

PLANKTON STUDIES IN SAN FRANCISCO BAY. III.

ZOOPLANKTON SPECIES COMPOSITION AND ABUNDANCE IN THE SOUTH BAY, 1978-1979

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U.S. GEOLOGICAL SURVEY

Open-File Report 81-132

Prepared as part of a continuing study of the
San Francisco Bay estuary

January 1981

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

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OPEN-FILE REPORT

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By ANNE HUTCHINSON

ABSTRACT

Data are presented that summarize zooplankton species composition and abundance in South San Francisco Bay during 1978 and 1979. Monthly sampling was conducted at seven fixed stations, from the southern extremity of South Bay to Golden Gate between February 1978 and November 1979. Sampling was more frequent during the spring period of rapid population growth. Samples were collected by pump, usually at three depths, and subsamples were enumerated in the field (while alive) or in the laboratory (after preservation). Total zooplankton biomass as carbon was calculated from estimated carbon quotas and abundances of each organism enumerated.

INTRODUCTION

Zooplankton are a significant component of estuarine ecosystems because: (1) they are the link in the food chain between the single-celled phytoplankton producers and the larger fish and invertebrate consumers; (2) most estuarine animals are members of the zooplankton at some time in their life cycle, many as larvae; and (3) zooplankton affect phytoplankton and nutrient dynamics by grazing and recycling of nutrients. This report summarizes the abundance and composition of zooplankton populations in South San Francisco Bay based upon monthly collections from February 1978 through November 1979 at seven fixed stations between San Jose and Golden Gate (Figure 1). Seven additional stations were occasionally sampled, and sampling frequency was increased in the spring of each year.

San Francisco Bay zooplankton (see Table I for comparison of zooplankton surveys) were first collected by the "Albatross" expedition in 1912-13 (Sumner, 1914). From the samples collected, Esterly (1924) compiled the first species list of copepods for the Bay. As the volume of water sampled was not estimated, the density of plankton is unknown. The first attempt at quantitative work was by the University of California Sanitary Engineering Research Laboratory (SERL) in the early 1960's (Harris and others, 1961, McCarty and others, 1962, Storrs and others, 1963). The small sample volume (275 ml), method of collection (a piece of pipe extended from a moving boat), and level of taxonomic identification (general

groupings) do not provide a basis for comparison with subsequent work. California Fish and Game funded a limited study in 1963-64 in which a large-mesh net (770 μ) was used; sample volume was not estimated. Caskey (1976) quantitatively sampled almost monthly for two years at the same seven USGS stations sampled in this study. His report does not include densities for individual species at each station. A four-year study of the Dungeness crab by California Fish and Game included sampling of zooplankton near the Golden Gate Bridge (Orcutt and others, 1975, 1976). Densities of zooplankton by species have been estimated but not published.

In this study discrete depths were sampled frequently (37 sampling dates in 22 months) with a small-mesh net (64 μ) to look at zooplankton population dynamics. The density estimates by lowest counted taxon and carbon estimates by sample are presented here.

METHODS

Zooplankton studies are part of an ongoing multidisciplinary study of San Francisco Bay. The 519 samples in this study were collected on 37 cruises (Table II) between February 1978 and November 1979. Sampling frequency was increased during the spring period of rapid population change and during the San Jose sewage spill of September - October 1979.

Fixed sampling stations were located in the ship channel ($z \approx 10$ m) (Figure 1). Usually, three depths were sampled: near-surface, mid-depth, and near-bottom. Samples were taken with a Jabsco¹ (Model No. 18270-0000) 2-inch bronze and brass pump (Peterson and

^{1/} Brand names are for identification purposes and do not constitute endorsement by the U. S. Geological Survey.

others, 1979) with a neoprene impeller, powered by an electric Baldor¹ (Model No. M3609) 3-phase, 220-V motor. The intake end of a 2-inch PVC reinforced hose (B. F. Goodrich Radial Flex) was lowered with a hydrowire to depth. Animals were collected by pumping water through nets having 80- μ mesh (before 1 March 1978) or 64- μ mesh (after 1 March 1978). The mesh size is listed for each sampling date.

To estimate the precision of the sampling method three replicate samples were taken on 5 April 1978 at Station 30 (page 13 of the Appendix). Analysis of variance for abundant animals demonstrated no significant difference between variation of counts among subsamples of the same sample or among subsamples of different samples.

An attempt was made to identify all organisms to species level. Frequently used taxonomic works include Smith (1977), Brodskii (1967), Edmondson (1959), Esterly (1924) and Trinast (1976). Table III summarizes all zooplankton taxa encountered in this study. Code numbers were assigned to each taxonomic group to facilitate computer storage (Table IV). Abbreviations were used for Female (F), Male (M), Copepodite (C), and Nauplii (N). Organisms for which identification to the species level are not complete were assigned letters (Table V).

There were two methods of enumeration; counts of live animals on board ship and counts of formalin-preserved samples in the laboratory. In the laboratory the sample was rinsed on a

63- μ brass screen to remove formalin. The sample was transferred to a pharmaceutical cylinder to settle, and wet volume was measured. The sample was diluted with water to 100 times its settled volume, but not more than 500 ml. Three 1-ml aliquots were removed with a Stemmler pipette and placed in a counting tray. The machined Plexiglas counting trays have partitions to make five long, narrow cells. The width of a cell is the same as the width of one field of view of a Wild M5 binocular microscope at 18x. All the animals in the three 1-ml subsamples were identified and enumerated. If there were not 100 individuals of the most numerous species, more aliquots were counted to reach that number. The entire sample was then briefly scanned to enumerate rare species, particularly large ones.

Precision of the laboratory counts was estimated from the three aliquots counted. When the density of a species was greater than $3000/\text{m}^3$, the mean coefficient of variation (s/\bar{x}) between aliquots was 17 percent with a range of 4 to 40 percent. The 95-percent confidence interval was ± 20 percent of the density. When the density was less than $3000/\text{m}^3$, the mean coefficient of variation was 76 percent with a range of 10-200 percent. Using normal statistics, the 95-percent confidence interval was ± 86 percent of the density. Because sums of small counts do not follow a normal distribution, normal statistics should not be used to calculate confidence intervals. A log transformation is more appropriate (Cassie, 1968). Then, for densities less than $3000/\text{m}^3$ the 95-percent confidence interval was the density $\times 0.86$.

Shipboard counts were conducted more quickly with some loss in precision. Sample volumes were made up to 100 to 1000 ml, depending on the density of animals expected, with bay-water filtered through a 20- μ -mesh screen. Most samples were made up to 300 to 500 ml. One 1-ml aliquot was removed for enumeration. The counting tray was modified with extra partitions to reduce animal movement from ship motion and swimming. Usually at least 50 individuals of the most abundant species were counted. No scan was done aboard ship, so rare species were missed altogether or may have been overestimated if present in the single aliquot.

As only one aliquot was counted on the ship, there were no estimates of precision. To estimate precision of shipboard counts, several samples were recounted in the laboratory. For densities above 3000/m³, the mean coefficient of variation (s/\bar{x}) between ship and lab counts was 20 percent with a range of 5 to 40 percent. The 95-percent confidence interval was ± 23 percent of the density. Densities below 3000/m³ are poorly sampled by one aliquot. However, for the recounted samples the mean coefficient of variation was 70 percent with a range of 7 to 173 percent. Using the log transformation, the 95-percent confidence interval was the density $\bar{x} \pm 0.78$.

While zooplankton were being collected, water samples were usually taken to measure vertical distributions of salinity, temperature, and chlorophyll fluorescence, using the pump-probe system of Schemel and Dedini (1979). Chlorophyll a concentration was estimated from in-vivo fluorescence, based upon linear regression of fluorescence and acetone-extracted chlorophyll a (Alpine and others, 1981). Light

extinction coefficient was determined from vertical profiles of quantum irradiance, usually in the upper 1 m of the water column. All discrete measurements of hydrographic data did not correspond to the same depths at which zooplankton were collected. In these cases hydrographic data were based upon linear interpolation of data collected at depths above and below depths of zooplankton sampling. A few of the cruises during the 1979 spring bloom were made aboard a vessel without vertical profiling capability for fluorometry. In these cases the discrete chlorophyll a measurement at the 1-m depth is shown for all depths. In all cases the depth given is where the zooplankton were sampled and is not necessarily the depth of the hydrographic data. See Smith and Herndon (1980) and Alpine and others (1981) for the actual data. Hydrographic data are listed only to give the closest (in space and time) measurements of these parameters.

A semiquantitative measure of detritus was recorded during sample enumeration (Table VI). No attempt has been made to correct the data for tide (tidal excursion is about 10 km in South Bay), but data-summary sheets note whether the tides were ebbing (-1), slack (0), or flooding (1).

Total zooplankton biomass is estimated in terms of carbon. The carbon content of each taxon counted was estimated from the literature by conversion from volume measurements, or by carbon analysis (Table III). Zooplankton carbon in mg/m^3 is listed for each sample. This value is the sum of products of carbon content times abundance. Carbon content for each species is preliminary and will be revised

as more carbon analyses are run. Also, the carbon content used for each taxon was constant throughout the year, although carbon values may differ by 50 percent or more for the same species developed in water of different temperature.

Samples were enumerated by the writer and by Denise Alexander, Lynn Schilling, Michael McGowan and Susan Hatfield. Many others provided sampling assistance, including Ray Wong, Brian Cole, Jan Thompson, Jim Cloern, David Coscas and Susana Cartegena. Carbon analyses were run by Michael DeManche at the University of Southern California.

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TABLE I. SUMMARY OF PREVIOUS ZOOPLANKTON STUDIES IN SAN FRANCISCO BAY

Reference	Sampling Dates	Number of Samples	Number of Stations; Area of Bay Sampled	Type of Gear	Mesh Size (μ)	Volume Estimates	Type of Tow	Type of Subsampling	Identification Level	Population Estimate
Aplin, 1967	monthly Apr63-Feb64	52	6; central and south	0.5m std. net	770	none 20min tow	surface	3 aliquots with ?	copepods-species others-grouped	#/subsample (relative no.)
Calif. Dept. Fish & Game, et al 1975, 1976 and pers. comm.	twice monthly Apr-Oct 74-75 monthly Nov-Mar 74-75 also some since Mar 71	1,102?	58; Carquinez Strait to Sacramento-San Joaquin Rivers	Clarke-Bumpus net and pump	?	?	oblique?	?	species	#/m ³ on graphs only
Caskey, 1976	~monthly June72-Apr74	172	13; entire plus west delta	0.5m std. net	140	none given flowmeter	oblique	3 aliquots with Stempel pipette	species or lowest taxon	#/m ³ on graphs only
Esterly, 1924 and Sumner, 1914	Jan12-Jan13	182	23; entire	~1m and 0.3m std. net	100?	none 5-10min tow	oblique	hand-sorted	copepods-species	#/sample
Harris et al, 1961	6 dates Nov58-Sep59	75	9; south of Dumbarton Bridge	tubes attached to hull of boat; also "conventional plankton net"	?	none given bucket fill	1/2 m, 1 1/2 m and oblique	1 ml aliquots with? to count 10% of sample	class or order some species	#/m ³ of total # of organisms
Kopache, 1976	4 dates Jan76-Aug76	28	7; western Sacramento-San Joaquin Delta ~30; entire	diaphragm pump	80	13-L	discrete depth	none, counted whole sample	species or lowest taxon	#/L on graphs only
Orcutt, et al, 1975, 1976 and pers. comm.	~monthly Apr75-June75	64		0.5m std. net	505	~90m ³ estimated	oblique, discrete depth	1 Stempel pipette aliquot, scan	species or lowest taxon	#/m ³ (not in lit.)
	Dec75-Jun76	77		0.5m opening and closing		~100m ³ flowmeter				
	Jan77-Jun77	50		0.5m Clarke-Bumpus		~100m ³ flowmeter				

TABLE I. (continued)

Reference	Sampling Dates	Number of Samples	Number of Stations; Area of Bay Sampled	Type of Gear	Mesh Size (μ)	Volume Estimates	Type of Tow	Type of Subsampling	Identification Level	Population Estimate
Painter, 1966 (also Turner, 1966; Turner & Heubach, 1966; Heubach, 1966)	monthly Jan-Dec63	383	19+; San Pablo, Suisun Bay	Clarke-Bumpus	180	none given flowmeter 10-20min tow	discrete depths	3ml counted 100 organisms identified	species or lowest taxon	$\#/m^3$
Siegfried and Knight, 1976	Jan-Dec76	336	6; western Sac-S.J. Delta	0.2m std. net	200	none given 1-4min tow		not given sugar floc and hand picked	species	
Storrs et al, 1964, 1965, 1966, and McCarty et al 1962	6/year 1960-64	~800	~68 entire bay at various times	1" tubes attached to hull of boat	147	275-L	~3m	3.1 ml aliquots with?	class or order	$\#/m^3$ of total # of organisms
Tattersall, 1932	Jan12-Jan13	313	23; entire	~1m std.net	947	none 5-10min tow	oblique	hand-sorted	mysids-species	#/sample

TABLE II. SAMPLING DATES AND STATIONS

<u>1978</u>	<u>STATIONS SAMPLED</u>	<u>1979</u>	<u>STATIONS SAMPLED</u>
<u>DAY-MONTH-YEAR</u>		<u>DAY-MONTH-YEAR</u>	
160278	32,24,19	150179	36,32,30,27,24,21
140378	36,32,30,27,24,21	010279	32,30,27,24
200378	32,30,27,24	130279	36,32,30,27,24,21
050478	32,30,27,24,21,19	280279	32
240578	36,32,30	050379	36,32,30,27,24,21,19
250578	30,27,24,21,19	090379	32,30,27,24
140678	36,32,30,27,24,21,19	130379	32,30,27
120778	36,32,30,27,24,21,19	160379	30,27
310778	36,32,30,27,24,21,19	190379	30,27,24
190978	36,32,30,27,24,21	220379	32,30,27
200978	19	290379	32,31,30,29,28,27,26,25,24
111078	36,32,30,27,24,21,19	020479	36,32,30,27,24,21,19
081178	36,32,30,27,24,21,19	160479	30) overnight anchor
051278	36,32	170479	30) station
141278	36,32,30,27,24,21,19	080579	36,32,30,27,24,21,19
		040679	36,32,30,27,24,21,19
		090779	36,32,30,27,24,21,19
		130879	32,30,27,24,21,19
		170879	36,32
		170979	36,32,30,27,24,21,19
		260979	36,34,32,30
		241079	362,36
		081179	362,36,34,30

TABLE III. SPECIES LIST
With codes, carbon values and sources

F = Female, M = Male, C = Copepodite, N = Nauplius

Code	Species	us C/animal	Source
5	Acartia clausi F	2.770	1
6	Acartia clausi M	1.400	1
7	Acartia clausi C	0.800	3
8	Acartia clausi N	0.100	3
9	Acartia edss	0.010	4
10	Acartia californiensis F	2.900	4
11	Acartia californiensis M	1.600	4
12	Acartia californiensis C	0.800	4
13	Acartia californiensis N	0.100	4
15	Acartia tonsa M	1.600	4
17	Acartia tonsa F	2.900	4
18	Acartia tonsa M	1.600	4
27	Tortanus discaudatus F	8.000	4
28	Tortanus discaudatus M	6.000	4
29	Tortanus discaudatus C	3.000	4
30	Calanus pacificus F	67.800	3
31	Calanus pacificus M	60.000	3
32	Calanus pacificus C	20.000	4
36	Calanus tenuicornis C	5.000	4
48	Rhincalanus sp. C	30.000	4
60	Paracalanus parvus F	2.500	4
61	Paracalanus parvus M	2.500	4
62	Paracalanus parvus C	0.500	4
63	Paracalanus parvus N	0.100	4
70	Pseudocalanus sp. A F	8.000	4
71	Pseudocalanus sp. A M	6.000	4
72	Pseudocalanus sp. A C	3.000	4
100	Eurytemora affinis F	3.200	2
101	Eurytemora affinis M	2.500	2
102	Eurytemora affinis C	1.000	4
103	Eurytemora affinis N	0.200	4
130	Metridia pacifica F	12.000	4
132	Metridia pacifica C	5.000	4
140	Centropages abdominalis F	8.000	4
141	Centropages abdominalis M	6.000	4
142	Centropages abdominalis C	3.000	4
160	Pseudodiaptomus euryhalinus F	6.000	4
161	Pseudodiaptomus euryhalinus M	4.000	4
162	Pseudodiaptomus euryhalinus C	2.000	4
191	Epilabidocera longipedata M	30.000	4
192	Epilabidocera longipedata C	12.000	4
195	copepod nauplius D	0.200	4
196	copepod nauplius A	0.100	4
197	copepod nauplius B	0.100	4
198	copepod nauplius C	0.100	4
199	copepod nauplius	0.100	4
200	Cyclopoida	3.000	4
210	Oithona spp.	0.600	4
213	Oithona spinirostris	0.700	4
220	Corycaeus sp.	1.400	4
250	Harpacticoida	1.200	4
260	Sapphirina spp.	1.800	4
270	Microsetella sp.	0.800	4
280	Harpacticoid sp. A	0.800	4
281	Harpacticoid A N	0.080	4
299	Parasitic copepod	3.000	4
300	Amphipoda	0.000	
305	Ampelisca milleri	0.000	
309	Corophium	0.000	

1. CHN analysis

2. Carbon value from literature

3. Estimated from literature dry wt.

4. Estimated from volume measurements

If no carbon is listed, the species was not included in carbon estimates.

Table III. (Continued)

315	Cumacea	0.000	
320	Isopoda	0.000	
321	Isopoda imm.	0.000	
325	Synidotea laticauda imm.	0.000	
331	Mysid juvenile	0.000	
332	Neomysis mercedis	0.000	
335	Acanthomysis	0.000	
340	Reptantia zoea	0.000	
341	Reptantia mesalops	0.000	
342	Majid zoea	0.000	
345	Grapsid zoea	0.000	
350	Xanthid zoea	0.000	
355	Cancer zoea	0.000	
356	Cancer mesalops	0.000	
360	Pinnotherid zoea	0.000	
362	Porcellanid zoea	0.000	
366	Hippid zoea	0.000	
370	Natantia zoea	0.000	
375	Caridean zoea	0.000	
376	Crandon sp.	0.000	
385	Penaeid zoea	0.000	
401	barnacle nauplius	1.500	4
402	barnacle cypris	2.000	4
420	Ostracoda	1.000	4
440	Cladocera	1.000	4
460	Malocarida	2.500	4
505	echinoderm pleuteus larva	0.800	4
520	Chaetosnatha	5.000	4
521	Sagitta spp.	5.000	4
541	Oikopleuridae	1.000	4
544	Ascidian egg	0.800	4
545	Ascidian larva	1.000	4
551	Endraulis mordax egg	1.000	4
559	other fish egg	1.000	4
560	fish larva	0.000	
570	Gobiidae larva	0.000	
601	tintinnid spp.	0.010	4
602	Tintinnopsis sp. A	0.020	4
603	Tintinnopsis sp. B	0.008	1
604	Tintinnid sp. C	0.008	4
605	Eutintinnus neriticus	0.020	4
630	coiled Foraminifera	0.050	4
650	Ctenophora	0.000	
660	Hydrozoa	0.000	
666	Polyorchis sp.	0.000	
681	flatworm sp. A	1.500	4
682	flatworm sp. B	1.500	4
690	Nemertina	2.000	4
691	Pilidium larva	0.500	4
700	Rotifera	0.050	4
701	Synchaeta sp.	0.050	4
702	Synchaeta sp. egg	0.050	4
705	Keratella sp.	0.030	4
740	Nematoda	2.000	4
748	Phoronida larva	0.500	4
751	Ectoprocta larva	0.200	4
771	Sipunculid pelagosphaera	2.500	4
801	Gastropod veliger	0.300	4
818	Gymnosomata	1.000	4
821	Bivalvia veliger	0.300	4
851	polychaete trochophore	1.200	4
855	spionid larva	2.300	4
880	scaeworm larva	2.300	4
899	pelagic polychaete	4.000	4
901	Insecta	0.000	

1. CHN analysis

2. Carbon value from literature

3. Estimated from literature dry wt.

4. Estimated from volume measurements

If no carbon is listed, the species was not included in carbon estimates.

TABLE IV. TAXONOMIC CODE NUMBERS

<u>CODES</u>	<u>GROUPS</u>
1-300	Copepoda
300-314	Amphipoda
315-319	Cumacea
320-329	Isopoda
330-339	Mysidacea
340-389	Decapoda
390-399	Euphausiacea
400-419	Cirripedia
420-439	Ostracoda
440-459	Cladocera
460-479	Halocarida
500-519	Echinodermata
520-539	Chaetognatha
540-549	Larvacea
550-599	Fish
600-649	Protozoa
650-659	Ctenophora
660-679	Cnidaria
680-689	Platyhelminthes
690-699	Nemertina
700-739	Rotifera
740-749	Nematoda
750-759	Bryozoa
770-779	Sipunculoidea
790-829	Mollusca
850-899	Polychaeta

TABLE V. NOTES ON UNKNOWN SPECIES

<u>CODE</u>	<u>SPECIES</u>	<u>NOTES</u>
195	Copepod nauplius D	Fig. 2A
196	Copepod nauplius A	Probably a parasitic copepod, not a nauplius. Fig. 2B
197	Copepod nauplius B	Perhaps <u>Eurytemora affinis</u> nauplius. Fig. 2C
198	Copepod nauplius C	Fig. 2D
280	Harpacticoid sp. A	Red color in live animal. Fig. 2E
281	Harpacticoid sp. A N	Distinguishable only by red color in live animal.
602	<u>Tintinnopsis</u> sp. A	Fig. 2F
603	<u>Tintinnopsis</u> sp. B	Fig. 2G
604	Tintinnid sp. C	Probably preserved <u>Parafavella</u> sp.
681	Flatworm sp. A	Polyclad turbellaria Fig. 2H
682	Flatworm sp. B	Non polyclad turbellaria. May contain several species.
855	Spionid larva	Probably <u>Polydora Ligna</u>
880	Scale worm larva	Probably <u>Hermothoe imbricata</u>

TABLE VI. DEFINITION OF DETRITUS MEASUREMENT

<u>DETRITUS MEASUREMENT</u>	<u>VOLUME (in ml) OF NONLIVING MATERIAL IN 1.5 m³ OF WATER</u>
-	Not measured
0	0
1	< 1
2	1-4
3	5-10
4	> 10

SAN FRANCISCO BAY

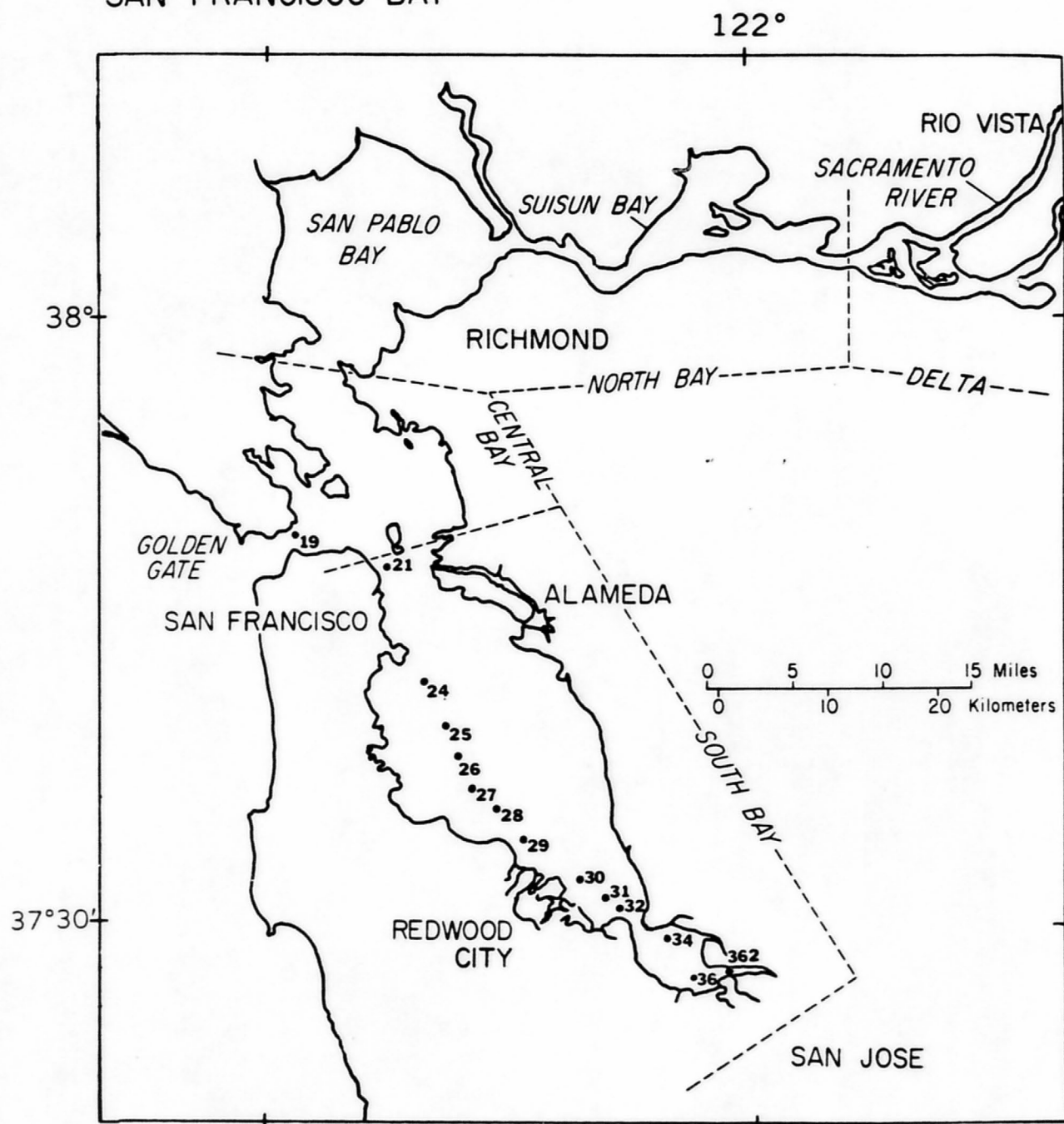


Figure 1. Location of Sampling Stations

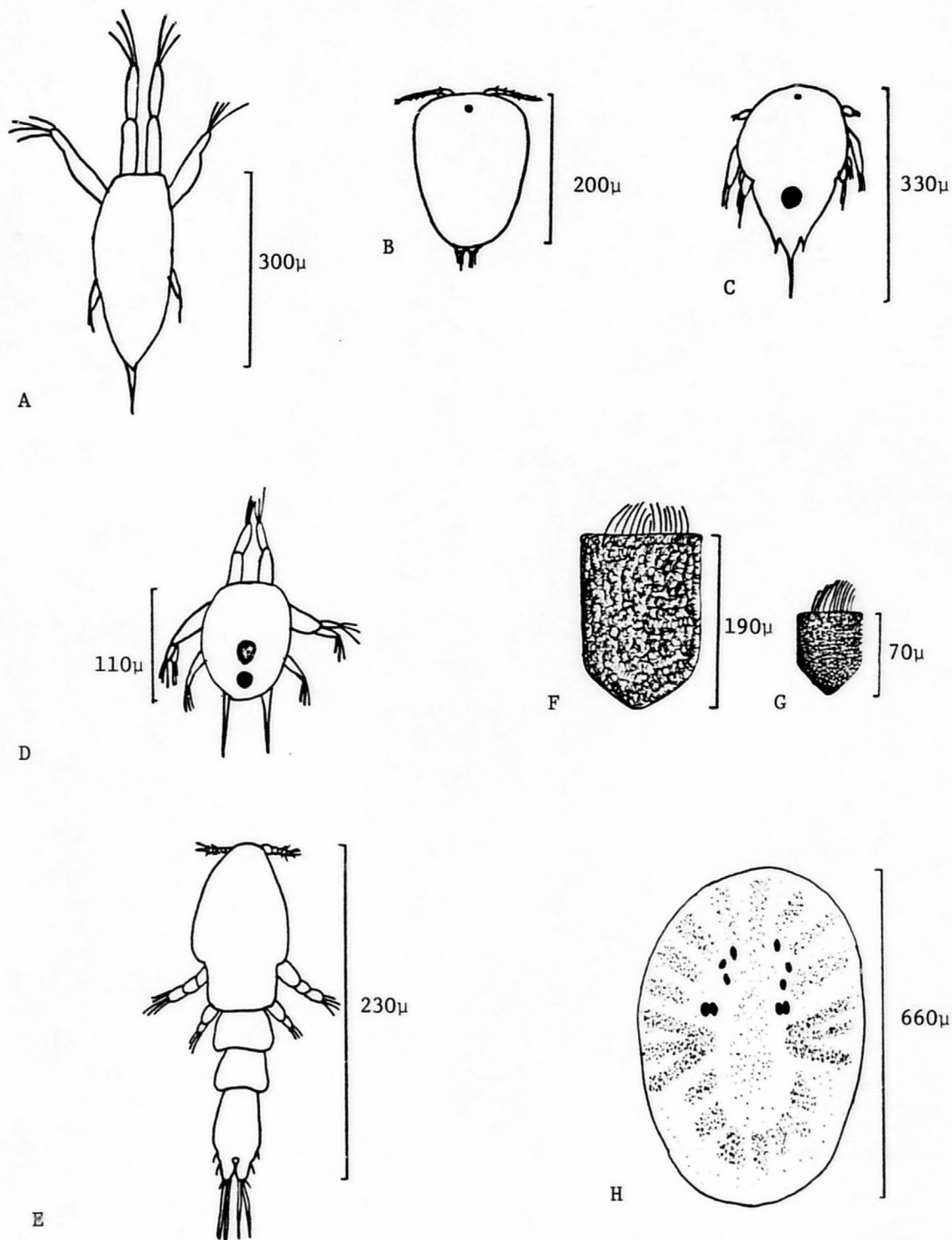


Figure 2. Illustrations of Unknown Species. A, copepod nauplius D; B, copepod nauplius A; C, copepod nauplius B; D, copepod nauplius C; E, harpacticoid sp. A; F, Tintinnopsis sp. A; G, Tintinnopsis sp. B; H, Flatworm sp. A.

