	6	9		2
<i>Ctenocalanus vanus</i>	1	20		
<i>Eucalanus bungii bungii</i>			0.6	
<i>E. bungii californicus</i>	1		2	p
<i>Euchirella pulchra</i>	p			
<i>Gaetanus</i> sp. copepodid			0.4	p
<i>Gaidius pungens</i>				0.5
<i>Haloptilus oxycephalus</i>			0.2	
<i>Heterorhabdus norvegicus</i>		p		
<i>Heterorhabdus</i> sp. copepodid			0.2	p
<i>Lucicutia flavicornis</i>	p	0.8		1
<i>Metridia lucens</i>	4	7	2	1
<i>Microcalanus pusillus</i>		p		3

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Paracalanus parvus</i>		4		2
<i>Paraeuchaeta elongata</i>	p	2	0.8	1
<i>Phyllopus bidentatus</i>			0.2	
<i>Pleuromamma abdominalis</i>		p		
<i>Pleuromamma</i> sp. copepodid				1
<i>Pseudocalanus minutus</i>	30	28	2	9
<i>Racovitzanus antarcticus</i>			0.4	p
<i>Scaphocalanus echinatus</i>		p	0.4	p
<i>Scaphocalanus</i> sp. copepodid				p
<i>Scolecithricella minor</i>	p	8	1	1
<i>Undeuchaeta bispinosa</i>		0.8		
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1	56	4	35
<i>Oncaea conifera</i>		p	1	p
HARPACTICOIDA				
<i>Clytemnestra rostrata</i>				p
Total unidentified Copepoda	6	9	3	7
Nauplii (Copepoda & Euphausiacea)		0.8		
OTHER GROUPS				
Amphipoda	1.5			
Appendicularia	0.5			
Chaetognatha		0.8	0.2	0.5
Cladocera			0.2	
Decapod larvae	3			
Ostracoda			6	0.5
Pteropoda	0.5			
Salpida			0.4	

BB 299 31 January 1962 Station 41 44°59' N, 124°49' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0110-0122	2	3.99	12	12
50	0110-0122	3	6.13	10	12
100	0045-0058	1	4.82	100	12
200	0045-0058	1	8.10	100	12

	Depth (m)			
	5	50	100	200
	Direct count			
Amphipoda	0.75		0.21	
Appendicularia	1.00	9.79		
Chaetognatha	3.01	0.49		1.98
Euphausiacea	3.01	0.65		
Fish larvae		0.33		
Medusae	2.26	0.98		1.98
Ostracoda				0.25
Polychaeta	0.25	0.16	1.45	
Pteropoda	0.50			
Salpida				0.25

	Aliquot count			
CALANOIDA				
<i>Acartia danae</i>		p	2	0.2
<i>A. longiremis</i>	4	2		0.1
<i>Acrocalanus?</i> copepodid			0.4	3
<i>Aetideus armatus</i>		p	1	1
<i>Calanus pacificus</i>	38	p	0.6	2
<i>C. tenuicornis</i>	p	p		
<i>Calocalanus styliremis</i>		p		
<i>Clausocalanus arcuicornis</i>	17	31	5	0.6
<i>C. pergens</i>	4			5
<i>Ctenocalanus vanus</i>		10		
<i>Eucalanus bungii</i>				
<i>californicus</i>			0.4	
<i>Euchirella pulchra</i>		2		
<i>Gaetanus</i> sp. copepodid			0.2	0.6
<i>Gaidius pungens</i>		p	0.4	
<i>G. tenuispinus</i>			1	
<i>Lucicutia flavicornis</i>		p	0.2	0.1
<i>Metridia lucens</i>	2	10	9	3
<i>Microcalanus pusillus</i>	p	7		4
<i>Paracalanus parvus</i>	6	24	2	

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Paraeuchaeta elongata</i>	p	p	0.6	
<i>Pleuromamma xiphias</i>		p	0.6	
<i>Pseudocalanus minutus</i>	129	64	26	5
<i>Racovitzanus antarcticus</i>				3
<i>Scaphocalanus</i> sp. copepodid	p			
<i>Scolecithricella minor</i>		7	1	1
<i>Undeuchaeta bispinosa</i>			0.2	0.1
CYCLOPOIDA				
<i>Lubbockia</i> sp. copepodid				0.1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	25	140	3	12
<i>Oncaea conifera</i>		10	0.4	2
<i>O. media</i>				1
Total unidentified Copepoda	2	23	5	3
Nauplii (Copepoda & Euphausiacea)		5		0.8
OTHER GROUPS				
Amphipoda			1	
Appendicularia	6	29		
Isopoda				0.2
Ostracoda		2	5	6
Pteropoda	46		0.6	2

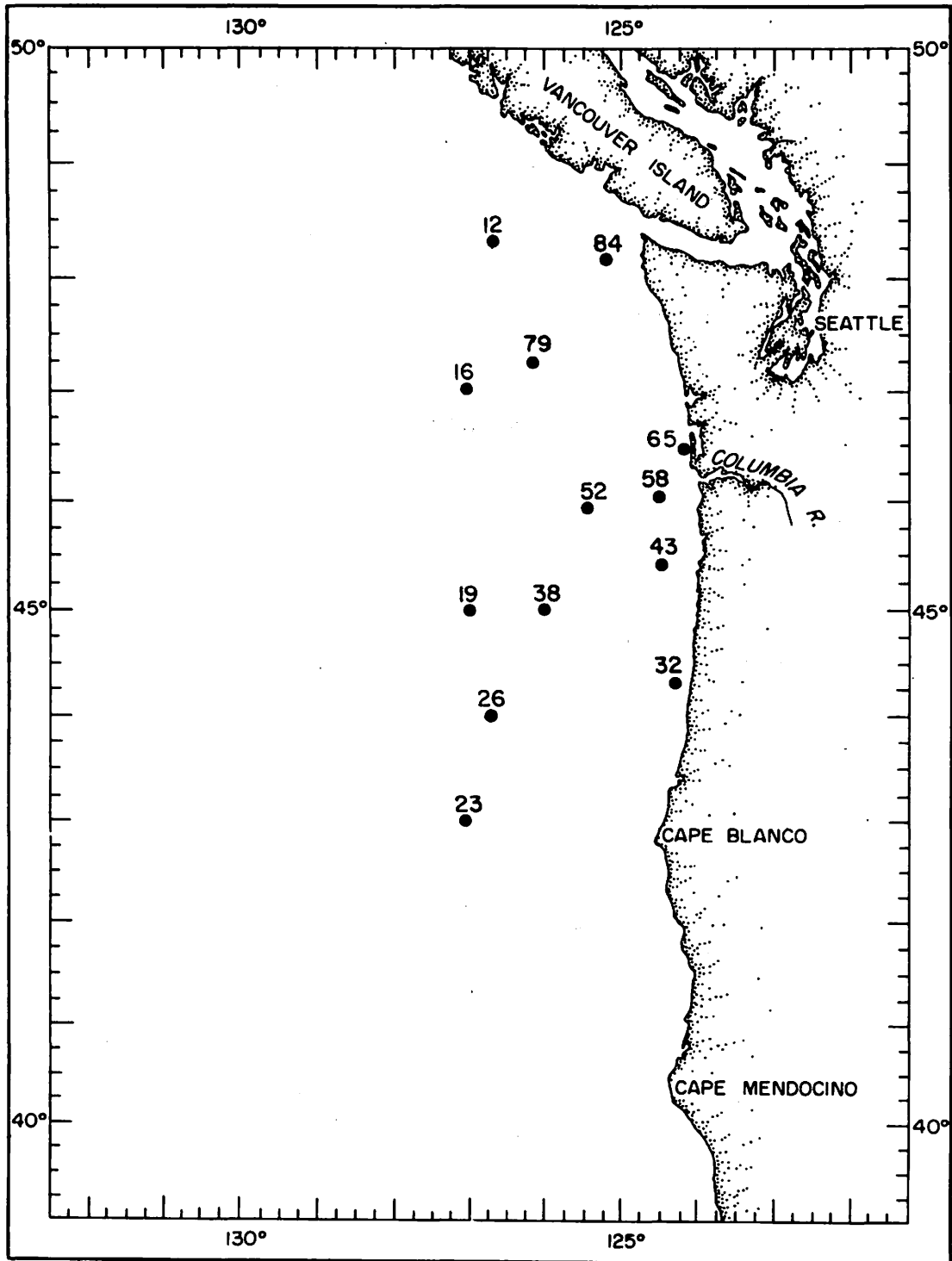


Fig. 9. Zooplankton sampling stations Brown Bear Cruise 304.
27 March - 12 April 1962.

BB 304 29 March 1962 Station 12 48°20' N, 126°39' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0210-0225	19	12.47	2	12
50*	0210-0225	73	15.89	1	12
100	0135-0150	2	7.81	10	12
200	0135-0150	+	0.37	100	12

	Depth (m)			
	5	50*	100	200
	Direct count			
Amphipoda		0.06		
Chaetognatha			0.13	
Decapoda		0.06		
Euphausiacea	0.24	1.76		
Fish larvae	0.24			
Polychaeta		0.25	0.77	
Pteropoda		1.95		
	Aliquot count			

CALANOIDA

<i>Acartia longiremis</i>	16	6		
<i>Calanus pacificus</i>	36	70		
<i>C. plumchrus</i>		6		
<i>C. tenuicornis</i>		38		3
<i>Calocalanus styliremis</i>		p		
<i>Clausocalanus arcuicornis</i>		6		
<i>C. pergens</i>			1	
<i>Ctenocalanus vanus</i>	12			
<i>Eucalanus bungii bungii</i>	4			
<i>Lucicutia flavicornis</i>			10	
<i>Metridia lucens</i>	4	19		
<i>Microcalanus pusillus</i>			19	3
<i>Paracalanus parvus</i>	4	6		
<i>Paraeuchaeta elongata</i>			1	
<i>Pseudocalanus minutus</i>	52	390	62	16
<i>Racovitzanus antarcticus</i>				3

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1508	7004	79	168
<i>Oncaea conifera</i>				3
<i>O. tenella pacifica</i>				8

	Depth (m)			
	5	50*	100	200
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>			3	3
Total unidentified Copepoda	245	132	10	22
Nauplii (Copepoda & Euphausiacea)	557	3329	90	54
OTHER GROUPS				
Appendicularia	4			
Cyphonautes larvae			3	
Foraminifera	12	31		5
Gastropod larvae	4			
Ostracoda			14	3
Polychaeta	4		1	3
Pteropoda	4	44		8
Radiolaria			1	3

*Sample composed mainly of *Chaetoceros* sp.

BB 304 29-30 March 1962 Station 16 47°03' N, 127°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2318-2333	13	9.41	1	12
50*	2318-2333	28	10.54	1	12
100	2355-0010	5	6.76	2	12
200	2355-0010	3	9.05	5	12

Depth (m)

5	50*	100	200
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Direct count

Amphipoda	0.53		0.15	
Chaetognatha	0.32	0.28	0.89	1.11
Euphausiacea	0.74			
Medusae	2.23			0.11
Polychaeta		0.38	0.44	
Pteropoda		0.09		
Salpida		0.09		
Siphonophora				0.11

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	11			
<i>Acartia</i> sp. copepodid				4
<i>Calanus pacificus</i>	96			
<i>C. plumchrus</i>		9	15	
<i>C. tenuicornis</i>		9		
<i>Calocalanus styliremis</i>		28		
<i>Calocalanus</i> sp.		p		
<i>Clausocalanus arcuicornis</i> forma minor				2
<i>C. pergens</i>		9	29	
<i>Ctenocalanus vanus</i>		37	7	2
<i>Eucalanus bungii</i> californicus				2
<i>Lucicutia flavicornis</i>		19	7	
<i>Metridia lucens</i>				2
<i>Microcalanus pusillus</i>			104	46
<i>Paracalanus parvus</i>	11			2
<i>Pseudocalanus minutus</i>	202	47	74	6
<i>Racovitzanus antarcticus</i>				2
<i>Scolecithricella minor</i>			14	

	Depth (m)			
	5	50*	100	200
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3124	1129	488	139
<i>Oncaea conifera</i>		19		
<i>O. media</i>		19		24
<i>O. tenella pacifica</i>		66		11
HARPACTICOIDA				
<i>Microsetella norvegica</i>		9		
<i>M. rosea</i>				9
Total unidentified Copepoda	32	199	44	9
Nauplii (Copepoda & Euphausiacea)	531	313	274	4
OTHER GROUPS				
Appendicularia		19	30	
Echinoderm larvae		9	7	2
Foraminifera	117	66	126	4
Gastropod larvae			7	
Isopoda			7	
Ostracoda			7	7
Polychaeta			22	
Pteropoda	74	9		
Radiolaria	21		37	13

*Contains large amount of unidentified gelatinous material.

BB 304 30 March 1962 Station 19 45°01' N, 127°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2150-2208	30	10.58	1	12
50	2150-2208	21	11.79	1	12
100	2115-2130	2	8.12	100	12
200	2115-2130	2	8.30	100	12

	Depth (m)			
	5	50	100	200
	Direct count			
Amphipoda	1.13			
Cephalopoda	0.19			
Chaetognatha	0.85	0.68	0.62	1.69
Decapod larvae	0.09			
Euphausiacea	0.09	0.08		
Fish eggs		0.08		
Medusae	0.66			
Ostracoda		0.08	0.12	
Polychaeta	0.38	0.68	0.62	
Pteropoda	0.38	0.08		
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>		P		
<i>A. longiremis</i>	19	P		
<i>Aetideus armatus</i>			0.2	0.1
<i>Calanus cristatus</i>	P	P		
<i>C. pacificus</i>	P			
<i>C. plumchrus</i>	p	8	0.9	0.4
<i>C. tenuicornis</i>	19	42		
<i>Calocalanus styliremis</i>		25		
<i>Clausocalanus arcuicornis</i> forma major	P			
<i>C. arcuicornis</i> forma minor	85	p	0.5	1
<i>C. pergens</i>	57	42	5	6
<i>Ctenocalanus vanus</i>		17		
<i>Eucalanus bungii bungii</i>	P	P	0.6	2
<i>E. bungii californicus</i>		p	0.1	1
<i>Euchirella rostrata</i>		P		
<i>Gaetanus armiger</i>			0.1	0.2
<i>Gaidius pungens</i>				0.1
<i>Heterorhabdus norvegicus</i>	P	p	0.2	0.2
<i>Lucicutia flavicornis</i>		59	1	

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Metridia lucens</i>	19	161	7	2
<i>Microcalanus pusillus</i>		76	13	19
<i>Paracalanus parvus</i>	28			
<i>Paraeuchaeta elongata</i>	p	p	2	0.2
<i>Pleuromamma quadrangulata</i>				0.2
<i>P. xiphias</i>		p	0.1	
<i>Pseudocalanus minutus</i>	284	110	1	2
<i>Racovitzanus antarcticus</i>		p	0.7	0.7
<i>Scaphocalanus echinatus</i>		p		
<i>Scolecithricella minor</i>		p	1	1
<i>S. ovata</i>			0.1	
<i>Undeuchaeta bispinosa</i>		p		
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3781	772	77	16
<i>Oncaea borealis</i>		p		
<i>O. conifera</i>		p		3
<i>O. media</i>	p	p	0.9	19
<i>O. tenella pacifica</i>		407	1	4
HARPACTICOIDA				
<i>Microsetella norvegica</i>			0.1	
<i>M. rosea</i>		8	2	5
Total unidentified Copepoda	38	85	11	13
Nauplii (Copepoda & Euphausiacea)	435	246	15	3
OTHER GROUPS				
Amphipoda			0.2	
Appendicularia	38	17		
Chaetognatha		8	0.6	0.7
Isopoda			0.1	
Ostracoda			3	2
Pteropoda	38		2	0.5

BB 304

1 April 1962

Station 23

43°00' N, 127°05' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0320-0335	33	11.24	1	12
50	0320-0335	3	2.63	10	12
100	0349-0404	2	6.12	10	12
200	0349-0404	2	7.14	10	12

Depth (m)				
	5	50	100	200

Direct count				
Amphipoda			0.16	0.14
Appendicularia		2.66		
Chaetognatha	4.54	3.04	0.49	2.38
Decapod larvae	0.18	0.38		
Fish eggs			0.16	
Fish larvae	0.09		0.16	
Medusae	0.09			
Ostracoda		1.90	1.31	2.24
Polychaeta	0.18	2.28	0.16	0.14
Pteropoda	0.44			
Salpida	3.29	16.73	8.66	0.28
Siphonophora	0.62	0.38		

Aliquot count

CALANOIDA

<i>Acartia danae</i>		p		p
<i>A. longiremis</i>	18	4		
<i>Acrocalanus?</i> copepodid				6
<i>Calanus cristatus</i>		p		
<i>C. pacificus</i>	p	p		
<i>C. plumchrus</i>	44	4	p	p
<i>C. tenuicornis</i>	44	11		
<i>Calocalanus gracilis</i>			p	1
<i>C. styliremis</i>	9	15		
<i>C. tenuis</i>	9			
<i>Clausocalanus arcuicornis</i>				
<i>forma major</i>	89		p	
<i>C. arcuicornis</i> <i>forma minor</i>	383	23	2	1
<i>C. pergens</i>	356	228	23	6
<i>Ctenocalanus vanus</i>		15	3	7
<i>Eucalanus bungii bungii</i>	p	p	p	7
<i>E. bungii californicus</i>		p	p	4
<i>Euchirella pulchra</i>	p		p	

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Euchirella rostrata</i>	p	p	p	
<i>Gaidius pungens</i>		p	p	p
<i>Heterorhabdus norvegicus</i>		p	7	6
<i>Lucicutia flavicornis</i>	p	p	2	p
<i>Metridia lucens</i>	53	331	29	6
<i>Microcalanus pusillus</i>				64
<i>Paracalanus parvus</i>	89		3	
<i>Paraeuchaeta elongata</i>	p	p	2	p
<i>Pleuromamma xiphias</i>		p	2	p
<i>Pseudocalanus minutus</i>	8977	163	39	4
<i>Racovitzanus antarcticus</i>			3	p
<i>Scaphocalanus echinatus</i>			p	
<i>Scolecithricella minor</i>	p	27	2	3
<i>S. ovata</i>			p	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>		p		
<i>Lubbockia</i> sp. copepodid				1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	6050	650	222	52
<i>Oncaea conifera</i>	p	15	p	1
<i>O. media</i>		15	2	42
<i>O. subtilis</i>	9	8	2	
<i>O. tenella pacifica</i>		19	3	126
HARPACTICOIDA				
<i>Aegisthus mucronatus</i>				p
<i>Clytemnestra rostrata</i>			p	
<i>Microsetella rosea</i>		4	p	1
Total unidentified Copepoda	356	53	5	14
Nauplii (Copepoda & Euphausiacea)	3096	608	39	15
OTHER GROUPS				
Appendicularia		23		
Chaetognatha		11	3	
Ostracoda		27	8	14
Pteropoda	18	4	8	7
Salpida	9	27		

BB 304

2 April 1962

Station 26

44°00' N, 126°42' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0111-0126	21	11.26	1	12
50	0111-0126	9	12.37	2	12
100	0143-0158	2	6.20	10	12
200*	0143-0158	3	3.10	10	12

	Depth (m)			
	5	50	100	200*
	Direct count			
Amphipoda	2.84		0.16	
Chaetognatha	0.09	1.86		1.61
Decapod larvae	0.80	0.08		0.32
Fish eggs	0.98	0.49	0.16	
Fish larvae				0.32
Medusae	0.18	0.16		
Ostracoda			2.90	0.64
Polychaeta		0.49	0.32	
Pteropoda	4.97	1.94	0.32	
Salpida	0.18	0.24		
Siphonophora				2.26
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>		p		3
<i>A. longiremis</i>		p		
<i>Aetideus armatus</i>			p	p
<i>Calanus pacificus</i>	p			
<i>C. plumchrus</i>	115	p	3	3
<i>C. tenuicornis</i>		32		6
<i>Calocalanus gracilis</i>			p	
<i>C. styliremis</i>		12		p
<i>Candacia</i> sp. copepodid		p		
<i>Clausocalanus arcuicornis</i>				
<i>forma major</i>	27			
<i>C. arcuicornis forma minor</i>	98	40	5	10
<i>C. pergens</i>	71	214	11	71
<i>Ctenocalanus vanus</i>		97	5	6
<i>Eucalanus bungii bungii</i>		p	p	
<i>E. bungii californicus</i>		p	2	p
<i>Euchirella galeata</i>		p		
<i>E. pulchra</i>		p		
<i>E. rostrata</i>		4	p	p

	Depth (m)			
	5	50	100	200*
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Gaidius pungens</i>			p	
<i>Heterorhabdus norvegicus</i>	p			
<i>H. papilliger</i>		4		
<i>Heterorhabdus</i> sp. copepodid			2	p
<i>Lucicutia flavicornis</i>	p	24	p	
<i>Metridia lucens</i>	9	392	18	19
<i>Microcalanus pusillus</i>			23	
<i>Paracalanus parvus</i>	159		p	
<i>Paraeuchaeta elongata</i>	p	p	2	
<i>Pleuromamma abdominalis</i>		p		
<i>P. quadrangulata</i>			p	
<i>P. riphias</i>		p	2	p
<i>Pseudocalanus minutus</i>	1545	303	27	71
<i>Racovitzanus antarcticus</i>			p	p
<i>Scaphocalanus echinatus</i>		p	p	
<i>Scolecithricella minor</i>		4	2	
<i>Undeuchaeta bispinosa</i>		p		
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	7060	622	245	768
<i>Oncaea conifera</i>	p	20	p	p
<i>O. media</i>	p	16	3	13
<i>O. subtilis</i>			p	p
<i>O. tenella pacifica</i>		271	16	6
HARPACTICOIDA				
<i>Aegisthus mucronatus</i>				p
<i>Microsetella rosea</i>		12	3	13
Total unidentified Copepoda	195	101	6	26
Nauplii (Copepoda & Euphausiacea)	693	570	37	103
OTHER GROUPS				
Amphipoda		4		
Appendicularia		32		
Ostracoda		4	8	6
Pteropoda	142	141	2	48
Salpida	27			

*Sampler came up open. It probably did not open until the second messenger and presumably sampled from 200 meters to the surface.