APPENDIX A. ZOOPLANKTON DATA TABLES

U.S. GEOLOGICAL SURVEY - WATER RESOURCES

ESTUARINE STUDIES GROUP
ZOOPLANKTON

page 1

DATE	JULIAN DATE	LOCATION	MESH SIZE
160278	78047	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
714	32	5	11.2	17.6	1.7	1.3	-	0	lab
720	32	2	11.2	17.6	1.7	1.3	-	0	lab
728	32	0	11.2	17.6	1.7	1.3	-	0	lab
905	24	5	11.4	16.5	1.6	1.0	-	-1	lab
910	24	2	11.4	16.5	1.6	1.0	-	-1	lab
916	24	0	11.4	16.5	1.6	1.0	-	-1	lab
1022	19	12	11.9	20.6	1.5	1.1	-	-1	lab

[illegible]

ESTUARINE STUDIES GROUP
ZOOPLANKTON

page 2

DATE	JULIAN DATE	LOCATION	MESH SIZE						
140378	78073	South S.F. Bay	80						
TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1021	36	5	13.8	12.2	5.4	4.4	-	0	lab
1026	36	2	13.8	11.1	5.2	4.4	-	0	lab
1032	36	0	14.1	9.6	5.7	4.4	-	0	lab
1125	32	10	13.7	16.9	3.6	1.5	-	0	lab
1133	32	5	13.6	15.6	5.7	1.5	-	0	lab
1138	32	2	13.6	15.5	4.4	1.5	-	0	lab
1143	32	0	13.8	15.3	5.0	1.5	-	0	lab

Station		5	36	0	10	5	32	2	0
Depth									
Code	Name	Number per cubic meter							
5	Acartia clausi F	22000	12944	370	12556	1074	48	27	
6	Acartia clausi M	3889	1167	37	7111	0	0	0	
7	Acartia clausi C	2444	333	111	2000	2963	407	18	
8	Acartia clausi M	4900	10778	0	519	34333	11111	1361	
27	Tortanus discaudatus F	0	0	0	0	0	0	0	
30	Calanus pacificus F	0	0	0	0	1	0	0	
31	Calanus pacificus M	0	0	0	0	0	0	0	
32	Calanus pacificus C	0	0	0	4	0	0	0	
36	Calanus tenuicornis C	0	0	0	0	0	0	0	
60	Paracalanus parvus F	0	0	0	37	0	0	0	
61	Paracalanus parvus M	0	0	0	0	0	0	0	
62	Paracalanus parvus C	0	0	0	0	0	0	0	
100	Eurytemora affinis F	889	37	93	74	0	0	0	
101	Eurytemora affinis M	1000	74	389	111	0	1	1	
102	Eurytemora affinis C	1444	815	1222	74	0	0	1	
190	Epilabidocera longiseta F	0	0	0	0	0	0	0	
191	Epilabidocera longiseta M	0	0	0	0	0	0	0	
192	Epilabidocera longiseta C	0	0	0	0	0	0	0	
196	copepod nauplius A	0	0	0	0	0	0	0	
197	copepod nauplius B	222	0	0	0	0	0	0	
200	Cyclopoida	778	370	204	37	1	13	9	
210	Oithona spp.	0	0	0	0	0	0	0	
220	Corycaeus sp.	0	0	0	0	0	0	0	
250	Haracticoida	0	37	56	0	185	1	3	
260	Sapphirina spp.	0	0	0	0	0	0	0	
300	Amphipoda	0	0	0	0	0	0	0	
321	Isopoda imm.	111	0	0	74	0	0	0	
331	Mysid juvenile	0	0	0	0	0	0	0	
345	Grapsid zoea	0	0	0	0	4	0	0	
355	Cancer zoea	0	0	0	0	0	0	0	
360	Pinnotherid zoea	0	0	0	0	0	0	0	
370	Natantia zoea	0	0	0	0	0	0	0	
375	Caridean zoea	0	0	0	0	0	0	0	
315	Cumacea	0	0	0	0	0	0	0	
401	barnacle nauplius	0	0	0	0	111	4	0	
402	barnacle cypris	0	0	0	0	0	0	0	
440	Cladocera	0	3	13	0	0	0	0	
505	echinoderm Pleuteus larva	0	0	0	0	0	0	0	
521	Saditta spp.	0	0	0	3	0	0	0	

	Station		36			32		
	Depth	5	2	0	10	5	2	0
Code	Name	Number per cubic meter						
541	Oikopleuridae	0	0	0	0	0	0	0
551	Endraulis mordax egg	0	0	0	0	0	0	0
560	fish larva	2	0	1	1	1	0	1
602	Tintinnopsis sp. A	0	0	0	593	3556	4667	1139
630	coiled Foraminifera	0	0	0	0	0	0	0
660	Hydrozoa	0	0	0	0	0	0	0
691	Pilidium larva	0	333	0	0	0	0	0
701	Synchaeta sp.	0	1333	0	0	5111	1333	0
702	Synchaeta sp. egg	222	5444	1222	0	19889	3889	167
771	Sipunculid pelagosphaera	0	0	0	0	0	0	0
801	Gastropod veliger	0	0	0	0	0	0	0
818	Gymnosomata	0	0	0	0	1	0	0
821	Rivalvia veliger	0	0	0	0	0	0	0
851	polychaete trochophore	0	0	0	0	0	0	0
855	spionid larva	37	148	37	963	259	93	6
899	pelagic polychaete	0	0	0	0	0	0	0
					ms Carbon per cubic meter			
		78	42	4	50	11	2	0

ESTUARINE STUDIES GROUP
ZOOPLANKTON

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DATE	JULIAN DATE	LOCATION	MESH SIZE
140378	78073	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1215	30	10	13.9	19.2	3.4	1.4	-	1	lab
1222	30	5	13.8	18.5	3.4	1.4	-	1	lab
1228	30	2	13.8	18.2	4.5	1.4	-	1	lab
1235	30	0	13.9	17.9	4.4	1.4	-	1	lab
1323	27	10	14.1	19.3	1.9	0.6	-	1	lab
1328	27	5	14.1	18.9	2.3	0.6	-	1	lab
1334	27	2	14.8	18.7	6.5	0.6	-	1	lab
1340	27	0	15.0	18.4	5.7	0.6	-	1	lab

[illegible]

	Station			30				27		
	Depth	10	5	2	0	10	5	2	0	
Code	Name	Number per cubic meter								
521	Sasitta spp.	0	1	1	0	0	0	0	0	
541	Oikopleuridae	1	0	0	0	0	0	0	0	
551	Ensaurelis mordax egg	0	0	0	0	0	0	0	0	
560	fish larva	0	0	1	0	0	0	0	0	
602	Tintinnopsis sp. A	6667	28667	24833	2222	1037	16667	48667	2222	
630	coiled Foraminifera	0	0	0	0	0	0	0	0	
660	Hydrozoa	0	0	0	0	0	0	0	0	
691	Pilidium larva	0	0	0	0	0	0	0	0	
701	Synchaeta sp.	407	1556	3667	111	74	1519	2167	444	
702	Synchaeta sp. egg	630	8444	11667	222	259	3778	7333	2889	
771	Sipunculid pelagosphaera	0	1	0	0	0	0	0	0	
801	Gastropod veliger	2	0	83	0	1	74	0	0	
818	Gymnosomata	0	0	0	0	0	0	0	0	
821	Bivalvia veliger	0	1	0	0	1	1	83	0	
851	Polychaete trochophore	0	6	0	0	10	1	42	0	
855	spionid larva	1333	3000	2167	389	556	667	4000	2	
899	pelagic polychaete	0	0	0	0	2	1	0	2	
ms Carbon per cubic meter										
		24	34	24	4	22	15	16	2	

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ZOOPLANKTON

DATE	JULIAN DATE	LOCATION	MESH SIZE
140378	78073	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1426	24	8	14.0	19.2	0.5	1.0	-	1	lab
1430	24	5	14.2	16.8	1.9	1.0	-	1	lab
1436	24	2	14.2	12.4	3.2	1.0	-	1	lab
1442	24	0	14.3	12.2	3.4	1.0	-	1	lab
1535	21	15	13.7	24.6	1.2	2.2	-	0	lab
1541	21	7	13.7	14.5	2.5	2.2	-	0	lab
1546	21	2	13.8	9.6	2.3	2.2	-	0	lab
1552	21	0	14.1	9.5	4.4	2.2	-	0	lab

[illegible]

U.S. GEOLOGICAL SURVEY - WATER RESOURCES

ESTUARINE STUDIES GROUP
ZOOPLANKTON

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 DATE JULIAN DATE LOCATION MESH SIZE
 200378 78079 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
950	32	12	16.5	16.8	5.3	1.0	-	-1	lab
956	32	6	16.6	16.7	5.9	1.0	-	-1	lab
1002	32	1	17.0	16.5	13.4	1.0	-	-1	lab
1105	30	12	15.3	18.8	0.9	0.9	-	-1	lab
1111	30	6	16.4	16.9	3.2	0.9	-	-1	lab
1117	30	1	16.6	16.3	7.0	0.9	-	-1	lab
1215	27	11	14.3	22.1	0.0	0.8	-	-1	lab
1221	27	5	14.7	18.9	0.0	0.8	-	-1	lab
1225	27	1	16.1	16.3	4.8	0.8	-	-1	lab

	Station Depth	12	32 6	1	12	30 6	1	11	27 5	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	648	1667	1481	1630	111	13	4222	889	148
6	Acartia clausi M	556	8333	1185	1185	222	0	7333	370	17
7	Acartia clausi C	14259	269444	40889	23333	34333	17333	11556	14296	3630
8	Acartia clausi N	108333	134167	188444	51556	54000	140000	4000	9667	25333
30	Calanus pacificus F	0	0	0	0	0	0	1	0	0
32	Calanus pacificus C	0	0	0	0	0	0	1	0	0
36	Calanus tenuicornis C	0	0	0	0	0	0	2	0	0
60	Paracalanus parvus F	0	0	0	148	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	111	74	2
100	Eurytemora affinis F	0	0	0	0	0	0	1	0	1
101	Eurytemora affinis M	0	0	0	0	0	0	0	0	1
102	Eurytemora affinis C	0	0	0	0	0	111	1	148	48
192	Epilabidocera lonsiredata C	0	1	0	0	0	1	3	2	0
196	copepod nauplius A	0	0	0	148	0	0	0	111	0
200	Cyclopoida	1	0	0	0	0	0	0	0	9
210	Oithona spp.	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	1	2	0	2	74	0
250	Haracticoida	278	278	1333	148	222	444	111	222	444
321	Isopoda imm.	0	0	0	0	0	0	1	0	0
345	Grapsid zoea	0	1	3	0	0	1	1	1	0
355	Cancer zoea	0	0	0	0	0	0	1	0	0
360	Pinnotherid zoea	0	0	0	1	7	1	1	2	1
370	Natantia zoea	0	1	2	0	0	0	0	0	0
375	Caridean zoea	0	0	0	0	0	0	0	2	0
385	Penaeid zoea	0	0	0	0	0	0	0	2	0
401	barnacle nauplius	185	15	148	444	667	111	222	222	12
402	barnacle cypris	2	1	3	2	2	1	4	1	148
521	Saditta spp.	0	0	0	0	0	0	0	2	0
551	Ensaurellis mordax egg	2	0	0	10	3	0	6	10	0
602	Tintinnopsis sp. A	37500	39444	27111	28222	90000	20000	3889	48667	1407
605	Eutintinnus neriticus	0	0	0	0	0	0	0	12222	0
630	coiled Foraminifera	185	0	0	0	0	0	1	0	0
701	Synchaeta sp.	201389	217222	180444	35333	30667	35667	4778	18111	233778
801	Gastropod veliger	93	1	889	0	1	0	9	0	0
821	Bivalvia veliger	278	556	0	0	333	1	333	556	74
851	polychaete trochophore	0	0	0	148	0	0	667	333	0

		Page 9								
		Station	32	1	12	30	1	11	27	1
		Depth	6			6			5	
Code	Name	Number per cubic meter								
855	spionid larva	5000	8611	9778	2667	4333	6667	7889	2444	1259
899	pelagic polychaete	0	0	0	0	0	0	222	0	0
		mg Carbon per cubic meter								
		48	277	91	40	48	46	53	25	21

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ESTUARINE STUDIES GROUP
ZOOPLANKTON

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 DATE JULIAN DATE LOCATION MESH SIZE
 200378 78079 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1318	24	8	14.2	22.6	0.0	0.8	-	-1	lab
1324	24	4	15.0	19.0	3.0	0.8	-	-1	lab
1329	24	1	16.7	16.0	14.8	0.8	-	-1	lab

Code	Name	Station Depth	24 4	1	Number per cubic meter
5	Acartia clausi F	2778	1037	500	
6	Acartia clausi M	3222	296	0	
7	Acartia clausi C	10667	57778	28333	
8	Acartia clausi N	556	63556	59444	
30	Calanus pacificus F	2	0	0	
32	Calanus pacificus C	8	0	0	
36	Calanus tenuicornis C	0	0	0	
60	Paracalanus parvus F	111	1	0	
61	Paracalanus parvus M	111	0	0	
62	Paracalanus parvus C	111	0	0	
100	Eurytemora affinis F	0	0	0	
101	Eurytemora affinis M	0	1	0	
102	Eurytemora affinis C	0	148	7	
192	Epilabidocera lonsipedata C	0	0	0	
196	copepod nauplius A	0	0	0	
200	Cyclopoida	111	0	0	
210	Oithona spp.	111	0	0	
220	Corycaeus sp.	4	0	0	
250	Harpacticoida	222	0	185	
321	Isopoda imm.	1	0	0	
345	Grapsid zoea	0	0	0	
355	Cancer zoea	4	0	0	
360	Pinnotherid zoea	1	0	0	
370	Nauplius zoea	0	0	0	
375	Caridean zoea	1	4	0	
385	Penaeid zoea	0	0	0	
401	barnacle nauplius	111	10	100	
402	barnacle cypris	1	2	7	
521	Saditta spp.	0	0	0	
551	Ensaurelia mordax egg	9	0	0	
602	Tintinnopsis sp. A	4222	68889	11111	
605	Eutintinnus neriticus	0	0	0	
630	coiled Foraminifera	0	0	0	
701	Synchaeta sp.	9222	81333	202778	
811	Gastropod veliger	1	0	0	
821	Bivalvia veliger	1333	10	0	
851	polychaete trochophore	0	0	0	
855	spionid larva	1889	8000	4444	
899	pelagic polychaete	0	0	0	
		28	80	51	ms Carbon per cubic meter

U.S. GEOLOGICAL SURVEY - WATER RESOURCES

ESTUARINE STUDIES GROUP
ZOOPLANKTON

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 DATE JULIAN DATE LOCATION MESH SIZE
 50478 78095 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
808	32	6	14.5	16.5	8.3	2.3	2	1	lab
814	32	3	14.7	16.5	8.3	2.3	3	1	lab
820	32	1	15.0	16.8	8.3	2.3	2	1	lab

Station	32
Depth	6 3 1

Code	Name	Number per cubic meter		
5	Acartia clausi F	15407	15185	1185
6	Acartia clausi M	9037	10556	963
7	Acartia clausi C	49333	44630	30740
8	Acartia clausi N	77556	82278	70889
15	Acartia tonsillae M	0	0	0
28	Tortanus discaudatus M	0	0	0
29	Tortanus discaudatus C	0	0	0
32	Calanus pacificus C	0	0	0
36	Calanus tenuicornis C	0	0	0
48	Rhincalanus sp. C	0	0	0
60	Paracalanus parvus F	0	0	1
61	Paracalanus parvus M	1	0	0
62	Paracalanus parvus C	0	1	0
70	Pseudocalanus sp. A F	0	0	0
100	Eurytemora affinis F	0	0	0
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	0	0	74
103	Eurytemora affinis N	0	278	148
190	Epilabidocera longipalata F	0	0	0
191	Epilabidocera longipalata M	0	0	0
192	Epilabidocera longipalata C	0	1	0
196	copepod nauplius A	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
210	Oithona spp.	0	0	0
213	Oithona spinirostris	0	0	0
220	Corycaeus sp.	0	0	0
250	Haracticoida	296	926	222
270	Microsetella sp.	0	0	0
300	Amphipoda	2	0	0
320	Isopoda	0	0	0
321	Isopoda imm.	0	185	74
332	Neomysis mercedis	0	0	0
345	Gammarid zoea	1	1	0
350	Xanthid zoea	0	0	0
355	Cancer zoea	0	0	0
360	Pinnotherid zoea	0	0	0
362	Porcellanid zoea	0	0	0
375	Caridean zoea	0	0	0
385	Penaeid zoea	0	0	0
401	barnacle nauplius	0	0	444
402	barnacle cypris	0	1	2
420	Ostracoda	1	0	0

		Station				32
		Depth	6	3	1	
Code	Name	Number per cubic meter				
505	echinoderm pleuteus larva	0	0	0		
521	Sagitta spp.	3	2	0		
541	Oikopleuridae	148	0	0		
551	Ensaerulis mordax egg	2	1	2		
560	fish larva	0	0	0		
602	Tintinnopsis sp. A	6444	6389	5778		
604	Tintinnid sp.C	0	0	0		
630	coiled Foraminifera	296	185	222		
660	Hydrozoa	0	0	0		
701	Synchaeta sp.	889	0	148		
751	Ectoprocta larva	0	0	0		
801	Gastropod veliser	148	556	444		
821	Bivalvia veliser	148	185	148		
851	polychaete trochophore	0	0	0		
855	spionid larva	9778	9722	7926		
899	pelagic polychaete	1	556	222		
		126	127	57	ms Carbon per cubic meter	

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
906	30	9	14.6	18.4	4.2	1.6	2	1	lab
910	30	5	15.2	18.3	4.2	1.6	3	1	lab
913	30	5	15.2	18.3	4.2	1.6	3	1	lab
916	30	5	15.2	18.3	4.2	1.6	3	1	lab
920	30	1	15.2	18.4	4.1	1.6	2	1	lab

Station Depth 9 5 5 5 1 30

Code	Name	Number per cubic meter				
5	Acartia clausi F	6333	2889	2555	4000	667
6	Acartia clausi M	5222	5778	4889	6222	1555
7	Acartia clausi C	40833	45000	37000	49000	30444
8	Acartia clausi N	24000	33111	28333	32111	20222
15	Acartia tonsiremis M	0	0	0	0	0
28	Tortanus discaudatus M	0	0	0	0	0
29	Tortanus discaudatus C	0	0	0	0	0
32	Calanus pacificus C	0	0	0	0	0
36	Calanus tenuicornis C	0	0	0	0	0
48	Rhincalanus sp. C	0	0	0	0	0
60	Paracalanus parvus F	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0
70	Pseudocalanus sp. A F	0	0	0	0	0
100	Eurytemora affinis F	0	0	0	0	0
101	Eurytemora affinis M	0	0	0	0	0
102	Eurytemora affinis C	0	0	0	0	222
103	Eurytemora affinis N	0	0	0	0	0
190	Epilabidocera tonsipedata F	0	0	0	0	0
191	Epilabidocera tonsipedata M	0	0	0	0	0
192	Epilabidocera tonsipedata C	0	0	0	0	0
196	copepod nauplius A	0	0	0	0	0
199	copepod nauplius	0	0	0	0	0
200	Cyclopoida	0	0	0	111	0
210	Oithona spp.	0	0	0	0	0
213	Oithona spinirostris	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	0
250	Harpacticoida	222	222	667	222	667
270	Microsetella sp.	0	0	0	0	0
300	Amphipoda	0	0	0	0	0
320	Isopoda	0	0	0	0	0
321	Isopoda imm.	0	0	1	0	0
332	Neomysis mercedis	0	0	0	0	0
345	Grapsid zoea	0	0	0	0	0
350	Xanthid zoea	0	0	0	0	0
355	Cancer zoea	0	0	1	0	0
360	Pinnotherid zoea	0	0	0	1	1
362	Porcellanid zoea	0	0	0	0	0
375	Caridean zoea	0	0	0	0	0
385	Penaeid zoea	0	0	0	0	0
401	barnacle nauplius	0	111	0	333	0

	Station Depth	9	5	5	5	1 ³⁰
Code	Name	Number per cubic meter				
402	barnacle cypris	1	20	111	9	2
420	Ostracoda	0	0	0	0	0
505	echinoderm pleuteus larva	0	0	0	0	0
521	Sesitta spp.	1	0	0	0	0
541	Dikoppleuridae	0	0	0	0	0
551	Engraulis mordax egg	5	9	2	3	6
560	fish larva	0	1	0	0	1
602	Tintinnopsis sp. A	7333	8444	9667	10555	9000
604	Tintinnid sp.C	0	0	0	0	0
630	coiled Foraminifera	1	333	0	444	111
660	Hydrozoa	0	0	0	0	0
701	Synchaeta sp.	0	111	1	333	0
751	Ectoprocta larva	0	0	0	0	0
801	Gastropod veliger	333	444	778	333	222
821	Bivalvia veliser	111	0	0	222	0
851	polychaete trochophore	0	0	111	0	0
855	spionid larva	2500	3889	2555	1333	2889
899	pelagic polychaete	0	0	0	0	0
		66	65	54	ms Carbon per cubic meter	67 38

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1012	27	10	14.7	19.8	4.5	1.2	3	1	lab
1015	27	5	14.6	19.8	3.3	1.2	2	1	lab
1020	27	1	14.7	20.2	3.1	1.2	-	1	lab

Station	27
Depth	10 5 1

Code	Name	Number per cubic meter		
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5	Acartia clausi F	2963	1407	74
6	Acartia clausi M	2000	1555	37
7	Acartia clausi C	13407	18000	11963
8	Acartia clausi N	10518	33667	47555
15	Acartia tonsiremis M	0	0	0
28	Tortanus discaudatus M	0	0	0
29	Tortanus discaudatus C	0	0	0
32	Calanus pacificus C	8	0	0
36	Calanus tenuicornis C	0	0	0
48	Rhincalanus sp. C	0	0	0
60	Paracalanus parvus F	148	0	0
61	Paracalanus parvus M	74	0	0
62	Paracalanus parvus C	0	1	0
70	Pseudocalanus sp. A F	0	0	0
100	Eurytemora affinis F	0	0	0
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	0	0	0
103	Eurytemora affinis N	0	0	37
190	Epilabidocera tonsiredata F	0	74	0
191	Epilabidocera tonsiredata M	0	1	0
192	Epilabidocera tonsiredata C	0	0	0
196	copepod nauplius A	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
210	Oithona spp.	0	0	0
213	Oithona spinirostris	0	0	0
220	Corycaeus sp.	148	0	0
250	Harpacticoida	74	370	296
270	Microsetella sp.	0	0	0
300	Amphipoda	0	0	0
320	Isopoda	0	1	0
321	Isopoda imm.	0	0	0
332	Neomysis mercedis	1	0	0
345	Gnathopoda	0	0	0
350	Xanthid zoea	0	0	0
355	Cancer zoea	0	0	0
360	Pinnotherid zoea	1	222	7
362	Porcellanid zoea	0	0	0
375	Caridean zoea	1	0	0
385	Penaeid zoea	0	0	0
401	barnacle nauplius	148	370	185
402	barnacle cypris	0	17	9
420	Ostracoda	0	0	0

27

Code	Name	Station			Number per cubic meter
		Depth	10	5	1
505	echinoderm pleuteus larva		0	0	0
521	Sasitta spp.		3	2	0
541	Dikopleuridae		0	0	0
551	Engraulis mordax egg		74	9	5
560	fish larva		0	1	0
602	Tintinnopsis sp. A	11630	13111	14629	
604	Tintinnid sp.C		0	0	0
630	coiled Foraminifera	148	0	0	
660	Hydrozoa		0	0	0
701	Synchaeta sp.		0	148	0
751	Ectoprocta larva	222	0	0	
801	Gastropod veliger	74	74	0	
821	Bivalvia veliger	0	74	37	
851	Polychaete trochophore	0	0	0	
855	spionid larva	2444	6444	2333	
899	Pelagic polychaete		0	0	0
			30	43	21

mg Carbon per cubic meter

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1104	24	9	14.1	21.8	3.0	1.1	-	0	lab
1107	24	5	13.9	21.4	2.7	1.1	-	0	lab
1112	24	1	14.4	21.4	2.9	1.1	-	0	lab

Station	Depth	9	5	1	24
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Code	Name	Number per cubic meter		
5	Acartia clausi F	3407	3037	51
6	Acartia clausi M	2370	3481	8
7	Acartia clausi C	5704	7111	18889
8	Acartia clausi N	7407	9259	92222
15	Acartia tonsillensis M	0	0	0
28	Tortanus discaudatus M	0	0	0
29	Tortanus discaudatus C	0	0	0
32	Calanus pacificus C	148	0	0
36	Calanus tenuicornis C	0	0	0
48	Rhincalanus sp. C	0	0	0
60	Paracalanus parvus F	148	74	0
61	Paracalanus parvus M	148	0	0
62	Paracalanus parvus C	74	741	111
70	Pseudocalanus sp. A F	0	0	0
100	Eurytemora affinis F	74	0	0
101	Eurytemora affinis M	0	0	3
102	Eurytemora affinis C	0	0	0
103	Eurytemora affinis N	0	0	0
190	Epilabidocera tonsillensis F	148	0	0
191	Epilabidocera tonsillensis M	296	0	0
192	Epilabidocera tonsillensis C	74	0	1
196	copepod nauplius A	0	296	2667
199	copepod nauplius	0	0	0
200	Cyclopoida	0	74	0
210	Oithona spp.	0	370	0
213	Oithona spinirostris	0	0	0
220	Corycaeus sp.	148	74	1111
250	Harpacticoida	963	1704	5111
270	Microsetella sp.	0	0	0
300	Amphipoda	0	0	0
320	Isopoda	1	0	1
321	Isopoda imm.	0	0	0
332	Neomysis mercedis	0	0	0
345	Grapsid zoea	0	0	0
350	Xanthid zoea	0	0	0
355	Cancer zoea	0	0	8
360	Pinnotherid zoea	0	0	2
362	Porcellanid zoea	0	0	0
375	Caridean zoea	0	0	0
385	Penaeid zoea	0	0	0
401	barnacle nauplius	370	667	2111
402	barnacle cypris	74	148	11
420	Ostracoda	0	0	0

24

Code	Name	Station			Number per cubic meter
		Depth	9	5	1
505	echinoderm Pleuteus larva		0	0	0
521	Sagitta spp.		0	1	0
541	Oikopleuridae		0	0	0
551	Endraulis mordax egg		15	1	2
560	fish larva		0	0	1
602	Tintinnopsis sp. A	16000	21778	11556	
604	Tintinnid sp.C	74	0	0	
630	coiled Foraminifera	0	1	0	
660	Hydrozoa	0	0	0	
701	Synchaeta sp.	0	0	2	
751	Ectoprocta larva	0	0	0	
801	Gastropod veliger	0	74	111	
821	Rivalvia veliger	296	296	0	
851	polychaete trochophore	0	0	111	
855	spionid larva	2000	5926	9888	
899	pelagic polychaete	1	0	0	
		45	39	59	ms Carbon per cubic meter

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1200	21	9	13.7	21.4	4.4	1.1	-	0	lab
1205	21	5	13.6	21.1	3.9	1.1	-	0	lab
1210	21	1	13.6	26.1	2.8	1.1	-	0	lab

Station	21
Depth	9 5 1

Code	Name	Number per cubic meter		
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5	Acartia clausi F	1667	778	889
6	Acartia clausi M	667	444	74
7	Acartia clausi C	3778	1555	5630
8	Acartia clausi N	18333	6000	29407
15	Acartia tonsiremis M	0	0	0
28	Tortanus discaudatus M	1	0	0
29	Tortanus discaudatus C	0	0	0
32	Calanus pacificus C	444	222	0
36	Calanus tenuicornis C	0	0	0
48	Rhincalanus sp. C	111	0	0
60	Paracalanus parvus F	444	0	29
61	Paracalanus parvus M	222	0	5
62	Paracalanus parvus C	3667	0	51
70	Pseudocalanus sp. A F	1	0	0
100	Eurytemora affinis F	0	0	0
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	111	555	0
103	Eurytemora affinis N	0	0	0
190	Epilabidocera tonsipedata F	1	0	0
191	Epilabidocera tonsipedata M	0	0	0
192	Epilabidocera tonsipedata C	7	0	7
196	copepod nauplius A	1556	222	0
199	copepod nauplius	0	0	2444
200	Cyclopoida	444	1	0
210	Oithona spp.	222	444	74
213	Oithona spinirostris	0	0	0
220	Corycaeus sp.	111	333	222
250	Harpacticoida	5000	2222	2815
270	Microsetella sp.	222	111	74
300	Amphipoda	0	0	0
320	Isopoda	0	0	0
321	Isopoda imm.	111	0	74
332	Neomysis mercedis	0	0	0
345	Grapsid zoea	0	0	0
350	Xanthid zoea	0	1	0
355	Cancer zoea	0	0	2
360	Pinnotherid zoea	0	0	0
362	Porcellanid zoea	0	0	0
375	Caridean zoea	1	1	2
385	Penaeid zoea	0	0	1
401	barnacle nauplius	999	0	7481
402	barnacle cypris	15	0	6
420	Ostracoda	0	0	0

		Station			21
		Depth			
		9	5	1	
Code	Name	Number per cubic meter			
505	echinoderm pleuteus larva	0	1	1	
521	Sasitta spp.	9	0	3	
541	Oikopleuridae	0	0	0	
551	Endraulis mordax egg	0	0	0	
560	fish larva	3	0	1	
602	Tintinnopsis sp. A	7778	4111	6074	
604	Tintinnid sp. C	0	0	0	
630	coiled Foraminifera	0	0	0	
660	Hydrozoa	0	1	0	
701	Synchaeta sp.	0	0	0	
751	Ectoprocta larva	0	0	0	
801	Gastropod veliger	111	222	74	
821	Bivalvia veliger	555	555	148	
851	polychaete trochophore	0	0	0	
855	seionid larva	2556	667	3333	
899	pelagic polychaete	0	0	1	
		42	15	33	ms Carbon per cubic meter

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1252	19	14	12.8	24.7	3.9	0.9	-	0	lab
1256	19	7	13.2	24.9	3.7	0.9	-	0	lab
1303	19	1	13.5	24.8	3.5	0.9	-	0	lab

Station	19
Depth	14 7 1

Code	Name	Number per cubic meter		
5	Acartia clausi F	74	111	0
6	Acartia clausi M	0	1	222
7	Acartia clausi C	2444	1556	2000
8	Acartia clausi N	21222	34889	13630
15	Acartia tonsiremis M	0	1	0
28	Tortanus discaudatus M	0	0	0
29	Tortanus discaudatus C	1	0	1
32	Calanus pacificus C	0	0	0
36	Calanus tenuicornis C	12	1	0
48	Rhincalanus sp. C	0	0	0
60	Paracalanus parvus F	0	0	0
61	Paracalanus parvus M	0	0	1
62	Paracalanus parvus C	1407	333	0
70	Pseudocalanus sp. A F	0	1	0
100	Eurytemora affinis F	0	0	1
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	0	111	0
103	Eurytemora affinis N	0	0	0
190	Epilabidocera tonsiredata F	0	0	0
191	Epilabidocera tonsiredata M	0	0	0
192	Epilabidocera tonsiredata C	0	0	0
196	copepod nauplius A	0	444	444
199	copepod nauplius	667	0	148
200	Cyclopoida	74	0	0
210	Oithona spp.	444	3	519
213	Oithona spinirostris	0	2	0
220	Corycaeus sp.	333	1444	1111
250	Harpacticoida	4518	1778	963
270	Microsetella sp.	296	0	0
300	Amphipoda	0	0	0
320	Isopoda	0	0	0
321	Isopoda imm.	0	0	0
332	Neomysis mercedis	0	0	0
345	Grapsid zoea	0	0	0
350	Xanthid zoea	0	0	0
355	Cancer zoea	8	17	0
360	Pinnotherid zoea	3	3	0
362	Porcellanid zoea	1	3	0
375	Caridean zoea	4	1	0
385	Penaeid zoea	0	0	0
401	barnacle nauplius	1778	778	741
402	barnacle cypris	74	444	0
420	Ostracoda	0	0	0

Station
Depth 14 7 1 19

Code	Name	Number per cubic meter		
505	echinoderm pleuteus larva	148	556	74
521	Sasitta spp.	24	14	0
541	Oikopleuridae	0	0	222
551	Endraulis mordax egg	5	6	1
560	fish larva	3	7	1
602	Tintinnopsis sp. A	4222	2444	1778
604	Tintinnid sp. C	0	222	296
630	coiled Foraminifera	0	0	0
660	Hydrozoa	0	0	0
701	Synchaeta sp.	0	0	0
751	Ectoprocta larva	0	0	0
801	Gastropod veliger	0	111	0
821	Bivalvia veliger	1667	1556	2000
851	polychaete trochophore	0	333	148
855	spionid larva	4667	4222	74
899	pelagic polychaete	1	0	0
		26	23	9
		mg Carbon per cubic meter		

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DATE	JULIAN DATE	LOCATION	MESH SIZE
240578	78144	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1315	36	2	16.2	18.1	11.4	9.6	4	1	lab
1426	32	10	17.0	20.8	7.4	2.5	3	1	lab
1420	32	6	17.0	20.8	7.2	2.5	3	1	lab
1415	32	1	16.9	20.7	6.8	2.5	0	1	lab
1515	30	12	17.5	20.0	4.4	1.7	0	0	lab
1520	30	6	17.6	20.9	4.4	1.7	0	0	lab
1526	30	1	17.4	21.0	3.4	1.7	0	0	lab

	Station	36	32		30			
	Depth	2	6	1	12	6		
Code	Name	Number per cubic meter						
5	Acartia clausi F	3	333	740	148	556	1037	111
6	Acartia clausi M	2	444	222	37	389	296	0
7	Acartia clausi C	148	2000	1037	407	944	1333	444
8	Acartia clausi N	7852	24889	37777	7741	10667	20667	13667
60	Paracalanus parvus F	0	0	0	0	0	0	113
62	Paracalanus parvus C	0	0	0	0	0	0	1001
100	Eurytemora affinis F	0	0	4	40	1	1	0
101	Eurytemora affinis M	74	0	0	0	0	0	0
102	Eurytemora affinis C	741	112	2	37	0	0	0
103	Eurytemora affinis N	0	0	0	4000	0	0	0
210	Oithona spp.	0	333	0	0	56	0	0
250	Harpacticoida	2296	5333	2963	2148	3394	3185	2333
270	Microsetella sp.	148	0	0	185	0	0	0
300	Amphipoda	9	3	8	0	0	0	0
320	Isopoda	14	11	13	1	3	0	0
321	Isopoda imm.	0	0	2	0	0	0	0
325	Synidotea laticauda imm.	0	0	0	0	0	9	0
375	Caridean zoea	0	17	0	0	1	2	0
401	barnacle nauplius	0	1111	148	74	278	593	333
402	barnacle cypris	0	3	74	1	4	74	444
420	Ostracoda	0	1	0	0	0	0	0
440	Cladocera	0	0	0	0	58	0	0
551	Ensaurelis mordax egg	0	4	4	2	0	11	0
560	fish larva	3	4	3	17	0	8	0
602	Tintinnopsis sp. A	0	0	0	0	167	0	0
630	coiled Foraminifera	0	111	0	37	0	74	0
801	Gastropod veliser	0	111	0	74	167	370	0
821	Bivalvia veliser	74	778	222	259	994	1407	0
851	polychaete trochophore	0	2	0	0	111	1	0
855	spionid larva	148	5111	3407	1370	2055	6222	4667
899	pelagic polychaete	1	0	2	0	0	0	0
			mg Carbon per cubic meter					
		5	26	19	9	14	26	18

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 DATE JULIAN DATE LOCATION MESH SIZE
 250578 78145 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
645	30	8	16.6	20.5	9.2	1.6	2	-1	lab
650	30	1	16.6	20.7	4.7	1.6	2	-1	lab
750	27	8	16.9	21.2	9.4	3.1	4	-1	lab
755	27	1	16.9	21.2	8.4	3.1	3	-1	lab
845	24	7	16.0	23.4	2.8	1.6	3	-1	lab
850	24	1	16.0	23.4	2.6	1.6	2	-1	lab

		Station Depth	30 8	1	27 8	1	24 7	1
Code	Name		Number per cubic meter					
5	Acartia clausi F	518	335		222	67	0	0
6	Acartia clausi M	667	111		185	89	0	0
7	Acartia clausi C	222	333		111	1474	0	0
8	Acartia clausi N	7333	6222		37	1251	0	0
9	Acartia eggs	0	0		0	0	0	0
10	Acartia californiensis F	0	0		0	67	467	28
11	Acartia californiensis M	0	0		0	0	333	0
12	Acartia californiensis C	0	0		0	0	2400	778
13	Acartia californiensis N	0	0		0	0	0	167
28	Tortanus discaudatus M	0	0		0	0	0	0
29	Tortanus discaudatus C	0	0		0	0	0	0
32	Calanus pacificus C	0	0		0	0	0	0
70	Pseudocalanus sp. A F	0	0		0	0	0	1
72	Pseudocalanus sp. A C	0	0		0	0	0	0
100	Eurytemora affinis F	0	111		0	0	0	0
101	Eurytemora affinis M	0	111		0	0	0	0
102	Eurytemora affinis C	278	0		0	0	0	0
140	Centropages abdominalis F	0	0		0	0	0	0
142	Centropages abdominalis C	0	0		0	0	0	0
190	Epilabidocera lonsipedata F	0	0		0	0	1	0
191	Epilabidocera lonsipedata M	0	0		0	0	2	1
192	Epilabidocera lonsipedata C	0	0		0	0	2	0
195	copepod nauplius D	0	0		0	0	0	0
196	copepod nauplius A	0	0		0	0	0	28
197	copepod nauplius B	0	0		0	0	0	28
198	copepod nauplius C	0	0		0	0	0	0
210	Oithona spp.	0	0		0	0	0	0
213	Oithona spirostris	0	0		0	0	0	0
220	Corycaeus sp.	0	0		0	0	0	0
250	Harpacticoida	2444	2444		0	313	267	139
270	Microsetella sp.	56	1		0	0	0	0
300	Amphipoda	8	2		4	0	2	0
315	Cumacea	0	0		0	0	1	0
320	Isopoda	3	3		2	0	0	0
321	Isopoda imm.	0	0		0	0	0	28
325	Synidotea laticauda imm.	0	0		0	2	0	0
342	Maxid zoea	0	0		0	0	0	0
345	Grapsid zoea	0	0		0	0	0	0
350	Xanthid zoea	0	0		0	0	0	0
355	Cancer zoea	2	1		1	0	0	0

		Station		27		24	
Depth		8	1	8	1	7	1
Code	Name	Number per cubic meter					
360	Pinnotherid zoea	0	0	0	0	1	0
401	barnacle nauplius	148	333	0	179	2	194
402	barnacle cypris	0	669	0	0	1	3
460	Halocarida	0	0	0	0	0	56
545	Ascidian larva	0	0	0	0	0	194
551	Engraulis mordax egg	0	111	4	5	3	9
560	fish larva	0	0	0	1	0	1
602	Tintinnopsis sp. A	1	0	0	89	0	0
603	Tintinnopsis sp. B	0	0	0	179	0	0
604	Tintinnid sp.C	0	0	0	0	0	0
605	Eutintinnus neriticus	0	0	0	89	0	0
630	coiled Foraminifera	0	444	0	536	67	28
650	Ctenophora	0	0	0	0	0	0
700	Rotifera	0	0	0	0	0	0
701	Synchaeta sp.	0	444	0	0	0	83
702	Synchaeta sp. egg	0	0	0	45	0	0
748	Phoronida larva	0	0	0	0	0	0
751	Ectoprocta larva	0	0	0	0	0	0
801	Gastropod veliger	833	0	0	268	1	58
818	Gymnosomata	0	0	0	0	0	0
821	Rivalvia veliger	278	0	0	491	0	139
851	Polyschaeta trochophore	0	0	0	0	1	0
855	spionid larva	963	225	0	491	333	806
880	scaeworm larva	0	0	0	45	1	0
ms Carbon per cubic meter							
		9	8	1	4	5	3

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DATE JULIAN DATE LOCATION MESH SIZE
250578 78145 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
940	21	15	15.4	24.7	4.3	1.6	2	-1	lab
945	21	7	15.7	24.1	3.5	1.6	1	-1	lab
950	21	1	16.1	23.6	3.3	1.6	0	-1	lab
1035	19	15	13.6	27.5	5.5	1.2	3	0	lab
1040	19	7	14.0	27.2	5.0	1.2	1	0	lab
1045	19	1	14.2	27.0	5.1	1.2	1	0	lab

Code	Name	Station Depth	15	21 7	1	15	19 7	1	Number per cubic meter
5	Acartia clausi F		0	0	0	0	1	1	
6	Acartia clausi M		0	0	0	0	0	0	
7	Acartia clausi C		0	0	0	0	733	233	
8	Acartia clausi N		0	0	0	0	3333	2611	
9	Acartia essex	67	0	0	0	0	0	0	
10	Acartia californiensis F	444	111	0	33	0	2		
11	Acartia californiensis M	178	89	0	0	1	0		
12	Acartia californiensis C	11044	2311	1778	900	700	233		
13	Acartia californiensis N	2444	1156	1244	3333	3333	2611		
28	Tortanus discaudatus M	0	0	0	3	0	0		
29	Tortanus discaudatus C	0	0	0	0	1	22		
32	Calanus pacificus C	0	1	0	0	0	0		
70	Pseudocalanus sp. A F	0	0	0	0	0	0		
72	Pseudocalanus sp. A C	0	0	0	0	1	0		
100	Eurytemora affinis F	0	0	0	0	0	0		
101	Eurytemora affinis M	0	0	0	0	0	0		
102	Eurytemora affinis C	0	0	0	0	0	0		
140	Centropages abdominalis F	0	0	0	1	0	0		
142	Centropages abdominalis C	0	0	0	3	0	22		
190	Epilabidocera lonsipedata F	0	0	0	0	0	0		
191	Epilabidocera lonsipedata M	0	0	0	0	0	0		
192	Epilabidocera lonsipedata C	44	2	0	0	0	0		
195	copepod nauplius D	0	0	0	0	67	44		
196	copepod nauplius A	0	0	0	0	200	133		
197	copepod nauplius B	0	0	0	0	33	89		
198	copepod nauplius C	0	0	0	0	133	0		
210	Oithona spp.	0	0	0	33	0	0		
213	Oithona spinirostris	44	0	0	66	2	3		
220	Corycaeus sp.	0	0	0	33	0	0		
250	Harpacticoida	489	156	89	700	233	22		
270	Microsetella sp.	0	0	0	0	67	0		
300	Amphipoda	87	1	1	1	0	0		
315	Cumacea	0	0	0	0	0	0		
320	Isofoda	3	0	0	0	0	0		
321	Isofoda imm.	0	0	0	0	0	0		
325	Synidotea laticauda imm.	0	0	0	0	0	0		
342	Naupliid zoea	0	0	0	0	1	1		
345	Grapsid zoea	0	0	0	3	0	0		
350	Xanthid zoea	0	0	0	0	1	0		
355	Cancer zoea	2	0	5	0	0	0		

	Station Depth	15	21 7	1	15	19 7	1
Code	Name	Number per cubic meter					
360	Pinnotherid zoea	0	0	0	0	0	0
401	barnacle nauplius	67	1	444	3533	500	333
402	barnacle cypris	2	2	3	3	5	1
460	Halocarida	0	0	0	0	0	0
545	Ascidian larva	0	0	44	0	33	0
551	Ensraulis mordax egg	0	0	1	0	1	0
560	fish larva	0	0	0	0	1	0
602	Tintinnopsis sp. A	0	0	0	0	0	22
603	Tintinnopsis sp. B	89	0	0	0	0	0
604	Tintinnid sp.C	0	0	0	600	1900	1378
605	Eutintinnus neriticus	0	0	0	0	133	89
630	coiled Foraminifera	0	1	0	0	33	0
650	Ctenophora	0	0	0	0	0	0
700	Rotifera	0	0	0	0	0	89
701	Synchaeta sp.	0	0	0	600	1733	267
702	Synchaeta sp. egg	0	0	0	0	200	289
748	Phoronida larva	0	156	0	0	0	0
751	Ectoprocta larva	0	0	0	0	0	1
801	Gastropod veliser	0	0	0	0	0	0
818	Gymnosomata	0	0	0	0	0	35
821	Bivalvia veliser	111	156	0	0	33	0
851	Polychaete trochophore	0	200	0	33	0	0
855	spionid larva	289	511	356	1667	933	89
880	scaeworm larva	0	0	0	0	33	0
ms Carbon per cubic meter							
		13	4	3	11	5	2

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 DATE JULIAN DATE LOCATION MESH SIZE
 140678 78165 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
905	36	5	19.5	21.2	3.6	2.0	0	0	lab
912	36	1	19.6	20.9	3.1	2.0	0	0	lab
1000	32	10	19.7	22.7	2.9	1.0	0	-1	lab
1005	32	5	19.7	22.4	2.9	1.0	0	-1	lab
1010	32	1	19.7	22.1	2.9	1.0	0	-1	lab
1100	30	7	19.5	22.8	2.0	1.2	0	-1	lab
1105	30	1	19.5	22.8	2.6	1.2	0	-1	lab

Code	Name	Station Depth								Number per cubic meter
		5	36	1	10	32 5	1	7	30	
5	Acartia clausi F	0		0	133	111	0	6	0	
6	Acartia clausi M	0		0	0	200	0	12	0	
7	Acartia clausi C	0		0	0	700	0	0	0	
8	Acartia clausi N	0		0	0	6212	0	0	0	
9	Acartia eggs	0		0	0	0	0	0	0	
10	Acartia californiensis F	100		3	533	89	0	40	6	
11	Acartia californiensis M	112		0	533	89	0	26	1	
12	Acartia californiensis C	36		308	1200	400	400	311	333	
13	Acartia californiensis N	0		4312	7733	3555	4893	2222	1700	
15	Acartia tonsillensis M	0		0	0	0	0	0	0	
27	Tortanus discaudatus F	0		0	0	0	0	0	0	
28	Tortanus discaudatus M	0		0	0	0	0	0	0	
29	Tortanus discaudatus C	0		0	0	0	0	0	0	
32	Calanus pacificus C	0		0	0	0	0	0	0	
60	Paracalanus parvus F	0		0	0	0	0	0	0	
61	Paracalanus parvus M	0		0	0	0	0	0	0	
70	Pseudocalanus sp. A F	0		0	0	0	0	0	0	
71	Pseudocalanus sp. A M	0		0	0	0	0	0	0	
72	Pseudocalanus sp. A C	0		0	0	0	0	0	0	
101	Eurytemora affinis M	67		0	0	0	0	0	0	
102	Eurytemora affinis C	356		0	0	0	0	0	67	
130	Metridia pacifica F	0		0	0	0	0	0	0	
132	Metridia pacifica C	0		0	0	0	0	0	0	
161	Pseudodiaptomus euryhalinus M	0		0	133	0	0	0	0	
162	Pseudodiaptomus euryhalinus C	0		0	400	111	0	0	0	
190	Epilabidocera tonsillensis F	0		0	0	0	0	0	0	
192	Epilabidocera tonsillensis C	0		0	0	0	0	0	0	
195	copepod nauplius D	0		0	0	0	0	0	0	
196	copepod nauplius A	0		0	0	0	0	0	0	
197	copepod nauplius B	8667		47344	0	0	9773	5867	10500	
198	copepod nauplius C	0		0	0	0	0	844	0	
200	Cyclopoida	22		0	0	0	0	44	0	
210	Oithona spp.	0		0	0	0	0	0	0	
213	Oithona spirostris	0		0	0	0	0	0	0	
220	Corycaeus sp.	0		0	0	0	0	0	0	
250	Harpacticoida	378		66	533	1867	933	1067	700	
270	Microsetella sp.	556		0	0	0	0	400	133	
299	Parasitic copepod	0		0	0	0	0	0	0	
300	Amphipoda	0		0	0	0	0	0	0	

		Station		36		32		30		Page 27	
Depth		5	1	10	5	1	7	1			
Code	Name	Number per cubic meter									
305	Ampelisca milleri	0	0	0	18	0	0	0			
309	Corophium	0	0	0	9	0	0	0			
315	Cumacea	0	0	0	0	0	0	0			
321	Isopoda imm.	0	0	0	22	133	0	33			
325	Synidotea laticauda imm.	6	0	0	0	0	0	0			
335	Acanthomysis	0	0	0	0	0	0	0			
342	Majid zoea	0	0	0	0	0	0	2			
345	Grapsid zoea	2	0	0	3	0	0	12			
355	Cancer zoea	0	0	0	0	0	0	0			
360	Pinnotherid zoea	0	0	0	0	0	0	0			
366	Hippid zoea	0	0	0	0	0	0	0			
370	Natantia zoea	0	0	0	0	0	0	2			
375	Caridean zoea	0	0	0	0	0	0	0			
376	Cranson sp.	0	0	0	3	0	0	0			
401	barnacle nauplius	0	2156	533	667	267	311	300			
402	barnacle cypris	1	0	0	22	0	0	1			
420	Ostracoda	0	0	0	2	0	0	0			
460	Halocarida	0	0	0	0	0	0	0			
520	Chaetosnatha	0	0	0	0	0	0	0			
521	Saditta spp.	0	0	0	0	0	0	0			
541	Oikopleuridae	0	0	0	0	0	0	0			
544	Ascidian egg	0	0	0	0	0	133	0			
545	Ascidian larva	0	0	0	0	0	44	167			
551	Endraulis mordax egg	5	9	0	18	0	0	6			
560	fish larva	0	0	0	2	0	0	0			
601	tintinnid spp.	0	0	0	0	0	0	0			
602	Tintinnopsis sp. A	0	0	0	0	0	0	0			
604	Tintinnid sp.C	0	0	0	0	0	0	0			
605	Eutintinnus neriticus	0	0	0	0	0	0	0			
630	coiled Foraminifera	0	0	0	0	0	0	0			
681	flatworm sp. A	0	0	0	0	0	0	33			
701	Synchaeta sp.	0	0	0	22	0	44	33			
702	Synchaeta sp. egg	0	0	0	0	0	89	0			
705	Keratella sp.	0	0	0	0	0	0	0			
751	Ectoprocta larva	0	0	0	0	0	0	0			
801	Gastropod veliger	289	0	533	111	0	400	200			
818	Gymnosomata	0	0	0	0	0	0	0			
821	Bivalvia veliger	0	0	1733	489	667	533	67			
851	polychaete trochophore	0	0	0	0	0	0	0			
855	spionid larva	16	0	2533	1156	1067	1644	967			
880	scaleworm larva	0	0	0	0	0	0	0			
899	pelagic polychaete	0	0	0	0	0	0	0			
		mg Carbon per cubic meter									
		3	9	14	9	6	8	5			