BB 304 3 April 1962 Station 32 44°20' N, 124°20' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0140-0155	21	11.09	1	12
50	0140-0155	16	9.38	1	12

Depth (m)

5 50

Direct count

Amphipoda		0.21
Appendicularia	4.24	
Chaetognatha	6.85	2.88
Decapod larvae	2.16	31.66
Euphausiacea	0.63	5.12
Fish larvae		2.23
Medusae	0.09	1.07
Polychaeta	0.81	2.03
Pteropoda		0.21

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	261	
<i>Bradyidius</i> sp. copepodid		p
<i>Calanus pacificus</i>	108	96
<i>C. tenuicornis</i>	p	21
<i>Centropages abdominalis</i>	72	
<i>Clausocalanus arcuicornis</i> forma major	p	
<i>C. arcuicornis</i> forma minor	63	32
<i>C. pergens</i>	90	32
<i>Ctenocalanus vanus</i>		21
<i>Eucalanus bungii californicus</i>		p
<i>Metridia lucens</i>	36	32
<i>Paraeuchaeta elongata</i>		p
<i>Pleuromamma</i> sp. copepodid		p
<i>Pseudocalanus minutus</i>	3264	938
<i>Tortanus discaudatus</i>	9	p

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	667	1397
<i>Oncaea tenella pacifica</i>		11
Total unidentified Copepoda	90	117
Nauplii (Copepoda & Euphausiacea)	6898	928

	Depth (m)	
	5	50
Aliquot count (cont.)		
OTHER GROUPS		
Appendicularia	99	267
Barnacle nauplii		11
Pelecypod larvae		149
Polychaeta	45	64
Pteropoda	18	32

BB 304 4 April 1962 Station 38 45°00' N, 126°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0055-0113	20	11.90	1	12
50	0055-0113	10	12.92	1	12
100	0129-0134	2	6.34	10	12
200*	0129-0134	4	3.76	4	12

	Depth (m)			
	5	50	100	200*
Direct count				
Amphipoda	0.76	0.23		0.27
Cephalopoda	0.08			0.27
Chaetognatha	0.17	0.85	0.94	1.86
Decapod larvae	0.34	0.15		
Fish eggs	1.01	0.15		
Fish larvae		0.23		
Medusae	0.76	0.08		
Ostracoda		0.15	0.94	0.53
Polychaeta	0.25	1.47	0.94	
Pteropoda	4.62	3.10	0.16	1.06
Salpida	0.17	0.15		1.33
Siphonophora				0.53

	Depth (m)			
	5	50	100	200*
Aliquot count				
CALANOIDA				
<i>Acartia danae</i>		p	p	
<i>A. longiremis</i>	84		6	7
<i>Aetideus armatus</i>		8	2	p
<i>Calanus cristatus</i>		p		
<i>C. pacificus</i>	p	p		
<i>C. plumchrus</i>	50	p		p
<i>C. tenuicornis</i>		39	2	
<i>Calocalanus styliremis</i>		p		p
<i>C. tenuis</i>				p
<i>Centropages abdominalis</i>	p			
<i>Clausocalanus arcuicornis</i> <i>forma major</i>	p		p	
<i>C. arcuicornis forma minor</i>	235	31	3	
<i>C. pergens</i>	84	271	17	13
<i>Ctenocalanus vanus</i>		70		20
<i>Eucalanus bungii bungii</i>		p		p
<i>E. bungii californicus</i>		p	2	p
<i>Euchirella rostrata</i>		p		p
<i>Gaetanus armiger</i>		p		p
<i>Gaidius pungens</i>			p	
<i>Heterorhabdus norvegicus</i>	p			
<i>H. papilliger</i>		p		
<i>Heterorhabdus sp. copepodid</i>				p
<i>Lucicutia flavicornis</i>	p	8	p	p
<i>Metridia lucens</i>	42	372	5	33
<i>Microcalanus pusillus</i>			p	93
<i>Paracalanus parvus</i>	134			
<i>Paraeuchaeta elongata</i>	p	p	3	p
<i>Pleuromamma quadrangulata</i>			p	
<i>P. xiphias</i>		p		
<i>Pleuromamma sp. copepodid</i>				p
<i>Pseudocalanus minutus</i>	580	310	13	86
<i>Racovitzanus antarcticus</i>			2	p
<i>Scolecithricella minor</i>	p	15	3	p
<i>S. ovata</i>		p		
<i>Tortanus discaudatus</i>	8			
CYCLOPOIDA				
<i>Oithona sp. (similis,</i> <i>spinirostris)</i>	5714	1107	197	938
<i>Oncaea conifera</i>		p	3	
<i>O. media</i>	p	15	p	7
<i>O. tenella pacifica</i>		193	2	66

	Depth (m)			
	5	50	100	200*
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella rosea</i>		P	P	P
Total unidentified Copepoda	84	310	16	40
Nauplii (Copepoda & Euphausiacea)	403	410	58	133
OTHER GROUPS				
Appendicularia		23		
Chaetognatha			2	
Ostracoda		23	3	
Pteropoda	202	23		27
Salpida				13

*Sampler came up open. It probably did not open until the second messenger and presumably sampled from 200 meters to the surface.

BB 304 4-5 April 1962 Station 43 45°25' N, 124°29' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2321-2336	5	12.20	2	12
50	2321-2336	13	14.32	1	12
100	2359-0014	2	6.54	100	12
200	2359-0014	3	7.18	4	12

	Depth (m)			
	5	50	100	200
	Direct count			
Amphipoda		0.21	0.15	
Chaetognatha	0.49	0.35	1.38	1.25
Decapod larvae		7.82	0.15	0.70
Fish eggs	0.24			
Fish larvae	0.08	0.07		
Ostracoda	2.13		1.22	1.25
Polychaeta		0.42		0.14
Pteropoda	0.08	13.48		0.14
Siphonophora	0.98			
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>	P			
<i>A. longiremis</i>	p	356		7
<i>Acrocalanus?</i>			1	
<i>Aetideus armatus</i>	p		0.3	p
<i>Calanus pacificus</i>	p	84	0.6	p
<i>C. plumchrus</i>	p	p		p
<i>C. tenuicornis</i>	8			
<i>Calocalanus styliremis</i>	8			
<i>Candacia</i> sp. copepodid	p			
<i>Clausocalanus arcuicornis</i>				
<i>forma minor</i>	8	49	2	14
<i>C. pergens</i>	94	42	0.3	10
<i>Ctenocalanus vanus</i>	41	14		7
<i>Eucalanus bungii bungii</i>	p		1	
<i>F. bungii californicus</i>	p		2	p
<i>Euchirella pulchra</i>	p			
<i>E. rostrata</i>	p		0.3	p
<i>Gaetanus armiger</i>			0.2	
<i>Gaidius pungens</i>	p		0.2	p
<i>Heterorhabdus norvegicus</i>			0.2	
<i>H. papilliger</i>	p			
<i>Heterorhabdus</i> sp. copepodid				3

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Lucicutia flavicornis</i>	16	p	0.2	
<i>Metridia lucens</i>	29	14	6	3
<i>Microcalanus pusillus</i>			28	66
<i>Paraeuchaeta elongata</i>	4	p	1	3
<i>Pleuromamma xiphias</i>	p		0.2	p
<i>Pseudocalanus minutus</i>	98	726	3	49
<i>Racovitzanus antarcticus</i>			0.5	
<i>Scaphocalanus</i> sp. copepodid	p		0.3	
<i>Scolecithricella minor</i>	4	7	4	10
<i>S. ovata</i>	p			
<i>Undeuchaeta plumosa</i>	p			
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	p			
<i>Lubbockia squillimana?</i>			0.5	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	500	2570	16	376
<i>Oncaea conifera</i>	p	p	6	p
<i>O. media</i>	p	7	13	p
<i>O. tenella pacifica</i>			15	
HARPACTICOIDA				
<i>Microsetella rosea</i>			0.2	3
Total unidentified Copepoda	70	49	14	
Nauplii (Copepoda & Euphausiacea)	299	35	7	38
OTHER GROUPS				
Amphipoda			0.2	
Ostracoda			6	
Pteropoda	4	7	2	

BB 304 5 April 1962 Station 52 45°50' N 125°28' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2331-2346	18	10.78	1	12
50	2331-2346	9	15.43	1	12
100	2300-2316	2	7.31	100	12
200	2300-2316	3	8.74	100	12

Depth (m)

5 50 100 200

Direct count

Amphipoda	1.30	0.32
Chaetognatha	0.56	2.01
Decapod larvae	0.56	
Euphausiacea	0.09	
Fish eggs	0.56	
Fish larvae		0.06
Medusae	0.28	0.06
Ostracoda	0.09	2.01
Polychaeta		0.39
Pteropoda	129.87	3.24
Salpida	0.28	0.13
Siphonophora		0.13

Aliquot count

CALANOIDA

<i>Acartia danae</i>		p	0.5	
<i>A. longiremis</i>		p		0.1
<i>Acrocalanus?</i> copepodid				0.2
<i>Aetideus armatus</i>		p	0.4	
<i>Calanus cristatus</i>			0.3	
<i>C. pacificus</i>		p		
<i>C. plumchrus</i>		p	0.4	
<i>C. tenuicornis</i>		13		
<i>Calocalanus gracilis</i>			0.3	
<i>C. styliremis</i>		6		0.2
<i>C. tenuis</i>		p		
<i>Candacia</i> sp. copepodid		p		
<i>Clausocalanus arcuicornis</i>				
<i>forma major</i>		p		
<i>C. arcuicornis</i> <i>forma minor</i>	186	19	1	1
<i>C. pergens</i>	28	123	2	0.8
<i>Ctenocalanus varus</i>		13		

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Eucalanus bungii bungii</i>		p	0.1	1
<i>E. bungii californicus</i>		p	0.4	1
<i>Euchirella pulchra</i>		P		
<i>E. rostrata</i>	9		0.5	
<i>Gaetanus armiger</i>				0.2
<i>Gaidius pungens</i>			0.3	0.1
<i>Heterorhabdus norvegicus</i>			0.4	
<i>H. papilliger</i>		P		
<i>Heterorhabdus</i> sp. copepodid				0.6
<i>Lophothrix frontalis</i>		p		
<i>Lucicutia flavicornis</i>	p	19	0.1	
<i>Metridia lucens</i>	83	220	7	1
<i>Microcalanus pusillus</i>		13	11	19
<i>Paracalanus parvus</i>	56			0.5
<i>Paraeuchaeta elongata</i>	p	p	0.3	0.1
<i>Pleuromamma quadrangulata</i>		p	0.4	
<i>P. xiphias</i>		p	0.1	
<i>Pleuromamma</i> sp. copepodid				0.3
<i>Pseudocalanus minutus</i>	4184	78	2	4
<i>Racovitzanus antarcticus</i>		p	0.4	1
<i>Scaphocalanus echinatus</i>		p		
<i>S. magnus</i>				0.1
<i>Scolecithricella minor</i>		39	0.7	1
<i>S. ovata</i>		p		
CYCLOPOIDA				
<i>Lubbockia squillimana?</i>				0.1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4805	616	89	13
<i>Oncaea borealis</i>		6		0.8
<i>O. conifera</i>	p	p	0.5	2
<i>O. media</i>	p	19	1	12
<i>O. tenella pacifica</i>		130	1.0	8
HARPACTICOIDA				
<i>Aegisthus mucronatus</i>				0.6
<i>Microsetella norvegica</i>			0.1	0.1
<i>M. rosea</i>	p	6	0.7	2
Total unidentified Copepoda	464	45	9	7
Nauplii (Copepoda & Euphausiacea)	93	266	12	2

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda			0.3	
Chaetognatha			1	0.8
Fish eggs			0.1	
Isopoda			0.4	
Ostracoda		52	6	3
Polychaeta			0.1	0.1
Pteropoda	37	26	3	0.5
Salpida				0.1

BB 304 7 April 1962 Station 58 46°02' N, 124°30' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0115-0132	4	11.01	2	12
50*	0115-0132	30	3.50	1	12
100	0100-0115	6	12.65	1	12

	Depth (m)		
	5	50*	100
Direct count			
Amphipoda		0.29	0.08
Appendicularia	0.45	2.86	
Chaetognatha	0.27	1.43	0.79
Decapoda			0.08
Decapod larvae		6.57	
Euphausiacea			0.47
Fish eggs		0.57	0.24
Medusae			0.08
Ostracoda			0.16
Polychaeta	0.09		
Pteropoda	0.09	7.14	0.16

	Depth (m)		
	5	50*	100
Aliquot count			
CALANOIDA			
<i>Acartia longiremis</i>	p		
<i>Aetideus armatus</i>	p		p
<i>Bradyidius</i> sp.			p
<i>Calanus pacificus</i>	5	286	p
<i>C. plumchrus</i>	p	p	p
<i>C. tenuicornis</i>			p
<i>Calocalanus styliremis</i>	5		
<i>Clausocalanus arcuicornis</i> forma minor	14	114	8
<i>C. pergens</i>	23	171	8
<i>Ctenocalanus vanus</i>	36	171	8
<i>Eucalanus bungii bungii</i>			p
<i>E. bungii californicus</i>			p
<i>Euchirella rostrata</i>	p		p
<i>Lucicutia flavicornis</i>	5		p
<i>Metridia lucens</i>	14	86	16
<i>Microcalanus pusillus</i>			40
<i>Paracalanus parvus</i>		86	
<i>Paraeuchaeta elongata</i>	p		p
<i>Pseudocalanus minutus</i>	177	24229	40
<i>Racovitzanus antarcticus</i>			p
<i>Scolecithricella minor</i>	p		16
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	522	5571	854
<i>Oncaea media</i>			p
<i>O. subtilis</i>			p
<i>O. tenella pacifica</i>	5		
HARPACTICOIDA			
<i>Aegisthus mucronatus</i>		p	
<i>Microsetella rosea</i>			p
Total unidentified Copepoda			32
Nauplii (Copepoda & Euphausiacea)	154	57	206
OTHER GROUPS			
Appendicularia	9		
Ostracoda			16
Pteropoda	32		

*Sampler came up open. It probably did not open until the second messenger and presumably sampled from 50 meters to the surface.

BB 304 7-8 April 1962 Station 65 46°27' N, 124°12' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2325-2341	14	14.15	1	12
20*	2353-0008	13	24.83	1	12

Depth (m)

5 20*

Direct count

Chaetognatha	0.57	
Euphausiacea	2.76	0.20
Fish eggs		3.10
Fish larvae	10.53	

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	57	p
<i>A. longiremis</i>	1442	137
<i>Calanus pacificus</i>	120	12
<i>C. plumchrus</i>		p
<i>Calocalanus styliremis</i>		12
<i>Centropages abdominalis</i>	p	p
<i>Clausocalanus arcuicornis forma minor</i>	21	
<i>C. pergens</i>		40
<i>Ctenocalanus vanus</i>		60
<i>Eurytemora americana?</i>	p	
<i>Lucicutia flavicornis</i>		p
<i>Paracalanus parvus</i>		56
<i>Pseudocalanus minutus</i>		322
<i>Tortanus discaudatus</i>	14	p

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	64	862
Total unidentified Copepoda	198	20
Nauplii (Copepoda & Euphausiacea)	1032	1442

	Depth (m)	
	5	20*
Aliquot count (cont.)		
OTHER GROUPS		
Appendicularia		20
Barnacle nauplii	64	
Pelecypod larvae	7	
Polychaeta		4
Pteropoda		28

*Records confusing concerning correct number of revolutions of flowmeter.

BB 304 10 April 1962 Station 79 47°14' N, 126°08' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0259-0316	15	13.24	1	12
50*	0259-0316	20	12.51	1	12
100	0228-0245	2	7.74	10	12

	Depth (m)		
	5	50*	100
Direct count			
Amphipoda		0.08	
Appendicularia		1.60	0.64
Chaetognatha		1.28	0.26
Euphausiacea	6.72	0.40	
Fish larvae			0.13
Polychaeta		0.64	
Pteropoda		0.16	0.13
Siphonophora			0.13
Aliquot count			

CALANOIDA

<i>Calanus pacificus</i>	159	16	9
<i>C. tenuicornis</i>		8	1
<i>Calocalanus styliremis</i>	8	8	

	Depth (m)		
	5	50*	100
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Calocalanus</i> sp.		P	
<i>Clausocalanus arcuicornis</i> forma minor	8		
<i>C. pergens</i>		8	8
<i>Ctenocalanus vanus</i>	8	80	1
<i>Euchirella rostrata</i>		8	8
<i>Lucicutia flavicornis</i>		8	1
<i>Metridia lucens</i>		16	26
<i>Microcalanus pusillus</i>		8	11
<i>Pseudocalanus minutus</i>	106	8	
<i>Racovitzanus antarcticus</i>			1
<i>Scolecithricella minor</i>		8	1
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3172	2030	110
<i>Oncaea media</i>		16	
<i>O. tenella pacifica</i>		136	35
HARPACTICOIDA			
<i>Microsetella norvegica</i>	8	8	1
<i>M. rosea</i>		40	
Total unidentified Copepoda	83		8
Nauplii (Copepoda & Euphausiacea)	332	296	66
OTHER GROUPS			
Appendicularia		32	
Echinoderm larvae	8	8	
Euphausiacea			1
Foraminifera	60	48	4
Ostracoda			3
Pteropoda	91	8	

*Contains large amount of phytoplankton.