DATE	JULIAN DATE	LOCATION	MESH SIZE
140678	78165	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1200	27	8	19.0	24.1	1.3	0.7	0	-1	lab
1205	27	1	19.1	23.9	2.1	0.7	0	-1	lab
1300	24	7	17.5	26.0	1.5	0.4	0	-1	lab
1305	24	1	17.7	26.0	1.5	0.4	0	-1	lab
1415	21	15	15.7	27.5	2.0	0.7	0	0	lab
1420	21	7	17.1	26.3	3.6	0.7	0	0	lab
1425	21	1	18.8	25.6	3.8	0.7	0	0	lab

	Station	8	27	1	7	24	1	15	21	7	1
	Depth										
Code	Name	Number per cubic meter									
5	Acartia clausi F	0	1		0	0		3	0		2
6	Acartia clausi M	0	1		0	0		0	0		2
7	Acartia clausi C	0	0		0	0		1622	1511		1222
8	Acartia clausi N	0	0		0	0		4400	5689		8028
9	Acartia esss	0	0		0	0		0	0		0
10	Acartia californiensis F	24	4		22	6		0	0		0
11	Acartia californiensis M	9	2		0	2		0	0		0
12	Acartia californiensis C	1067	489		1244	1778		0	0		0
13	Acartia californiensis N	2000	1889		5400	5833		0	0		0
15	Acartia longiremis M	0	0		0	0		0	0		0
27	Tortanus discaudatus F	0	0		0	0		0	0		0
28	Tortanus discaudatus M	0	0		0	0		0	0		0
29	Tortanus discaudatus C	0	0		0	0		1	0		0
32	Calanus pacificus C	0	0		0	0		0	0		0
60	Paracalanus parvus F	0	0		0	0		0	0		0
61	Paracalanus parvus M	0	0		0	0		0	0		0
70	Pseudocalanus sp,A F	0	0		0	0		0	0		0
71	Pseudocalanus sp,A M	0	0		0	0		0	0		0
72	Pseudocalanus sp,A C	0	0		0	0		0	0		0
101	Eurytemora affinis M	0	0		0	0		0	0		0
102	Eurytemora affinis C	0	1		0	0		0	0		28
130	Metridia pacifica F	0	0		0	0		0	0		0
132	Metridia pacifica C	0	0		0	0		0	0		0
161	Pseudodiaptomus euryhalinus M	0	0		0	0		0	0		0
162	Pseudodiaptomus euryhalinus C	0	0		0	0		0	0		0
190	Epilabidocera longipedata F	0	0		0	0		0	0		0
192	Epilabidocera longipedata C	0	0		0	0		2	1		0
195	copepod nauplius D	0	0		67	0		44	67		28
196	copepod nauplius A	0	0		0	0		22	0		0
197	copepod nauplius B	1378	1356		667	83		22	0		0
198	copepod nauplius C	0	867		0	778		22	44		278
200	Cyclopoida	0	0		0	0		67	2		0
210	Oithona spp.	0	0		0	0		44	0		0
213	Oithona spinirostris	0	0		0	0		0	0		0
220	Corycaeus sp.	0	0		0	0		489	1		0
250	Harpacticoida	0	0		5333	0		0	378		222
270	Microsetella sp.	62	422		67	500		289	44		83
299	parasitic copepod	1	0		0	0		0	0		0
300	Amphipoda	89	0		0	0		0	0		0

		Station	27	24		21		Page 31	
Depth		8	1	7	1	15	7	1	
Code	Name	Number per cubic meter							
305	Ampelisca milleri	0	0	0	0	0	0	0	
309	Corophium	0	0	0	0	0	0	0	
315	Cumacea	0	0	0	0	0	0	0	
321	Isopoda imm.	0	0	22	0	22	0	28	
325	Synidotea laticauda imm.	0	0	0	0	0	0	0	
335	Acanthomysis	0	0	0	0	0	0	0	
342	Majid zoea	3	0	15	0	0	5	0	
345	Grapsid zoea	2	0	5	5	0	0	0	
355	Cancer zoea	0	0	0	0	0	0	1	
360	Pinnotherid zoea	0	0	3	0	0	2	2	
366	Hippid zoea	0	0	0	0	1	0	0	
370	Natantia zoea	0	0	2	0	0	0	0	
375	Caridean zoea	2	0	0	0	0	0	0	
376	Crandon sp.	0	0	0	0	0	0	0	
401	barnacle nauplius	267	244	689	361	1911	1133	472	
402	barnacle cypris	3	0	5	3	178	267	0	
420	Ostracoda	0	0	0	0	0	0	0	
460	Halocarida	89	0	0	0	0	22	0	
520	Chaetosnatha	0	0	0	0	0	0	0	
521	Sagitta spp.	0	0	0	0	22	0	0	
541	Oikopleuridae	0	0	0	0	0	0	0	
544	Ascidian egg	356	422	0	222	0	22	0	
545	Ascidian larva	222	267	289	111	22	333	667	
551	Endraulis mordax egg	0	1	0	0	0	0	0	
560	fish larva	1	0	0	0	0	0	0	
601	tintinnid spp.	0	0	0	0	0	0	0	
602	Tintinnopsis sp. A	44	22	0	0	0	0	0	
604	Tintinnid sp. C	0	0	0	0	0	22	83	
605	Eutintinnus neriticus	0	0	0	0	200	22	0	
630	coiled Foraminifera	1	0	0	0	0	0	0	
681	flatworm sp. A	89	1	0	0	0	0	0	
701	Synchaeta sp.	89	0	6667	222	622	0	333	
702	Synchaeta sp. egg	44	0	0	28	44	156	139	
705	Keratella sp.	0	2	0	0	0	0	0	
751	Ectoprocta larva	0	0	22	0	0	0	0	
801	Gastropod veliger	444	0	44	28	0	1	0	
818	Gymnosomata	0	0	0	0	0	0	1	
821	Bivalvia veliger	578	89	22	56	0	22	0	
851	polychaete trochophore	0	2	333	0	0	44	28	
855	spionid larva	2267	867	622	611	3800	1644	806	
880	scaleworm larva	89	22	0	0	0	1	0	
899	pelagic polychaete	0	0	0	0	0	0	0	
		mg Carbon per cubic meter							
		8	4	12	5	15	9	5	

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 DATE JULIAN DATE LOCATION MESH SIZE
 140678 78165 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1535	19	15	12.0	31.5	9.5	0.5	1	0	lab
1540	19	7	12.5	31.1	8.2	0.5	1	0	lab
1545	19	1	16.4	25.9	7.5	0.5	0	0	lab

Station	19
Depth	15 7 1

Code	Name	Number per cubic meter		
5	Acartia clausi F	2400	3889	2
6	Acartia clausi M	400	111	0
7	Acartia clausi C	600	1222	400
8	Acartia clausi N	1267	3333	6667
9	Acartia eggs	133	0	0
10	Acartia californiensis F	200	222	1
11	Acartia californiensis M	0	111	2
12	Acartia californiensis C	0	0	333
13	Acartia californiensis N	0	0	6000
15	Acartia lonsiremis M	0	222	0
27	Tortanus discaudatus F	1	5	0
28	Tortanus discaudatus M	4	2	0
29	Tortanus discaudatus C	0	2	2
32	Calanus pacificus C	1	0	0
60	Paracalanus parvus F	0	111	2
61	Paracalanus parvus M	0	0	1
70	Pseudocalanus sp.A F	133	444	0
71	Pseudocalanus sp.A M	67	222	0
72	Pseudocalanus sp.A C	133	222	0
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	0	0	0
130	Metridia pacifica F	1	333	0
132	Metridia pacifica C	0	0	0
161	Pseudodiaptomus euryhalinus M	0	0	0
162	Pseudodiaptomus euryhalinus C	0	0	0
190	Epilabidocera lonsipedata F	0	1	0
192	Epilabidocera lonsipedata C	0	0	0
195	COPEPOD NAUPLIUS D	0	0	133
196	COPEPOD NAUPLIUS A	0	222	67
197	COPEPOD NAUPLIUS B	0	222	0
198	COPEPOD NAUPLIUS C	133	222	67
200	Cyclopoids	0	0	0
210	Oithona spp.	400	556	0
213	Oithona spinirostris	67	111	0
220	Corycaeus sp.	0	0	0
250	Haracticoids	0	111	0
270	Microsetella sp.	1800	2556	6
299	PARASITIC COPEPOD	0	222	0
300	Amphipoda	0	0	0
305	Ampelisca milleri	0	0	0
309	Corophium	0	0	0
315	Cumacea	0	1	0
321	Isopoda imm.	0	0	0

Code	Name	Station	19		Number per cubic meter
		Depth	7	1	
325	Synidotea laticauda imm.	0	0	0	
335	Acanthomysis	0	778	0	
342	Majid zoea	0	0	0	
345	Grapsid zoea	1	0	0	
355	Cancer zoea	0	2	0	
360	Pinnotherid zoea	0	0	0	
366	Hippid zoea	3	2	0	
370	Natantia zoea	0	0	0	
375	Caridean zoea	2	3	0	
376	Cranson sp.	0	0	0	
401	barnacle nauplius	933	1444	2067	
402	barnacle cypris	1333	444	2	
420	Ostracoda	0	0	0	
460	Halocarida	0	0	0	
520	Chaetosnatha	1333	0	0	
521	Sasitta spp.	0	1	0	
541	Oikopleuridae	2	2	0	
544	Ascidian egg	0	0	0	
545	Ascidian larva	1	0	0	
551	Endraulis mordax egg	0	0	0	
560	fish larva	0	0	0	
601	tintinnid spp.	67	0	0	
602	Tintinnopsis sp. A	0	0	0	
604	Tintinnid sp.C	67	0	67	
605	Eutintinnus neriticus	0	0	0	
630	coiled Foraminifera	67	0	0	
681	flatworm sp. A	0	0	0	
701	Synchaeta sp.	800	667	3600	
702	Synchaeta sp. egg	0	111	3267	
705	Keratella sp.	0	0	0	
751	Ectoprocta larva	0	0	0	
801	Gastropod veliger	0	111	0	
818	Gymnosomata	0	0	0	
821	Bivalvia veliger	67	0	67	
851	polychaete trochophore	133	222	0	
855	spionid larva	2800	2556	7533	
880	scaleworm larva	200	222	5	
899	pelagic polychaete	67	0	1	
		30	36	23	ms Carbon per cubic meter

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
900	36	3	20.8	22.5	3.0	1.8	-	-1	lab
910	36	1	20.8	22.8	3.4	1.8	-	-1	lab
1006	32	7	21.0	24.8	2.9	1.8	-	-1	lab
1014	32	4	21.0	24.8	2.9	1.8	2	-1	lab
1019	32	1	21.0	24.7	2.9	1.8	-	-1	lab
1100	30	11	20.5	25.4	2.2	1.0	-	-1	lab
1106	30	6	20.9	25.2	1.9	1.0	-	-1	lab
1112	30	1	21.0	25.2	2.3	1.0	-	-1	lab

	Station Depth	3	36	1	7	32 4	1	11	30 6	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	0	0	0	0	89	0	0	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	0	0
8	Acartia clausi N	0	0	0	0	0	0	0	0	0
10	Acartia californiensis F	893	335	1407	1333	100	2814	726	670	
11	Acartia californiensis M	893	112	804	1156	0	1675	507	223	
12	Acartia californiensis C	7035	7259	16683	18667	11055	4891	9714	7549	
13	Acartia californiensis N	19877	52597	9648	10756	10552	5427	4857	15143	
102	Eurytemora affinis C	0	0	0	89	0	0	0	0	
103	Eurytemora affinis N	0	0	0	2311	0	0	0	0	
160	Pseudodiaptomus euryhalinus F	0	0	0	1	0	0	0	0	
192	Epilabidocera longipedata C	0	0	0	0	0	0	0	0	
197	copepod nauplius B	0	0	0	0	0	0	0	0	
200	Cyclopoida	0	112	0	0	0	0	0	89	
250	Harpacticoida	4913	782	603	0	1005	670	837	268	
270	Microsetella sp.	0	0	0	1689	0	0	0	0	
305	Ampelisca milleri	0	0	0	0	0	1	0	0	
320	Isopoda	1	0	0	0	0	0	1	2	
321	Isopoda imm.	0	0	0	89	0	0	0	0	
340	Reptantia zoea	0	0	0	0	0	0	0	45	
342	Majid zoea	0	0	0	0	0	0	0	0	
345	Grapsid zoea	0	0	0	0	0	0	1	0	
375	Caridean zoea	0	0	0	1	0	0	3	0	
401	barnacle nauplius	0	0	2	89	804	0	112	0	
402	barnacle cypris	0	0	1	89	0	1	0	0	
551	Engraulis mordax egg	6	20	2	23	15	5	21	9	
560	fish larva	1	5	0	0	0	0	1	0	
602	Tintinnopsis sp. A	0	0	0	0	0	67	0	0	
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	
605	Eutintinnus neriticus	0	0	100	0	0	0	0	0	
630	coiled Foraminifera	0	0	1	0	0	268	0	45	
681	flatworm sp. A	0	0	0	0	0	0	0	0	
701	Synchaeta sp.	0	0	0	0	0	268	167	0	
702	Synchaeta sp. egg	0	0	100	0	100	134	391	89	
801	Gastropod veliger	1898	447	502	444	100	469	558	45	
821	Bivalvia veliger	782	447	1005	622	201	670	781	134	
851	Polyschaeta trochophore	0	0	0	0	0	67	0	45	
855	spionid larva	1340	670	904	444	2	3687	2233	581	

		Station	36		32				Page 33	
		Depth	3	1	7	4	1	11	30	
									6	
Code	Name				Number per cubic meter					1
880	scaleworm larva	0	0		0	89	0	1	112	
899	pelagic polychaete	0	0		0	0	0	0	0	
					ms Carbon per cubic meter					
		21		15	23	26	13	25	18	
									12	

Code	Name	Station Depth	10	27 5	1	9	24 5	1	9	21 5	1
		Number per cubic meter									
855	spionid larva	2368	1340	402	938	1005	89	335	804	491	
880	scalemorm larva	89	1	0	1	0	0	1	1	0	
899	pelagic polychaete	0	0	0	0	0	0	0	0	0	
		ms Carbon per cubic meter									
		10	8	6	8	9	2	6	4	3	

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 DATE JULIAN DATE LOCATION MESH SIZE
 120778 78193 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1622	19	14	13.8	32.6	3.9	0.5	-	1	lab
1628	19	7	13.8	32.7	3.8	0.5	-	1	lab
1634	19	1	13.9	32.6	3.6	0.5	-	1	lab

Station	Depth
19	14
7	1

Code	Name	Number per cubic meter
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5	Acartia clausi F	1787	3573	1117
6	Acartia clausi M	558	558	112
7	Acartia clausi C	4355	4467	4243
8	Acartia clausi N	3685	1228	1787
10	Acartia californiensis F	0	0	0
11	Acartia californiensis M	0	0	0
12	Acartia californiensis C	0	0	0
13	Acartia californiensis N	0	0	0
102	Eurytemora affinis C	0	0	0
103	Eurytemora affinis N	0	0	0
160	Pseudodiaptomus euryhalinus F	0	0	0
192	Epilabidocera longipedata C	0	0	6
197	copepod nauplius B	0	0	0
200	Cyclopoida	112	0	0
250	Harpacticoida	447	893	335
270	Microsetella sp.	0	0	0
305	Ampelisca milleri	0	0	0
320	Isopoda	0	0	0
321	Isopoda imm.	0	0	0
340	Reptantia zoea	0	1	0
342	Majid zoea	0	0	0
345	Grapsid zoea	0	0	0
375	Caridean zoea	3	1	3
401	barnacle nauplius	1340	0	0
402	barnacle cypris	0	11	0
551	Endraulis mordax egg	3	0	0
560	fish larva	0	1	0
602	Tintinnopsis sp. A	0	0	0
604	Tintinnid sp. C	0	112	223
605	Eutintinnus neriticus	0	0	0
630	coiled Foraminifera	0	112	0
681	flatworm sp. A	0	112	0
701	Synchaeta sp.	0	0	0
702	Synchaeta sp. egg	0	0	0
801	Gastropod veliger	335	0	0
821	Bivalvia veliger	0	223	112
851	polychaete trochophore	1	0	0
855	spionid larva	0	782	782
880	scaleworm larva	0	0	1
899	pelagic polychaete	0	0	0

mg Carbon per cubic meter

13	18	9
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DATE JULIAN DATE LOCATION MESH SIZE
310778 78212 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
914	36	3	21.2	24.6	2.3	3.8	-	1	lab
920	36	1	21.2	24.5	2.3	3.8	-	1	lab
1009	32	7	20.6	27.1	2.0	2.0	-	1	lab
1020	32	3	20.7	27.1	2.0	2.0	-	1	lab
1025	32	1	20.7	27.1	2.0	2.0	-	1	lab
1101	30	9	20.4	27.8	2.3	1.0	-	1	lab
1107	30	5	20.4	27.8	2.3	1.0	-	1	lab
1112	30	1	20.5	27.7	2.3	1.0	-	1	lab

		Station Depth	3	36	1	7	32 3	1	9	30 5	1
Code	Name	Number per cubic meter									
5	Acartia clausi F	0	0	0	0	67	0	0	0	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	0	0	0
8	Acartia clausi N	0	0	0	0	0	0	0	0	0	0
10	Acartia californiensis F	4020	4440	804	4466	333	670	871	112		
11	Acartia californiensis M	933	2960	402	3867	67	268	402	0		
12	Acartia californiensis C	6253	2960	21205	19467	11801	4467	4757	1340		
13	Acartia californiensis N	4467	7400	5125	5867	6667	2502	3149	2680		
160	Pseudodiaptomus euryhalinus F	0	0	0	133	0	0	0	0		
162	Pseudodiaptomus euryhalinus C	933	1480	0	200	0	0	0	0		
197	copepod nauplius B	0	0	0	200	0	0	0	0		
199	copepod nauplius	0	0	0	466	0	0	0	0		
200	Cyclopoids	0	0	0	0	0	45	67	0		
250	Harpacticoida	1340	2960	302	534	400	134	335	223		
300	Amphipoda	0	1	0	1	0	0	0	0		
320	Isopoda	0	0	0	1	0	0	0	0		
325	Synidotea laticauda imm.	0	0	1	0	2	0	0	0		
340	Reptantia zoea	0	0	0	0	0	1	0	0		
345	Grapsid zoea	0	0	0	0	0	0	0	0		
370	Natantia zoea	0	0	0	0	0	2	1	0		
402	barnacle cypris	0	0	0	0	0	0	0	0		
401	barnacle nauplius	0	0	0	133	0	0	0	0		
551	Endraulis mordax egg	6	8	7	8	25	8	5	1		
560	fish larva	0	0	0	2	1	4	3	0		
570	Gobiidae larva	0	0	0	0	1	0	0	0		
604	Tintinnid sp.C	0	0	0	0	0	0	0	0		
605	Eutintinnus neriticus	1340	0	0	0	0	45	67	0		
630	coiled Foraminifera	447	0	402	67	133	0	134	0		
681	flatworm sp. A	0	0	0	0	0	0	0	0		
701	Synchaeta sp.	0	740	100	133	200	134	134	0		
702	Synchaeta sp. egg	0	740	402	1866	1000	358	536	670		
801	Gastropod veliger	0	0	703	467	867	670	804	558		
821	Bivalvia veliger	1787	2960	1608	667	600	625	670	447		
851	polychaete trochophore	0	0	0	67	0	134	67	0		
855	spionid larva	0	4	1608	1867	1200	2948	2211	2010		
880	scaleworm larva	0	0	100	0	133	45	134	3		
		mg Carbon per cubic meter									
		23	28	25	42	15	14	14	7		

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DATE JULIAN DATE LOCATION MESH SIZE
310778 78212 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1200	27	9	19.0	29.4	2.3	0.5	-	0	lab
1208	27	5	19.1	29.2	2.3	0.5	-	0	lab
1213	27	1	19.5	28.9	2.3	0.5	-	0	lab
1258	24	8	17.4	30.7	2.3	0.6	-	-1	lab
1303	24	4	17.4	30.8	2.3	0.6	-	-1	lab
1310	24	1	17.7	30.7	2.3	0.6	-	-1	lab
1355	21	9	16.0	30.0	2.3	0.7	-	-1	lab
1401	21	5	16.4	30.9	2.3	0.7	-	-1	lab
1406	21	1	17.9	30.5	2.3	0.7	-	-1	lab

Code	Name	Station Depth									ms Carbon per cubic meter
		9	27 5	1	8	24 4	1	9	21 5	1	
5	Acartia clausi F	0	0	0	0	0	0	45	0	45	
6	Acartia clausi M	0	0	0	0	0	0	0	45	0	
7	Acartia clausi C	0	0	0	0	0	0	0	0	0	
8	Acartia clausi N	0	0	0	0	0	0	0	0	0	
10	Acartia californiensis F	134	0	89	45	268	45	447	45	45	
11	Acartia californiensis M	67	45	45	179	89	22	357	0	22	
12	Acartia californiensis C	3953	3573	2333	2993	2948	1340	3216	1474	916	
13	Acartia californiensis N	1876	1295	1653	2278	3261	3729	2412	2099	3707	
160	Pseudodiaptomus euryhalinus F	0	0	0	0	0	0	0	0	0	
162	Pseudodiaptomus euryhalinus C	0	0	0	0	0	0	0	0	0	
197	Copepod nauplius B	0	0	0	0	0	0	0	0	0	
199	Copepod nauplius	0	0	0	0	0	0	0	0	0	
200	Cyclopoids	0	45	0	45	0	0	89	89	22	
250	Harpacticoids	402	313	89	179	134	89	268	357	112	
300	Amphipoda	0	0	0	0	0	0	0	0	0	
320	Isopoda	0	0	0	0	0	0	0	0	0	
325	Synidotea laticauda imm.	0	0	0	0	0	0	0	0	0	
340	Reptantia zoea	0	11	0	0	0	2	6	0	5	
345	Grapsid zoea	21	0	0	39	3	0	0	0	0	
370	Natantia zoea	0	0	45	0	0	0	1	0	0	
402	barnacle cypris	0	0	0	134	0	0	0	0	0	
401	barnacle nauplius	67	0	89	134	1	89	0	625	0	
551	Endraulius mordax egg	1	3	3	3	3	3	5	3	3	
560	fish larva	0	0	1	0	0	0	0	1	0	
570	Gobiidae larva	0	0	0	0	0	0	0	0	0	
604	Tintinnid sp.C	0	0	0	0	0	0	0	0	0	
605	Eutintinnus neriticus	0	0	0	0	0	0	0	0	0	
630	coiled Foraminifera	0	313	89	45	0	0	45	0	0	
681	flatworm sp. A	0	11	89	45	0	0	3	5	1	
701	Synchaeta sp.	0	45	0	0	223	0	179	0	67	
702	Synchaeta sp. egg	67	0	179	0	89	0	89	134	67	
801	Gastropod veliger	737	1653	1474	491	179	22	179	223	67	
821	Bivalvia veliger	1273	7192	2770	893	1117	45	223	536	113	
851	polychaete trochophore	0	89	0	45	0	0	0	89	1	
855	spionid larva	737	1200	581	89	134	45	402	581	67	
880	scaeworm larva	0	0	0	0	0	0	0	0	0	
		7	9	5	5	4	2	6	5	2	

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 DATE JULIAN DATE LOCATION MESH SIZE
 310778 78212 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1501	19	10	15.3	31.9	2.3	1.1	-	-1	lab
1458	19	5	15.5	31.8	2.3	1.1	-	-1	lab
1454	19	1	15.4	31.8	2.3	1.1	-	-1	lab

Station	Depth
19	10
5	1

Code	Name	Number per cubic meter
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5	Acartia clausi F	0	37	74
6	Acartia clausi M	0	37	296
7	Acartia clausi C	851	1184	2146
8	Acartia clausi N	3578	3552	5476
10	Acartia californiensis F	0	0	0
11	Acartia californiensis M	0	2	0
12	Acartia californiensis C	481	0	0
13	Acartia californiensis N	1787	0	0
160	Pseudodiaptomus euryhalinus F	0	0	0
162	Pseudodiaptomus euryhalinus C	0	0	0
197	copepod nauplius B	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	111	222
250	Harpacticoida	0	111	296
300	Amphipoda	0	0	0
320	Isopoda	0	0	1
325	Synidotea laticauda imm.	0	0	0
340	Reptantia zoea	8	37	0
345	Grapsid zoea	0	0	0
370	Matantia zoea	24	8	5
402	barnacle cypris	0	0	0
401	barnacle nauplius	0	0	0
551	Endraulis mordax egg	0	3	2
560	fish larva	0	0	0
570	Gobiidae larva	0	0	0
604	Tintinnid sp.C	1443	1184	1406
605	Eutintinnus neriticus	0	0	3
630	coiled Foraminifera	0	0	0
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	370	370	518
702	Synchaeta sp. egg	2479	2109	3256
801	Gastropod veliger	111	37	222
821	Bivalvia veliger	37	111	222
851	polychaete trochophore	0	0	0
855	spionid larva	111	74	148
880	scaeworm larva	0	0	0

mg Carbon per cubic meter

2	2	5
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 DATE JULIAN DATE LOCATION MESH SIZE
 190978 78262 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
903	36	3	18.2	25.5	2.8	7.7	3	0	lab
909	36	1	18.2	24.4	2.9	7.7	3	0	lab
1007	32	10	18.9	29.0	2.0	2.8	0	1	lab
1013	32	6	19.0	28.7	2.0	2.8	2	1	lab
1019	32	1	19.2	28.6	1.9	2.8	0	1	lab
1105	30	10	19.5	29.7	1.7	2.1	4	1	lab
1111	30	6	19.6	29.7	1.7	2.1	3	1	lab
1118	30	1	19.6	29.5	1.7	2.1	1	1	lab

		Station Depth	36	1	10	32 6	1	10	30 6	1
Code	Name	Number per cubic meter								
10	Acartia californiensis F	5360	5025		4200	4533	200	3238	7370	1340
11	Acartia californiensis M	1228	1117		3400	2400	200	1675	3797	893
12	Acartia californiensis C	3573	5137		7200	8733	5800	5248	11055	8709
13	Acartia californiensis N	1898	1452		400	400	15200	447	447	447
160	Pseudodiaptomus euryhalinus F	0	0		0	67	0	0	0	0
161	Pseudodiaptomus euryhalinus M	0	0		0	2	0	0	0	0
162	Pseudodiaptomus euryhalinus C	335	223		200	0	0	0	0	0
197	COPEPOD nauplius B	0	0		1000	0	15200	0	0	0
200	Cyclopoida	0	0		0	0	0	0	0	56
250	Harpacticoida	0	335		0	200	200	223	447	335
300	Amphipoda	0	0		0	0	0	4	0	0
305	Ampelisca milleri	0	0		0	200	0	0	0	0
309	Corophium	0	0		0	96	0	0	0	0
320	Isopoda	0	0		0	0	0	2	7	1
340	Reptantia zoea	0	0		0	0	0	0	0	0
356	Cancer mesalops	0	0		0	2	0	0	0	0
370	Natantia zoea	2	3		0	0	0	3	0	1
375	Caridean zoea	0	0		0	1	0	0	0	0
401	barnacle nauplius	0	0		0	0	0	0	0	0
402	barnacle cypris	1	0		0	3	0	0	0	0
420	Ostracoda	0	0		0	1	0	0	0	0
551	Endraulis mordax egg	1	0		0	7	0	25	27	19
560	fish larva	0	0		0	0	0	1	1	1
602	Tintinnopsis sp. A	0	112		0	0	0	0	0	0
605	Eutintinnus neriticus	447	0		2600	0	0	2345	6254	2233
630	coiled Foraminifera	335	447		0	67	0	447	0	0
681	flatworm sp. A	0	0		0	0	0	0	0	0
701	Synchaeta sp.	0	0		0	0	0	0	0	0
702	Synchaeta sp. egg	0	0		0	0	0	0	112	0
801	Gastropod veliger	112	0		1200	533	0	223	335	0
821	Bivalvia veliger	447	782		0	133	0	670	447	112
851	polychaete trochophore	0	0		0	67	0	0	0	56
855	spionid larva	558	112		0	400	200	782	1787	1228
880	scaleworm larva	0	0		0	0	0	0	0	223
		23	22		24	26	9	19	41	16
		mg Carbon per cubic meter								

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DATE JULIAN DATE LOCATION MESH SIZE
190978 78262 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1216	27	10	19.4	30.3	1.7	2.6	4	1	lab
1222	27	6	19.4	30.3	1.7	2.6	3	1	lab
1228	27	1	19.5	30.4	1.6	2.6	2	1	lab
1319	24	8	18.5	30.7	1.5	2.0	3	1	lab
1325	24	4	18.6	30.7	1.5	2.0	3	1	lab
1331	24	1	18.6	30.7	1.5	2.0	1	1	lab
1422	21	15	15.4	31.5	2.4	1.2	3	1	lab
1428	21	7	16.0	31.0	2.0	1.2	1	1	lab
1434	21	1	16.8	30.1	2.0	1.2	1	1	lab

		Station Depth	10	27 6	1	8	24 4	1	15	21 7	1
Code	Name	Number per cubic meter									
10	Acartia californiensis F	3350	3350	670	2457	3797	1340	2457	2122	335	
11	Acartia californiensis M	1898	1787	469	1340	1787	447	1452	1340	335	
12	Acartia californiensis C	6142	9715	3149	8264	10609	7370	7482	3127	3350	
13	Acartia californiensis N	447	893	536	2586	3462	2792	1117	4020	5248	
160	Pseudodiaptomus euryhalinus F	0	0	0	0	0	0	0	0	0	
161	Pseudodiaptomus euryhalinus M	0	0	0	0	0	0	0	0	0	
162	Pseudodiaptomus euryhalinus C	0	0	0	558	335	0	0	0	0	
197	copepod nauplius B	0	0	0	0	0	0	0	0	0	
200	Cyclopoida	223	335	67	112	112	112	1005	447	670	
250	Harpacticoida	447	670	402	447	1117	782	893	782	782	
300	Amphipoda	0	0	0	0	0	0	0	0	0	
305	Ampelisca milleri	0	0	0	0	0	0	0	0	0	
309	Corophium	0	0	0	0	0	0	0	0	0	
320	Isopoda	1	0	0	1	0	0	0	0	0	
340	Reptantia zoea	3	0	6	23	19	9	4	0	1	
356	Cancer mesalops	0	0	0	0	0	0	0	0	0	
370	Natantia zoea	0	1	0	0	1	1	3	1	0	
375	Caridean zoea	0	0	0	0	0	0	0	0	0	
401	barnacle nauplius	0	112	0	0	0	0	335	0	0	
402	barnacle cypris	0	0	4	0	3	1	0	112	0	
420	Ostracoda	0	0	0	0	0	0	0	0	0	
551	Endraulix mordax egg	19	12	15	19	23	18	0	5	5	
560	fish larva	1	0	0	0	1	0	0	0	0	
602	Tintinnopsis sp. A	335	335	201	112	335	223	1005	782	112	
605	Eutintinnus neriticus	1117	3797	1541	2345	2345	1563	670	335	447	
630	coiled Foraminifera	558	1452	469	782	447	335	223	0	0	
681	flatworm sp. A	0	447	5	0	0	335	0	8	0	
701	Synchaeta sp.	223	0	0	112	0	0	112	0	112	
702	Synchaeta sp. egg	112	0	134	893	335	223	558	782	335	
801	Gastropod veliger	558	558	201	0	112	223	0	0	0	
821	Bivalvia veliger	223	558	469	447	670	335	223	223	335	
851	Polychaete trochophore	0	0	0	0	0	0	0	0	0	
855	spionid larva	335	1228	201	112	447	112	0	223	8	
880	scaleworm larva	112	0	0	0	1	0	0	0	0	
		mg Carbon per cubic meter									
		20	26	7	19	26	13	20	14	8	

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 DATE JULIAN DATE LOCATION MESH SIZE
 200978 78263 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1438	19	13	13.8	32.3	5.0	0.5	3	1	lab
1445	19	7	14.0	32.2	4.5	0.5	3	1	lab
1450	19	1	14.2	32.1	2.6	0.5	0	1	lab

Station	19
Depth	13 7 1

Code	Name	Number per cubic meter		
5	Acartia clausi F	533	711	133
6	Acartia clausi M	133	178	333
7	Acartia clausi C	1800	4356	1800
8	Acartia clausi N	2267	7644	9867
28	Tortanus discaudatus M	1	0	0
29	Tortanus discaudatus C	133	144	0
31	Calanus pacificus M	2	0	0
32	Calanus pacificus C	0	1	0
60	Paracalanus parvus F	133	2	0
61	Paracalanus parvus M	333	1	0
62	Paracalanus parvus C	133	356	1
70	Pseudocalanus sp. A F	1	89	0
72	Pseudocalanus sp. A C	0	1	0
192	Epilabidocera lonsipedata C	3	1	2
196	copepod nauplius A	0	89	67
199	copepod nauplius	0	267	200
200	Cyclopoida	0	0	67
213	Oithona spinirostris	467	622	16
220	Corycaeus sp.	1	4	0
250	Harpacticoida	0	0	267
270	Microsetella sp.	533	1067	67
300	Amphipoda	1	0	0
315	Cumacea	1	0	0
331	Mysid juvenile	0	1	0
342	Majid zoea	6	8	0
355	Cancer zoea	5	1	1
356	Cancer mesalops	1	0	0
360	Pinnotherid zoea	3	0	0
362	Porcellanid zoea	1	1	0
366	Hippid zoea	1	1	0
401	barnacle nauplius	467	711	67
402	barnacle cypris	67	1	1
440	Cladocera	0	0	1
521	Sagitta spp.	0	1	1
551	Engraulis mordax egg	0	0	2
559	other fish egg	2	1	2
604	Tintinnid sp. C	133	1	67
630	coiled Foraminifera	1	0	0
681	flatworm sp. A	2	3	0
701	Synchaeta sp.	0	0	133
801	Gastropod veliger	0	0	3
821	Bivalvia veliger	133	1	4
855	spionid larva	600	622	267

Code	Name	Station	19		
		Depth	13	7	1
					Number per cubic meter
899	pelagic polychaete		1	178	1
			8	12	5
					mg Carbon per cubic meter

DATE	JULIAN DATE	LOCATION	MESH SIZE
111078	78284	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
924	36	7	19.6	28.8	3.0	1.5	2	1	lab
931	36	4	19.6	28.8	3.0	1.4	2	1	lab
937	36	1	19.0	28.7	3.2	1.4	0	1	lab
1021	32	10	19.6	30.0	2.0	0.8	0	0	lab
1027	32	5	19.6	30.0	2.2	0.8	1	0	lab
1032	32	1	19.5	30.0	2.9	0.9	0	0	lab
1115	30	10	19.3	30.2	1.7	0.7	1	-1	lab
1120	30	5	19.3	30.2	1.7	0.8	0	-1	lab
1127	30	1	19.6	30.2	1.8	0.8	1	-1	lab

	Station	36			32			30	
	Depth	7	4	1	10	5	1	10	5
Code	Name								
					Number per cubic meter				
5	Acartia clausi F	0	0	0	0	0	0	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	0
8	Acartia clausi N	0	0	0	0	0	0	0	0
10	Acartia californiensis F	7200	1778	41	222	0	23	333	67
11	Acartia californiensis M	2600	1722	45	0	0	5	400	67
12	Acartia californiensis C	369	20833	5689	11911	16800	8167	18200	20467
13	Acartia californiensis N	244	14778	6956	13156	26466	43833	3867	4400
27	Tortanus discaudatus F	0	0	0	0	0	0	0	0
100	Eurytemora affinis F	1	0	1	0	0	0	0	0
101	Eurytemora affinis M	0	0	0	0	0	0	0	0
102	Eurytemora affinis C	133	0	22	0	0	0	67	0
162	Pseudodiaptomus euryhalinus C	0	0	0	0	0	0	0	0
196	copepod nauplius A	0	0	0	0	0	0	0	0
197	copepod nauplius B	0	0	0	0	533	945	1200	1000
199	copepod nauplius	0	0	0	178	0	0	0	0
200	Cyclopoida	0	56	0	0	0	0	0	0
210	Oithona spp.	0	56	0	0	0	0	0	0
250	Harpacticoida	0	278	111	0	0	0	0	0
270	Microsetella sp.	600	111	822	533	444	389	733	733
300	Amphipoda	0	0	0	0	0	0	0	0
315	Cumacea	0	0	0	0	0	0	0	0
320	Isopoda	0	0	0	0	0	0	0	0
321	Isopoda imm.	0	56	1	0	44	0	0	0
340	Reptantia zoea	0	0	0	0	0	0	0	0
341	Reptantia mesalops	1	0	0	0	0	0	0	0
342	Majid zoea	0	0	0	7	3	0	31	7
345	Gnapsid zoea	0	0	0	0	0	0	0	0
370	Natantia zoea	0	0	0	0	0	0	0	0
375	Caridean zoea	1	0	0	0	0	0	0	0
401	barnacle nauplius	67	0	0	0	89	56	0	0
402	barnacle cypris	1	0	0	0	44	56	0	0
420	Ostracoda	67	0	0	0	0	0	0	0
440	Cladocera	0	0	0	44	400	722	67	800
460	Halocarida	0	0	0	0	0	0	0	0
551	Endraulus mordax egg	10	6	15	8	5	5	8	11
560	fish larva	1	0	0	0	0	0	0	0

		Station	36			32			30	Page 47
	Depth	7	4	1	10	5	1	10	5	1
Code	Name	Number per cubic meter								
570	Gobiidae larva	0	0	0	0	1	1	1	1	0
602	Tintinnopsis sp. A	0	0	0	0	0	0	0	0	0
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	0
605	Eutintinnus neriticus	0	0	0	0	0	0	0	0	0
630	coiled Foraminifera	0	0	0	0	0	0	0	0	0
681	flatworm sp. A	0	56	0	89	44	0	67	200	1
682	flatworm sp. B	0	0	0	0	0	56	0	0	0
701	Synchaeta sp.	0	111	0	178	0	2556	133	67	733
702	Synchaeta sp. egg	0	0	0	89	0	778	133	67	533
801	Gastropod veliger	267	333	67	133	178	56	533	467	267
821	Bivalvia veliger	1	56	67	44	0	56	67	0	0
851	polychaete trochophore	0	111	0	0	44	0	133	1	0
855	spionid larva	867	833	467	2267	889	889	2600	2333	1867
880	scaeworm larva	0	0	0	0	0	0	0	0	0
899	pelagic polychaete	0	0	0	0	0	0	67	0	0
		mg Carbon per cubic meter								
		28	29	7	17	19	15	24	24	25

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DATE JULIAN DATE LOCATION MESH SIZE
111078 78284 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1217	27	12	19.1	30.6	1.7	1.0	0	-1	lab
1224	27	6	19.1	30.5	1.7	0.7	0	-1	lab
1230	27	1	19.3	30.5	2.1	0.6	0	-1	lab
1316	24	9	19.3	30.3	2.0	1.5	2	-1	lab
1322	24	5	19.3	30.3	2.0	1.5	2	-1	lab
1328	24	1	19.2	30.2	2.0	1.5	1	-1	lab
1416	21	12	17.0	29.8	2.4	1.3	1	0	lab
1422	21	6	17.1	29.7	2.4	1.0	1	0	lab
1429	21	1	17.2	29.7	2.5	0.8	0	0	lab

Code	Name	Station Depth	12	27 6	1	9	24 5	1	12	21 6	1
5	Acartia clausi F		0	0	0	0	0	0	0	0	0
6	Acartia clausi M		0	0	0	0	0	0	0	0	0
7	Acartia clausi C		0	0	0	0	0	0	0	0	0
8	Acartia clausi N		0	0	0	0	0	0	0	0	0
10	Acartia californiensis F		400	266	88	3462	1228	536	223	335	0
11	Acartia californiensis M		622	400	0	1228	670	335	112	335	22
12	Acartia californiensis C		5022	8177	9022	6254	8152	4757	3685	5896	915
13	Acartia californiensis N		1422	2311	8844	1117	2233	3551	7259	5092	7302
27	Tortanus discaudatus F		44	0	0	0	0	0	0	0	0
100	Eurytemora affinis F		0	0	0	0	0	0	0	0	0
101	Eurytemora affinis M		0	0	0	0	0	0	0	0	0
102	Eurytemora affinis C		0	0	0	0	0	0	0	0	0
162	Pseudodiaptomus euryhalinus C		0	0	0	112	223	67	0	0	0
196	copepod nauplius A		0	0	44	0	0	0	0	0	0
197	copepod nauplius B		0	177	222	0	0	0	0	0	0
199	copepod nauplius		222	0	0	0	0	0	0	0	0
200	Cyclopoida		0	0	0	0	0	0	0	201	0
210	Oithona spp.		0	0	0	0	0	0	0	0	0
250	Harpacticoida		0	0	0	447	447	536	1117	603	134
270	Microsetella sp.		933	888	1466	0	0	0	0	0	0
300	Amphipoda		0	1	44	0	0	0	112	0	0
315	Cumacea		0	0	1	0	0	0	0	0	0
320	Isopoda		0	0	0	0	0	0	112	0	0
321	Isopoda imm.		0	0	0	0	0	0	0	0	0
340	Reptantia zoea		0	0	0	223	61	14	3	21	0
341	Reptantia mesalops		0	0	0	0	0	0	0	0	0
342	Majid zoea		13	13	0	0	0	0	0	0	0
345	Grapsid zoea		4	2	0	0	0	0	0	0	0
370	Natantia zoea		0	0	0	0	0	0	1	1	0
375	Caridean zoea		0	0	0	0	0	0	0	0	0
401	barnacle nauplius		0	0	88	0	0	0	0	0	67
402	barnacle cypris		0	1	0	10	4	0	447	67	22
420	Ostracoda		0	0	0	0	0	0	0	0	0
440	Cladocera		44	88	0	0	0	0	0	0	0
460	Malocarida		0	0	0	0	0	0	0	0	1
551	Endraulix mordax egg		0	9	1	7	4	3	3	0	1
560	fish larva		0	0	0	0	1	0	0	0	0

		Station		27		24		21		Page 47	
Depth		12	6	1	9	5	1	12	6	1	
Code	Name	Number per cubic meter									
570	Gobiidae larva	0	0	0	0	0	0	0	0	0	
602	Tintinnopsis sp. A	0	0	0	223	0	0	0	0	67	
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	536	
605	Eutintinnus neriticus	0	0	0	2345	1452	3216	670	0	45	
630	coiled Foraminifera	0	0	0	558	112	0	0	67	67	
681	flatworm sp. A	0	0	0	21	112	60	558	737	156	
682	flatworm sp. B	0	0	0	0	0	0	0	0	0	
701	Synchaeta sp.	0	0	533	0	0	201	335	134	246	
702	Synchaeta sp. egg	0	0	0	0	0	67	0	67	22	
801	Gastropod veliger	1	0	44	223	112	268	112	134	22	
821	Bivalvia veliger	1	88	0	5	335	335	670	2	134	
851	polychaete trochophore	0	0	1	2	0	134	0	0	45	
855	spionid larva	0	0	2000	558	782	201	558	402	223	
880	scaleworm larva	0	0	0	0	112	0	0	268	22	
899	pelagic polychaete	0	0	0	0	0	0	0	0	0	
		mg Carbon per cubic meter									
		7	9	14	19	15	8	9	11	3	

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 DATE JULIAN DATE LOCATION MESH SIZE
 111078 78284 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1518	19	15	14.4	30.6	2.3	0.8	1	1	lab
1527	19	7	14.7	30.7	2.3	0.7	1	1	lab
1533	19	1	15.0	30.7	2.3	0.7	1	1	lab

Station	19
Depth	7
	1

Code	Name	Number per cubic meter		
5	Acartia clausi F	201	0	0
6	Acartia clausi M	67	0	45
7	Acartia clausi C	1541	536	1072
8	Acartia clausi N	1575	1206	1742
10	Acartia californiensis F	268	0	0
11	Acartia californiensis M	67	0	0
12	Acartia californiensis C	1943	1340	625
13	Acartia californiensis N	1574	1206	1742
27	Tortanus discaudatus F	0	0	0
100	Eurytemora affinis F	0	0	0
101	Eurytemora affinis M	0	0	0
102	Eurytemora affinis C	1	0	0
162	Pseudodiaptomus euryhalinus C	0	0	0
196	copepod nauplius A	0	0	0
197	copepod nauplius B	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	134	0	0
210	Oithona spp.	0	0	0
250	Harpacticoida	1005	469	313
270	Microsetella sp.	0	0	0
300	Amphipoda	0	0	0
315	Cumacea	0	0	0
320	Isopoda	0	0	0
321	Isopoda imm.	0	0	0
340	Reptantia zoea	15	22	0
341	Reptantia mesalops	0	0	0
342	Majid zoea	0	0	0
345	Grapsid zoea	0	0	0
370	Natantia zoea	1	3	1
375	Caridean zoea	0	0	0
401	barnacle nauplius	402	0	134
402	barnacle cypris	0	0	0
420	Ostracoda	0	0	0
440	Cladocera	0	0	0
460	Malocarida	0	0	0
551	Engraulis mordax egg	3	0	0
560	fish larva	1	0	0
570	Gobiidae larva	0	0	0
602	Tintinnopsis sp. A	335	201	0
604	Tintinnid sp. C	0	0	0
605	Eutintinnus neriticus	134	134	0
630	coiled Foraminifera	268	0	134
681	flatworm sp. A	67	134	21

Code	Name	Station	19		Number per cubic meter
		Depth	7	1	
682	flatworm sp. B	0	0	0	
701	Synchaeta sp.	268	335	268	
702	Synchaeta sp. egg	0	67	0	
801	Gastropod veliger	201	134	89	
821	Bivalvia veliger	402	603	313	
851	polychaete trochophore	0	67	0	
855	spionid larva	536	268	223	
880	scaleworm larva	67	0	0	
899	pelagic polychaete	0	0	0	
		9	3	3	ms Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
81178 78312 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
908	36	4	16.6	28.5	3.2	1.0	1	-1	ship
914	36	2	16.5	28.3	3.2	1.0	1	-1	ship
920	36	1	16.5	28.0	2.6	1.0	1	-1	ship
1041	32	10	16.1	29.4	2.6	1.7	1	-1	lab
1047	32	5	16.1	29.5	2.5	1.3	1	-1	ship
1054	32	1	16.1	29.5	2.5	1.0	1	-1	ship
1129	30	11	16.0	30.1	2.1	1.3	1	-1	ship
1135	30	6	16.1	30.0	2.1	1.2	1	-1	ship
1142	30	1	16.2	29.9	2.8	1.0	1	-1	ship

	Station Depth	4	36 2	1	10	32 5	1	11	30 6	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	0	0	0	0	0	0	0	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	0	0
8	Acartia clausi N	0	0	0	0	0	0	0	0	0
10	Acartia californiensis F	600	1400	0	3667	1800	0	400	1000	0
11	Acartia californiensis M	800	200	200	3667	333	0	0	400	0
12	Acartia californiensis C	5600	7200	7400	10333	14533	6400	5600	9600	21000
13	Acartia californiensis N	10200	9000	9200	4333	5800	3600	400	1000	2200
27	Tortanus discaudatus F	0	0	0	0	0	0	0	0	0
60	Paracalanus parvus F	0	0	0	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0
102	Eurytemora affinis C	0	400	0	0	0	0	0	0	0
191	Epilabidocera lonsipedata M	0	0	0	0	0	0	0	0	0
196	copepod nauplius A	0	0	0	0	0	0	0	0	0
197	copepod nauplius B	200	0	0	0	133	2000	0	0	200
199	copepod nauplius	0	0	0	0	0	0	0	0	0
200	Cyclopoida	200	0	0	0	67	0	0	200	0
210	Oithona spp.	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	0	0	0	200	0
250	Haracticoida	0	0	0	333	0	200	200	0	800
280	Haracticoid sp.A	0	0	0	0	0	0	0	0	0
281	Haracticoid A N	0	0	0	0	0	0	0	200	0
321	Isopoda imm.	0	0	0	0	67	0	0	0	0
342	Majid zoea	0	0	0	0	0	0	0	0	0
360	Pinnotherid zoea	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	200	0	0	0
402	barnacle cypris	0	0	0	0	0	0	0	0	0
440	Cladocera	0	0	0	0	0	0	0	0	0
460	Halocarida	0	0	0	0	67	0	0	0	0
551	Endraulis mordax egg	0	0	0	0	0	0	0	0	0
560	fish larva	0	0	0	0	0	0	0	0	0
605	Eutimninus neriticus	0	0	0	0	0	0	0	0	0
630	coiled Foraminifera	0	0	0	0	133	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	0	0	0	0
691	Pilidium larva	0	0	0	0	0	0	0	0	0
701	Synchaeta sp.	0	0	0	0	0	600	0	0	0

Code	Name	Station	4	36	1	10	32	1	11	30	1
		Depth		2			5			6	
			Number per cubic meter								
801	Gastropod veliger		0	0	0	0	467	600	0	0	200
821	Bivalvia veliger		0	0	0	0	0	400	0	0	0
851	polychaete trochophore		0	0	0	0	0	400	0	0	1000
855	spionid larva		200	600	200	667	2133	800	600	400	600
899	pelagic polychaete		0	0	0	0	0	0	0	0	0
			mg Carbon per cubic meter								
			10	13	8	27	23	9	7	13	21

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DATE JULIAN DATE LOCATION MESH SIZE
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TIME	STATION	DEPTH m	TEMP C	SALIN g/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1234	27	7	16.1	30.4	2.1	1.3	1	-1	lab
1240	27	4	16.1	30.4	2.1	1.3	1	-1	ship
1146	27	1	16.1	30.4	1.9	1.2	1	-1	ship
1333	24	7	16.1	30.3	2.3	1.4	1	0	ship
1339	24	4	16.2	30.3	2.3	1.2	1	0	ship
1346	24	1	16.3	30.3	2.3	1.0	1	0	ship
1435	21	11	14.2	29.8	3.1	1.3	1	1	ship
1442	21	6	14.3	29.7	2.8	1.0	1	1	ship
1449	21	1	14.8	29.7	3.8	0.9	1	1	ship

Code	Name	Station Depth	7	27 4	1	7	24 4	1	11	21 6	1
5	Acartia clausi F		0	0	0	600	100	100	222	0	0
6	Acartia clausi M		0	0	0	400	100	0	0	200	0
7	Acartia clausi C		0	0	0	8000	5100	2400	7111	5600	2400
8	Acartia clausi N		0	0	0	100	100	1300	889	2600	37400
10	Acartia californiensis F		200	0	0	600	100	100	0	0	0
11	Acartia californiensis M		467	200	0	400	100	0	0	0	0
12	Acartia californiensis C		6267	7000	4200	5400	5100	2400	0	0	0
13	Acartia californiensis N		2733	1800	800	100	100	1300	0	0	0
27	Tortanus discaudatus F		1	0	0	0	0	0	0	0	0
60	Paracalanus parvus F		0	0	0	500	0	0	0	0	0
61	Paracalanus parvus M		67	0	0	100	0	0	0	0	0
62	Paracalanus parvus C		67	0	0	0	0	0	667	0	0
102	Eurytemora affinis C		0	0	0	0	0	0	0	200	0
191	Epilabidocera lonsipedata M		0	0	0	0	0	0	0	0	0
196	copepod nauplius A		0	0	0	0	0	0	0	0	600
197	copepod nauplius B		2267	2200	1400	0	0	0	0	0	200
199	copepod nauplius		0	0	0	0	0	0	0	0	0
200	Cyclopoida		0	0	0	0	0	0	0	0	0
210	Oithona spp.		0	0	0	0	0	0	0	200	0
220	Corycaeus sp.		1	0	0	0	0	0	0	0	0
250	Haracticoida		1867	1800	1400	400	400	1200	444	1400	200
280	Haracticoid sp. A		0	0	0	0	0	0	0	0	0
281	Haracticoid A N		0	0	0	0	0	0	0	0	0
321	Isopoda imm.		133	0	0	0	0	0	0	0	0
342	Majid zoea		14	0	0	0	0	0	0	0	0
360	Pinnotherid zoea		0	0	0	0	0	0	0	0	0
401	barnacle nauplius		0	0	400	0	0	0	0	0	1200
402	barnacle cypris		4	0	0	0	0	0	889	200	200
440	Cladocera		0	200	0	0	0	0	0	0	0
460	Halocarida		0	0	0	0	0	0	0	0	0
551	Endraulis mordax egg		1	0	0	0	0	0	0	0	0
560	fish larva		1	0	0	0	0	0	0	0	0
605	Eutimninus neriticus		933	0	0	0	0	0	0	0	0
630	coiled Foraminifera		0	200	0	0	0	0	0	0	0
681	flatworm sp. A		0	200	0	200	200	0	0	0	0
691	Pilidium larva		0	0	0	0	0	0	0	200	0
701	Synchaeta sp.		200	400	200	0	0	0	0	0	2000