BB 304 11 April 1962 Station 84 48°10' N, 125°11' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0135-0150	13	12.32	1	12
50	0135-0150	3	10.02	4	12
100	0105-0120	+	7.34	10	12
200	0105-0120	1	5.32	20	12

Depth (m)

5	50	100	200
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Direct count

Chaetognatha		0.70	0.41	2.82
Euphausiacea	1.70	0.10		
Fish larvae		0.10		
Pteropoda		0.40	0.14	

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	24			
<i>Calanus pacificus</i>	105	7	7	2
<i>C. plumchrus</i>				1
<i>Clausocalanus arcuicornis</i> <i>forma minor</i>	24			
<i>C. pergens</i>		2		2
<i>Ctenocalanus vanus</i>	8	2	4	1
<i>Eucalanus bungii bungii</i>				1
<i>E. bungii californicus</i>				4
<i>Heterorhabdus pacificus</i>				1
<i>Lucicutia flavicornis</i>		2		
<i>Metridia lucens</i>		16	3	6
<i>Microcalanus pusillus</i>			1	1
<i>Mimocalanus cultrifer</i>				1
<i>Pseudocalanus minutus</i>	1201	19	7	2
<i>Scolecithricella minor</i>		12	1	3

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1347	279	108	43
<i>Oncaea conifera</i>				2
<i>O. media</i>				23
<i>O. tenella pacifica</i>	2	12	13	

	Depth (m)			
	5	50	100	200
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>				7
<i>M. rosea</i>		2		
Total unidentified Copepoda	32	12	11	1
Nauplii (Copepoda & Euphausiacea)	154	200	108	3
OTHER GROUPS				
Foraminifera		2	1	
Ostracoda		2	1	6
Pteropoda		12		

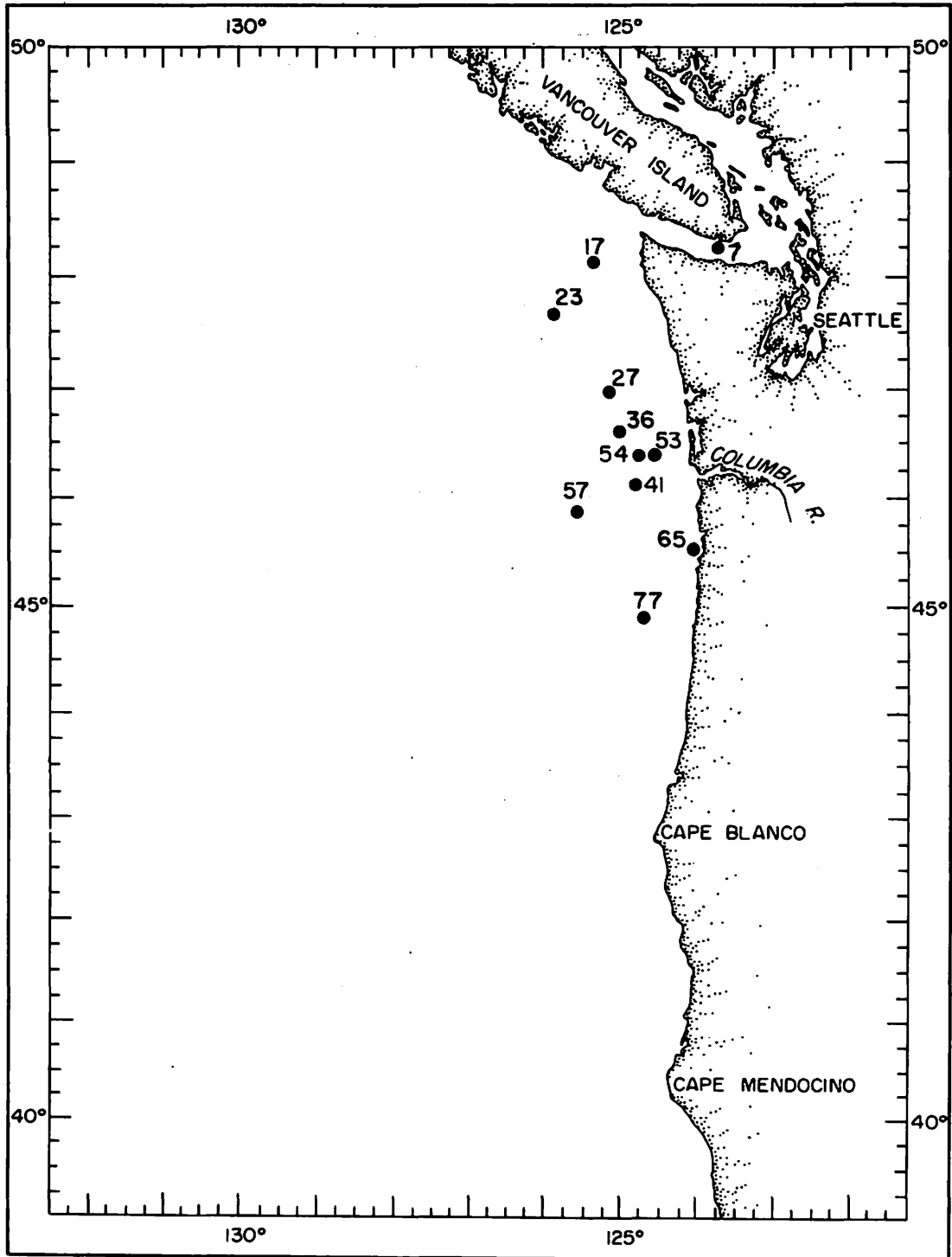


Fig. 10. Zooplankton sampling stations Brown Bear Cruise 308, 7 - 19 June 1962.

BB 308 8 June 1962 Station 7 48°16' N, 123°41' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0529-0539	5	10.22	1	12
10	0546-0556	6	10.79	1	12
20	0546-0556	5	11.56	2	12

	Depth (m)		
	5	10	20
	Direct count		
Chaetognatha	0.29	0.19	2.08
Decapod larvae	0.49		
Euphausiacea	0.20		0.17
Fish larvae	0.29		0.09
	Aliquot count		

CALANOIDA

<i>Acartia clausii</i>		9	8
<i>A. longiremis</i>	577	362	66
<i>Calanus pacificus</i>		28	17
<i>C. plumchrus</i>		37	4
<i>C. tenuicornis</i>	391		4
<i>Centropages abdominalis</i>		9	
<i>Ctenocalanus vanus</i>			4
<i>Metridia lucens</i>			4
<i>Microcalanus pusillus</i>		9	4
<i>Paracalanus parvus</i>			4
<i>Pseudocalanus minutus</i>	157	889	856

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	39	37	86
<i>Oncaea conifera</i>		9	4
<i>O. media</i>	10	19	13
<i>O. tenella pacifica</i>		9	22

	Depth (m)		
	5	10	20
Aliquot count (cont.)			
HARPACTICOIDA			
<i>Microsetella norvegica</i>		9	13
Total unidentified Copepoda			4
Nauplii (Copepoda & Euphausiacea)	6438	7526	8477
OTHER GROUPS			
Appendicularia	20		26
Barnacle nauplii	431	510	588
Chaetognatha	10		30
Cladocera		9	
Euphausiacea	29		
Fish larvae			4
Pelecypod larvae			4

BB 308 9 June 1962 Station 17 48°08' N, 125°21' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0508-0518	2	7.41	10	12
10*	0508-0518	1	9.11	10	12
20	0508-0518	5	13.48	4	12

	Depth (m)		
	5	10*	20
Direct count			
Chaetognatha			0.15
Euphausiacea			0.22

	Depth (m)		
	5	10*	20
Aliquot count			
CALANOIDA			
<i>Acartia clausii</i>	4	6	6
<i>A. longiremis</i>	120	64	360
<i>Calanus pacificus</i>		1	
<i>C. plumchrus</i>	4	2	20
<i>Centropages abdominalis</i>	3		9
<i>Paracalanus parvus</i>			4
<i>Pseudocalanus minutus</i>	16	16	170
<i>Tortanus discaudatus</i>	1		
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	20	5	161
HARPACTICOIDA			
<i>Microsetella norvegica</i>	3		
Total unidentified Copepoda			4
Nauplii (Copepoda & Euphausiacea)	42	4	40
OTHER GROUPS			
Barnacle nauplii	3		
Decapod larvae			9

*Due to small hole in screen of sampler cup sample probably not quantitative.

BB 308 9 June 1962 Station 23 47°40' N, 125°52' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2334-2354	34	11.26	1	12
25	2334-2354	28	12.25	1	12
75	2334-2354	2	11.56	10	12

	Depth (m)		
	5	25	75
	Direct count		
Amphipoda	9.33	0.08	0.17
Appendicularia		0.73	1.47
Cephalopoda	0.09		
Chaetognatha	0.53	0.24	0.69
Decapoda			0.09
Decapod larvae	0.09	0.08	
Euphausiacea	1.78	1.14	9.60
Medusae	2.84		
Ostracoda			0.17
Polychaeta	1.15	1.88	0.26
Pteropoda	6.57	0.33	0.26
Salpida	0.09	0.08	
	Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>		16	
<i>Calanus pacificus</i>			1
<i>C. plumchrus</i>			1
<i>C. tenuicornis</i>	18	8	5
<i>Calocalanus styliremis</i>		8	1
<i>Candacia</i> sp. copepodid			1
<i>Clausocalanus arcuicornis</i> forma minor	17	16	3
<i>C. pergens</i>			2
<i>Ctenocalanus varus</i>	53		
<i>Metridia lucens</i>		8	17
<i>Paracalanus parvus</i>	18	8	
<i>Pseudocalanus minutus</i>	13125	2695	15
<i>Scolecithricella minor</i>		8	14

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3543	5216	189
<i>Oncaea conifera</i>		8	1
<i>O. tenella pacifica</i>		24	3

		Depth (m)		
		5	25	75
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>			8	3
Nauplii (Copepoda & Euphausiacea)	12265		4294	13
OTHER GROUPS				
Amphipoda	17			
Appendicularia	9	33		2
Cyphonautes larvae	9			
Decapod larvae	9			1
Euphausiacea	44	41		2
Medusae		16		
Ostracoda				8
Pelecypod larvae		8		
Polychaeta				2
Pteropoda		41		16

BB 308 11 June 1962 Station 27 46°57' N, 125°07' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0055-0115	22	9.49	1	12
25	0039-0059	20	7.47	1	12
75*	0039-0059	10	12.11	2	12

		Depth (m)		
		5	25	75*
Direct count				
Amphipoda		6.32	0.40	
Appendicularia		0.84	13.79	0.66
Chaetognatha		0.95	0.27	0.58
Decapod larvae		0.74		
Euphausiacea		1.48	1.74	

	Depth (m)		
	5	25	75*
	Direct count (cont.)		
Fish larvae			0.08
Medusae	0.53	0.27	
Polychaeta	0.95	1.07	0.33
Pteropoda	0.32	0.40	
Siphonophora			2.48
	Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>	64	53	
<i>Aetideus armatus</i>			p
<i>Calanus cristatus</i>	11	13	
<i>C. plumchrus</i>	11		
<i>C. tenuicornis</i>	32		p
<i>Candacia</i> sp. copepodid			p
<i>Clausocalanus arcuicornis</i>			p
<i>C. pergens</i>	53		4
<i>Eucalanus bungii californicus</i>			p
<i>Gaetanus</i> sp. copepodid			p
<i>Gaidius</i> sp. copepodid			p
<i>Heterorhabdus</i> sp. copepodid			p
<i>Metridia lucens</i>	95		29
<i>Microcalanus pusillus</i>			4
<i>Paracalanus parvus</i>	43		
<i>Paraeuchaeta elongata</i>			p
<i>Pleuromamma quadrangulata</i>			p
<i>P. xiphias</i>			p
<i>Pseudocalanus minutus</i>	1665	1205	4
<i>Scolecithricella minor</i>			21

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1296	8260	417
<i>Oncaea conifera</i>			8
<i>O. tenella pacifica</i>		720	4

	Depth (m)		
	5	25	75*
Aliquot count (cont.)			
HARPACTICOIDA			
<i>Microsetella norvegica</i>			8
<i>M. rosea</i>			4
Total unidentified Copepoda			29
Nauplii (Copepoda & Euphausiacea)	1391	1914	116
OTHER GROUPS			
Amphipoda	105		
Appendicularia	11		17
Pteropoda	1		29

*Contains large amount of broken Siphonophora.

BB 308 12 June 1962 Station 36 46°37' N, 124°59' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0122-0144	12	12.95	1	12
25	0222-0244	19	14.46	1	12
75	0222-0244	1	3.94	10	12

	Depth (m)		
	5	25	75

	Direct count		
	5	25	75
Amphipoda	0.62	0.90	
Appendicularia		0.55	
Cephalopoda		0.14	
Chaetognatha	0.15	0.28	1.02
Decapod larvae	0.23	0.14	

	Depth (m)		
	5	25	75
	Direct count (cont.)		
Euphausiacea	0.77	1.80	
Medusae		0.07	
Polychaeta		0.48	0.25
Pteropoda		0.35	0.25
Salpida		0.07	
	Aliquot count		
CALANOIDA			
<i>Acartia danae</i>	8		
<i>A. longiremis</i>	240	48	3
<i>Calanus plumchrus</i>		21	
<i>C. tenuicornis</i>	15	21	
<i>Calocalanus styliremis</i>		p	
<i>Calocalanus</i> sp.		7	
<i>Clausocalanus arcuicornis</i>	46		
<i>C. pergens</i>	46	28	3
<i>Ctenocalanus vanus</i>		7	
<i>Euchirella galeata</i>		p	
<i>Gaidius tenuispinus</i>			3
<i>Lucicutia flavicornis</i>		14	
<i>Metridia lucens</i>	115	21	8
<i>Microcalanus pusillus</i>			8
<i>Paracalanus parvus</i>	23	35	
<i>Paraeuchaeta elongata</i>			8
<i>Pseudocalanus minutus</i>	3560	1362	18
<i>Scolecithricella minor</i>			5
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1240	3291	279
<i>Oncaea tenella pacifica</i>		41	5
HARPACTICOIDA			
<i>Microsetella norvegica</i>	8	7	
Nauplii (Copepoda & Euphausiacea)	9620	941	30
OTHER GROUPS			
Appendicularia			5
Euphausiacea	8		3
Pteropoda		138	

BB 308 13 June 1962 Station 41 46°08' N, 124°47' W

Depth (m)	Time interval of hauls	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	0156-0216	2	0.71	4	12
25*	0156-0216	4	0.93	2	12

Depth (m)

5* 25*

Direct count

Amphipoda	1.41	1.08
Euphausiacea	8.45	3.23
Medusae		4.30
Polychaeta		7.53
Pteropoda	1.41	

Aliquot count

CALANOIDA

<i>Acartia clausii</i>	35	
<i>A. danae</i>	35	
<i>A. longiremis</i>	317	
<i>Calanus cristatus</i>		54
<i>C. plumchrus</i>	35	
<i>Calocalanus styliremis</i>		p
<i>Clausocalanus pergens</i>	317	
<i>Metridia lucens</i>	35	
<i>Paraeuchaeta elongata</i>		54
<i>Pseudocalanus minutus</i>	3134	1075

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2183	20484
<i>Oncaea tenella pacifica</i>		269
Total unidentified Copepoda		376
Nauplii (Copepoda & Euphausiacea)	880	1559

OTHER GROUPS

Chaetognatha		54
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*Probable flowmeter or sampler malfunctions.

BB 308 15 June 1962 Station 53 46°25' N, 124°33' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	0213-0233	1	1.36	4	12
25*	0213-0233	3	2.80	2	12
75*	0213-0233	2	2.32	10	12

	Depth (m)		
	5*	25*	75*
	Direct count		
Euphausiacea	7.35	1.43	
	Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>	36	107	52
<i>Aetideus armatus</i>			8
<i>Calanus pacificus</i>	36		21
<i>C. plumchrus</i>		71	13
<i>Clausocalanus pergens</i>	18		
<i>Ctenocalanus vanus</i>		18	
<i>Eucalanus bungii</i>			4
<i>Heterorhabdus</i> sp. copepodid			4
<i>Metridia lucens</i>			48
<i>Microcalanus pusillus</i>			17
<i>Paraeuchaeta</i> sp. copepodid			9
<i>Pseudocalanus minutus</i>	1731	554	167
<i>Scolecithricella minor</i>			13

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2097	2607	751
<i>Oncaea tenella pacifica</i>			13
Nauplii (Copepoda)	147	143	82

OTHER GROUPS

Decapod larvae			4
Ostracoda			13

*Probable flowmeter or sampler malfunctions.

BB 308 15 June 1962 Station 54 46°25' N, 124°42' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
10	0551-0602	11	10.10	1	6
20	0551-0602	18	12.31	1	6
40	0551-0602	1	13.11	4	6

	Depth (m)		
	10	20	40
	Direct count		
Chaetognatha		0.08	
Decapod larvae		0.08	
Euphausiacea		0.49	
Fish larvae		0.08	
Pteropoda			0.08
	Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>	408	235	12
<i>Calanus pacificus</i>	110	184	
<i>C. plumchrus</i>			2
<i>C. tenuicornis</i>		32	
<i>Calocalanus styliremis</i>			p
<i>Centropages abdominalis</i>	20		
<i>Clausocalanus arcuicornis</i>		32	
<i>Ctenocalanus vanus</i>			2
<i>Metridia lucens</i>			4
<i>Pseudocalanus minutus</i>	861	2030	65
<i>Scolecithricella minor</i>			2

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2099	3201	202
<i>Oncaea media</i>			2
Nauplii (Copepoda)	455	300	21

OTHER GROUPS

Chaetognatha			2
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BB 308 16 June 1962 Station 57 45°54' N, 125°35' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0423-0433	6	8.24	1	12
25	0423-0433	13	10.25	1	12
75	0423-0433	7	14.86	1	12

Depth (m)

5	25	75
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Direct count

Amphipoda			0.40
Cephalopoda		0.10	
Chaetognatha			0.27
Decapod larvae	0.12		
Euphausiacea		0.10	0.07
Medusae		0.10	0.07
Polychaeta			0.74

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>		10	
<i>Calanus pacificus</i>	61	88	
<i>C. plumchrus</i>			7
<i>C. tenuicornis</i>	49	225	54
<i>Calocalanus styliremis</i>			p
<i>Calocalanus</i> sp.			p
<i>Clausocalanus arcuicornis</i> forma major	24	50	
<i>C. arcuicornis</i> forma minor		10	7
<i>C. pergens</i>	12	69	7
<i>Ctenocalanus vanus</i>		10	
<i>Lucicutia flavicornis</i>			7
<i>Metridia lucens</i>			114
<i>Paracalanus parvus</i>	85	88	
<i>Pseudocalanus minutus</i>	1189	3278	108

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2682	6868	2880
<i>Oncaea tenella pacifica</i>			585
Nauplii (Copepoda & Euphausiacea)	1068	2479	309

	Depth (m)		
	5	25	75
Aliquot count (cont.)			
OTHER GROUPS			
Appendicularia			13
Chaetognatha	20		
Euphausiacea	10		61
Polychaeta			34

BB 308 17 June 1962 Station 65 45°33' N, 124°02' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m)	Percent of sample counted	Net mesh
5	0157-0217	17	8.88	1	12
25*	0157-0217	1	1.07	20	12

		Depth (m)	
		5	25*
		Direct count	
Ctenophora		0.23	
Medusae		0.11	
		Aliquot count	

CALANOIDA

<i>Acartia clausii</i>	p	
<i>A. longiremis</i>	822	23
<i>Aetideus armatus</i>		5
<i>Calanus pacificus</i>	23	p
<i>Centropages abdominalis</i>	11	
<i>Clausocalanus arcuicornis</i>	169	
<i>Eucalanus bungii californicus</i>	p	
<i>Metridia lucens</i>	p	
<i>Pseudocalanus minutus</i>	3660	117
<i>Tortanus discaudatus</i>	p	

	Depth (m)	
	5	25*
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2173	467
Total unidentified Copepoda		103
Nauplii (Copepoda & Euphausiacea)	1767	112

*Probable flowmeter or sampler malfunction.

BB 308 19 June 1962 Station 77 44°55' N, 124°41' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0150-?	6	15.29	2	12
25	0150-?	17	12.88	1	12
75	0150-?	3	15.59	2	12

	Depth (m)		
	5	25	75
Direct count			
Amphipoda	0.52	0.31	
Appendicularia		0.08	
Chaetognatha	0.07		
Euphausiacea	0.13	1.16	
Medusae		0.23	0.06
Mysidacea	0.07		
Polychaeta		0.08	0.13
Pteropoda	0.26	0.08	1.48
Siphonophora	0.07		

	Depth (m)		
	5	25	75
Aliquot count			
CALANOIDA			
<i>Acartia longiremis</i>	65	318	9
<i>Calanus pacificus</i>	3	31	
<i>C. plumchrus</i>	p	8	
<i>C. tenuicornis</i>	p	23	
<i>Calocalanus gracilis</i>			p
<i>C. styliremis</i>			p
<i>Calocalanus</i> sp.		p	
<i>Centropages abdominalis</i>	p		
<i>Clausocalanus arcuicornis</i> forma minor	33		3
<i>C. pergens</i>		39	
<i>Ctenocalanus vanus</i>		8	
<i>Eucalanus bungii bungii</i>			3
<i>Lucicutia flavicornis</i>	p		
<i>Metridia lucens</i>	20	8	6
<i>Microcalanus pusillus</i>			13
<i>Paracalanus parvus</i>	46		
<i>Paraeuchaeta elongata</i>		8	16
<i>Pseudocalanus minutus</i>	922	2570	157
<i>Scaphocalanus</i> sp. copepodid			3
<i>Undeuchaeta bispinosa</i>	p		
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	559	1887	401
<i>Oncaea tenella pacifica</i>		16	10
Total unidentified Copepoda	654		
Nauplii (Copepoda & Euphausiacea)	454	2880	100
OTHER GROUPS			
Amphipoda	20	8	3
Appendicularia		8	
Chaetognatha		8	
Ostracoda			3
Polychaeta			6

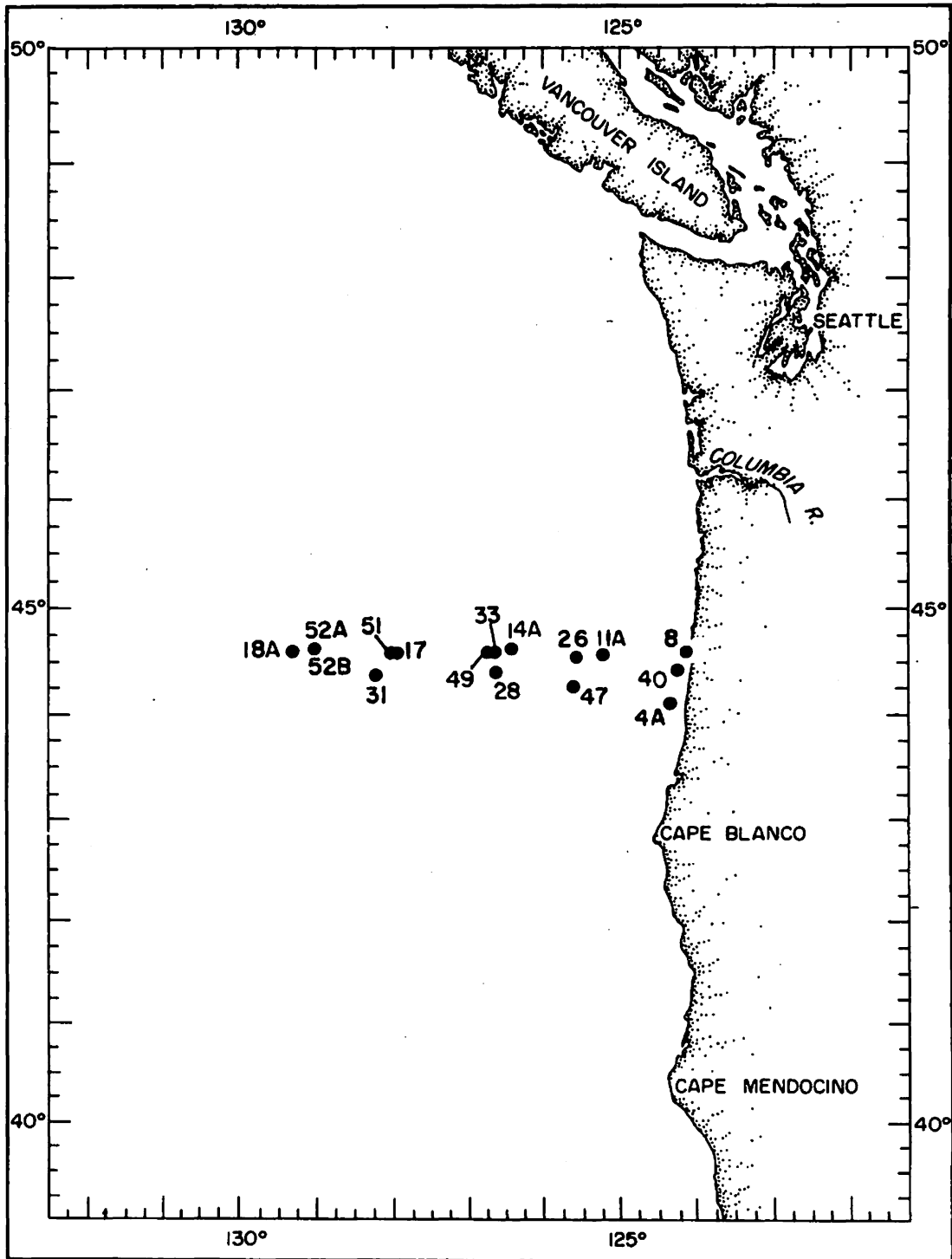


Fig. 11. Zooplankton sampling stations Brown Bear Cruise 309, 20 June - 19 July 1962.

BB 309 21-22 June 1962 Station 4A 44°07' N, 124°22' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	2323-2338	+		100	12
38**	2323-2338	81		5	12
66***	2358-0013	14	6.43	5	12

	Depth (m)		
	5*	38**	66***
	Direct count		
Appendicularia			0.78
Chaetognatha			0.16
Euphausiacea		p	
Medusae			0.16
	Aliquot count		

CALANOIDA

<i>Acartia longiremis</i>		p	3
<i>Calanus pacificus</i>		p	
<i>C. plumchrus</i>			18
<i>Ctenocalanus vanus</i>	p		
<i>Metridia lucens</i>		p	12
<i>Microcalanus pusillus</i>			31
<i>Pseudocalanus minutus</i>	p	p	24
<i>Scolecithricella minor</i>			6

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	p	p	243
<i>Oncaea conifera</i>			9
<i>O. tenella pacifica</i>			22

HARPACTICOIDA

<i>Microsetella norvegica</i>			9
Nauplii (Copepoda & Euphausiacea)	p	p	102

	Depth (m)		
	5*	38**	66***
Aliquot count (cont.)			
OTHER GROUPS			
Foraminifera			3
Ostracoda			3
Polychaeta		p	

*Flowmeter malfunctioned.

**Flowmeter malfunctioned. Sample contains large amount of phytoplankton.

***Contains large amount of phytoplankton.

BB 309 22 June 1962 Station 8 44°36' N, 124°08' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1037-1052	15	13.23	1	12
30	1037-1052	4	4.61	2	12

	Depth (m)	
	5	30
Direct count		
Chaetognatha		9.11
Decapod larvae		0.87
Euphausiacea		0.22
Fish larvae		0.22
Medusae		1.30
Aliquot count		

CALANOIDA

<i>Acartia clausii</i>	45	11
<i>A. longiremis</i>	294	76
<i>Calanus pacificus</i>	45	33

	Depth (m)	
	5	30
	Aliquot count (cont.)	
CALANOIDA (cont.)		
<i>Centropages abdominalis</i>	287	22
<i>Clausocalanus arcuicornis</i> forma major	16	
<i>Microcalanus pusillus</i>		22
<i>Pseudocalanus minutus</i>	741	1279
<i>Scolecithricella minor</i>		22
<i>Tortanus discaudatus</i>		11
CYCLOPOIDA		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	76	141
<i>Oncaea media</i>	8	
<i>O. tenella pacifica</i>		43
HARPACTICOIDA		
<i>Microsetella norvegica</i>		43
Total unidentified Copepoda		11
Nauplii (Copepoda & Euphausiacea)	620	130
OTHER GROUPS		
Barnacle nauplii	39	65
Cladocera	484	22
Pelecypoda	8	347
Polychaeta		22

BB 309 22-23 June 1962 Station 11A 44°35' N, 125°15' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2314-2329	8	12.71	2	12
38	2314-2329	14	13.04	1	12
60	2350-0005	9	11.78	1	12
100	2350-0005	4	11.75	1	12

Depth (m)

5	38	60	100
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Direct count

Amphipoda			0.08	
Appendicularia		0.54		
Cephalopoda		0.08		
Chaetognatha	0.08	0.61	0.42	0.17
Decapod larvae		0.15		
Euphausiacea	0.71	1.30	1.10	0.26
Fish larvae		0.23		
Medusae		0.38	0.08	0.09
Polychaeta		1.46	0.68	0.34
Pteropoda	0.39	0.23	0.08	
Siphonophora	0.08			

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	12	31	25	9
<i>Calanus pacificus</i>		15		
<i>C. tenuicornis</i>	146	15	8	
<i>Calocalanus styliremis</i>		8	17	
<i>C. tenuis</i>			p	
<i>Calocalanus</i> sp.		p	p	
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	87	53	41	26
<i>C. pergens</i>	47			
<i>Ctenocalanus varus</i>	32	31	17	
<i>Gaidius tenuispinus</i>		8		
<i>Lucicutia flavicornis</i>	36	8		
<i>Metridia lucens</i>	295	215	161	204
<i>Microcalanus pusillus</i>				17
<i>Paracalanus parvus</i>	99			9
<i>Pleuromamma abdominalis</i>				17
<i>Pseudocalanus minutus</i>	79	2170	1129	315
<i>Racovitzanus antarcticus</i>			8	17

	Depth (m)			
	5	38	60	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Scaphocalanus brevicornis</i>		8		
<i>S. curtus</i>			8	
<i>Scolecithricella minor</i>		8		
<i>S. ovata</i>		8	8	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	185	4087	2912	1353
<i>Oncaea conifera</i>			8	
<i>O. media</i>			8	9
<i>O. tenella pacifica</i>		84	76	34
HARPACTICOIDA				
<i>Microsetella rosea</i>		8		
Total unidentified Copepoda	51	100	34	26
Nauplii (Copepoda & Euphausiacea)	177	744	263	43
OTHER GROUPS				
Amphipoda	16			
Appendicularia		23		9
Cladocera		8	8	
Chaetognatha		15		
Euphausiacea		8	8	
Foraminifera		8		
Ostracoda		23	25	51
Polychaeta	4	8	25	
Pteropoda	47	61	17	17
Radiolaria		8		9
Siphonophora	8			

BB 309 23 June 1962 Station 14A 44°38' N, 126°26' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1008-1022	17	14.13	1	12
38	1008-1022	10	7.12	1	12
60	1036-1051	5	11.13	2	12
100	1036-1051	16	7.04	1	12

Depth (m)

5*	38	60	100
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Direct count

Amphipoda		0.09	
Chaetognatha	0.70	0.63	3.69
Decapoda		0.09	
Euphausiacea	0.14	0.36	3.84
Fish larvae			0.28
Medusae	0.42	0.54	0.99
Polychaeta		0.81	
Pteropoda		0.45	
Salpida	3.37	0.18	1.85

Aliquot count

CALANOIDA

<i>Calanus pacificus</i>	7	211	9	412
<i>C. plumchrus</i>			5	
<i>C. tenuicornis</i>		28	32	170
<i>Calocalanus styliremis</i>		56	5	43
<i>Calocalanus</i> sp.		p		14
<i>Clausocalanus arcuicornis</i> forma <i>major</i>		14	10	
<i>C. arcuicornis</i> forma <i>minor</i>		112		
<i>C. pergens</i>		42	55	383
<i>Ctenocalanus vanus</i>		84		56
<i>Eucalanus bungii bungii</i>			5	14
<i>Heterorhabdus</i> sp. copepodid			5	
<i>Lucicutia flavicornis</i>			5	
<i>Metridia lucens</i>			27	14
<i>Paracalanus parvus</i>	78	140	9	99
<i>Pseudocalanus minutus</i>	14	1194	31	1108
<i>Scolecithricella minor</i>			5	

	Depth (m)			
	5*	38	60	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	7150	8820	504	8423
<i>Oncaea tenella pacifica</i>			22	128
HARPACTICOIDA				
<i>Microsetella norvegica</i>		14	18	
Total unidentified Copepoda		112	54	270
Nauplii (Copepoda & Euphausiacea)	304	506	109	511
OTHER GROUPS				
Amphipoda		14		14
Appendicularia	21	14	5	28
Chaetognatha		14		
Decapoda		14		
Euphausiacea				28
Foraminifera	21	98	9	57
Isopoda			5	
Medusae		14		43
Ostracoda			9	
Polychaeta		14	5	28
Pteropoda		14	9	57
Radiolaria			13	
Salpida		56		14

*Sampler did not close with second messenger.

BB 309 23 June 1962 Station 17 44°36' N, 128°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2216-2231	5	11.32	1	12
38	2216-2231	31	7.59	1	12
60	2253-2308	15	9.75	1	12
100	2253-2308	3	9.88	2	12

	Depth (m)			
	5	38	60	100
	Direct count			
Amphipoda	46.67		0.10	
Chaetognatha		0.26	0.31	
Decapoda	0.44			
Decapod larvae	0.27			
Euphausiacea	0.27	0.26	0.82	0.51
Fish larvae			0.10	
Medusae	31.80	3.16	0.51	
Polychaeta	11.04	0.26		
Pteropoda	0.71		0.10	
Salpida	28.45	3.29	1.95	
	Aliquot count			

CALANOIDA

<i>Aetideus armatus</i>				5
<i>Calanus cristatus</i>		40		
<i>C. pacificus</i>	18	92	41	5
<i>C. plumchrus</i>		105		5
<i>C. tenuicornis</i>		13		
<i>Calocalanus styliremis</i>		40	31	
<i>Calocalanus</i> sp.		p	p	
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	9			5
<i>C. pergens</i>		171	10	
<i>Epilabidocera amphitrites</i>	9			
<i>Eucalanus bungii californicus</i>		13	31	
<i>Euchirella rostrata</i>		p		
<i>Gaetanus armiger</i>				5
<i>Heterorhabdus</i> sp. copepodid				5
<i>Lucicutia flavicornis</i>			10	10
<i>Metridia lucens</i>	26		21	30
<i>Paracalanus parvus</i>	35	13		

	Depth (m)			
	5	38	60	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Paraeuchaeta</i> sp. copepodid		13		10
<i>Pleuromamma quadrangulata</i>				p
<i>P. xiphias</i>		p	p	p
<i>Pseudocalanus minutus</i>		533	184	25
<i>Racovitzanus antarcticus</i>				5
<i>Scolecithricella minor</i>			10	5
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2164	4282	2595	562
<i>Oncaea media</i>			10	
<i>O. tenella pacifica</i>		659	10	15
HARPACTICOIDA				
<i>Microsetella norvegica</i>	274	13	21	5
Nauplii (Copepoda & Euphausiacea)	512	1475	400	56
OTHER GROUPS				
Amphipoda	53		10	
Appendicularia		13	21	
Foraminifera		237	123	15
Medusae	18	40		
Ostracoda				5
Pteropoda	53	13	31	
Radiolaria				5
Salpida	26		10	
Siphonophora	18			

BB 309 24 June 1962 Station 18A 44°36' N, 129°19' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	1041-1056	15	14.98	1	12
38	1041-1059	21	8.49	1	12
60	1117-1132	21	9.69	1	12
100**	1117-1132	2	37.66	5	12

Depth (m)

5*	38	60	100**
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Direct count

Amphipoda	0.13	0.12		
Chaetognatha		1.06	0.10	0.11
Euphausiacea		0.82		0.05
Medusae		0.94	0.10	0.03
Ostracoda				0.03
Polychaeta		0.59	0.21	0.08
Pteropoda			0.10	0.03
Salpida		2.59		

Aliquot count

CALANOIDA

<i>Calanus pacificus</i>	7	177		
<i>C. tenuicornis</i>		12	237	2
<i>Calocalanus gracilis</i>				P
<i>C. styliremis</i>		153	73	1
<i>C. tenuis</i>		P		P
<i>Calocalanus</i> sp.		24	P	
<i>Clausocalanus arcuicornis</i> forma major		24		2
<i>C. arcuicornis</i> forma minor	13	24	124	
<i>C. pergens</i>		331	217	4
<i>Ctenocalanus vauus</i>	53	248	124	
<i>Eucalanus bungii bungii</i>		24	10	
<i>Gaidius tenuispinus</i>				1
<i>Heterorhabdus</i> sp. copepodid				1
<i>Lucicutia flavicornis</i>		12		1
<i>Metridia lucens</i>			62	10
<i>Paracalanus parvus</i>	67	212		
<i>Paraeuchaeta</i> sp. copepodid				1
<i>Pseudocalanus minutus</i>		801	599	10
<i>Scolecithricella minor</i>	40			3

	Depth (m)			
	5*	38	60	100**
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3131	6019	4479	109
<i>Oncaea conifera</i>			10	
<i>O. media</i>		12		
<i>O. tenella pacifica</i>		883	289	4
HARPACTICOIDA				
<i>Microsetella rosea</i>			10	1
Total unidentified Copepoda	67	718	475	1
Nauplii (Copepoda & Euphausiacea)	814	2133	753	14
OTHER GROUPS				
Appendicularia	20	82		2
Chaetognatha		12	21	
Foraminifera	27	35	62	3
Ostracoda				2
Polychaeta		24		
Pteropoda	27	71	144	4
Salpida		24	31	
Siphonophora		24		

*Sampler at 5 meters failed to release its second messenger and came up with its gate open. Sampler at 38 meters was raised approximately 10 meters before being closed.

**Indicates probable flowmeter malfunction.

BB 309 29 June 1962 Station 26 44°34' N, 125°35' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1038-1053	11	12.73	1	12
38	1038-1053	23	11.31	1	12
60	1116-1131	15	9.96	1	12
100	1116-1131	4	9.00	2	12

Depth (m)

5	38	60	100
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Direct count

Appendicularia	0.33
Chaetognatha	0.56
Euphausiacea	0.22
Polychaeta	1.78

Aliquot count

CALANOIDA

<i>Acrocalanus longicornis?</i>			100	
<i>Calanus pacificus</i>	731	442	110	39
<i>C. tenuicornis</i>		53	240	17
<i>Calocalanus styliremis</i>	8	27	p	6
<i>C. tenuis</i>		p	p	p
<i>Calocalanus</i> sp.		p		p
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	8	62	90	
<i>C. arcuicornis</i> forma <i>minor</i>		177		
<i>C. pergens</i>		18	50	28
<i>Ctenocalanus vanus</i>	8	9	20	
<i>Eucalanus bungii</i>		9		6
<i>Gaetanus armiger</i>			10	
<i>Heterorhabdus</i> sp. copepodid				6
<i>Metridia lucens</i>			462	34
<i>Paracalanus parvus</i>	369			
<i>Pseudocalanus minutus</i>	8	2838	1246	157
<i>Scolecithricella minor</i>		9		11

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2800	6172	2339	439
<i>Oncaea media</i>				6
<i>O. tenella pacifica</i>		62	20	

	Depth (m)			
	5	38	60	100
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>	8		10	6
Total unidentified Copepoda	63		20	
Nauplii (Copepoda & Euphausiacea)	1872	44	50	6
OTHER GROUPS				
Appendicularia	110	62		
Chaetognatha		27	10	6
Euphausiacea		44	10	
Fish larvae	8			
Foraminifera	8			
Medusae		27	10	11
Ostracoda				11
Polychaeta			10	6
Pteropoda	16			
Radiolaria				6
Siphonophora		18		

BB 309 29 June 1962 Station 28 44°25' N, 126°39' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2227-2243	10	14.75	1	12
38	2227-2243	16	12.19	2	12
60	2303-?	?	9.68	10	12
100	2303-?	2	9.46	10	12

	Depth (m)			
	5	38	60	100
Direct count				
Amphipoda	49.36	7.14	2.38	0.53
Chaetognatha			0.52	0.74
Euphausiacea	6.78	4.43	2.17	0.42

	Depth (m)			
	5	38	60	100
	Direct count (cont.)			
Medusae	10.98	47.09	5.68	0.42
Polychaeta	0.07	4.68	0.72	0.42
Pteropoda	0.27	0.90	0.10	
Salpida	5.36	4.51	1.14	0.21
	Aliquot count			
	CALANOIDA			
<i>Acartia negligens</i>	7			
<i>Calanus cristatus</i>		4		
<i>C. pacificus</i>	109	45	5	6
<i>C. tenuicornis</i>			4	
<i>Calocalanus gracilis</i>				p
<i>C. styliremis</i>	p	8	p	
<i>C. tenuis</i>			p	
<i>Candacia columbiae</i>		p		
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	7			
<i>C. pergens</i>	48	95	2	3
<i>Ctenocalanus vanus</i>	14		2	
<i>Eucalanus bungii bungii</i>		4	1	
<i>Euchirella rostrata</i>	p			
<i>Metridia lucens</i>	7		1	5
<i>Paracalanus parvus</i>	129			
<i>Paraeuchaeta</i> sp. copepodid	7	8		2
<i>Pseudocalanus minutus</i>		62	11	23
<i>Racovitzanus antarcticus</i>				4
<i>Scolecithricella minor</i>			2	8
	CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2675	2055	199	181
<i>Oncaea conifera</i>		8		1
<i>O. media</i>				2
<i>O. tenella pacifica</i>		90		1
	HARPACTICOIDA			
<i>Microsetella norvegica</i>		8	1	11
Total unidentified Copepoda	20	53	4	
Nauplii (Copepoda & Euphausiacea)	163	62	18	14

	Depth (m)			
	5	38	60	100
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	27	33	1	
Appendicularia	7	4		1
Chaetognatha		8		1
Fish larvae		8		
Isopoda		25		
Medusae	7	12		
Ostracoda			1	6
Polychaeta		37	2	2
Pteropoda		12		
Radiolaria				10
Salpida	34	37		4

BB 309 1-2 July 1962 Station 31 44°22' N, 128°14' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2358-0013	18	8.12	1	12
38	2358-0013	24	8.82	1	12
100	0039-0054	3	4.83	10	12

	Depth (m)		
	5	38	100
Direct count			
Amphipoda	12.56	0.34	
Appendicularia		0.23	
Chaetognatha	0.86	1.02	0.83
Decapoda	0.37		
Euphausiacea	1.48	2.04	0.62
Medusae	56.40	0.11	
Polychaeta	2.22	0.11	
Pteropoda	0.74	0.68	0.21
Salpida	74.63	3.17	