Code	Name	Station	7	27	1	7	24	1	11	21	1
		Depth		4			4			6	
						Number per cubic meter					
801	Gastropod veliger		0	0	0	200	0	0	0	0	0
821	Bivalvia veliger		0	200	0	0	0	0	0	0	200
851	polychaete trochophore		0	0	0	0	0	0	0	0	0
855	spionid larva		600	1600	800	200	0	600	222	1200	400
899	pelagic polychaete		0	0	0	0	0	0	0	0	0
						ms Carbon per cubic meter					
			11	13	8	18	10	7	10	10	9

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 DATE JULIAN DATE LOCATION MESH SIZE
 81178 78312 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1539	19	15	12.8	31.7	3.5	1.0	0	1	ship
1545	19	8	12.8	31.7	3.5	0.9	0	1	ship
1551	19	1	12.8	31.7	3.0	0.9	0	1	ship

Station	Depth	15	19	8	1
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Code	Name	Number per cubic meter		
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5	Acartia clausi F	2600	1400	200
6	Acartia clausi M	600	200	0
7	Acartia clausi C	2400	2600	1800
8	Acartia clausi N	200	0	200
10	Acartia californiensis F	0	0	0
11	Acartia californiensis M	0	0	0
12	Acartia californiensis C	0	0	0
13	Acartia californiensis N	0	0	0
27	Tortanus discaudatus F	0	0	0
60	Paracalanus parvus F	200	300	200
61	Paracalanus parvus M	0	300	200
62	Paracalanus parvus C	0	400	400
102	Eurytemora affinis C	200	0	800
191	Epilabidocera longipedata M	2	0	0
196	copepod nauplius A	0	0	0
197	copepod nauplius B	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
210	Oithona spp.	0	400	0
220	Corycaeus sp.	0	0	0
250	Harpacticoida	200	400	600
280	Harpacticoid sp. A	200	200	0
281	Harpacticoid A N	0	200	400
321	Isopoda imm.	0	0	0
342	Majid zoea	0	0	0
360	Pinnotherid zoea	0	1	0
401	barnacle nauplius	0	200	0
402	barnacle cypris	0	0	0
440	Cladocera	0	0	0
460	Halocarida	0	0	0
551	Ensaurelia mordax egg	0	0	0
560	fish larva	0	0	0
605	Eutimninus neriticus	0	0	0
630	coiled Foraminifera	0	200	0
681	flatworm sp. A	0	0	0
691	Pilidium larva	0	200	0
701	Synchaeta sp.	0	0	0
801	Gastropod veliger	0	0	0
821	Bivalvia veliger	200	400	0
851	polychaete trochophore	0	0	0
855	spionid larva	0	200	600
899	pelagic polychaete	200	0	0

mg Carbon per cubic meter

12	10	6
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DATE	JULIAN DATE	LOCATION	MESH SIZE
51278	78339	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
915	36	4	11.6	26.5	-	-	1	-1	lab
922	36	2	11.6	26.5	-	-	2	-1	lab
1015	32	10	11.9	28.7	-	-	2	-1	lab

	Station Depth	4	36	2	32 10
Code	Name	Number per cubic meter			
5	Acartia clausi F	0	543		440
6	Acartia clausi M	1666	0		286
7	Acartia clausi C	184	400		535
8	Acartia clausi N	300	56		16
10	Acartia californiensis F	83	4613		2091
11	Acartia californiensis M	517	978		714
12	Acartia californiensis C	1149	2000		4000
13	Acartia californiensis N	100	300		50
27	Tortanus discaudatus F	1	0		2
102	Eurytemora affinis C	0	0		66
160	Pseudodiaptomus euryhalinus F	3	267		0
161	Pseudodiaptomus euryhalinus M	2	89		0
162	Pseudodiaptomus euryhalinus C	200	89		0
191	Epilabidocera lonsipedata M	0	0		1
192	Epilabidocera lonsipedata C	0	0		4
199	copepod nauplius	133	89		66
200	Cyclopoida	67	0		66
250	Haracticoida	0	89		198
270	Microsetella sp.	1	0		0
300	Amphipoda	1	0		2
309	Corophium	0	2		0
320	Isopoda	2	0		0
332	Neomysis mercedis	2	0		0
401	barnacle nauplius	0	89		0
402	barnacle cypris	0	0		1
420	Ostracoda	2	1		0
559	other fish egg	0	0		4
630	coiled Foraminifera	0	0		66
855	spionid larva	0	1		1
		5	21		
				ms Carbon per cubic meter	13

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DATE	JULIAN DATE	LOCATION	MESH SIZE
141278	78348	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
858	36	5	9.0	27.6	4.8	2.2	-	1	ship
905	36	3	8.9	27.6	4.6	2.2	-	1	ship
911	36	1	8.7	27.6	4.8	2.2	-	1	ship
1012	32	10	9.6	29.4	4.2	2.4	-	1	ship
1019	32	5	9.5	29.4	3.5	1.9	-	1	ship
1025	32	1	9.6	29.3	3.4	1.7	-	1	ship
1113	30	12	9.8	29.8	3.0	1.7	-	1	ship
1119	30	6	9.8	29.8	2.7	2.0	-	1	ship
1125	30	1	9.9	29.8	2.5	2.2	-	1	ship

	Station	36			32			30	
	Depth	5	3	1	10	5	1	12	6
Code	Name	Number per cubic meter							
5	Acartia clausi F	1167	1333	1600	1600	1800	133	800	800
6	Acartia clausi M	1333	1333	400	1000	800	400	268	800
7	Acartia clausi C	833	833	1600	2600	5800	4933	3200	5800
8	Acartia clausi N	0	333	200	400	800	2800	0	600
60	Paracalanus parvus F	0	0	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0
63	Paracalanus parvus N	0	0	0	0	0	0	0	0
102	Eurytemora affinis C	167	0	0	0	0	0	0	200
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0	200
200	Cyclopoida	0	0	0	0	200	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	200	0	0	0
250	Harpacticoida	0	0	0	0	200	0	267	200
281	Harpacticoid A N	0	0	0	0	0	0	0	0
355	Cancer zoea	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	0	0	0
691	Pilidium larva	0	0	0	0	0	0	0	0
701	Synchaeta sp.	333	0	0	0	0	0	0	0
705	Keratella sp.	0	0	0	200	200	0	0	0
801	Gastropod veliger	0	0	0	0	0	0	0	0
851	polychaete trochophore	0	0	0	0	0	0	0	200
855	spionid larva	0	0	0	0	0	267	0	200
		mg Carbon per cubic meter							
		6	6	6	8	12	6	5	12

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DATE JULIAN DATE LOCATION MESH SIZE
141278 78348 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1234	27	11	9.7	29.9	1.7	1.7	-	1	ship
1240	27	5	9.8	29.9	1.7	1.6	-	1	ship
1246	27	1	9.8	30.0	1.9	1.6	-	1	ship
1331	24	10	10.3	29.4	1.7	1.9	-	0	ship
1337	24	5	10.3	29.5	1.2	1.6	-	0	ship
1343	24	1	10.8	29.6	1.3	1.5	-	0	ship
1435	21	9	10.3	30.1	1.6	1.7	-	-1	ship
1443	21	4	10.3	29.8	1.5	1.6	-	-1	ship
1450	21	1	10.3	29.8	1.2	1.6	-	-1	ship

	Station Depth	11	27 5	1	10	24 5	1	9	21 4	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	533	800	533	3600	1868	267	4600	2933	0
6	Acartia clausi M	533	600	533	1600	1868	0	400	1067	0
7	Acartia clausi C	5600	13800	12533	6600	10667	2400	5000	2933	533
8	Acartia clausi N	533	14000	30667	0	0	7733	0	0	267
60	Paracalanus parvus F	0	0	0	200	267	267	400	2400	0
61	Paracalanus parvus M	0	0	0	0	0	0	600	0	267
62	Paracalanus parvus C	0	0	0	0	0	0	400	0	0
63	Paracalanus parvus N	0	0	0	0	0	0	0	0	267
102	Eurytemora affinis C	0	0	0	0	0	0	0	0	0
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0	0	0
200	Cyclopoids	0	0	0	0	0	0	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	0	0	0	0	0
250	Harpacticoids	268	600	267	0	0	267	600	533	1067
281	Harpacticoid A N	0	0	0	0	0	0	0	0	0
355	Cancer zoea	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	0	0	0	0
691	Pilidium larva	0	0	0	0	0	0	0	267	0
701	Synchaeta sp.	0	0	0	0	0	0	0	0	0
705	Keratella sp.	0	0	0	0	0	0	0	0	0
801	Gastropod veliger	0	0	0	0	0	0	0	0	0
851	polychaete trochophore	0	400	267	0	0	0	0	0	0
855	spionid larva	0	200	0	0	0	0	0	0	0
	ms Carbon per cubic meter	7	17	16	18	17	4	21	19	2

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 DATE JULIAN DATE LOCATION MESH SIZE
 141278 78348 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1530	19	14	10.4	31.2	1.5	1.5	-	-1	ship
1538	19	7	10.4	31.2	1.4	2.1	-	-1	ship

Station	19
Depth	
14	7

Code	Name	Number per cubic meter
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5	Acartia clausi F	400	0
6	Acartia clausi M	800	0
7	Acartia clausi C	1400	1000
8	Acartia clausi N	200	1500
60	Paracalanus parvus F	400	1000
61	Paracalanus parvus M	200	0
62	Paracalanus parvus C	200	0
63	Paracalanus parvus N	200	0
102	Eurytemora affinis C	0	0
192	Epilabidocera lonsipedata C	0	0
200	Cyclopoida	0	0
210	Oithona spp.	400	0
220	Corycaeus sp.	0	0
250	Harpacticoida	200	2500
281	Harpacticoid A N	0	0
355	Cancer zoea	200	0
401	barnacle nauplius	0	0
681	flatworm sp. A	200	0
691	Pilidium larva	0	0
701	Synchaeta sp.	0	0
705	Keratella sp.	0	0
801	Gastropod veliger	200	0
851	polychaete trochophore	0	0
855	spionid larva	0	0

mg Carbon per cubic meter

6	6
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DATE	JULIAN DATE	LOCATION	MESH SIZE
150179	79015	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
907	36	4	9.9	26.4	2.1	1.2	2	1	ship
914	36	2	10.0	24.6	2.4	1.2	2	1	ship
919	36	1	10.1	23.3	2.6	2.4	2	1	ship
1006	32	10	9.6	28.4	2.2	1.5	2	1	ship
1011	32	5	9.6	28.2	1.8	1.3	2	1	lab
1018	32	1	9.8	26.3	1.9	1.2	2	1	ship
1057	30	11	9.4	28.8	1.7	1.2	2	1	ship
1103	30	6	9.4	28.8	1.5	2.0	2	1	ship
1110	30	1	9.5	28.6	1.2	1.7	2	1	ship

	Station	4	36	1	10	32	1	11	30	1
	Depth		2			5			6	
Code	Name	Number per cubic meter								
5	Acartia clausi F	1333	133	133	533	844	0	533	267	0
6	Acartia clausi M	400	0	0	0	2444	133	0	1867	0
7	Acartia clausi C	4133	6400	2667	3467	2756	5200	12000	8800	12500
8	Acartia clausi N	1467	12266	11200	267	356	8000	533	800	9500
10	Acartia californiensis F	0	0	0	0	0	0	0	0	0
27	Tortanus discaudatus F	0	0	0	0	2	0	0	0	0
28	Tortanus discaudatus M	0	0	0	0	1	0	0	0	0
30	Calanus pacificus F	0	0	0	0	1	0	0	0	0
60	Paracalanus parvus F	0	0	0	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0
102	Eurytemora affinis C	0	0	0	0	44	0	0	0	0
192	Epilabidocera lonsipedata C	0	0	0	0	4	0	0	1	0
199	copepod nauplius	0	0	0	0	0	133	0	0	0
200	Cyclopoida	0	0	0	0	0	0	0	0	0
250	Harpacticoida	0	0	0	0	1	0	0	0	0
300	Amphipoda	0	0	0	0	0	0	0	0	0
321	Isofoda imm.	0	0	0	0	0	0	0	0	0
325	Synidotea laticauda imm.	0	0	0	0	1	0	0	0	0
335	Acanthomysis	0	0	0	0	0	1	0	0	0
342	Majid zoea	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	133	0	0	0
630	coiled Foraminifera	0	0	0	0	0	133	0	0	0
666	Polysorchis sp.	0	0	0	0	0	0	1	0	1
701	Synchaeta sp.	0	4400	3200	533	0	133	0	0	0
801	Gastropod veliger	0	0	0	0	44	0	0	0	0
821	Bivalvia veliger	0	0	0	0	0	0	0	0	0
851	polychaete trochophore	0	0	0	0	0	0	0	0	0
855	spionid larva	0	0	0	0	0	133	267	267	167
899	pelagic polychaete	0	0	0	0	0	0	0	0	0
		8	7	4	4	8	6	12	11	11
					mg Carbon per cubic meter					

DATE	JULIAN DATE	LOCATION	MESH SIZE
150179	79015	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1210	27	10	9.5	28.7	2.3	1.2	2	0	ship
1215	27	5	9.4	28.7	2.1	1.2	2	0	ship
1222	27	1	9.9	27.3	2.2	1.1	2	0	lab
1320	24	9	10.0	28.7	1.2	1.2	2	-1	ship
1326	24	4	10.0	28.6	1.2	1.2	2	-1	ship
1331	24	1	10.0	28.6	1.4	1.1	2	-1	ship
1416	21	9	10.5	30.1	1.0	1.2	2	-1	ship
1422	21	4	10.4	29.9	1.0	1.1	2	-1	ship
1428	21	1	10.1	28.2	1.5	1.2	2	-1	ship

	Station	27	24	21						
	Depth	10	5	1	9	4	1	9	4	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	2200	952	444	1000	1000	600	1200	400	400
6	Acartia clausi M	1400	634	1222	0	400	0	0	400	133
7	Acartia clausi C	16000	6349	55778	3400	6800	6000	1800	1000	400
8	Acartia clausi N	600	952	122167	400	2400	12400	200	200	133
10	Acartia californiensis F	0	0	10	0	0	0	0	0	0
27	Tortanus discaudatus F	0	0	1	0	0	0	0	0	0
28	Tortanus discaudatus M	0	0	0	0	0	0	0	0	0
30	Calanus pacificus F	1	0	0	0	0	0	0	0	0
60	Paracalanus parvus F	0	0	1	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	2	0	0	0	0	0	0
62	Paracalanus parvus C	0	159	0	0	0	0	200	0	0
102	Eurytemora affinis C	0	0	0	0	0	0	0	0	0
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0	0	0
199	copepod nauplius	0	0	556	0	0	0	0	0	0
200	Cyclopoida	0	0	0	200	0	0	0	0	267
250	Harpacticoida	111	0	0	0	0	0	0	0	0
300	Amphipoda	1	0	0	0	0	0	0	0	0
321	Isopoda imm.	0	1	0	0	0	0	200	0	0
325	Synidotea laticauda imm.	0	0	0	0	0	0	0	0	0
335	Acanthomysis	0	0	0	0	0	0	0	0	0
342	Majid zoea	2	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	0	0	0	133
630	coiled Foraminifera	0	0	0	0	0	0	0	0	0
666	Polysorchis sp.	4	0	0	0	0	0	0	1	0
701	Synchaeta sp.	333	0	0	0	0	0	0	0	0
801	Gastropod veliger	0	0	0	0	0	0	0	0	133
821	Rivalvia veliger	0	0	0	0	200	0	400	200	0
851	polychaete trochophore	0	0	11	0	0	0	0	0	0
855	spionid larva	600	0	444	0	0	0	0	0	133
899	pelagic polychaete	0	0	0	0	0	0	0	0	0
					mg Carbon per cubic meter					
		23	9	61	6	9	8	5	3	3

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 DATE JULIAN DATE LOCATION MESH SIZE
 10279 79032 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
910	32	9	8.0	25.0	3.1	2.0	2	-1	ship
917	32	5	8.0	25.0	3.1	2.0	2	-1	ship
923	32	1	7.8	24.9	3.1	2.0	2	-1	ship
1000	30	9	8.0	25.0	3.2	2.0	4	-1	ship
1007	30	5	8.0	25.0	3.2	2.0	3	-1	ship
1013	30	1	8.1	25.2	3.2	2.0	2	-1	ship
1102	27	8	8.0	25.0	1.9	2.0	2	1	ship
1109	27	4	8.0	25.0	1.9	2.0	2	1	ship
1115	27	1	8.5	25.4	1.9	2.0	2	1	ship

	Station Depth	9	32 5	1	9	30 5	1	8	27 4	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	1500	2500	200	400	1300	1000	1000	833	0
6	Acartia clausi M	500	3000	600	200	867	167	833	1500	0
7	Acartia clausi C	11500	14000	3600	1400	8233	11833	9167	12000	15600
8	Acartia clausi N	1833	3667	1800	0	2817	5333	1000	1833	10000
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0	0	0
199	copepod nauplius	0	0	0	0	0	167	0	0	0
250	Harpacticoida	0	0	0	0	0	0	0	167	0
321	Isopoda imm.	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	167	0	0	0	0	0	0	0	0
440	Cladocera	167	0	0	0	0	0	0	0	0
630	coiled Foraminifera	0	0	0	0	217	0	0	0	0
660	Hydrozoa	1	0	0	0	0	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	0	0	0	0
701	Synchaeta sp.	0	0	0	0	0	0	0	0	200
851	polychaete trochophore	0	0	0	0	0	0	0	0	0
855	spionid larva	0	0	200	0	0	0	0	167	200
899	pelagic polychaete	0	0	0	0	217	0	0	0	0
	ms Carbon per cubic meter	15	23	5	3	13	13	11	15	14

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 DATE JULIAN DATE LOCATION MESH SIZE
 10279 79032 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1202	24	8	8.0	25.0	1.8	2.0	2	1	ship
1208	24	4	8.0	25.0	1.8	2.0	2	1	ship
1214	24	1	9.9	25.8	1.8	2.0	3	1	ship

Station	Depth
24	8
4	1

Code	Name	Number per cubic meter
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5	Acartia clausi F	833	1400	600
6	Acartia clausi M	333	600	0
7	Acartia clausi C	4500	7000	9000
8	Acartia clausi N	167	400	15000
61	Paracalanus parvus M	0	200	0
192	Epilabidocera lonsipedata C	0	0	200
199	copepod nauplius	0	0	0
250	Haracticoida	0	0	0
321	Isopoda imm.	0	200	0
401	barnacle nauplius	0	0	0
440	Cladocera	0	0	0
630	coiled Foraminifera	0	0	0
660	Hydrozoa	0	0	0
681	flatworm sp. A	0	200	0
701	Synchaeta sp.	0	0	0
851	polychaete trochophore	0	0	200
855	spionid larva	0	0	0
899	pelagic polychaete	0	0	0

mg Carbon per cubic meter

6	11	13
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	Station	36			32			30	
	Depth	4	2	1	9	5	1	12	6
Code	Name								
					Number per cubic meter				
5	Acartia clausi F	1500	1600	1200	2200	3500	2000	2800	2600
6	Acartia clausi M	1800	1200	1600	1000	1867	1000	2800	2000
7	Acartia clausi C	3000	1600	2200	3000	4200	3200	3800	2200
8	Acartia clausi N	600	400	4800	2000	3967	2200	200	800
36	Calanus tenuicornis C	0	0	0	0	0	0	0	0
60	Paracalanus parvus F	0	0	0	0	0	200	0	0
61	Paracalanus parvus H	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0
195	Copepod nauplius D	0	0	0	0	0	0	0	0
196	Copepod nauplius A	0	0	0	0	0	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0	0
250	Harpacticoida	0	200	0	0	0	0	0	0
321	Isopoda imm.	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	233	0	200	0
603	Tintinnopsis sp. B	0	0	0	0	0	0	0	0
630	coiled Foraminifera	0	0	0	0	0	0	0	200
691	Pilidium larva	0	0	0	0	0	0	0	400
801	Gastropod veliger	0	0	0	0	0	0	0	0
851	polychaete trochophore	0	0	0	0	0	200	0	0
855	spionid larva	0	0	0	0	0	0	0	400
899	pelagic polychaete	0	0	0	0	0	0	0	0
					mg Carbon per cubic meter				
		9	8	8	10	16	10	15	13

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 DATE JULIAN DATE LOCATION MESH SIZE
 130279 79044 South S.F. Bay 80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1206	27	10	10.0	25.7	2.5	3.3	0	0	ship
1212	27	5	10.0	25.6	1.5	1.8	0	0	ship
1218	27	1	10.0	25.6	1.5	1.8	0	0	ship
1324	24	9	10.9	27.6	1.2	1.3	0	-1	ship
1330	24	5	10.9	27.5	1.1	1.1	0	-1	ship
1336	24	1	10.9	26.9	2.3	0.8	0	-1	ship
1449	21	10	10.9	29.0	1.2	1.5	0	-1	ship
1455	21	5	11.0	27.9	1.4	1.0	0	-1	ship
1500	21	1	11.0	27.8	1.8	0.9	0	-1	ship

		Station Depth	10	27 5	1	9	24 5	1	10	21 5	1
Code	Name		Number per cubic meter								
5	Acartia clausi F	3800	1600	3000	4400	1600	267	3800	8533	800	
6	Acartia clausi M	1400	1800	600	2600	1000	1067	0	800	0	
7	Acartia clausi C	8000	4200	3800	12000	10000	8800	2800	2933	1800	
8	Acartia clausi N	0	800	600	400	600	14400	200	0	1800	
36	Calanus tenuicornis C	0	0	0	0	0	0	0	267	0	
60	Paracalanus parvus F	200	0	0	200	0	262	800	267	0	
61	Paracalanus parvus M	0	0	0	0	0	0	200	267	0	
62	Paracalanus parvus C	0	0	0	0	0	0	1400	533	200	
195	copepod nauplius D	0	0	0	200	0	0	0	267	0	
196	copepod nauplius A	0	0	0	0	0	0	0	0	600	
210	Oithona spp.	0	0	0	0	0	0	0	0	200	
250	Harpacticoids	0	0	200	0	0	267	1200	267	200	
321	Isopoda imm.	200	0	0	0	0	0	0	0	200	
401	barnacle nauplius	0	0	0	0	0	267	600	533	600	
603	Tintinnopsis sp. B	0	400	0	0	0	0	0	0	0	
630	coiled Foraminifera	0	0	0	0	0	0	0	0	0	
691	Pilidium larva	0	0	0	200	0	0	0	0	0	
801	Gastropod veliger	0	1	0	0	0	0	0	0	0	
851	polychaete trochophore	0	0	0	0	0	0	0	0	0	
855	spionid larva	0	0	600	0	200	1333	200	267	200	
899	pelagic polychaete	0	0	0	0	0	1	0	267	0	
			mg Carbon per cubic meter								
			19	10	14	26	14	15	19	33	6

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DATE	JULIAN DATE	LOCATION	MESH SIZE
280279	79059	South S.F. Bay	80

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1030	32	9	12.8	22.2	8.0	2.0	3	0	ship
1035	32	5	12.8	22.2	8.0	2.0	2	0	ship
1041	32	1	12.8	22.2	8.0	2.0	1	0	ship

Station	32
Depth	9 5 1

Code	Name	Number per cubic meter
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5	Acartia clausi F	1060	1230	573
6	Acartia clausi M	2120	1640	0
7	Acartia clausi C	4593	8610	7453
8	Acartia clausi N	3180	5740	18633
250	Harpacticoida	707	410	287
401	barnacle nauplius	353	0	0
630	coiled Foraminifera	353	0	0
855	spionid larva	0	0	573

ms Carbon per cubic meter

11	14	11
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DATE JULIAN DATE LOCATION MESH SIZE
50379 79064 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
901	36	3	11.9	20.0	2.5	2.3	-	-1	ship
910	36	1	12.1	19.6	3.0	2.3	-	-1	ship
956	32	7	11.8	21.4	2.6	2.5	-	-1	ship
1002	32	3	11.8	21.3	2.5	2.0	-	-1	ship
1009	32	1	11.7	21.1	2.3	1.7	-	-1	ship
1059	30	7	11.8	22.8	2.3	2.1	-	-1	ship
1106	30	3	12.2	22.6	2.2	1.9	-	-1	ship
1112	30	1	12.3	22.6	1.8	1.7	-	-1	ship

Code	Name	Station Depth	36 3	1 1	7 7	32 3	1 1	7 7	30 3	1 1
5	Acartia clausi F		3000	400	1400	800	2500	1050	3600	1400
6	Acartia clausi M		2600	0	600	400	500	450	1000	200
7	Acartia clausi C		5000	1200	3600	3600	9666	7500	9000	3800
8	Acartia clausi N		1600	13800	12200	11200	17833	9900	67000	60000
36	Calanus tenuicornis C		0	0	0	0	0	0	0	0
60	Paracalanus parvus F		0	0	0	0	0	0	0	0
61	Paracalanus parvus M		0	0	0	0	0	0	0	0
62	Paracalanus parvus C		0	0	0	0	0	0	0	0
63	Paracalanus parvus N		0	0	0	0	0	0	0	0
102	Eurytemora affinis C		600	0	0	0	0	0	0	0
199	Copepod nauplius		0	0	200	0	166	0	0	0
200	Cyclopoida		0	0	0	0	0	0	0	0
220	Corycaeus sp.		0	0	0	0	0	0	0	0
250	Harpacticoida		0	0	0	0	166	0	0	0
260	Sapphirina spp.		0	0	0	0	0	0	0	0
321	Isopoda imm.		200	0	0	0	0	0	0	0
360	Pinnotherid zoea		0	0	0	0	0	0	0	0
370	Natantia zoea		0	0	0	0	0	0	0	0
401	barnacle nauplius		0	1200	0	0	333	150	200	1000
402	barnacle cypris		0	0	0	400	0	0	0	200
521	Sagitta spp.		0	0	0	0	0	0	0	0
602	Tintinnopsis sp. A		0	0	600	600	500	300	0	0
603	Tintinnopsis sp. B		0	0	0	0	0	0	0	0
605	Eutintinnus neriticus		0	0	0	0	0	60000	43333	1000
630	coiled Foraminifera		0	0	0	0	0	0	0	0
700	Rotifera		0	0	0	0	0	0	200	400
740	Nematoda		0	0	0	0	0	0	0	0
801	Gastropod veliger		0	0	0	400	166	0	0	0
821	Bivalvia veliger		0	0	0	0	0	0	0	0
851	polychaete trochophore		0	0	0	0	0	0	0	0
855	spionid larva		200	0	200	400	0	0	600	0
880	scaeworm larva		0	0	0	0	500	0	0	0
899	pelagic polychaete		0	0	0	0	166	0	0	0
			17	5	9	9	20	12	28	15

mg Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
50379 79064 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1211	27	10	11.8	22.7	2.5	1.7	-	-1	ship
1220	27	5	11.8	22.7	2.4	1.6	-	-1	ship
1228	27	1	12.7	22.0	3.0	1.0	-	-1	ship
1321	24	7	11.7	21.4	2.0	1.2	-	1	ship
1329	24	3	11.7	20.4	2.7	1.2	-	1	ship
1337	24	1	11.7	19.1	3.3	1.2	-	1	ship
1431	21	12	11.5	20.8	1.9	1.3	-	1	ship
1439	21	6	11.7	19.2	2.1	1.3	-	1	ship
1445	21	1	12.5	16.6	2.6	1.3	-	1	ship

		Station Depth	10	27 5	1	7	24 3	1	12	21 6	1
Code	Name	Number per cubic meter									
5	Acartia clausi F	333	1600	1666	183	4000	650	400	6400	826	
6	Acartia clausi M	2333	400	2333	0	800	0	3800	2133	206	
7	Acartia clausi C	6000	18000	40666	3483	9400	7150	2200	24266	413	
8	Acartia clausi N	3666	12800	130666	2750	2000	12566	800	6933	20666	
36	Calanus tenuicornis C	0	0	0	0	0	0	0	0	0	
60	Paracalanus parvus F	0	0	0	0	0	0	0	0	0	
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0	
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0	
63	Paracalanus parvus N	0	0	0	0	0	0	0	0	0	
102	Eurytemora affinis C	0	0	0	0	0	0	0	0	0	
199	copepod nauplius	0	0	0	0	0	0	0	0	0	
200	Cyclopoida	0	0	0	183	0	0	0	0	0	
220	Corycaeus sp.	0	0	0	0	0	0	0	0	0	
250	Harpacticoida	0	400	0	0	200	0	0	266	0	
260	Sapphirina spp.	0	0	0	0	0	0	200	0	0	
321	Isopoda imm.	0	0	0	0	0	0	0	0	0	
360	Pinnotherid zoea	0	0	0	0	200	0	0	0	0	
370	Matantia zoea	0	0	0	0	0	0	1	0	0	
401	barnacle nauplius	0	400	1000	0	0	0	0	800	826	
402	barnacle cypris	0	0	0	0	0	0	0	0	0	
521	Sasitta spp.	0	0	0	0	0	0	0	0	0	
602	Tintinnopsis sp. A	0	1600	0	0	200	0	0	0	0	
603	Tintinnopsis sp. B	29000	40800	0	32083	35000	65000	17400	266	21080	
605	Eutintinnus neriticus	1050000	1400000	56667	1000000	1000000	500	60000	40000	500	
630	coiled Foraminifera	0	0	0	0	200	0	0	0	0	
700	Rotifera	0	400	0	0	0	0	0	0	0	
740	Nematoda	0	0	0	0	0	0	0	0	0	
801	Gastropod veliger	0	0	333	183	0	0	0	0	0	
821	Bivalvia veliger	333	400	0	0	200	0	200	266	206	
851	polychaete trochophore	333	0	0	0	0	0	0	0	0	
855	spionid larva	1333	4800	1000	550	200	433	200	800	0	
880	scaeworm larva	0	0	0	0	0	0	0	0	0	
899	pelagic polychaete	0	0	0	183	0	0	400	0	0	
		mg Carbon per cubic meter									
		34	61	59	26	41	10	12	45	6	

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 DATE JULIAN DATE LOCATION MESH SIZE
 50379 79064 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1547	19	14	11.4	27.0	1.4	1.2	-	1	ship
1555	19	7	11.4	27.0	1.4	1.2	-	1	ship
1601	19	1	11.6	26.0	1.8	1.2	-	1	ship

Station	19
Depth	14 7 1

Code	Name	Number per cubic meter
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5	Acartia clausi F	2784	3466	533
6	Acartia clausi M	1012	1066	0
7	Acartia clausi C	1265	1600	1333
8	Acartia clausi N	1772	800	1066
36	Calanus tenuicornis C	0	266	266
60	Paracalanus parvus F	759	533	533
61	Paracalanus parvus M	0	266	0
62	Paracalanus parvus C	2784	1333	1333
63	Paracalanus parvus N	253	0	266
102	Eurytemora affinis C	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
220	Corycaeus sp.	253	0	0
250	Harpacticoida	506	800	0
260	Sapphirina spp.	0	0	0
321	Isopoda imm.	0	0	0
360	Pinnotherid zoea	0	0	0
370	Natantia zoea	0	0	0
401	barnacle nauplius	0	0	0
402	barnacle cypris	0	0	266
521	Saditta spp.	0	0	266
602	Tintinnopsis sp. A	0	0	0
603	Tintinnopsis sp. B	4810	3466	4000
605	Eutintinnus neriticus	70000	66667	70000
630	coiled Foraminifera	0	0	0
700	Rotifera	0	0	0
740	Nematoda	0	0	266
801	Gastropod veliger	0	0	0
821	Bivalvia veliger	506	1066	266
851	polychaete trochophore	0	266	0
855	spionid larva	1012	0	266
880	scaeworm larva	0	0	0
899	pelagic polychaete	0	0	0

mg Carbon per cubic meter

19	19	11
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DATE	JULIAN DATE	LOCATION	MESH SIZE
90379	79068	South S.F.Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1002	32	12	13.6	21.2	10.2	1.3	0	-1	ship
1008	32	6	13.5	21.1	10.2	1.3	0	-1	ship
1014	32	1	13.5	21.1	10.2	1.3	0	-1	ship
1104	30	10	13.2	20.8	8.8	1.2	0	-1	ship
1110	30	5	13.2	20.8	8.8	1.2	0	-1	ship
1116	30	1	13.3	20.6	8.8	1.2	0	-1	ship
1210	27	10	12.8	20.7	4.4	1.2	0	-1	ship
1223	27	5	12.8	20.7	4.4	1.2	0	-1	ship
1234	27	1	12.8	20.3	4.4	1.2	0	-1	lab

Station Depth	12	32 6	1	10	30 5	1	10	27 5	1	
Code	Name	Number per cubic meter								
5	Acartia clausi F	0	2000	1667	2667	0	1000	3333	667	4000
6	Acartia clausi M	533	333	0	1333	667	667	0	667	2667
7	Acartia clausi C	1600	8000	19667	2000	6667	70333	4000	3333	33667
8	Acartia clausi N	11733	48333	112022	3000	30000	133333	333	2333	51000
60	Paracalanus parvus F	0	0	0	0	0	0	0	0	1333
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	1333
220	Corycaeus sp.	0	0	0	0	0	0	0	0	0
250	Harpacticoida	267	667	0	0	0	2667	0	667	2667
401	barnacle nauplius	0	667	333	0	333	2667	333	0	1333
402	barnacle cypris	0	333	0	0	0	0	0	0	0
602	Tintinnopsis sp. A	800	4667	1667	2000	2667	2000	333	1667	1333
603	Tintinnopsis sp. B	109333	71667	100000	53333	50000	233333	83333	158333	241000
605	Eutintinnus neriticus	500000	700000	1200000	600000	1100000	1566670	700000	2000000	4000000
701	Synchaeta sp.	0	667	667	0	0	0	0	0	667
771	Sipunculid pelasosphaera	0	0	0	0	333	333	0	0	0
821	Rivalvia veliger	0	0	667	333	0	0	0	667	1333
851	polychaete trochophore	0	0	0	0	667	1000	0	0	0
855	spionid larva	267	6333	1667	333	4333	16000	0	2667	8667
880	scaevorn larvae	267	333	667	0	0	0	0	0	1333
		mg Carbon per cubic meter								
		16	50	62	24	44	153	28	54	161

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DATE	JULIAN DATE	LOCATION	MESH SIZE
90379	79068	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1318	24	7	12.3	21.4	2.0	1.5	0	-1	ship
1324	24	3	12.4	21.3	2.0	1.5	1	-1	ship
1330	24	1	12.5	21.1	2.0	1.5	0	-1	ship

Station	24
Depth	7 3 1

Code	Name	Number per cubic meter		
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5	Acartia clausi F	667	1667	333
6	Acartia clausi M	667	1333	667
7	Acartia clausi C	3333	4333	1667
8	Acartia clausi N	1000	1000	0
60	Paracalanus parvus F	0	0	0
61	Paracalanus parvus M	0	0	333
62	Paracalanus parvus C	0	0	0
220	Corycaeus sp.	333	0	0
250	Harpacticoida	0	0	0
401	barnacle nauplius	0	0	667
402	barnacle cypris	0	0	0
602	Tintinnopsis sp. A	333	1000	0
603	Tintinnopsis sp. B	10000	41667	41667
605	Eutintinnus neriticus	200000	300000	283333
701	Synchaeta sp.	0	0	0
771	Sipunculid pelagosphaera	0	0	0
821	Rivalvia veliger	0	333	0
851	polychaete trochophore	0	0	0
855	spionid larva	333	333	1000
880	scaleworm larva	0	0	0

mg Carbon per cubic meter

11	17	13
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DATE JULIAN DATE LOCATION MESH SIZE
130379 79072 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1020	30	12	12.3	19.2	4.7	1.8	3	1	ship
1028	30	6	12.4	19.2	4.7	1.8	3	1	ship
1038	30	1	12.5	19.2	4.7	1.8	3	1	ship
1225	27	5	13.2	20.4	2.2	1.5	2	-1	ship
1235	27	3	13.3	20.3	2.2	1.5	2	-1	ship
1249	27	1	14.3	19.8	2.2	1.5	2	-1	ship
1415	32	10	13.3	20.1	3.9	1.2	2	-1	ship
1424	32	5	13.4	20.1	3.9	1.2	2	-1	ship
1431	32	1	13.8	20.0	3.9	1.2	2	-1	ship

Code	Name	Station Depth	12	30 6	1	5	27 3	1	10	32 5	1
Number per cubic meter											
5	Acartia clausi F		4400	440	0	1833	1867	0	417	2520	0
6	Acartia clausi M		0	880	387	1000	533	0	833	720	0
7	Acartia clausi C		13600	10560	5800	23667	28533	19133	5833	14400	27653
8	Acartia clausi N		2000	1760	4253	23333	50667	39667	2083	1440	44427
61	Paracalanus parvus M		0	440	0	0	0	0	0	0	0
192	Epilabidocera lonsipedata C		0	0	0	0	0	0	0	360	0
197	copepod nauplius B		0	0	0	0	0	0	0	1440	1813
220	Corycaeus sp.		0	0	0	167	0	0	0	0	0
250	Harpacticoida		800	440	773	167	267	0	0	0	453
370	Natantia zoea		400	0	0	0	0	0	0	0	0
401	barnacle nauplius		1200	1320	773	500	1067	233	1667	2160	1360
402	barnacle cypris		0	0	773	0	0	0	417	360	0
440	Cladocera		0	0	387	0	0	0	0	0	0
602	Tintinnopsis sp. A		2800	1760	2707	1000	1067	2100	11667	4320	453
603	Tintinnopsis sp. B		0	0	0	60833	32000	33833	14583	3960	5893
605	Eutintinnus neriticus		700000	666667	700000	116667	116667	100000	633333	1000000	1333330
630	coiled Foraminifera		0	0	387	0	0	0	0	0	0
681	flatworm sp. A		400	0	1547	0	0	0	417	2160	1360
701	Synchaeta sp.		400	0	387	1000	1600	467	0	720	453
801	Gastropod veliger		0	440	0	0	0	0	0	0	0
821	Bivalvia veliger		1200	0	0	0	0	0	0	360	907
851	Polychaete trochophore		0	1320	1547	0	0	0	417	360	0
855	spionid larva		4000	16280	8893	1333	533	1167	9583	8640	19947
880	scaleworm larva		0	2640	0	167	0	0	2917	2520	4533
899	pelagic polychaete		0	440	387	167	0	0	0	0	0
ms Carbon per cubic meter											
			50	75	50	36	40	25	53	78	115

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 DATE JULIAN DATE LOCATION MESH SIZE
 160379 79075 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN g/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
822	30	9	13.2	19.6	18.5	2.6	3	1	ship
826	30	5	13.2	19.6	18.5	2.6	3	1	ship
834	30	1	13.5	19.7	18.5	2.6	3	1	ship
950	27	9	13.3	20.6	4.4	1.7	2	1	ship
1000	27	5	13.3	20.6	4.4	1.7	2	1	ship
1009	27	1	13.4	20.6	4.4	1.7	2	1	ship

Code	Name	Station Depth	9	30 5	1	9	27 5	1	Number per cubic meter
5	Acartia clausi F		1364	3733	1800	2333	1667	333	
6	Acartia clausi M		455	800	2100	2667	1333	0	
7	Acartia clausi C		7273	9067	21600	9667	14000	13000	
8	Acartia clausi N		4545	25867	28500	2333	11333	39333	
250	Harpacticoida		0	267	300	0	0	333	
341	Reptantia mesalops		1	0	0	0	0	0	
401	barnacle nauplius		455	800	1200	333	1667	1000	
402	barnacle cypris		455	0	0	333	0	0	
602	Tintinnopsis sp. A		1364	1867	900	13000	10000	10000	
603	Tintinnopsis sp. B		1364	533	900	667	0	667	
605	Eutintinnus neriticus		150000	150000	166667	240000	216667	170000	
681	flatworm sp. A		455	0	600	333	1333	1000	
701	Synchaeta sp.		0	0	300	667	0	1000	
702	Synchaeta sp. egg		0	0	0	0	2333	0	
821	Bivalvia veliger		0	533	0	0	0	333	
851	polychaete trochophore		2273	3733	4200	6333	4667	1667	
855	spionid larva		1818	3467	1800	6667	7000	7000	
880	scaleworm larva		0	0	0	0	3667	0	
			23	38	44	48	58	41	ms Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
190379 79078 South S.F. Bay 64

TIME	STATION	DEPTH #	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
802	30	8	10.2	17.2	6.5	2.3	3	-1	ship
812	30	5	10.4	17.5	6.5	2.3	3	-1	ship
822	30	1	10.8	18.0	6.5	2.3	3	-1	ship
924	27	9	12.6	19.4	2.7	2.0	3	-1	ship
932	27	5	12.7	21.0	2.7	2.0	3	-1	ship
941	27	1	12.9	20.7	2.7	2.0	2	-1	ship
1048	24	7	12.1	21.2	1.6	1.1	0	-1	ship
1057	24	4	12.2	21.1	1.6	1.1	0	-1	ship
1104	24	1	12.3	20.8	1.6	1.1	0	-1	ship

Code	Name	Station Depth	8	30 5	1	9	27 5	1	7	24 4	1
Number per cubic meter											
5	Acartia clausi F		3311	7853	2219	5100	3600	233	1867	1067	267
6	Acartia clausi M		1419	2893	1268	1200	2400	0	4000	533	267
7	Acartia clausi C		5676	9507	4438	5400	5400	3267	2133	7467	7467
8	Acartia clausi N		23650	24800	53256	16200	22200	41533	267	800	13600
192	Epilabidocera longipedata C		0	0	0	0	0	0	267	0	0
197	copepod nauplius B		0	827	0	900	1200	233	0	0	0
199	copepod nauplius		0	0	0	0	0	0	267	0	267
200	Cyclopoida		0	0	0	0	0	233	0	0	0
250	Harpacticoida		473	413	0	600	0	0	0	0	0
401	barnacle nauplius		473	1653	634	600	900	700	0	0	0
402	barnacle cypris		0	0	0	300	0	0	0	0	0
602	Tintinnopsis sp. A		6622	4133	5072	10800	13500	3733	267	5867	4267
603	Tintinnopsis sp. B		1892	413	2853	1500	900	0	2400	78765	266667
605	Eutintinnus neriticus		0	0	0	120000	116667	120000	120000	155000	1000
666	Polyorchis sp.		0	0	0	0	0	0	1	0	0
681	flatworm sp. A		0	0	0	0	300	0	0	0	0
701	Synchaeta sp.		473	0	317	0	0	0	267	267	533
702	Synchaeta sp. egg		0	0	0	0	0	700	0	0	0
801	Gastropod veliger		0	0	0	0	0	0	0	0	533
821	Bivalvia veliger		946	1653	634	300	600	0	0	267	0
851	polychaete trochophore		2365	4960	634	1800	1500	233	267	0	0
855	spionid larva		10879	7027	8876	6300	9300	3967	533	800	1600
899	pelagic polychaete		0	0	0	300	0	0	0	0	0
mg Carbon per cubic meter											
			48	62	39	45	48	21	20	16	15

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ESTUARINE STUDIES GROUP
ZOOPLANKTON

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DATE JULIAN DATE LOCATION MESH SIZE
220379 79081 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
812	30	8	11.9	19.9	3.0	1.0	1	0	ship
822	30	4	12.2	19.5	3.0	1.0	1	0	ship
832	30	1	12.7	19.5	3.0	1.0	1	0	ship
941	27	8	12.8	21.2	2.7	0.9	0	-1	ship
945	27	4	13.1	20.9	2.7	0.9	0	-1	ship
958	27	1	13.2	20.7	2.7	0.9	0	-1	ship
1124	32	8	13.6	20.7	8.5	1.4	2	-1	ship
1134	32	4	13.6	20.7	8.5	1.4	2	-1	ship
1141	32	1	13.6	20.7	8.5	1.4	2	-1	ship

		Station Depth	8	30 4	1	8	27 4	1	8	32 4	1
Code	Name		Number per cubic meter								
5	Acartia clausi F		4280	3663	0	2400	2667	533	5700	7000	1333
6	Acartia clausi M		2140	1332	0	3733	1333	0	1520	2664	1667
7	Acartia clausi C		8917	14985	14233	3200	4000	18933	23180	15651	11000
8	Acartia clausi N		11057	29637	61005	0	333	21600	106400	94239	66667
250	Haracticoida		357	666	0	0	0	267	760	0	1333
321	Isopoda imm.		0	0	0	0	0	0	0	333	0
401	barnacle nauplius		713	4662	6913	267	0	2133	3420	1000	1333
602	Tintinnopsis sp. A		69193	55611	19520	5600	8000	30133	35340	39294	21333
603	Tintinnopsis sp. B		2497	333	0	124000	26667	10133	0	0	0
605	Eutintinnus neriticus		1000	1000	0	1000	8333	1000	1500	8000	1000
681	flatworm sp. A		0	333	813	0	0	0	380	0	667
701	Synchaeta sp.		0	333	407	267	1000	0	380	333	0
702	Synchaeta sp. egg		0	333	407	0	0	0	0	0	0
748	Phoronida larva		1	0	0	0	0	0	0	0	0
801	Gastropod veliger		357	0	0	0	0	0	0	333	0
821	Bivalvia veliger		1427	1665	0	0	333	1067	760	667	0
851	polychaete trochophore		0	0	0	533	0	267	0	0	0
855	spionid larva		26393	11988	12200	2133	5000	5333	6840	7326	4333
880	scaleworm larva		1427	1332	1220	267	667	533	3040	3663	2667
			mg Carbon per cubic meter								
			91	68	60	22	26	37	77	73	43

ESTUARINE STUDIES GROUP
ZOOPLANKTON

DATE	JULIAN DATE	LOCATION	MESH SIZE
290379	79088	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
946	32	2	12.9	19.3	6.2	3.8	3	1	ship
1010	31	2	13.1	20.0	5.1	3.0	4	1	ship
1038	30	2	13.3	21.3	2.3	2.3	2	1	ship

Station	32	31	30
Depth	2	2	2

Code	Name	Number per cubic meter		
5	Acartia clausi F	6650	3333	600
6	Acartia clausi M	5383	6667	1200
7	Acartia clausi C	31667	25333	14000
8	Acartia clausi N	9817	7333	22400
62	Paracalanus parvus C	0	0	0
101	Eurytemora affinis M	317	0	0
192	Epilabidocera longipedata C	317	0	0
197	copepod nauplius B	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
210	Oithona spp.	0	0	0
220	Corycaeus sp.	0	0	0
250	Harpacticoida	0	333	0
321	Isopoda imm.	317	0	0
345	Grapsid zoea	0	0	0
401	barnacle nauplius	950	2000	400
402	barnacle cypris	317	0	0
602	Tintinnopsis sp. A	25017	42333	13000
603	Tintinnopsis sp. B	0	667	2000
605	Eutintinnus neriticus	0	0	1000
630	coiled Foraminifera	0	0	0
681	flatworm sp. A	0	333	0
701	Synchaeta sp.	0	333	400
801	Gastropod veliger	0	0	200
821	Bivalvia veliger	317	0	0
851	polychaete trochophore	1267	333	0
855	spionid larva	5383	4670	1200
880	scaletworm larva	633	1333	800
899	pelagic polychaete	0	0	0
		mg Carbon per cubic meter		
		75	59	22

ESTUARINE STUDIES GROUP
ZOOPLANKTON

DATE	JULIAN DATE	LOCATION	MESH SIZE
290379	79088	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1106	29	2	13.0	21.8	2.8	3.8	4	1	ship
1124	28	2	13.1	22.1	1.9	3.8	4	1	ship
1148	27	2	13.0	22.8	1.4	2.3	2	1	ship

Station	29	28	27
Depth	2	2	2

Code	Name	Number per cubic meter		
5	Acartia clausi F	2148	3810	533
6	Acartia clausi M	5586	2857	267
7	Acartia clausi C	9453	9048	9600
8	Acartia clausi N	430	476	13333
62	Paracalanus parvus C	0	0	533
101	Eurytemora affinis M	0	0	0
192	Epilabidocera lonsipedata C	0	0	0
197	copepod nauplius B	0	0	0
199	copepod nauplius	0	0	0
200	Cyclopoida	0	0	0
210	Oithona spp.	0	0	0
220	Corycaeus sp.	0	0	267
250	Harpacticoida	0	0	0
321	Iso-poda imm.	0	0	0
345	Grapsid zoea	0	0	0
401	barnacle nauplius	0	1429	533
402	barnacle cypris	430	0	0
602	Tintinnopsis sp. A	11172	2381	2667
603	Tintinnopsis sp. B	11172	12857	6667
605	Eutintinnus neriticus	0	0	0
630	coiled Foraminifera	430	476	0
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	1289	0	1333
801	Gastropod veliger	0	0	267
821	Bivalv veliger	0	2381	533
851	polychaete trochophore	0	0	0
855	spionid larva	1719	1905	800
880	scaleworm larva	0	0	267
899	pelagic polychaete	0	0	0
		mg Carbon per cubic meter		
		27	29	15

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ZOOPLANKTON

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 DATE JULIAN DATE LOCATION MESH SIZE
 290379 79088 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1205	26	2	12.9	23.6	1.3	3.0	2	1	ship
1225	25	2	13.3	24.5	1.5	2.3	2	1	ship
1246	24	2	12.6	25.4	1.3	1.8	2	1	ship

Station	26	25	24
Depth	2	2	2

Code	Name	Number per cubic meter		
5	Acartia clausi F	1133	4000	333
6	Acartia clausi M	1133	2400	0
7	Acartia clausi C	8783	6400	4667
8	Acartia clausi N	11333	1067	18333
62	Paracalanus parvus C	0	0	0
101	Eurytemora affinis M	0	0	0
192	Epilabidocera longipedata C	283	0	0
197	copepod nauplius B	283	0	0
199	copepod nauplius	0	0	333
200	Cyclopoida	0	0	333
210	Oithona spp.	0	0	333
220	Corycaeus sp.	0	0	0
250	Haracticoida	283	267	0
321	Isopoda imm.	0	267	0
345	Grapsid zoea	0	267	0
401	barnacle nauplius	567	267	0
402	barnacle cypris	0	0	0
602	Tintinnopsis sp. A	3967	1600	667
603	Tintinnopsis sp. B	5950	267	333
605	Eutintinnus neriticus	0	0	0
630	coiled Foraminifera	283	0	0
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	283	0	0
801	Gastropod veliger	0	0	0
821	Bivalvia veliger	567	0	333
851	polychaete trochophore	0	0	667
855	spionid larva	850	533	333
880	scaleworm larva	0	0	333
899	pelagic polychaete	0	0	333
		20	ms Carbon per cubic meter 22	12

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	Station	36		32		9	30	
	Depth	3	1	8	4	1	5	1
Code	Name	Number per cubic meter						
5	Acartia clausi F	4600	801	1602	3738	1869	1869	203
6	Acartia clausi M	1800	1335	1869	3204	2670	5073	0
7	Acartia clausi C	6200	13350	31239	18423	78765	18690	5684
8	Acartia clausi N	14400	31239	20559	10680	16821	8010	21721
36	Calanus tenuicornis C	0	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0
100	Eurytemora affinis F	400	267	0	0	0	0	0
101	Eurytemora affinis M	200	0	267	0	0	0	0
102	Eurytemora affinis C	600	534	0	0	1068	267	406
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0
199	copepod nauplius	0	0	0	0	0	0	0
200	Cyclopoida	200	0	0	0	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0
220	Corucaeus sp.	0	0	0	0	0	0	0
250	Harpacticoida	1200	1068	0	1335	0	267	667
321	Isopoda imm.	0	0	0	0	0	0	0
401	barnacle nauplius	0	267	267	534	801	0	203
402	barnacle cypris	0	0	0	0	0	0	0
551	Ensaurelis mordax egg	0	0	0	0	0	0	0
602	Tintinnopsis sp. A	1400	1068	8544	19224	2403	6942	203
603	Tintinnopsis sp. B	17400	36846	53400	53400	97188	60000	16240
630	coiled Foraminifera	0	0	0	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	0	0
690	Nemertina	0	0	0	0	0	0	0
701	Synchaeta sp.	400	4806	267	0	0	0	203
801	Gastropod veliger	0	267	0	267	0	801	1665
821	Bivalvia veliger	0	0	0	0	0	0	0
851	polychaete trochophore	0	0	0	0	0	0	0
855	spionid larva	0	534	267	267	534	267	1000
880	scaeworm larva	200	267	0	267	0	0	203
<hr/>								
		mg Carbon per cubic meter						
		27	23	36	35	78	30	46