	Depth (m)		
	5	38	100
	Aliquot count		
CALANOIDA			
<i>Acartia danae</i>	12		
<i>Aetideus armatus</i>			6
<i>Calanus pacificus</i>	382	79	2
<i>C. tenuicornis</i>		260	
<i>Calocalanus styliremis</i>		68	6
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	234	23	16
<i>C. arcuicornis</i> forma <i>minor</i>		57	
<i>C. pergens</i>	74	46	8
<i>Ctenocalanus vanus</i>		147	6
<i>Eucalanus bungii bungii</i>			4
<i>Metridia lucens</i>	49		18
<i>Paracalanus parvus</i>	98	102	
<i>Pseudocalanus minutus</i>	961	828	25
<i>Racovitzanus antarcticus</i>			4
<i>Scaphocalanus brevicornis</i>		11	
<i>Scolecithricella minor</i>		11	16
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	10603	7347	337
<i>Oncaea tenella pacifica</i>		510	52
HARPACTICOIDA			
<i>Microsetella norvegica</i>	25		23
Total unidentified Copepoda		1032	58
Nauplii (Copepoda & Euphausiacea)	1970	3072	187
OTHER GROUPS			
Amphipoda	37		2
Appendicularia	62	79	4
Euphausiacea		11	
Foraminifera		68	27
Medusae		11	2
Ostracoda		11	8
Polychaeta		11	2
Pteropoda			2
Radiolaria			25
Salpida	283		2
Siphonophora		11	2

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2 July 1962

Station 33

44°36' N, 126°40' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1130-?	7	9.13	1	12
35	1130-?	18	6.82	1	12
70	1250-1305	2	6.68	4	12
100	1250-1305	2	6.60	4	12

	Depth (m)			
	5	35	70	100
	Direct count			
Chaetognatha		0.29	0.30	0.76
Euphausiacea				0.45
Medusae		0.29	18.41	7.73
Polychaeta		0.15	2.84	2.58
Salpida		128.30	0.90	0.30
Siphonophora				0.61
Unidentified eggs		0.15		
	Aliquot count			

CALANOIDA

<i>Aetideus armatus</i>				P
<i>Calanus pacificus</i>	44	117	22	8
<i>C. tenuicornis</i>		29	4	
<i>Calocalanus styliremis</i>		29		
<i>Calocalanus</i> sp.		15		
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	22	103		
<i>C. pergens</i>			4	
<i>Ctenocalanus vanus</i>		59		
<i>Eucalanus bungii bungii</i>		15		
<i>Lucicutia flavicornis</i>			11	
<i>Metridia lucens</i>			41	12
<i>Microcalanus pusillus</i>				4
<i>Paracalanus parvus</i>	110	15		
<i>Paraeuchaeta</i> sp. copepodid				4
<i>Pseudocalanus minutus</i>	11	264	7	12
<i>Scaphocalanus brevicornis</i>			4	
<i>Scolecithricella minor</i>			26	4

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4370	5248	404	485
<i>Oncaea conifera</i>				4
<i>O. media</i>			7	
<i>O. tenella pacifica</i>		792	7	4
HARPACTICOIDA				
<i>Microsetella norvegica</i>		29		8
Total unidentified Copepoda	66	381	4	23
Nauplii (Copepoda)	394	1730	19	53
OTHER GROUPS				
Amphipoda		15	4	
Appendicularia	33	29	19	
Chaetognatha	11	15		
Ctenophora			22	
Euphausiacea		29		
Foraminifera			11	
Gastropod larvae				4
Medusae			15	
Ostracoda				34
Polychaeta			7	
Pteropoda				8
Radiolaria			11	15
Salpida		147		

BB 309 4 July 1962 Station 40 44°24' N, 124°18' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2159-2207	41	4.44	1	12
35	2159-2207	13	6.17	1	12

Depth (m)

5 35

Direct count

Appendicularia	0.49
Chaetognatha	3.08
Decapod larvae	18.69 2.11
Euphausiacea	56.08 3.08
Polychaeta	0.16

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	1239	437
<i>Calanus pacificus</i>		130
<i>C. plumchrus</i>	226	
<i>Centropages abdominalis</i>	23	
<i>Ctenocalanus vanus</i>	23	16
<i>Microcalanus pusillus</i>		16
<i>Paracalanus parvus</i>		16
<i>Pseudocalanus minutus</i>	6036	1329
<i>Scolecithricella minor</i>	23	

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	473	989
<i>Oncaea media</i>		16
<i>O. tenella pacifica</i>		16

HARPACTICOIDA

<i>Microsetella rosea</i>		32
Total unidentified Copepoda	473	113
Nauplii (Copepoda)	18311	1037

	Depth (m)	
	5	35
Aliquot count (cont.)		
OTHER GROUPS		
Appendicularia		16
Barnacle nauplii	23	
Euphausiacea		32
Isopoda		16
Polychaeta	68	

BB 309 7 July 1962 Station 47 44°16' N, 125°37' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0044-0059	9	7.26	1	12
35*	0044-0059	8	2.92	1	12
70	0136-0151	3	6.93	4	12
100	0136-0151	2	7.92	4	12

	Depth (m)			
	5	35*	70	100
Direct count				
Amphipoda	1.52		0.14	
Appendicularia		0.68	0.29	0.51
Chaetognatha	0.28	0.34	0.29	0.63
Euphausiacea		2.05	0.43	0.13
Medusae	2.75	1.03		
Polychaeta	0.28	1.37	1.15	1.26
Pteropoda	2.62	1.03		0.13
Aliquot count				

CALANOIDA

<i>Aetideus armatus</i>			p
<i>Calanus pacificus</i>	83	584	4
<i>C. tenuicornis</i>	441	241	32

	Depth (m)			
	5	35*	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Calocalanus gracilis</i>				P
<i>C. styliremis</i>	55	206	P	P
<i>C. tenuis</i>			P	
<i>Candacia bipinnata</i>		P		
<i>C. columbiae</i>			P	
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	303		11	9
<i>C. pergens</i>	262	68	4	15
<i>Ctenocalanus vanus</i>	28	240		3
<i>Euchirella pulchra</i>	P	P	P	
<i>Gaidius pungens</i>			11	3
<i>Heterorhabdus norvegicus</i>			15	3
<i>Lucicutia flavicornis</i>	P	34		
<i>Metridia lucens</i>	234	103	98	66
<i>Paracalanus parvus</i>	138	411		
<i>Paraeuchaeta elongata</i>			11	3
<i>Pleuromamma abdominalis</i>	P			
<i>P. quadrangulata</i>				P
<i>Pseudocalanus minutus</i>	69	1271	43	44
<i>Scaphocalanus brevicornis</i>		P		
<i>Scolecithricella minor</i>			7	3
<i>S. ovata</i>		P	4	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1777	12158	469	372
<i>Oncaea tenella pacifica</i>	28	342	36	22
HARPACTICOIDA				
<i>Microsetella norvegica</i>		34	4	6
Total unidentified Copepoda	152	584	25	
Nauplii (Copepoda)	399	1374	14	6
OTHER GROUPS				
Amphipoda	14			
Appendicularia			4	
Chaetognatha		34		
Cyphonautes larvae				3
Euphausiacea	42	34	4	3

	Depth (m)			
	5	35*	70	100
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Medusae		103		
Ostracoda			18	6
Polychaeta			7	3
Pteropoda	152			
Radiolaria				3

*Sampler came up open.

BB 309 7 July 1962 Station 49 44°35' N, 126°39' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	1057-1112	9	9.75	1	12
35	1057-1112	24	11.17	1	12
70	1130-1145	?	10.40	1	12
100	1130-1145	6	11.10	2	12

	Depth (m)			
	5	35	70	100
Direct count				
Chaetognatha			0.38	0.45
Euphausiacea			0.29	0.45
Fish larvae				0.09
Medusae			0.10	1.35
Polychaeta			0.10	0.27
Salpida			9.52	0.63

Aliquot count

CALANOIDA				
<i>Calanus pacificus</i>	369	322		
<i>C. tenuicornis</i>			106	50
<i>Calocalanus gracilis</i>		9		

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Calocalanus styliremis</i>	10	161	19	p
<i>C. tenuis</i>				p
<i>Calocalanus</i> sp.		18		
<i>Clausocalanus arcuicornis</i> forma <i>major</i>				4
<i>C. arcuicornis</i> forma <i>minor</i>		162	10	4
<i>C. pergens</i>		45	58	23
<i>Ctenocalanus varus</i>	10	90	38	4
<i>Eucalanus bungii bungii</i>		9		9
<i>E. bungii californicus</i>				4
<i>Metridia lucens</i>		18		90
<i>Paracalanus parvus</i>	143			
<i>Paraeuchaeta</i> sp. copepodid				4
<i>Pseudocalanus minutus</i>		662	317	27
<i>Racovitzanus antarcticus</i>				4
<i>Scolecithricella minor</i>				4
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3703	10310	3788	906
<i>Oncaea media</i>				4
<i>O. tenella pacifica</i>		45	173	13
HARPACTICOIDA				
<i>Microsetella norvegica</i>		9		4
Total unidentified Copepoda		143	19	
Nauplii (Copepoda)	636	1180	183	36
OTHER GROUPS				
Amphipoda			10	
Appendicularia	72	45	38	
Chaetognatha		9		4
Euphausiacea	41	9	38	
Foraminifera	21		19	
Medusae			10	
Salpida		89	19	

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Station 51

44°36' N, 128°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2137-2152	18	9.60	1	12
35	2137-2152	16	8.16	1	12
70	2212-2227	13	8.63	1	12
100	2212-2227	2	13.79	10	12

	Depth (m)			
	5	35	70	100

	Direct count			
	5	35	70	100
Amphipoda	7.92			0.07
Appendicularia			0.46	
Chaetognatha	0.21	3.55	0.23	
Decapoda	0.10	0.12		
Euphausiacea	0.10	3.55	0.23	0.15
Fish larvae		0.61		
Medusae	3.75	0.49	0.12	
Ostracoda				0.07
Polychaeta	0.73	1.84	0.46	0.07
Pteropoda		0.49	0.23	
Salpida	34.90		0.12	
Siphonophora			0.12	

Aliquot count

CALANOIDA

<i>Aetideus armatus</i>				1
<i>Calanus pacificus</i>	260	74	104	
<i>C. tenuicornis</i>	292	49		
<i>Calocalanus gracilis</i>		p		p
<i>C. styliremis</i>		110	p	1
<i>C. tenuis</i>		p	12	
<i>Calocalanus</i> sp.		12	23	p
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	301	122	12	.1
<i>C. pergens</i>	229	49	12	4
<i>Ctenocalanus vanus</i>	83	85	70	
<i>Eucalanus bungii bungii</i>		12		
<i>E. elongatus</i>			p	
<i>Metridia lucens</i>	10	61	24	17
<i>Paracalanus parvus</i>	146			
<i>Paraeuchaeta</i> sp. copepodid				1

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Pseudocalanus minutus</i>	2188	391	1078	
<i>Scaphocalanus curtus</i>				1
<i>Scolecithricella minor</i>			35	
<i>S. ovata</i>				1
CYCLOPOIDA				
<i>Corycaeus anglicus</i>		12		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	8708	15079	4565	74
<i>Oncaea conifera</i>			46	
<i>O. media</i>		12		
<i>O. tenella pacifica</i>		257	93	4
HARPACTICOIDA				
<i>Microsetella norvegica</i>	10	24	23	2
Total unidentified Copepoda	427	1506	301	7
Nauplii (Copepoda)	2031	564	1124	3
OTHER GROUPS				
Amphipoda	10			2
Appendicularia	21	49	12	1
Chaetognatha	10	24	23	
Euphausiacea	21		12	
Foraminifera		12	35	1
Ostracoda		12	35	2
Pteropoda		12		
Radiolaria			35	12
Salpida	208	74		

BB 309 8 July 1962 Station 52A 44°38' N, 129°02' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0415-0430	15	9.24	1	12
35	0415-0430	13	9.67	1	12
70	0439-0454	5	7.08	2	12
100	0439-0454	2	8.24	10	12

	Depth (m)			
	5	35	70	100
	Direct count			
Amphipoda	3.35	4.23	10.17	1.94
Cephalopoda			0.14	
Chaetognatha		2.90	0.14	0.12
Decapoda		0.21		
Euphausiacea		1.03	0.56	0.61
Fish eggs		0.10		
Fish larvae		0.21		0.12
Medusae		1.34	0.14	1.33
Salpida		0.10		
	Aliquot count			

CALANOIDA

<i>Calanus pacificus</i>	65	41	14	2
<i>C. tenuicornis</i>	140	227	7	3
<i>Calocalanus gracilis</i>		p		
<i>C. styliremis</i>	22	83	p	3
<i>C. tenuis</i>	p	p		
<i>Calocalanus</i> sp.	p	31	p	
<i>Clausocalanus arcuicornis</i> forma major	11			6
<i>C. arcuicornis</i> forma minor	151	134	49	
<i>C. pergens</i>	195	124	49	4
<i>Ctenocalanus vanus</i>	75	227		2
<i>Heterorhabdus</i> sp. copepodid				1
<i>Lucicutia flavicornis</i>		10		1
<i>Metridia lucens</i>			113	3
<i>Paracalanus parvus</i>	86		56	
<i>Paraeuchaeta</i> sp. copepodid			14	1
<i>Pseudocalanus minutus</i>	985	724	219	24
<i>Racovitzanus antarcticus</i>				3
<i>Scolecithricella minor</i>		10		

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	9784	7020	1441	172
<i>Oncaea conifera</i>		10		1
<i>O. media</i>	11			
<i>O. tenella pacifica</i>	606	186	21	2
HARPACTICOIDA				
<i>Microsetella norvegica</i>			14	5
Total unidentified Copepoda	877	559	113	5
Nauplii (Copepoda)	1807	1748	64	7
OTHER GROUPS				
Amphipoda			7	2
Appendicularia	11	31		
Chaetognatha		10		
Euphausiacea			14	
Foraminifera	11			
Medusae		10		
Ostracoda			21	4
Polychaeta				2
Radiolaria				1
Salpida		10		

BB 309 8 July 1962 Station 52B 44°38' N, 129°02' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0643-0658	7	7.87	1	12
35	0643-0658	3	10.85	2	12
70	0733-0748	3	8.57	4	12
100*	0733-0748	+	0.07	100	12

	Depth (m)			
	5	35	70	100*
	Direct count			
Amphipoda		0.18	0.12	14.29
Appendicularia			0.35	
Cephalopoda			0.47	
Chaetognatha		0.92	0.23	
Euphausiacea		0.28		
Medusae		0.09	0.23	

	Aliquot count			
	5	35	70	100*
CALANOIDA				
<i>Calanus pacificus</i>	292	9	87	114
<i>C. tenuicornis</i>	38	54		
<i>Calocalanus styliremis</i>	51	23	6	14
<i>C. tenuis</i>	p			
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	26			
<i>C. pergens</i>		5	18	85
<i>Ctenocalanus vanus</i>		42	3	
<i>Eucalanus bungii bungii</i>			3	14
<i>Heterorhabdus</i> sp. copepodid			3	
<i>Lucicutia flavicornis</i>			3	14
<i>Metridia lucens</i>			15	29
<i>Paracalanus parvus</i>	114			42
<i>Paraeuchaeta</i> sp. copepodid				14
<i>Pseudocalanus minutus</i>	877	189	120	385
<i>Scolecithricella minor</i>			3	14

CYCLOPOIDA				
	5	35	70	100*
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	6976	1508	893	3014
<i>Oncaea media</i>			3	
<i>O. tenella pacifica</i>	127	69	3	42

	Depth (m)			
	5	35	70	100*
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>		9		200
Total unidentified Copepoda	457	148	38	42
Nauplii (Copepoda)	762	480	178	729
OTHER GROUPS				
Amphipoda		9		42
Appendicularia	25	5		
Chaetognatha	13			
Ostracoda				29
Pteropoda				14

*Probable flowmeter malfunction.

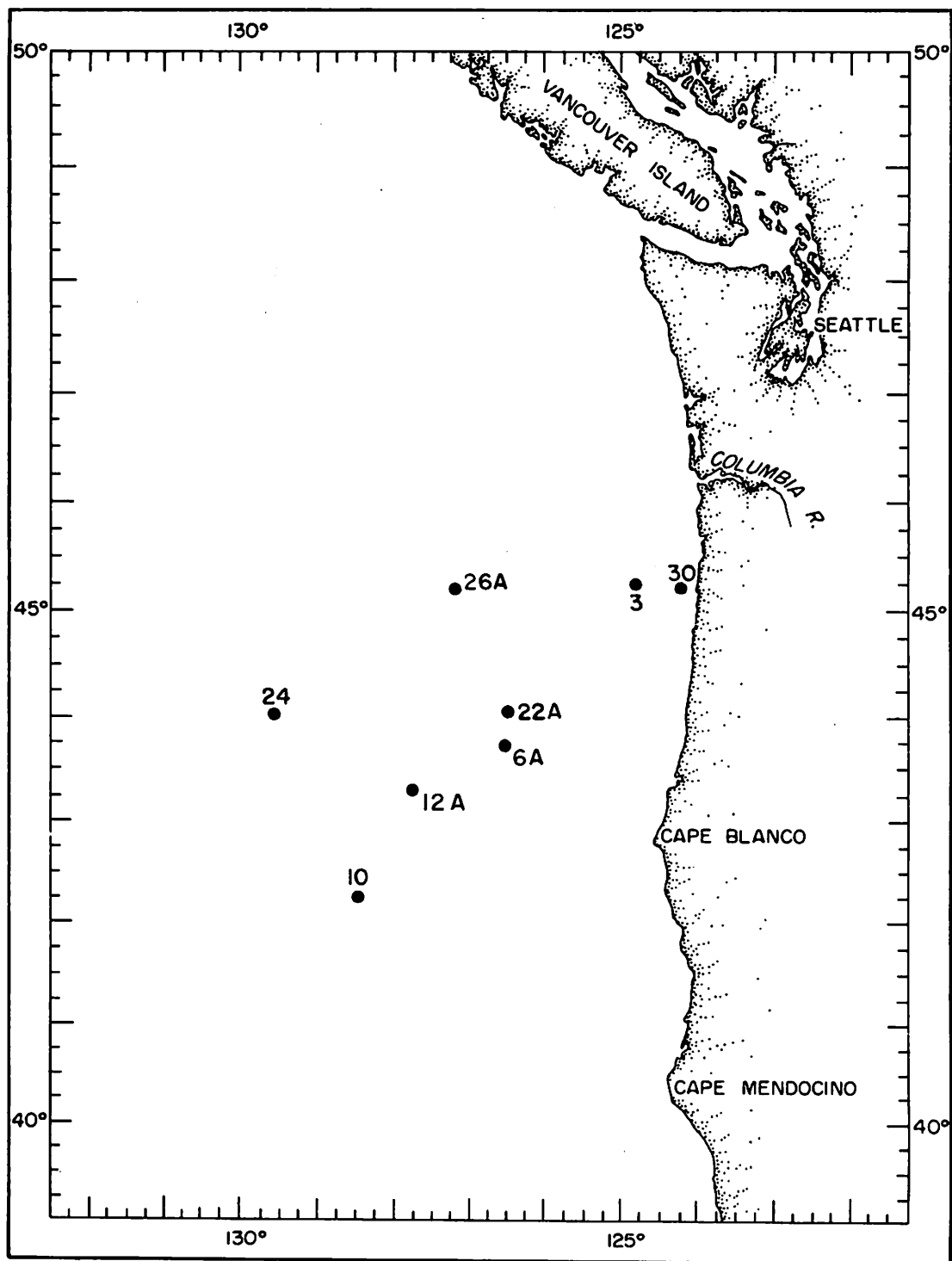


Fig. 12. Zooplankton sampling stations Brown Bear Cruise 310, 11 - 23 July 1962.

BB 310 12 July 1962 Station 3 45°14' N, 124°51' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0115-0130	7	3.06	4	12
35*	0115-0130	32	17.64	1	12
70	0155-0210	8	10.73	1	12
100**	0155-0210	1		100	12

Depth (m)

5	35*	70	100**
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Direct count

Amphipoda	11.76	1.19	0.56
Chaetognatha		1.98	1.86
Decapod larvae	2.29	0.11	
Euphausiacea	3.27	2.04	1.30
Fish eggs		0.40	
Fish larvae	1.63	0.62	0.09
Medusae	2.61	2.66	
Polychaeta	2.94	6.41	1.12
Pteropoda	3.27		
Radiolaria		0.23	
Salpida		0.51	
Siphonophora		4.42	3.73

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	p	17	28	
<i>Aetideus armatus</i>			9	
<i>Calanus cristatus</i>		p	p	
<i>C. pacificus</i>	8	28	9	
<i>C. tenuicornis</i>	p	113	37	
<i>Calocalanus styliremis</i>		17		
<i>C. tenuis</i>		p		
<i>Candacia columbiae</i>		p		
<i>Centropages abdominalis</i>	p			
<i>Clausocalanus arcuicornis</i> forma major	p			
<i>C. arcuicornis</i> forma minor	49	p	p	
<i>C. pergens</i>	57	204	75	
<i>Ctenocalanus vanus</i>	8	28	19	p
<i>Epilabidocera amphitrites</i>	p			
<i>Eucalanus bungii bungii</i>		p	p	
<i>E. bungii californicus</i>		p		

	Depth (m)			
	5	35*	70	100**
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Euchirella pulchra</i>		p		
<i>E. rostrata</i>		p		
<i>Gaetanus armiger</i>			p	
<i>Gaidius pungens</i>		p	p	
<i>Heterorhabdus norvegicus</i>		p	p	
<i>Lucicutia flavicornis</i>	p	p	p	
<i>Metridia lucens</i>	24	45	37	p
<i>Paracalanus parvus</i>	16	28		
<i>Paraeuchaeta elongata</i>		p	p	
<i>Pleuromamma quadrumgulata</i>			p	
<i>P. xiphias</i>			p	
<i>Pseudocalanus minutus</i>		402	103	
<i>Scaphocalanus echinatus</i>		p	p	
<i>Scolecithricella minor</i>		p	9	
<i>S. ovata</i>			p	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	8			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	686	5873	1044	p
<i>Oncaea borealis</i>			p	
<i>O. conifera</i>		p	9	
<i>O. media</i>		6		p
<i>O. tenella pacifica</i>		289	19	p
HARPACTICOIDA				
<i>Microsetella norvegica</i>	16	6		p
<i>M. rosea</i>		p		
Total unidentified Copepoda		198		p
Nauplii (Copepoda & Euphausiacea)	409	362	75	p
OTHER GROUPS				
Appendicularia	261	68	28	p
Fish eggs	8			
Fish larvae				p
Medusae		6		
Pteropoda	294	28	19	p
Salpida		11		
Siphonophora	16	102		p

*Contains large amount of phytoplankton.

**Flowmeter malfunctioned.

BB 310 13 July 1962 Station 6A 43°45' N, 126°34' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	0025-0040	12	1.18	1	12
35**	0025-0040	1	0.17	100	12
70	0100-0115	6	7.72	1	12
100**	0100-0115	0.5	0.16	100	12

Depth (m)

5*	35**	70	100**
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Direct count

Amphipoda	855.93	5.96
Chaetognatha	156.78	3.37
Decapod larvae	0.85	
Euphausiacea	14.41	1.94
Fish larvae	10.17	0.39
Medusae	39.83	
Ostracoda		0.13
Polychaeta	1.69	0.78
Pteropoda	4.24	
Salpida	6.78	0.26
Siphonophora	0.85	0.26

Aliquot count

CALANOIDA

<i>Acartia danae</i>	254			
<i>A. longiremis</i>			P	
<i>Aetideus armatus</i>			P	
<i>Calanus pacificus</i>	1102		P	
<i>C. plumchrus</i>			P	
<i>C. tenuicornis</i>	2034	65	65	44
<i>Calocalanus styliremis</i>		124	130	44
<i>Candacia bipinnata</i>	P			
<i>Candacia</i> sp. copepodid			P	19
<i>Clausocalanus arcuicornis</i> forma major	1186		P	
<i>C. arcuicornis</i> forma minor	3135	24	104	13
<i>C. pergens</i>	6186	288	220	131
<i>Ctenocalanus vanus</i>	3135	271	220	94
<i>Eucalanus bungii bungii</i>			P	
<i>E. bungii californicus</i>			P	
<i>Euchaeta media</i>	P			
<i>Euchirella pulchra</i>	P		P	

	Depth (m)			
	5*	35**	70	100**
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Euchirella rostrata</i>			p	
<i>Gaidius pungens</i>			p	
<i>Heterorhabdus norvegicus</i>		6	p	
<i>H. papilliger</i>			p	
<i>Lucicutia flavicornis</i>	339		p	
<i>Metridia lucens</i>	170	71	65	38
<i>Paracalanus parvus</i>	7458	65		
<i>Paraeuchaeta elongata</i>			p	
<i>Pleuromamma abdominalis</i>			p	
<i>P. quadrangulata</i>			p	
<i>Pseudocalanus minutus</i>	4576	182	518	144
<i>Racovitzanus antarcticus</i>			p	
<i>Scaphocalanus echinatus</i>			p	
<i>Scolecithricella minor</i>			26	
<i>S. ovata</i>			p	
<i>Undeuchaeta bispinosa</i>	p		p	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	p			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	31525	2565	3653	644
<i>Oncaea conifera</i>	p		p	
<i>O. media</i>	170	12	26	
<i>O. subtilis</i>			p	
<i>O. tenella pacifica</i>	1271	29	52	25
HARPACTICOIDA				
<i>Microsetella norvegica</i>	p	77	26	75
<i>M. rosea</i>	p	12	26	6
Total unidentified Copepoda	2119	176	65	63
Nauplii (Copepoda & Euphausiacea)	3475	88	402	51
OTHER GROUPS				
Amphipoda	339			
Appendicularia	85			
Chaetognatha		18		
Euphausiacea				6
Ostracoda				6
Pteropoda	2542		13	19

*Probable flowmeter malfunction.

**Samplers failed to open properly.

BB 310 14 July 1962 Station 10 42°18' N, 128°36' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0017-0032	6	12.85	2	12
35*	0017-0032	1	0.26	10	12
70	0049-0106	4	9.64	4	12
100	0049-0106	3	8.53	4	12

Depth (m)

5 35* 70 100

Direct count

Amphipoda	17.20	15.38	0.82	
Chaetognatha	2.02	26.92	2.90	2.34
Decapod larvae	0.15			
Euphausiacea	4.28	19.23		0.23
Ostracoda	0.77		1.45	0.46
Polychaeta	0.54	3.84	0.20	
Pteropoda	7.47		1.03	0.11
Radiolaria				1.17
Salpida	1.55	3.84	0.10	0.11
Siphonophora	0.31	3.84		

Aliquot count

CALANOIDA

<i>Acartia danae</i>	11			
<i>A. longiremis</i>				P
<i>Calanus pacificus</i>	11	p		
<i>C. tenuicornis</i>	4	p	3	6
<i>Calocalanus styliremis</i>	19	500	3	p
<i>C. tenuis</i>	p	p		
<i>Candacia</i> sp. copepodid				P
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	58			
<i>C. arcuicornis</i> forma <i>minor</i>	31	423	18	9
<i>C. pergens</i>	599	731	23	15
<i>Ctenocalanus vanus</i>	245	1346	36	41
<i>Eucalanus bungii bungii</i>	p	p	p	
<i>E. bungii californicus</i>		p	p	P
<i>Euchaeta acuta</i>	p			
<i>Euchirella messinensis</i>				P
<i>E. pulchra</i>	p	p	p	
<i>E. rostrata</i>			p	

	Depth (m)			
	5	35*	70	100

Aliquot count (cont.)

CALANOIDA (cont.)

<i>Gaetanus armiger</i>			p	p
<i>Gaidius pungens</i>			p	p
<i>Heterorhabdus norvegicus</i>	p		p	p
<i>H. papilliger</i>		p		p
<i>Lucicutia flavicornis</i>	4	p	p	6
<i>Metridia lucens</i>	15	192	21	18
<i>Microcalanus pusillus</i>				p
<i>Paracalanus parvus</i>	66			
<i>Paraeuchaeta elongata</i>		p	p	p
<i>Pleuromamma abdominalis</i>		p	p	
<i>P. xiphias</i>	p		p	3
<i>Pseudocalanus minutus</i>	39	577	42	6
<i>Racovitzanus antarcticus</i>				3
<i>Scaphocalanus echinatus</i>	p	p	p	3
<i>Scolecithricella minor</i>	p	p	p	3
<i>S. ovata</i>			p	
<i>Scottocalanus persecans</i>			p	

CYCLOPOIDA

<i>Corycaeus anglicus</i>	4			
<i>Lubbockia</i> sp.			p	
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	428	3846	208	366
<i>Oncaea borealis</i>			3	
<i>O. conifera</i>		39	3	p
<i>O. media</i>		p	5	p
<i>O. tenella pacifica</i>		77	p	6

HARPACTICOIDA

<i>Clytemmestra rostrata</i>	p			
<i>Microsetella norvegica</i>		39	p	
<i>M. rosea</i>		39	p	3
Total unidentified Copepoda	97	385	21	
Nauplii (Copepoda & Euphausiacea)	30	423	3	12

OTHER GROUPS

Amphipoda		39	3	
Appendicularia		39		
Chaetognatha	8			

	Depth (m)			
	5	35*	70	100
Aliquot count (cont.)				
OTHER GROUPS (cont.)				
Ostracoda		39	8	21
Polychaeta		39		
Pteropoda	117	77	5	
Salpida	58	39		

*Probable flowmeter malfunction.

BB 310 15 July 1962 Station 12A 43°19' N, 127°48' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5*	0012-0027	2	0.90	8	12
35*	0012-0027	2	1.31	6	12
70	0041-0056	8	10.33	1	12
100	0041-0056	1	1.14	100	12

	Depth (m)			
	5*	35*	70	100
Direct count				
Amphipoda	11.11	3.05	0.87	0.87
Chaetognatha	2.22	3.05	4.35	3.50
Decapod larvae		0.76		
Euphausiacea	1.11		0.96	
Fish larvae			0.67	
Medusae		0.76	0.48	
Ostracoda		0.76	0.38	
Polychaeta		1.52	1.45	
Pteropoda	1.11		0.19	
Salpida		67.17	7.93	13.15
Siphonophora			0.96	

	Depth (m)			
	5	35*	70	100
Aliquot count (cont.)				
CALANOIDA				
<i>Acartia danae</i>	14		p	
<i>Aetideus armatus</i>			p	
<i>Calanus pacificus</i>			p	
<i>C. tenuicornis</i>	14	25	19	4
<i>Calocalanus gracilis</i>				1
<i>C. styliremis</i>	28	25	48	1
<i>C. tenuis</i>	14			
<i>Candacia bipinnata</i>			p	
<i>C. columbiae</i>			p	
<i>Candacia</i> sp. copepodid				3
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	p		10	
<i>C. arcuicornis</i> forma <i>minor</i>	125	76	39	9
<i>C. pergens</i>	28	76	10	17
<i>Ctenocalanus vanus</i>	69	38	213	15
<i>Eucalanus bungii californicus</i>			p	1
<i>Euchirella rostrata</i>			p	
<i>Gaidius pungens</i>	p		p	
<i>Heterorhabdus norvegicus</i>			p	4
<i>Lucicutia flavicornis</i>	p	p	p	
<i>Metridia lucens</i>	97	25	87	24
<i>Microcalanus pusillus</i>				4
<i>Paracalanus parvus</i>	42	76		4
<i>Paraeuchaeta elongata</i>			p	1
<i>Pleuromamma abdominalis</i>	p		p	
<i>P. xiphias</i>	p		p	
<i>Pseudocalanus minutus</i>	56	25	290	18
<i>Racovitzanus antarcticus</i>			p	3
<i>Scaphocalanus echinatus</i>			p	1
<i>Scolecithricella minor</i>	p		48	3
<i>S. ovata</i>			p	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	p	p	p	1
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1931	2036	2401	327
<i>Oncaea borealis</i>				1
<i>O. conifera</i>	p	p	10	4
<i>O. media</i>		p	29	3
<i>O. subtilis</i>	14	p	p	2
<i>O. tenella pacifica</i>				

	Depth (m)			
	5*	35*	70	100
Aliquot count (cont.)				
HARPACTICOIDA				
<i>Microsetella norvegica</i>	56			20
<i>M. rosea</i>		p	p	4
Total unidentified Copepoda			136	18
Nauplii (Copepoda & Euphausiacea)	28	63	368	27
OTHER GROUPS				
Amphipoda	14			
Appendicularia			10	1
Chaetognatha				4
Euphausiacea				1
Ostracoda	14			6
Polychaeta			10	2
Pteropoda	69	25		7
Salpida		25		
Siphonophora		13		

*Samplers came up open. They probably did not open until the second messenger and presumably sampled from five and thirty-five meters to the surface.

BB 310 19 July 1962 Station 22A 44°05' N, 126°33' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0013-0028	19	11.31	1	12
35	0013-0028	3	1.41	4	12
70	0047-0102	7	10.09	1	12
100*	0047-0102	11	11.98	1	12

Depth (m)

5 35 70 100*

Direct count

Amphipoda	11.49		0.29	0.16
Chaetognatha	1.67	5.67	5.15	1.58
Decapod larvae	0.88		0.19	
Euphausiacea	2.38		0.99	0.58
Fish eggs		0.70		
Fish larvae		0.70	0.10	0.08
Gastropod larvae	0.17			
Medusae		0.70	0.10	
Polychaeta	0.17	2.83	0.19	0.25
Pteropoda	0.53		0.19	0.08
Radiolaria	0.44	2.12	0.89	0.08
Salpida	1.85		0.39	0.33
Siphonophora		1.41	0.19	

Aliquot count

CALANOIDA

<i>Acartia danae</i>			P	
<i>Aetideus armatus</i>			P	P
<i>Calanus cristatus</i>			P	P
<i>C. pacificus</i>	186		10	
<i>C. plumchrus</i>	318	P	P	
<i>C. tenuicornis</i>	44	106	109	8
<i>Calocalanus styliremis</i>	35	124	89	50
<i>Candacia bipinnata</i>	P		P	
<i>C. columbiae</i>		P		
<i>Candacia</i> sp. copepodid				P
<i>Clausocalanus arcuicornis</i> forma major	265			
<i>C. arcuicornis</i> forma minor	159	71	10	67
<i>C. pergens</i>	133	266	149	167
<i>Ctenocalanus vanus</i>	168	674	357	109
<i>Epilabidocera amphitrites</i>	P			

	Depth (m)			
	5	35	70	100*
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Eucalanus bungii bungii</i>		p	p	p
<i>E. bungii californicus</i>			p	p
<i>E. elongatus</i>			p	
<i>Euchirella rostrata</i>			p	
<i>Euchirella</i> sp. copepodid			p	
<i>Gaetanus armiger</i>				p
<i>Gaidius pungens</i>			p	p
<i>Heterorhabdus norvegicus</i>	p		p	p
<i>Lucicutia flavicornis</i>	9	p	p	17
<i>Metridia lucens</i>	18	53	p	259
<i>Microcalanus pusillus</i>	53	231	109	
<i>Paracalanus parvus</i>	274	195	20	50
<i>Paraeuchaeta elongata</i>			p	8
<i>Pleuromamma quadrangulata</i>				p
<i>P. riphias</i>			p	p
<i>Pseudocalanus minutus</i>	80	674	149	67
<i>Racovitzanus antarcticus</i>				p
<i>Scaphocalanus echinatus</i>			p	
<i>Scolecithricella minor</i>			30	p
<i>S. ovata</i>			p	p
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	p	p		p
<i>Lubbockia</i> sp.				p
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	5004	1773	2706	2254
<i>Oncaea conifera</i>		p	p	p
<i>O. media</i>		p	20	p
<i>O. tenella pacifica</i>		18	99	376
HARPACTICOIDA				
<i>Clytemmestra rostrata</i>	p	p		
<i>Microsetella norvegica</i>		35	10	
<i>M. rosea</i>		18	p	p
Total unidentified Copepoda	354	638	228	175
Nauplii (Copepoda & Euphausiacea)	168	159	357	826

	Depth (m)			
	5	35	70	100*
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	35			
Appendicularia	18	35		
Chaetognatha		18		17
Ostracoda		18	50	8
Pteropoda	44	89	30	
Salpida		18		

*Sampler did not close with second messenger.

BB 310 20 July 1962 Station 24 44°05' N, 129°39' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0053-0108	16	11.58	1	12
35	0053-0108	10	7.73	1	12
70	0120-0135	6	10.56	1	12
100	0120-0135	2	9.03	3	12

	Depth (m)			
	5	35	70	100
Direct count				
Amphipoda	37.13	9.70	3.40	0.44
Chaetognatha	0.09	3.49	3.21	1.66
Euphausiacea	0.17	2.19	2.08	
Fish larvae		0.25	0.09	
Polychaeta			0.09	
Pteropoda	0.09			
Radiolaria		0.12		
Siphonophora		0.25		

	Depth (m)			
	5	35	70	100
Aliquot count				
GALANOIDA				
<i>Acartia danae</i>		p		
<i>Aetideus armatus</i>			p	
<i>Calanus cristatus</i>	p	p	p	
<i>C. pacificus</i>	510	p	38	p
<i>C. plumchrus</i>	p	p		
<i>C. tenuicornis</i>	225	194	19	p
<i>Calocalanus styliremis</i>	26	207	9	
<i>C. tenuis</i>		p	p	
<i>Candacia bipinnata</i>	p		p	
<i>C. columbiae</i>				p
<i>Candacia</i> sp. copepodid		39		
<i>Clausocalanus arcuicornis</i> forma major	181		9	p
<i>C. arcuicornis</i> forma minor	440	311	66	26
<i>C. pergens</i>	1295	259	85	15
<i>Ctenocalanus vanus</i>	510	595	95	30
<i>Epilabidocera amphitrites</i>	p			
<i>Eucalanus bungii bungii</i>	p		p	p
<i>E. bungii californicus</i>		p		4
<i>E. elongatus</i>		p		
<i>Euchirella rostrata</i>		p	p	
<i>Gaetanus armiger</i>			p	p
<i>Gaidius pungens</i>	p	p	p	p
<i>Heterorhabdus norvegicus</i>	p	p	9	
<i>H. papilliger</i>	p	p	p	
<i>Heterorhabdus</i> sp. copepodid				p
<i>Lophothrix</i> sp. copepodid			p	
<i>Lucicutia flavicornis</i>	35	13	9	7
<i>Metridia lucens</i>	p	52	19	33
<i>Microcalanus pusillus</i>		181	9	19
<i>Paracalanus parvus</i>	648	285	19	
<i>Paraeuchaeta elongata</i>	p	p	p	p
<i>Pleuromamma abdominalis</i>	p			p
<i>P. xiphias</i>	p		p	
<i>Pleuromamma</i> sp. copepodid		p		
<i>Pseudocalanus minutus</i>	52	479	95	55
<i>Racovitzanus</i> sp. copepodid				p
<i>Scaphocalanus echinatus</i>	p	13		
<i>Scolecithricella minor</i>		78	p	15
<i>S. ovata</i>	p	p	p	p

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3541	5046	1345	424
<i>Oncaea conifera</i>		p	p	
<i>O. media</i>		13	p	
<i>O. tenella pacifica</i>	138	91	19	19
HARPACTICOIDA				
<i>Microsetella norvegica</i>	17	p		4
<i>M. rosea</i>	9	39	9	4
Total unidentified Copepoda	432	647	76	26
Nauplii (Copepoda & Euphausiacea)	52	919	142	15
OTHER GROUPS				
Amphipoda	52			
Ostracoda	9			
Pteropoda	78	13	19	

BB 310 21 July 1962 Station 26A 45°13' N, 127°14' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0115-0130	11	18.69	1	12
35*	0010-0025	2	0.75	10	12
70	0044-0059	5	10.84	2	12
100	0044-0059	3	9.38	8	12

	Depth (m)			
	5	35*	70	100
	Direct count			
Amphipoda	1.23	10.66	0.18	0.53
Chaetognatha	0.21	12.00	1.38	2.34
Decapod larvae	0.05			
Euphausiacea		0.53	0.64	0.10
Fish larvae			0.09	
Medusae	0.16	2.66	0.64	0.31
Ostracoda	0.05		0.64	0.31
Polychaeta				0.42
Pteropoda	0.10	0.13	0.09	
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>	p			
<i>A. longiremis</i>			5	
<i>Aetideus armatus</i>			p	p
<i>Calanus cristatus</i>		p		
<i>C. pacificus</i>	16	40	p	1
<i>C. plumchrus</i>		p		
<i>C. tenuicornis</i>	171	93	9	4
<i>Calocalanus styliremis</i>	11	13	9	
<i>Condacia columbiae</i>		p	p	
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	p			
<i>C. arcuicornis</i> forma <i>minor</i>	21	93	23	4
<i>C. pergens</i>	112	67	18	9
<i>Ctenocalanus vanus</i>		93	14	
<i>Eucalanus bungii bungii</i>			p	p
<i>Euchirella pulchra</i>	p			
<i>E. rostrata</i>		p	p	p
<i>Gaetanus armiger</i>		p	p	p
<i>Gaidius pungens</i>			p	

	Depth (m)			
	5	35*	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Heterorhabdus norvegicus</i>		13	p	1
<i>Lucicutia flavicornis</i>	p	13	p	1
<i>Metridia lucens</i>	43	53	23	15
<i>Microcalanus pusillus</i>				3
<i>Paracalanus parvus</i>	198	160		
<i>Paraeuchaeta elongata</i>		p	p	p
<i>Pleuromamma abdominalis</i>	p			
<i>P. quadrangulata</i>		p		
<i>P. xiphias</i>			p	p
<i>Pseudocalanus minutus</i>	11	147	125	8
<i>Racovitzanus antarcticus</i>		p	p	4
<i>Scaphocalanus</i> sp. copepodid			p	
<i>Scolecithricella minor</i>		13		3
<i>S. ovata</i>			p	
<i>Undeuchaeta bispinosa</i>	p			
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1632	1133	899	152
<i>Oncaea conifera</i>		13	p	p
<i>O. media</i>		p	p	1
<i>O. subtilis</i>	11			
<i>O. tenella pacifica</i>	16	40		5
HARPACTICOIDA				
<i>Microsetella norvegica</i>		67		1
<i>M. rosea</i>		p	p	1
Total unidentified Copepoda				3
Nauplii (Copepoda & Euphausiacea)	5	93	60	7
OTHER GROUPS				
Amphipoda	5			
Chaetognatha			5	1
Ostracoda		27	42	7
Pteropoda		67		1

*Probable sampler malfunction.

BB 310

22 July 1962

Station 30

45°13' N, 124°16' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0002-0017	30	12.53	2	12
35	0002-0017	5	7.28	4	12
70	0032-0047	5	9.38	5	12
100*	0032-0047	2	0.40	10	12

	Depth (m)			
	5	35	70	100*
	Direct count			
Amphipoda	14.76		2.34	2.50
Chaetognatha	0.39		0.21	17.50
Decapod larvae	0.23		0.10	
Euphausiacea	4.77	3.15	0.95	15.00
Fish larvae	0.23			
Medusae	2.79		0.10	
Pteropoda	0.15			
Siphonophora			0.10	

Aliquot count

CALANOIDA				
	5	35	70	100*
<i>Acartia longiremis</i>	308	295	135	1750
<i>Aetideus armatus</i>			p	
<i>Calanus cristatus</i>	p	p		
<i>C. pacificus</i>	247	10	9	25
<i>C. tenuicornis</i>	64	3	p	
<i>Centropages abdominalis</i>	p			
<i>Clausocalanus arcuicornis</i> forma minor	48		p	
<i>C. pergens</i>	20		11	
<i>Epilabidocera amphitrites</i>	p			
<i>Heterorhabdus norvegicus</i>		p		p
<i>Lucicutia flavicornis</i>	8	p	p	50
<i>Metridia lucens</i>	56	3	45	50
<i>Paracalanus parvus</i>	12		p	
<i>Paraeuchaeta elongata</i>	p	p	p	
<i>Pseudocalanus minutus</i>	567	148	66	775
<i>Racovitzanus antarcticus</i>			p	
<i>Scaphocalanus</i> sp. copepodid				p
<i>Scolecithricella minor</i>		3	4	75
<i>S. ovata</i>			p	
<i>Tortanus discaudatus</i>	p			

	Depth (m)			
	5	35	70	100*
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	439	155	201	675
<i>Oncaea borealis</i>		P		
<i>O. tenella pacifica</i>		3	2	
HARPACTICOIDA				
<i>Microsetella norvegica</i>		P		
Total unidentified Copepoda	28	24		
Nauplii (Copepoda & Euphausiacea)	1089	216	66	475
OTHER GROUPS				
Amphipoda			2	
Appendicularia		3		
Ostracoda		3		
Pteropoda		7		

*Probable sampler or flowmeter malfunction.

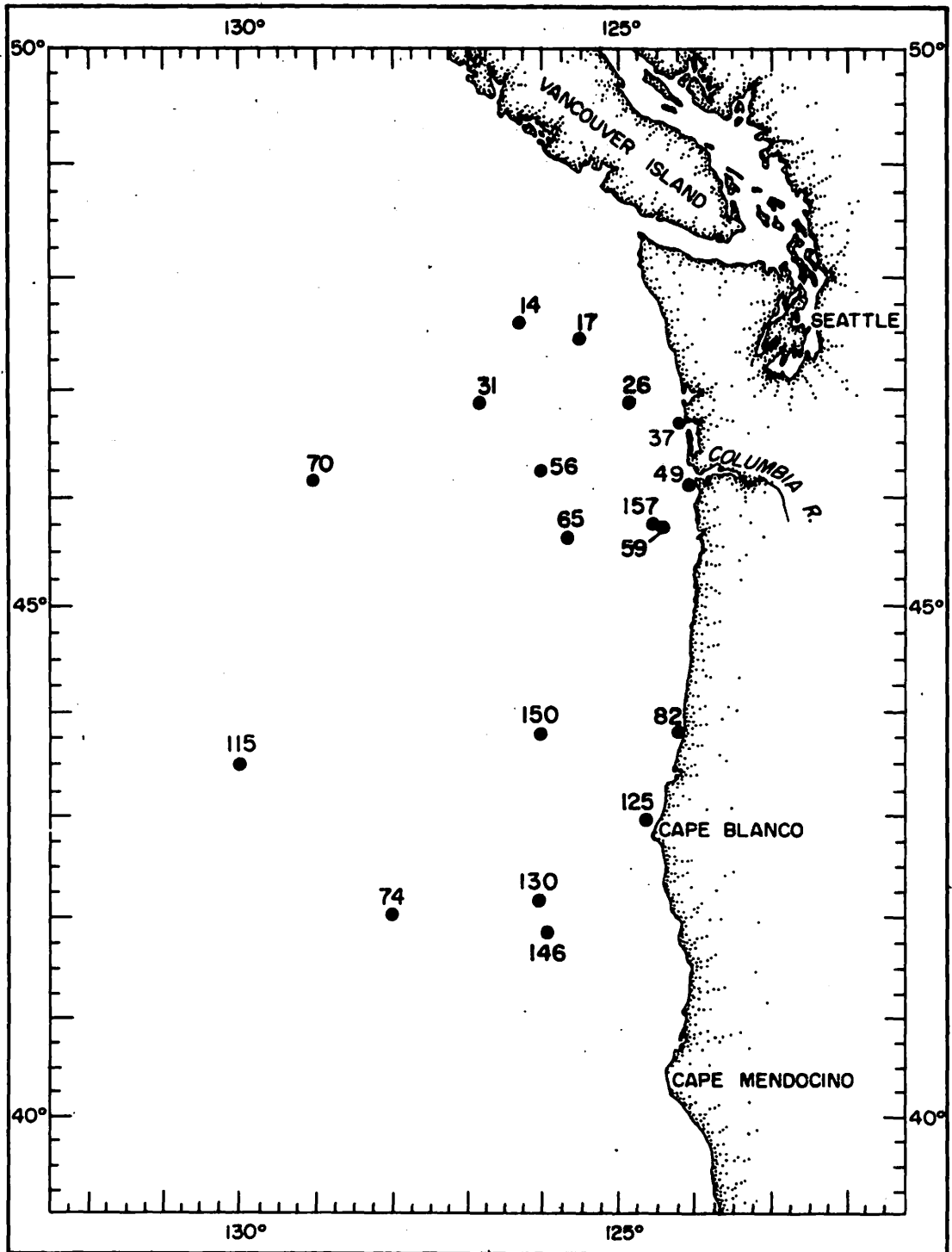


Fig. 13. Zooplankton sampling stations Brown Bear Cruise 312, 14 September - 18 October 1962.

BB 312 16 September 1962 Station 14 47°36' N, 126°17' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
70	0318-0338	7	14.62	2	12
100	0318-0338	4	12.83	2	12

Depth (m)

70 100

Direct count

Amphipoda					0.08
Chaetognatha				0.27	0.46
Euphausiacea				1.29	0.38
Medusae				0.07	
Polychaeta					0.08
Pteropoda				2.11	0.15

Aliquot count

CALANOIDA

<i>Acartia clausii</i>		12
<i>A. longiremis</i>	47	8
<i>Calanus cristatus</i>	p	
<i>Heterorhabdus norvegicus</i>	17	
<i>Lucicutia flavicornis</i>	27	12
<i>Metridia lucens</i>	44	
<i>Microcalanus pusillus</i>		19
<i>Paracalanus parvus</i>	3	
<i>Paraeuchaeta</i> sp. copepodid	3	31
<i>Pleuromamma abdominalis</i>		4
<i>Pseudocalanus minutus</i>	20	31
<i>Racovitzanus antarcticus</i>		4
<i>Scolecithricella minor</i>	23	
<i>S. ovata</i>	p	
<i>Scottocalanus persecans</i>	p	

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	618	323
<i>Oncaea media</i>		8
<i>O. tenella pacifica</i>	55	148

	Depth (m)	
	70	100
	Aliquot count (cont.)	
HARPACTICOIDA		
<i>Microsetella norvegica</i>	3	12
Total unidentified Copepoda	14	
Nauplii (Copepoda)	119	66
OTHER GROUPS		
Amphipoda	3	
Chaetognatha		4
Isopoda		8
Ostracoda		8
Pteropoda	7	
Radiolaria	3	19

BB 312 16-17 September 1962 Station 17 47°26' N, 125°29' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2325-2346	45	6.05	1	12
35*	0015-0035	7	8.93	5	6
77*	0015-0038	7	9.79	2	12
98*	0015-0038	3	8.29	2	12

	Depth (m)			
	5	35*	77*	98*
	Direct count			
Amphipoda	82.81	0.67	0.10	0.12
Cephalopoda			0.10	
Chaetognatha		0.67	0.61	1.20
Ctenophora	0.16	0.33		
Decapod larvae	0.16			
Euphausiacea	141.32	7.27	0.61	0.24

	Depth (m)			
	5	35*	77*	98*
Direct count (cont.)				
Fish larvae	0.49			
Medusae	9.59			
Polychaeta	0.82			
Pteropoda	1.31			0.12
Aliquot count				
CALANOIDA				
<i>Acartia longiremis</i>		15		
<i>Calanus pacificus</i>	33	2		
<i>C. tenuicornis</i>		42		
<i>Calocalanus styliremis</i>	116			
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	99	2		
<i>C. pergens</i>		2	10	
<i>Ctenocalanus vanus</i>	215			18
<i>Eucalanus bungii bungii</i>		2		
<i>Lucicutia flavicornis</i>		27	5	6
<i>Metridia lucens</i>	33	43	56	42
<i>Microcalanus pusillus</i>			26	12
<i>Paracalanus parvus</i>	2926			
<i>Paraeuchaeta</i> sp. copepodid				12
<i>Pseudocalanus minutus</i>	99	116	148	145
<i>Racovitzanus antarcticus</i>				6
<i>Scaphocalanus brevicornis</i>		6		
<i>Scolecithricella minor</i>		15	5	12
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	8744	87	786	826
<i>Oncaea media</i>	17			
<i>O. tenella pacifica</i>	149		92	
HARPACTICOIDA				
<i>Microsetella norvegica</i>	1785		36	24
Total unidentified Copepoda	1273			
Nauplii (Copepoda)	4298		20	30

	Depth (m)			
	5	35*	77*	98*
Aliquot count (cont.)				
OTHER GROUPS				
Amphipoda	33	4		
Appendicularia	182	2		
Euphausiacea	83	2	5	
Medusae		2		
Ostracoda		9	20	6
Pteropoda		2	10	
Radiolaria				12

*Sampler at thirty-five meters failed to release the second messenger. Therefore, the samplers at seventy-seven and ninety-eight meters were hauled up about fifty meters before being closed. Also, sampler at seventy-seven meters slipped to position of sampler at ninety-eight meters sometime during haul.

BB 312 17-18 September 1962 Station 26 46°53' N, 124°50' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
8	2343-0003	27	19.10	1	12
35*	0037-0057	3	10.76	10	6
71*	0037-0104	3	14.42	2	12
106*	0037-0104	3	14.06	2	12

	Depth (m)			
	8	35*	71*	106*
Direct count				
Amphipoda	0.57	0.18	0.07	0.14
Chaetognatha	8.11	0.27	0.13	0.56
Ctenophora	0.15	0.18		
Euphausiacea	21.83	0.37	0.76	1.13
Isopoda		0.09		

	Depth (m)			
	8	35*	71*	106*
Aliquot count				
CALANOIDA				
<i>Acartia longiremis</i>	1068	42	7	
<i>Calanus pacificus</i>	5	7	3	14
<i>C. plumchrus</i>	16	4		
<i>C. tenuicornis</i>	79			
<i>Calocalanus styliremis</i>	32			
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>		2	3	
<i>C. pergens</i>	42	3	7	4
<i>Lucicutia flavicornis</i>		1		4
<i>Metridia lucens</i>	10	15	62	11
<i>Microcalanus pusillus</i>			14	
<i>Paracalanus parvus</i>	299		3	7
<i>Paraeuchaeta</i> sp. copepodid		1		
<i>Pseudocalanus minutus</i>	712	142	65	35
<i>Scolecithricella minor</i>		6	21	11
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3812	101	350	573
<i>Oncaea tenella pacifica</i>	5		10	
HARPACTICOIDA				
<i>Microsetella norvegica</i>				4
Total unidentified Copepoda	305	1	3	
Nauplii (Copepoda)	2079		347	238
OTHER GROUPS				
Barnacle cypris				4
Euphausiacea	10			4
Ostracoda		2		

*Sampler at thirty-five meters failed to release second messenger. Therefore, the samplers at 71 and 106 meters were hauled up about 50 meters before being closed.

BB 312 18 September 1962 Station 31 46°52' N, 126°50' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
4	2257-2317	13	17.73	1	12
35	2334-2354	11	13.19	1	12
71	2334-2354	3	12.14	2	12
99	2334-2354	+	3.03	100	6

	Depth (m)			
	4	35	71	99
	Direct count			
Amphipoda	0.39	0.08		
Chaetognatha	5.35	1.28	0.74	0.99
Ctenophora	0.06	0.08		
Euphausiacea		0.37		0.33
Fish larvae			0.08	
Medusae	0.56	1.51	0.08	0.33
Polychaeta	0.33	0.30		
Salpida		0.08		
	Aliquot count			

CALANOIDA

<i>Acartia longiremis</i>	11			1
<i>Aetideus armatus</i>				0.3
<i>Calanus pacificus</i>	34			
<i>C. plumchrus</i>				0.6
<i>C. tenuicornis</i>		68		
<i>Calocalanus gracilis</i>		p		
<i>C. styliremis</i>	586	645	4	0.3
<i>C. tenuis</i>	p	15		
<i>Calocalanus</i> sp.	17	91	4	
<i>Clausocalanus arcuicornis</i> forma <i>major</i>	203	15		3
<i>C. arcuicornis</i> forma <i>minor</i>	153	68	4	
<i>C. pergens</i>	17	61		1
<i>Ctenocalanus vanus</i>		15		1
<i>Epilabidocera amphitrites</i>	6			
<i>Euchirella pulchra</i>		p		
<i>Gaetanus armiger</i>				2
<i>Heterorhabdus</i> sp. copepodid			4	
<i>Lucicutia flavicornis</i>		15		1
<i>Metridia lucens</i>	6		128	7

	Depth (m)			
	4	35	71	99
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Microcalanus pusillus</i>			16	
<i>Paracalanus parvus</i>	2210	1426		2
<i>Paraeuchaeta</i> sp. copepodid				0.6
<i>Pleuromamma xiphias</i>		P		
<i>Pseudocalanus minutus</i>	34	53	16	2
<i>Racovitzanus antarcticus</i>			8	7
<i>Scolecithricella minor</i>		8		0.3
CYCLOPOIDA				
<i>Corycaeus anglicus</i>	6			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3408	3162	680	13
<i>Oncaea media</i>		15		
<i>O. tenella pacifica</i>	34	205		
HARPACTICOIDA				
<i>Microsetella norvegica</i>	6		4	3
Total unidentified Copepoda	1738	265		
Nauplii (Copepoda)	28	167	161	
OTHER GROUPS				
Amphipoda	11	8		
Appendicularia	34	15	4	
Barnacle nauplii		8		
Ctenophora				3
Euphausiacea				1
Foraminifera	11			
Medusae		8		
Ostracoda		8		1
Polychaeta		15		
Pteropoda		8	4	0.3
Radiolaria			12	

BB 312 19 September 1962 Station 37 46°39' N, 124°16' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
11	2238-2258	13	18.75	1	12
20	2238-2258	9	17.58	1	12

Depth (m)

11 20

Direct count

Amphipoda	1.71	1.19
Chaetognatha	8.91	5.17
Ctenophora	0.69	
Decapod larvae	0.05	
Euphausiacea	154.88	97.89
Medusae	0.05	

Aliquot count

CALANOIDA		
<i>Acartia longiremis</i>	810	359
<i>Calanus plumchrus</i>		17
<i>Calocalanus styliremis</i>	p	p
<i>Paracalanus parvus</i>	906	63
<i>Pseudocalanus minutus</i>	842	228

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3045	1240
<i>Oncaea tenella pacifica</i>	5	
Total unidentified Copepoda	80	
Nauplii (Copepoda)	848	307

OTHER GROUPS

Amphipoda		17
Euphausiacea	5	6

BB 312 21 September 1962 Station 49 46°08' N, 124°04' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7	0342-0402	18	15.57	1	12
32	0342-0402	12	6.27	1	12

Depth (m)

7 32

Direct count

Chaetognatha	0.63
Ctenophora	1.09
Euphausiacea	1.59
Medusae	0.06

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	44	160
<i>Calanus pacificus</i>	26	
<i>C. plumchrus</i>	39	48
<i>C. tenuicornis</i>	13	
<i>Calocalanus styliremis</i>	P	
<i>Lucicutia flavicornis</i>		16
<i>Metridia lucens</i>	13	48
<i>Paracalanus parvus</i>	886	
<i>Pseudocalanus minutus</i>	771	1372

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1419	1674
<i>Oncaea tenella pacifica</i>	39	
Nauplii (Copepoda)	745	287

OTHER GROUPS

Appendicularia	366	176
Chaetognatha	6	16
Euphausiacea	6	4817
Pteropoda	6	

BB 312 22 September 1962 Station 56 46°15' N, 126°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	0329-0349	10	16.92	1	12
35	0242-0302	4	2.75	2	12
70	0242-0302	6	15.01	2	12
100	0242-0302	2	12.59	20	6

Depth (m)

5	35	70	100
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Direct count

Amphipoda	0.35	0.36		
Chaetognatha			0.19	0.23
Euphausiacea			0.46	0.39
Fish larvae			0.07	
Isopoda	0.06			
Medusae	4.37	0.36		0.08
Polychaeta	3.30		0.07	0.08
Pteropoda	0.06	0.72		
Salpida	0.23			0.08

Aliquot count

CALANOIDA

<i>Acartia danae</i>	30			
<i>A. longiremis</i>		109		0.5
<i>A. negligens</i>	12			
<i>Aetideus armatus</i>			3	
<i>Calanus tenuicornis</i>	53	36		
<i>Calocalanus styliremis</i>	p	18		
<i>C. tenuis</i>		p		
<i>Clausocalanus arcuicornis</i> forma major	12			1
<i>C. arcuicornis</i> forma minor	118			1
<i>C. pergens</i>	225	18	10	3
<i>Euchirella pulchra</i>			p	p
<i>Gaetanus armiger</i>				0.5
<i>Gaidius tenuispinus</i>				5
<i>Heterorhabdus</i> sp. copepodid				1
<i>Lucicutia flavicornis</i>			3	1
<i>Lucicutia</i> sp. copepodid				0.5
<i>Metridia lucens</i>	47		6	8
<i>Microcalanus pusillus</i>			3	0.5

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Mimocalanus cultrifer</i>				p
<i>Paracalanus parvus</i>	969	109		2
<i>Paraeuchaeta elongata</i>			10	6
<i>Pleuromamma quadrangulata</i>				0.5
<i>Pseudocalanus minutus</i>		182	13	7
<i>Racovitzanus antarcticus</i>				3
<i>Scolecithricella minor</i>		36	3	2
<i>S. ovata</i>				p
<i>Scolecithrix</i> sp.			p	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	2600	4018	262	27
<i>Oncaea media</i>		36	3	
<i>O. tenella pacifica</i>	154	36		
HARPACTICOIDA				
<i>Microsetella norvegica</i>	18	18	3	0.5
Nauplii (Copepoda)	272	145	7	
OTHER GROUPS				
Appendicularia	65			
Euphausiacea		18		
Medusae				0.5
Ostracoda			10	5
Polychaeta	12			
Pteropoda		18		
Siphonophora	12			

BB 312 24 September 1962 Station 59 45°43' N, 124°25' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
6	0142-0202	44	16.66	1	12
27	0142-0202	8	20.40	2	12

Depth (m)

6 27

Direct count

Amphipoda	0.48	0.05
Chaetognatha	0.90	0.19
Decapoda	0.06	
Euphausiacea	9.36	1.86

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	1980	223
<i>Calanus pacificus</i>	264	2
<i>C. tenuicornis</i>	156	
<i>Calocalanus styliremis</i>	36	p
<i>Calocalanus</i> sp.	12	
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	60	5
<i>C. pergens</i>		7
<i>Ctenocalanus vanus</i>	24	
<i>Lucicutia flavicornis</i>	12	
<i>Metridia lucens</i>	60	25
<i>Paracalanus parvus</i>	6122	31
<i>Pseudocalanus minutus</i>	4718	138

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	10092	417
<i>Oncaea tenella pacifica</i>	24	

HARPACTICOIDA

<i>Microsetella norvegica</i>		5
Nauplii (Copepoda)	5940	110

OTHER GROUPS

Appendicularia	24
Euphausiacea	24

BB 312 24 September 1962 Station 65 45°37' N, 125°40' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2318-2338	19	11.43	1	12
35	2242-2302	13	7.62	1	12
71	2242-2302	3	11.79	4	12
100	2242-2302	2	10.21	10	6

Depth (m)

5 35 71 100

Direct count

Amphipoda	0.09			
Appendicularia				0.10
Chaetognatha			0.67	1.08
Euphausiacea	0.78	0.39	0.08	0.59
Fish larvae				0.10
Medusae	0.26			
Polychaeta	0.34	0.13		

Aliquot count

CALANOIDA

<i>Acartia danae</i>	87	13		
<i>Aetideus armatus</i>				1
<i>Calanus pacificus</i>	17			1
<i>C. tenuicornis</i>	17	53		
<i>Calocalanus styliremis</i>	9	p	p	
<i>Calocalanus</i> sp.		26		
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	314			3
<i>C. pergens</i>	683	39	4	4
<i>Ctenocalanus vanus</i>	26	13		2
<i>Gaidius tenuispinus</i>				1
<i>Heterorhabdus</i> sp. copepodid			2	
<i>Lucicutia flavicornis</i>	9		4	1
<i>Metridia lucens</i>	78	53	17	8
<i>Microcalanus pusillus</i>				2
<i>Paracalanus parvus</i>	3036	210	6	1
<i>Paraeuchaeta elongata</i>			9	
<i>Pseudocalanus minutus</i>	53	512	21	13
<i>Racovitzanus antarcticus</i>				3
<i>Scolecithricella minor</i>		13	2	

	Depth (m)			
	5	35	71	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3045	4606	358	49
<i>Oncaea conifera</i>				1
<i>O. tenella pacifica</i>	262	420	2	147
HARPACTICOIDA				
<i>Microsetella norvegica</i>	9			
Total unidentified Copepoda			4	
Nauplii (Copepoda)	901	564	9	
OTHER GROUPS				
Appendicularia	857	236		
Chaetognatha			2	
Cyphonautes larvae			2	1
Euphausiacea	9			
Isopoda	9			
Medusae		13		
Ostracoda			9	3
Pteropoda			2	

BB 312 26 September 1962 Station 70 46°10' N, 129°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
7*	0416-0436	100	10.17	2	12
35*	0338-0358	54	8.00	1	12
70	0338-0358	3	10.61	4	12
100	0338-0358	2	9.94	10	6

	Depth (m)			
	7*	35*	70	100
	Direct count			
Amphipoda	1.47	0.25		
Chaetognatha		0.50		0.40
Euphausiacea	0.58		0.94	0.60
Medusae		0.13		0.10
Polychaeta		0.25		
	Aliquot count			

CALANOIDA

<i>Acartia clausii</i>	664	38		
<i>A. danae</i>	54			4
<i>A. negligens</i>	49			
<i>Calanus pacificus</i>		13		
<i>Calocalanus styliremis</i>		438	4	1
<i>C. tenuis</i>		p		
<i>Calocalanus</i> sp.		50		
<i>Clausocalanus arcuicornis</i> forma major	64	163		1
<i>C. arcuicornis</i> forma minor		13	7	2
<i>C. pergens</i>		125	4	1
<i>Ctenocalanus vanus</i>	34	51		
<i>Eucalanus bungii bungii</i>				1
<i>Heterorhabdus</i> sp. copepodid				1
<i>Lucicutia flavicornis</i>				1
<i>Metridia lucens</i>			35	2
<i>Microcalanus pusillus</i>			16	
<i>Paracalanus parvus</i>	187	1051	14	1
<i>Pseudocalanus minutus</i>		250	21	
<i>Racovitzanus antarcticus</i>				5
<i>Scolecithricella minor</i>			5	1

	Depth (m)			
	7*	35*	70	100
Aliquot count (cont.)				
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1308	8050	688	55
<i>Oncaea media</i>		13		
<i>O. tenella pacifica</i>		750		
HARPACTICOIDA				
<i>Microsetella norvegica</i>	5			
Nauplii (Copepoda)	634	5063	38	2
OTHER GROUPS				
Amphipoda	15			
Appendicularia	187	150	5	
Decapod larvae		13		
Euphausiacea	20	13		1

*Samples contain large amounts of phytoplankton.

BB 312 26 September 1962 Station 74 42°02' N, 128°00' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
4	2248-2307	22	17.11	1	12
35	2318-2338	58	7.92	2	12
70	2318-2338	8	11.75	2	12
100	2318-2338	3	9.91	10	6

	Depth (m)			
	4	35	70	100
	Direct count			
Amphipoda	0.06	0.25		
Chaetognatha			0.17	
Euphausiacea	0.06	0.13	0.25	
Medusae		0.38		
Polychaeta		0.13	0.09	
Pteropoda	0.06			
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>	18	95		
<i>A. longiremis</i>		13		
<i>A. negligens</i>	12	31		10
<i>Acartia</i> sp. copepodid	403	240		
<i>Calocalanus gracilis</i>		p		
<i>C. styliremis</i>	6	145		p
<i>C. tenuis</i>		p	p	
<i>Calocalanus</i> sp.		p	4	
<i>Clausocalanus arcuicornis</i> forma major	47			
<i>C. arcuicornis</i> forma minor	140	82		3
<i>C. pergens</i>	526	372		
<i>Ctenocalanus vanus</i>	81	151	4	
<i>Eucalanus hungii hungii</i>		13		
<i>Gaetanus minor</i>				9
<i>Gaidius tenuispinus</i>				1
<i>Lucicutia flavicornis</i>			9	
<i>Metridia lucens</i>	18	25	42	7
<i>Microcalanus pusillus</i>			30	
<i>Paracalanus parvus</i>	252	57		
<i>Paraeuchaeta elongata</i>		6		

	Depth (m)			
	4	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Pleuromamma quadrangulata</i>				1
<i>Pseudocalanus minutus</i>		114	4	
<i>Racovitzanus antarcticus</i>				1
<i>Scaphocalanus brevicornis</i>			9	
<i>Scolecithricella minor</i>		6	9	5
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	175	1338	614	48
<i>Oncaea tenella pacifica</i>	374	3131	64	
HARPACTICOIDA				
<i>Microsetella norvegica</i>	35	44	13	1
Total unidentified Copepoda	18			
Nauplii (Copepoda)	485	2671	98	
OTHER GROUPS				
Amphipoda		6		
Appendicularia	117	63	4	
Chaetognatha		25		3
Euphausiacea		44	13	
Ostracoda		13		1
Polychaeta		19		

BB 312 3 October 1962 Station 82 43°51' N, 124°13' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
11	0240-0300	30	23.45	1	12

Depth (m)

11

Aliquot count

CALANOIDA

<i>Acartia danae</i>	13
<i>A. longiremis</i>	94
<i>A. negligens</i>	13
<i>Calanus pacificus</i>	89
<i>C. tenuicornis</i>	13
<i>Calocalanus styliremis</i>	13
<i>C. tenuis</i>	p
<i>Clausocalanus arcuicornis</i> forma minor	107
<i>C. pergens</i>	13
<i>Ctenocalanus vanus</i>	68
<i>Metridia lucens</i>	8
<i>Paracalanus parvus</i>	870
<i>Pseudocalanus minutus</i>	2021

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	3535
Nauplii (Copepoda)	2806

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6 October 1962

Station 115

43°30' N, 129°57' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	?	17	19.31	1	12
35*	0135-?	9		2	12
70	?	5	20.73	2	12

Depth (m)

5	35*	70
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Direct count

Amphipoda	0.51		
Appendicularia			0.14
Cephalopoda		p	
Euphausiacea	0.41	p	0.19
Fish larvae		p	
Medusae	0.05		0.05
Polychaeta	0.31	p	1.64
Salpida	0.25	p	0.05
Siphonophora		p	

Aliquot count

CALANOIDA

<i>Acartia clausii</i>			2
<i>A. danae</i>	135	p	
<i>A. negligens</i>		p	
<i>Calanus plumchrus</i>			2
<i>C. tenuicornis</i>		p	2
<i>Calocalanus gracilis</i>	p		
<i>C. styliremis</i>	10	p	12
<i>C. tenuis</i>	p	p	p
<i>Canadacia</i> sp. copepodid		p	2
<i>Centropages bradyi</i>	p		
<i>Clausocalanus arcuicornis</i> forma major	21	p	
<i>C. arcuicornis</i> forma minor	140	p	2
<i>C. pergens</i>	186	p	32
<i>Ctenocalanus vanus</i>	5	p	17
<i>Eucalanus elongatus</i>	16	p	
<i>Heterorhabdus norvegicus</i>			7
<i>Lucicutia flavicornis</i>		p	
<i>Metridia luomensis</i>	10	p	29
<i>Paracalanus parvus</i>	41		

	Depth (m)		
	5	35*	70
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Paraeuchaeta</i> sp. copepodid.			2
<i>Pleuromamma abdominalis</i>		p	p
<i>P. xiphias</i>			5
<i>Pseudocalanus minutus</i>			14
<i>Racovitzanus antarcticus</i>		p	
<i>Scaphocalanus brevicornis</i>			7
<i>Scolecithricella minor</i>			14
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	440	p	386
<i>Oncaea conifera</i>	31	p	2
<i>O. media</i>	10		2
<i>O. tenella pacifica</i>	31		
<i>Sapphirina</i> sp.		p	
HARPACTICOIDA			
<i>Microsetella norvegica</i>	10		2
<i>M. rosea</i>			2
Nauplii (Copepoda)	52		12
OTHER GROUPS			
Appendicularia	114		5
Chaetognatha	5	p	2
Euphausiacea	31	p	
Fish larvae	5		
Foraminifera	47		
Medusae		p	
Ostracoda		p	5
Polychaeta	21		
Pteropoda		p	
Salpida	47		

*Records inadequate concerning number of revolutions of flowmeter.

BB 312 8 October 1962 Station 125 42°58' N, 124°37' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
15	0310-0330	6	25.39	2	6

Depth (m)

15

Direct count

Chaetognatha	0.16
Decapod larvae	0.04
Euphausiacea	17.72

Aliquot count

CALANOIDA

<i>Acartia longiremis</i>	26
<i>Calanus pacificus</i>	2
<i>C. plumchrus</i>	2
<i>Clausocalanus arcuicornis</i> forma major	2
<i>C. arcuicornis</i> forma minor	6
<i>Ctenocalanus vanus</i>	18
<i>Eucalanus bungii californicus</i>	2
<i>Metridia lucens</i>	10
<i>Paracalanus parvus</i>	28
<i>Pseudocalanus minutus</i>	558

CYCLOPOIDA

<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	49
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OTHER GROUPS

Ostracoda	2
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BB 312 9 October 1962 Station 130 42°11' N, 126°01' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
8	0330-0407	22	30.12	1	6
35	0230-0250	2	13.72	20	6
70	0230-0250	3	14.83	10	12

Depth (m)

8	35	70
---	----	----

Direct count

Amphipoda	7.99		0.13
Cephalopoda	0.07		
Chaetognatha	0.53		0.20
Euphausiacea	14.77	0.29	0.20
Polychaeta	17.29	0.14	0.26
Pteropoda	0.03		
Salpida	0.23		

Aliquot count

CALANOIDA

<i>Acartia danae</i>	93	0.5	
<i>A. longiremis</i>			1
<i>A. negligens</i>	10		
<i>Aetideus armatus</i>		0.5	
<i>Calanus pacificus</i>			1
<i>C. plumchrus</i>	7		
<i>C. tenuicornis</i>	17		
<i>Calocalanus gracilis</i>			P
<i>C. styliremis</i>	P		
<i>C. tenuis</i>	P		
<i>Candacia</i> sp. copepodid	3		1
<i>Clausocalanus arcuicornis</i> forma major	20	1	
<i>C. arcuicornis</i> forma minor	216		1
<i>C. pergens</i>		1	3
<i>Ctenocalanus vanus</i>	40		
<i>Eucalanus bungii bungii</i>	10		2
<i>E. bungii californicus</i>		1	
<i>Euchaeta</i> sp. copepodid		0.5	
<i>Euchirella</i> sp. copepodid			1
<i>Gaidius tenuispinus</i>		0.5	1
<i>Heterorhabdus norvegicus</i>		0.5	2

	Depth (m)		
	8	35	70
Aliquot count (cont.)			
CALANOIDA (cont.)			
<i>Metridia lucens</i>	33	2	15
<i>Microcalanus pusillus</i>			1
<i>Paracalanus parvus</i>	230	1	1
<i>Paraeuchaeta</i> sp. copepodid			2
<i>Pleuromamma abdominalis</i>			9
<i>P. quadrangulata</i>			1
<i>P. xiphias</i>			1
<i>Pseudocalanus minutus</i>		2	9
<i>Racovitzanus antarcticus</i>		3	2
<i>Scaphocalanus brevicornis</i>			7
<i>Scolecithricella minor</i>			5
<i>Undeuchaeta plumosa</i>	p		
CYCLOPOIDA			
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	73	7	63
<i>Oncaea conifera</i>		1	1
HARPACTICOIDA			
<i>Microsetella norvegica</i>		0.5	
OTHER GROUPS			
Amphipoda	17		
Appendicularia	3		
Chaetognatha		1	
Euphausiacea	33	0.5	
Ostracoda		4	9
Polychaeta	10	0.5	1
Salpida	17		

BB 312 15 October 1962 Station 146 41°53' N, 125°56' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
8	0040-0100	12	2.71	1	6
35	0115-0135	3	20.35	10	6
70	0115-0135	5	17.02	5	6
100	0115-0135	3	17.04	10	6

	Depth (m)			
	8	35	70	100
	Direct count			
Amphipoda	25.46	0.39	0.17	0.06
Chaetognatha	9.59	0.24	0.41	0.35
Ctenophora	2.58	4.81		
Euphausiacea	66.78	3.83	0.58	0.17
Medusae	2.21	0.49		
Polychaeta	37.26			0.06
Pteropoda				0.06
Salpida			0.11	
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>		7		
<i>A. longiremis</i>	148	0.5	20	
<i>Calanus pacificus</i>	295	4		
<i>C. tenuicornis</i>		1		
<i>Calocalanus styliremis</i>	p			
<i>C. tenuis</i>	p			
<i>Candacia</i> sp. copepodid		2		
<i>Clausocalanus arcuicornis</i> forma major		2		
<i>C. arcuicornis</i> forma minor		6		
<i>C. pergens</i>		2	1	4
<i>Ctenocalanus vanus</i>	37	3	2	1
<i>Epilabidocera amphitrites</i>		0.5		
<i>Eucalanus bungii bungii</i>	p	5	p	
<i>E. bungii californicus</i>			2	2
<i>E. elongatus</i>	259			
<i>Euchirella</i> sp. copepodid			4	0.5
<i>Heterorhabdus norvegicus</i>			1	
<i>Heterorhabdus</i> sp. copepodid	37			2
<i>Lucicutia flavicornis</i>	295	0.5		
<i>L. ovalis</i>			p	

	Depth (m)			
	8	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Lucicutia</i> sp. copepodid	111		1	
<i>Metridia lucens</i>	701	11	5	10
<i>Mimocalanus cultrifer</i>				P
<i>Paracalanus parvus</i>	37	13	1	
<i>Paraeuchaeta</i> sp. copepodid			1	3
<i>Pleuromamma quadrangulata</i>			9	2
<i>Pseudocalanus minutus</i>	1255	4	2	2
<i>Racovitzanus antarcticus</i>			4	4
<i>Rhincalanus nasutus</i>	P		P	
<i>Scaphocalanus brevicornis</i>			1	1
<i>Scolecithricella minor</i>	296			3
<i>S. ovata</i>			P	
<i>Undeuchaeta plumosa</i>		P	P	
CYCLOPOIDA				
<i>Corycaeus anglicus</i>		1		
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	1550	5	26	28
<i>Oncaea conifera</i>	258	0.5	5	1
OTHER GROUPS				
Amphipoda	111	6	1	
Chaetognatha		2	5	0.5
Echinoderm larvae			1	
Euphausiacea	148	7		1
Decapod larvae			2	
Medusae				0.5
Ostracoda	111		6	3
Polychaeta	37		1	
Radiolaria			6	
Salpida	37	3		
Siphonophora		0.5		

BB 312 15 October 1962 Station 150 43°49' N, 125°58' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
5	2236-2256	8	23.05	2	6
35	2321-2341	8	14.38	2	6
70	2321-2341	3	14.33	20	6
100	2321-2341	1	11.96	20	6

	Depth (m)			
	5	35	70	100
	Direct count			
Amphipoda	0.13	0.20		
Chaetognatha			0.20	0.33
Euphausiacea	5.63	0.48	0.97	0.91
Medusae	0.47	0.76	0.13	0.16
Polychaeta	0.21	2.29		0.08
	Aliquot count			

CALANOIDA

<i>Acartia danae</i>	65	93		
<i>A. longiremis</i>	2		3	
<i>A. negligens</i>	4	10		
<i>Acartia</i> sp. copepodid	20			
<i>Aetideus armatus</i>				1
<i>Calanus pacificus</i>		3		
<i>Calocalanus styliremis</i>	P	P	P	P
<i>C. tenuis</i>	P	P		
<i>Clausocalanus arcuicornis</i> forma major	22	13		
<i>C. arcuicornis</i> forma minor	172	72	3	2
<i>C. pergens</i>	54	41	7	0.5
<i>Ctenocalanus vanus</i>	37	7	0.3	
<i>Euchirella</i> sp. copepodid			0.3	1
<i>Heterorhabdus</i> sp. copepodid		7	1	0.5
<i>Lucicutia flavicornis</i>	2	3	0.7	0.5
<i>Metridia lucens</i>	2	17	1	3
<i>Microcalanus pusillus</i>			0.3	0.5
<i>Mimocalanus cultrifer</i>				0.5
<i>Paracalanus parvus</i>	16	10		
<i>Paraeuchaeta</i> sp. copepodid				1
<i>Pleuromamma</i> sp. copepodid			0.3	
<i>Pseudocalanus minutus</i>	11	3	2	3

	Depth (m)			
	5	35	70	100
Aliquot count (cont.)				
CALANOIDA (cont.)				
<i>Racovitzanus antarcticus</i>				2
<i>Scaphocalanus brevicornis</i>			1	1
<i>Scolecithricella minor</i>		3	1	0.5
<i>S. ovata</i>			0.3	
CYCLOPOIDA				
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	4		9	32
<i>Oncaea conifera</i>		17	0.7	
<i>O. tenella pacifica</i>			0.3	
HARPACTICOIDA				
<i>Microsetella norvegica</i>			0.3	
Nauplii (Copepoda)	2			
OTHER GROUPS				
Amphipoda	2			
Appendicularia	9	21	0.3	1
Barnacle nauplii		3		
Chaetognatha		3		
Euphausiacea		6		0.5
Ostracoda			1	2
Polychaeta		3		

BB 312 17 October 1962 Station 157 45°47' N, 124°32' W

Depth (m)	Time interval of haul	Settled volume of sample (ml)	Water filtered (m ³)	Percent of sample counted	Net mesh
8	0218-0238	9	11.73	2	6
35	0300-0325	5	12.36	2	6
70	0300-0325	2	17.31	10	6
100*	0300-0325	+	0.58	100	6

Depth (m)

8	35	70	100*
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Direct count

Amphipoda	0.09	0.28
Chaetognatha	0.16	0.11
Euphausiacea	0.40	0.46
Medusae	0.08	0.06
Polychaeta		0.06

Aliquot count

CALANOIDA

<i>Acartia danae</i>		4		
<i>A. longiremis</i>	4	16	3	2
<i>A. negligens</i>	4	4		
<i>Aetideus armatus</i>			0.5	
<i>Calanus tenuicornis</i>			0.5	
<i>Calocalanus styliremis</i>		p	p	
<i>Clausocalanus arcuicornis</i> forma <i>minor</i>	13	20	2	2
<i>C. pergens</i>	38	48	8	4
<i>Ctenocalanus vanus</i>		44	0.5	2
<i>Lucicutia flavicornis</i>		4	1	
<i>Metridia lucens</i>	8	16	32	
<i>Paracalanus parvus</i>	128	8		12
<i>Paraeuchaeta</i> sp. copepodid		12		7
<i>Pseudocalanus minutus</i>	887	777	17	41
<i>Scolecithricella minor</i>			6	

CYCLOPOIDA

<i>Corycaeus anglicus</i>				2
<i>Oithona</i> sp. (<i>similis</i> , <i>spinirostris</i>)	115	20	55	5
Nauplii (Copepoda)			0.5	

	Depth (m)			
	8	35	70	100*
	Aliquot count (cont.)			
OTHER GROUPS				
Chaetognatha			0.5	
Euphausiacea			5	2
Isopoda			0.5	

*Probable sampler malfunction.

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14. KEY WORDS	LINK A		LINK B		LINK C	
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