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DATE JULIAN DATE LOCATION MESH SIZE
20479 79092 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1203	27	7	13.9	21.7	3.3	1.8	0	1	ship
1209	27	4	13.9	21.7	3.3	1.6	0	1	ship
1215	27	1	14.1	21.4	4.4	1.7	0	1	ship
1304	24	7	13.6	24.0	2.2	1.4	0	1	ship
1310	24	4	13.6	24.0	2.3	1.3	0	1	ship
1316	24	1	14.0	24.0	2.5	1.1	0	1	ship
1411	21	9	13.2	25.2	2.3	2.3	0	1	ship
1417	21	5	13.6	24.0	2.3	1.3	0	1	ship
1423	21	1	13.8	21.0	2.4	1.4	0	1	ship

	Station Depth	7	27 4	1	7	24 4	1	9	21 5	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	3330	2937	0	1067	0	0	1600	900	0
6	Acartia clausi M	8325	1869	0	800	1067	0	1333	2100	0
7	Acartia clausi C	6670	21360	16267	7733	8000	3733	4000	3000	3200
8	Acartia clausi N	1009	1602	20267	18133	36000	120000	4267	1800	16600
36	Calanus tenuicornis C	0	0	0	0	0	0	0	0	0
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0
100	Eurytemora affinis F	0	0	0	0	0	0	0	0	0
101	Eurytemora affinis M	0	0	0	0	0	0	0	0	0
102	Eurytemora affinis C	0	0	0	0	0	0	0	0	0
192	Epilabidocera lonsipedata C	0	0	0	0	0	0	0	0	0
199	copepod nauplius	0	0	0	0	0	533	0	300	0
200	Cyclopoids	0	0	0	0	0	0	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	0	533	0	0	200
250	Haracticoida	0	267	533	267	800	2400	0	600	2200
321	Isopoda imm.	333	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	1602	2133	267	1867	0	0	600	200
402	barnacle cypris	333	0	0	0	0	0	0	0	0
551	Endraulis mordax egg	0	1	0	0	0	0	0	0	0
602	Tintinnopsis sp. A	14319	12549	28000	0	1600	1333	267	300	600
603	Tintinnopsis sp. B	3330	13350	41333	5600	5600	1600	3467	1200	200
630	coiled Foraminifera	0	0	0	0	267	0	0	0	200
681	flatworm sp. A	0	0	0	267	0	0	0	0	0
690	Nemertina	0	0	0	0	0	0	267	0	0
701	Synchaeta sp.	0	0	267	0	0	267	0	0	0
801	Gastropod veliger	2997	267	0	0	0	267	267	300	0
821	Rivalvia veliger	0	0	0	0	267	0	267	300	0
851	polychaete trochophore	0	0	0	0	267	0	0	0	0
855	spionid larva	333	267	6667	533	1333	3733	800	2100	400
880	scaeworm larva	1000	0	533	0	800	800	533	900	0
ms Carbon per cubic meter										
		31	32	36	14	21	29	14	17	8

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ESTUARINE STUDIES GROUP
ZOOPLANKTON

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DATE	JULIAN DATE	LOCATION	MESH SIZE
20479	79092	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a us/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1537	19	13	12.6	29.7	1.2	0.9	0	1	ship
1545	19	7	12.8	29.6	1.2	0.9	0	1	ship
1551	19	1	12.9	28.5	1.1	0.9	0	1	ship

Station	Depth
19	13
7	1

Code	Name	Number per cubic meter
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5	Acartia clausi F	333
6	Acartia clausi M	333
7	Acartia clausi C	2000
8	Acartia clausi N	6000
36	Calanus tenuicornis C	0
61	Paracalanus parvus M	0
62	Paracalanus parvus C	2333
100	Eurytemora affinis F	0
101	Eurytemora affinis M	0
102	Eurytemora affinis C	0
192	Epilabidocera lonsipedata C	0
199	copepod nauplius	0
200	Cyclopoida	0
210	Oithona spp.	1000
220	Coryscaeus sp.	0
250	Harpacticoida	2000
321	Isopoda imm.	0
401	barnacle nauplius	333
402	barnacle cypris	0
551	Endraulis mordax egg	0
602	Tintinnopsis sp. A	0
603	Tintinnopsis sp. B	0
630	coiled Foraminifera	0
681	flatworm sp. A	0
690	Nemertina	0
701	Synchaeta sp.	0
801	Gastropod veliger	0
821	Rivalvia veliger	667
851	Polyschaete trochophore	0
855	spionid larva	1667
880	scaleworm larva	0

mg Carbon per cubic meter

12	11	10
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 DATE JULIAN DATE LOCATION MESH SIZE
 160479 79106 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1759	30	11	15.2	21.9	5.7	-	0	-1	ship
1805	30	6	15.2	21.5	5.5	-	0	-1	ship
1811	30	1	15.2	21.9	5.3	-	0	-1	ship

Station	11	6	1	30
Depth				

Code	Name	Number per cubic meter		
5	Acartia clausi F	3000	3996	0
6	Acartia clausi M	3333	666	0
7	Acartia clausi C	13333	2664	4329
8	Acartia clausi N	1666	1998	5661
62	Paracalanus parvus C	0	333	0
192	Epilabidocera lonsiredata C	333	0	0
250	Harpacticoida	333	333	333
321	Isopoda imm.	333	0	0
325	Synidotea laticauda imm.	333	0	0
345	Grapsid zoea	0	0	0
401	barnacle nauplius	0	333	999
551	Endraulis mordax egg	1	1	0
602	Tintinnopsis sp. A	16000	52281	4995
603	Tintinnopsis sp. B	8666	31635	12987
605	Eutintinnus neriticus	0	666	333
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	333	0	0
801	Gastropod veliger	0	0	333
851	polychaete trochophore	0	0	0
855	spionid larva	666	0	2997
880	scaleworm larva	0	0	0
		30	17	13

mg Carbon per cubic meter

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 DATE JULIAN DATE LOCATION MESH SIZE
 160479 79106 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN g/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
2005	30	12	15.3	21.8	5.6	-	3	-1	ship
2011	30	6	15.4	21.7	5.3	-	2	-1	ship
2017	30	1	15.3	21.5	5.5	-	1	-1	ship

Station Depth	12	6	1	30
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Code	Name	Number per cubic meter		
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5	Acartia clausi F	2999	1665	9324
6	Acartia clausi M	3333	2331	999
7	Acartia clausi C	15333	15984	3996
8	Acartia clausi N	9999	18315	5994
62	Paracalanus parvus C	0	0	0
192	Epilabidocera longipedata C	0	0	0
250	Harpacticoida	666	999	0
321	Isopoda imm.	0	0	0
325	Synidotea laticauda imm.	0	0	0
345	Grapsid zoea	0	0	0
401	barnacle nauplius	333	333	666
551	Endraulis mordax egg	0	0	0
602	Tintinnopsis sp. A	19999	19647	3333
603	Tintinnopsis sp. B	12666	5661	6650
605	Eutintinnus neriticus	333	0	0
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	333	333	0
801	Gastropod veliger	0	0	0
851	polychaete trochophore	333	0	0
855	spionid larva	666	1998	666
880	scaeworm larva	0	0	0

mg Carbon per cubic meter

30	29	34
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ZOOPLANKTON

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DATE JULIAN DATE LOCATION MESH SIZE
160479 79106 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
2248	30	12	15.4	21.6	5.1	-	1	1	ship
2242	30	10	15.4	21.6	5.1	-	0	2	ship
2236	30	8	15.4	21.6	5.0	-	0	1	ship
2230	30	6	15.4	21.6	5.1	-	0	1	ship
2224	30	4	15.4	21.5	4.9	-	0	1	ship
2218	30	2	15.4	21.5	5.4	-	0	1	ship
2206	30	1	15.4	21.5	4.9	-	0	1	ship
2212	30	0	15.4	21.5	4.9	-	0	1	ship

		Station Depth	12	10	8	6	4	30	2	1	0
Code	Name										
5	Acartia clausi F		6667	2667	2667	2333	2000	1333	2333	2000	
6	Acartia clausi M		6333	4000	2333	3667	2000	1333	1333	1667	
7	Acartia clausi C		17667	14000	17667	14000	11333	16333	9000	12000	
8	Acartia clausi N		5667	11333	12000	14000	17667	7667	9667	7333	
62	Paracalanus parvus C		0	0	0	0	0	0	0	0	
192	Epilabidocera longipedata C		0	0	0	0	0	0	0	0	
250	Harpacticoida		667	1000	333	333	1000	0	0	667	
321	Isopoda imm.		0	0	0	0	0	0	0	0	
325	Synidotea laticauda imm.		2	0	0	2	0	0	0	0	
345	Gnapsid zoea		0	333	0	0	0	0	0	0	
401	barnacle nauplius		1000	667	2333	2333	333	667	1667	667	
551	Endraulis mordax egg		0	0	0	0	0	0	0	0	
602	Tintinnopsis sp. A		8667	32667	25667	19000	15000	6667	3667	2667	
603	Tintinnopsis sp. B		24333	20667	15333	31667	32000	25667	12333	4000	
605	Eutintinnus neriticus		0	0	0	1000	0	0	0	0	
681	flatworm sp. A		0	0	0	0	333	0	0	0	
701	Synchaeta sp.		0	0	333	2667	0	0	0	333	
801	Gastropod veliger		0	0	333	0	333	0	333	0	
851	polychaete trochophore		0	0	0	0	0	333	0	0	
855	spionid larva		0	667	1333	1667	1667	667	1667	667	
880	scaeworm larva		0	0	333	1333	0	0	333	0	
			45	30	34	36	26	23	24	22	

mg Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
170479 107 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
16	30	10	15.3	22.0	5.0	-	1	1	ship
10	30	5	15.3	22.0	5.0	-	0	1	ship
4	30	1	15.3	22.0	5.0	-	0	1	ship
214	30	10	15.2	22.5	5.1	-	2	1	ship
208	30	5	15.2	22.2	4.7	-	1	1	ship
202	30	1	15.1	22.2	4.6	-	0	1	ship
451	30	14	15.2	22.4	4.4	-	0	-1	ship
432	30	8	15.1	22.3	4.4	-	0	-1	ship
406	30	1	15.0	22.3	4.4	-	0	-1	ship

		Station Depth	10	30 5	1	10	30 5	1	14	30 8	1
Code	Name	Number per cubic meter									
5	Acartia clausi F	3846	4333	2333	3333	4333	3000	7000	6000	7333	
6	Acartia clausi M	2333	2667	1333	7000	2667	1000	5667	2333	2000	
7	Acartia clausi C	15064	14667	9333	20333	11000	10667	19333	12667	8333	
8	Acartia clausi N	4808	5000	6000	1000	4333	9333	1333	4000	6667	
192	Epilabidocera longicauda C	0	0	0	0	0	0	0	0	0	
250	Haracticoida	0	1333	0	333	0	333	1333	0	0	
300	Amphipoda	0	0	0	0	0	0	0	0	0	
321	Isopoda imm.	0	0	0	333	0	0	0	0	0	
325	Synidotea laticauda imm.	0	1	0	0	0	0	0	0	0	
376	Cranson sp.	0	0	0	1	0	0	0	0	0	
401	barnacle nauplius	962	2000	1333	667	667	333	333	667	667	
402	barnacle cypris	0	0	0	0	0	0	0	0	0	
420	Ostracoda	0	0	0	0	0	0	0	0	0	
521	Sasitta spp.	0	0	0	333	0	0	0	0	0	
551	Ensaaulis mordax egg	0	0	0	0	0	0	0	1	0	
570	Gobiidae larva	0	0	0	0	0	0	0	0	0	
602	Tintinnopsis sp. A	23077	37667	27667	162667	16333	30333	76333	56667	12667	
603	Tintinnopsis sp. B	28526	11000	25667	17000	18000	34667	13667	10667	22333	
605	Eutintinnus neriticus	1923	2333	1333	0	0	0	0	20000	1333	
630	coiled Foraminifera	0	0	0	333	333	0	333	0	333	
681	flatworm sp. A	0	0	0	0	0	0	0	0	333	
691	Pilidium larva	0	0	0	333	0	0	0	0	0	
700	Rotifera	0	0	0	0	0	0	0	0	0	
801	Gastropod veliger	0	0	0	0	0	333	0	333	0	
821	Rivalvia veliger	0	0	0	0	0	0	0	0	0	
855	spionid larva	641	1000	2000	0	333	0	1000	2000	2333	
880	scaleworm larva	0	667	0	333	667	333	1667	1000	333	
		mg Carbon per cubic meter									
		30	37	24	43	29	22	53	40	39	

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 DATE JULIAN DATE LOCATION MESH SIZE
 170479 107 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
620	30	12	15.1	22.0	5.9	-	3	-1	lab
614	30	6	15.1	21.9	5.4	-	2	-1	lab
608	30	1	15.1	21.6	5.2	-	1	-1	lab

Code	Name	Station Depth	12	30 6	1	Number per cubic meter
5	Acartia clausi F		6467	3378	1067	
6	Acartia clausi M		3800	2400	1067	
7	Acartia clausi C		5600	5511	12600	
8	Acartia clausi N		1467	3733	8867	
192	Epilabidocera longipedata C		7	0	0	
250	Harpacticoida		800	800	400	
300	Amphipoda		5	1	0	
321	Isopoda imm.		0	0	0	
325	Synidotea laticauda imm.		0	0	0	
376	Crangon sp.		0	0	0	
401	barnacle nauplius		5	889	2000	
402	barnacle cypris		1	0	0	
420	Ostracoda		1	0	0	
521	Saditta spp.		0	0	0	
551	Engraulis mordax egg		43	45	43	
570	Gobiidae larva		2	0	2	
602	Tintinnopsis sp. A		38200	34311	12067	
603	Tintinnopsis sp. B		19667	14133	15067	
605	Eutintinnus neriticus		2400	0	0	
630	coiled Foraminifera		0	89	67	
681	flatworm sp. A		0	0	0	
691	Pilidium larva		0	0	0	
700	Rotifera		0	267	200	
801	Gastropod veliger		0	0	0	
821	Bivalvia veliger		0	89	0	
855	spionid larva		533	889	667	
880	scaeworm larva		0	0	0	
			31	23	21	ms Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
80579 79128 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
926	36	3	16.2	20.4	1.7	2.1	1	1	ship
919	36	1	16.1	20.2	1.7	2.1	0	1	ship
1037	32	12	16.0	23.5	2.4	1.2	1	1	ship
1031	32	6	16.0	23.5	2.4	1.2	1	1	ship
1025	32	1	16.2	23.3	2.4	1.2	0	1	ship
1135	30	14	15.9	24.7	2.0	1.5	0	-1	ship
1141	30	7	16.0	24.4	2.0	1.5	0	-1	ship
1147	30	1	16.0	24.3	2.0	1.5	0	-1	ship

Code	Name	Station Depth	36 3	1 1	12 12	32 6	1 1	14 14	30 7	1 1
5	Acartia clausi F		666	0	0	0	0	0	333	0
6	Acartia clausi M		0	500	0	333	0	0	0	0
7	Acartia clausi C		999	333	1666	999	333	4000	4333	666
8	Acartia clausi N		56666	791666	15000	21000	28333	2666	5333	2000
61	Paracalanus parvus M		0	0	0	0	0	0	0	0
62	Paracalanus parvus C		0	0	0	0	0	0	0	0
213	Oithona spirostris		0	0	0	0	0	0	0	0
220	Corycaeus sp.		0	0	0	0	0	0	0	0
250	Harpacticoida		1333	833	333	999	0	0	666	333
281	Harpacticoid A N		0	0	0	0	0	0	0	333
321	Isopoda imm.		0	166	0	0	0	0	0	0
401	barnacle nauplius		0	166	0	0	333	0	0	1000
505	echinoderm pleuteus larva		0	0	0	0	0	0	0	0
602	Tintinnopsis sp. A		0	0	999	333	0	4000	3000	0
603	Tintinnopsis sp. B		0	0	0	12000	3333	68333	85000	158333
604	Tintinnid sp. C		0	0	0	0	0	0	0	0
630	coiled Foraminifera		0	0	0	0	0	333	0	0
681	flatworm sp. A		0	0	0	0	0	0	0	0
701	Synchaeta sp.		0	166	999	999	333	0	666	0
801	Gastropod veliger		0	333	0	0	0	0	0	333
821	Bivalvia veliger		0	0	333	666	0	1333	333	0
851	polychaete trochophore		0	0	0	0	0	0	0	666
855	spionid larva		0	500	666	999	333	1666	1000	0
880	scaeworm larva		0	0	0	0	0	0	0	0
			10	83	5	7	4	8	9	5

mg Carbon per cubic meter

DATE	JULIAN DATE	LOCATION	MESH SIZE
80579	79128	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1245	27	12	15.5	26.0	2.2	0.7	0	-1	ship
1251	27	6	15.7	25.8	2.2	0.7	0	-1	ship
1257	27	1	15.9	25.8	2.2	0.7	0	-1	ship
1350	24	9	15.0	27.4	2.8	0.8	2	-1	ship
1356	24	5	15.0	27.4	2.8	0.8	0	-1	ship
1402	24	1	15.4	27.3	2.8	0.8	0	-1	ship
1450	21	13	14.5	28.0	2.5	0.9	1	-1	ship
1456	21	6	14.8	28.0	2.5	0.9	0	-1	ship
1502	21	1	14.8	28.0	2.5	0.9	1	-1	ship

		Station 27			24			21		
Depth		12	6	1	9	5	1	13	6	1
Code	Name	Number per cubic meter								
5	Acartia clausi F	666	333	0	0	0	0	0	0	0
6	Acartia clausi M	666	0	0	0	0	0	0	0	0
7	Acartia clausi C	3000	7666	4266	16333	15666	9000	8000	6666	5333
8	Acartia clausi N	1333	666	12800	6000	14666	20000	12666	22000	50000
61	Paracalanus parvus M	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	333
213	Oithona spinirostris	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	333	0	0	333	333
250	Harpacticoida	666	0	533	666	333	333	1000	1333	0
281	Harpacticoid A N	0	0	0	0	0	0	0	0	0
321	Isopoda imm.	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	1000	266	0	333	0	666	666	0
505	echinoderm Pleuteus larva	0	0	0	0	0	0	0	0	0
602	Tintinnopsis sp. A	1333	7000	2666	2666	11000	4333	666	666	666
603	Tintinnopsis sp. B	60000	96666	7200	6333	33333	13000	1333	1333	0
604	Tintinnid sp.C	0	0	0	0	0	666	1000	3000	2333
630	coiled Foraminifera	0	0	0	0	0	0	0	0	0
681	flatworm sp. A	333	0	0	0	333	0	0	0	0
701	Synchaeta sp.	0	333	4800	0	0	1000	333	666	6000
801	Gastropod veliger	0	0	0	0	333	0	0	0	0
821	Bivalvia veliger	666	0	0	0	333	0	0	0	333
851	polychaete trochophore	0	0	0	0	0	0	0	0	0
855	spionid larva	1666	666	1600	999	666	0	666	1666	1333
880	scaleworm larva	0	0	0	0	0	666	0	333	0
		mg Carbon per cubic meter								
		11	11	10	17	18	11	11	15	13

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 DATE JULIAN DATE LOCATION MESH SIZE
 80579 79128 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1616	19	14	13.2	30.3	1.9	0.6	2	-1	ship
1622	19	7	13.3	30.0	1.9	0.6	2	-1	ship
1628	19	1	14.0	29.0	1.9	0.6	2	-1	ship

Code	Name	Station Depth	14	19 7	1	Number per cubic meter
5	Acartia clausi F		5000	1000	666	
6	Acartia clausi M		666	666	0	
7	Acartia clausi C		3333	3666	5000	
8	Acartia clausi N		0	666	2000	
61	Paracalanus parvus M		0	333	0	
62	Paracalanus parvus C		333	0	0	
213	Oithona spinirostris		333	333	0	
220	Corycaeus sp.		0	0	0	
250	Harpacticoida		1000	1000	333	
281	Harpacticoid A N		0	0	0	
321	Isopoda imm.		0	0	0	
401	barnacle nauplius		0	0	0	
505	echinoderm pleuteus larva		0	0	333	
602	Tintinnopsis sp. A		1000	0	333	
603	Tintinnopsis sp. B		0	0	0	
604	Tintinnid sp. C		0	0	1000	
630	coiled Foraminifera		0	0	0	
681	flatworm sp. A		0	0	0	
701	Synchaeta sp.		0	0	0	
801	Gastropod veliger		0	333	0	
821	Bivalvia veliger		0	0	0	
851	polychaete trochophore		333	0	0	
855	spionid larva		1333	0	0	
880	scaeworm larva		333	0	0	
			23	9	7	mg Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
40679 79155 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
925	36	6	21.2	23.8	0.6	1.2	-	-1	lab
932	36	3	21.1	23.2	0.6	1.3	-	-1	lab
939	36	1	21.2	22.9	0.6	1.5	-	-1	lab
1055	32	12	21.0	25.2	0.7	0.9	-	-1	lab
1104	32	6	21.0	25.1	0.7	0.9	-	-1	ship
1111	32	1	21.0	24.9	0.7	1.0	-	-1	ship
1204	30	10	20.3	24.9	0.7	0.7	-	-1	ship
1210	30	5	20.5	24.6	0.7	1.1	-	-1	ship
1216	30	1	20.8	24.5	0.7	1.6	-	-1	lab

Code	Name	Station Depth	6	36 3	1	12	32 6	1	10	30 5	1	
5	Acartia clausi F		0	0	0	0	0	0	0	0	0	
6	Acartia clausi M		0	0	0	0	0	0	0	0	0	
7	Acartia clausi C		0	0	0	0	0	0	0	0	0	
8	Acartia clausi N		0	0	0	0	0	0	0	0	0	
10	Acartia californiensis F		355	0	0	778	0	0	0	377	0	
11	Acartia californiensis M		177	0	0	555	0	0	333	0	0	
12	Acartia californiensis C		711	267	267	2111	2000	1667	2000	1507	89	
13	Acartia californiensis N		39288	74311	79289	7666	12000	18333	6000	12053	13155	
200	Cyclopoida		0	0	0	0	0	0	0	0	89	
250	Haracticoida		2133	1155	533	2333	1000	667	667	753	1955	
300	Amphipoda		0	0	0	0	0	0	0	0	0	
370	Nauplius		1	0	0	1	0	0	0	0	0	
401	barnacle nauplius		0	266	444	0	0	0	0	0	533	
402	barnacle cypris		0	1	0	0	0	0	0	377	0	
551	Endraulis mordax egg		18	6	11	0	0	0	0	0	0	
559	other fish egg		0	0	0	19	0	333	0	0	4	
560	fish larva		0	0	0	0	0	0	0	0	1	
602	Tintinnopsis sp. A		0	0	0	0	0	0	0	0	0	
604	Tintinnid sp. C		0	0	0	0	0	0	0	0	177	
605	Eutintinnus neriticus		0	0	0	0	0	0	0	0	0	
630	coiled Foraminifera		0	0	0	0	0	0	0	0	0	
681	flatworm sp. A		177	0	0	0	0	0	0	0	622	
701	Synchaeta sp.		89	0	0	0	0	0	0	0	800	
801	Gastropod veliger		1955	533	444	1222	1333	667	667	753	444	
821	Bivalvia veliger		800	355	444	333	333	333	333	377	444	
851	Polychaete trochophore		0	0	0	0	0	0	0	0	0	
855	spionid larva		622	444	0	4667	3000	1667	3000	2637	4088	
880	scaeworm larva		0	0	0	111	0	0	333	0	89	
			11	11	10	ms Carbon per cubic meter	20	11	8	11	12	16

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DATE JULIAN DATE LOCATION MESH SIZE
40679 79155 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN g/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1322	27	11	20.0	27.2	0.8	0.7	-	-1	ship
1327	27	5	20.1	27.1	0.8	0.7	-	-1	ship
1333	27	1	20.4	26.8	0.8	0.8	-	-1	ship
1423	24	8	19.1	27.9	0.8	0.7	-	0	ship
1429	24	4	19.1	27.9	0.8	0.7	-	0	ship
1435	24	1	19.1	27.9	0.8	0.7	-	0	ship
1530	21	14	16.2	28.0	0.8	0.7	-	1	lab
1537	21	7	17.1	27.9	0.8	0.7	-	1	ship
1543	21	1	18.0	27.9	0.8	0.7	-	1	ship

		Station Depth	11	27 5	1	8	24 4	1	14	21 7	1
Code	Name	Number per cubic meter									
5	Acartia clausi F	0	0	0	0	0	0	0	444	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	111	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	4222	1667	2000
8	Acartia clausi N	0	0	0	0	0	0	0	5555	3000	5667
10	Acartia californiensis F	0	0	0	0	0	0	0	0	0	0
11	Acartia californiensis M	0	0	0	0	0	0	0	0	0	0
12	Acartia californiensis C	2667	3420	1333	1667	2000	2667	0	0	0	0
13	Acartia californiensis N	8000	13300	5000	2000	11000	7333	0	0	0	0
200	Cyclopoida	0	0	0	0	0	0	0	0	0	0
250	Harpacticoida	1333	0	667	1333	333	667	666	333	333	333
300	Amphipoda	0	0	0	0	0	0	0	0	0	0
370	Natantia zoea	0	0	0	0	0	0	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	0	0	333	0	0
402	barnacle cypris	0	0	0	0	0	0	0	333	0	0
551	Ensaerulis mordax egg	0	0	0	0	0	0	0	0	0	0
559	other fish egg	0	0	0	0	0	0	0	0	0	0
560	fish larva	0	0	0	0	0	0	0	0	0	0
602	Tintinnopsis sp. A	0	0	0	0	0	0	667	0	0	0
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	0	0
605	Eutintinnus neriticus	0	0	0	0	0	0	0	0	0	0
630	coiled Foraminifera	0	0	0	0	0	0	0	0	0	333
681	flatworm sp. A	0	380	0	0	0	0	0	0	0	0
701	Synchaeta sp.	0	0	0	0	1000	667	444	333	667	0
801	Gastropod veliger	0	2660	333	0	333	333	0	333	0	0
821	Bivalvia veliger	3333	9120	333	333	667	333	111	0	0	0
851	polychaete trochophore	0	380	667	0	0	0	0	0	0	0
855	spionid larva	3000	4560	1333	333	1333	0	1333	0	1333	0
880	scaeworm larva	0	0	0	0	0	0	0	0	0	0
		mg Carbon per cubic meter									
		12	19	6	4	7	4	10	2	6	

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DATE	JULIAN DATE	LOCATION	MESH SIZE
40679	79155	South S.F. Bay	64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1647	19	15	13.3	31.4	0.7	0.7	-	1	lab
1654	19	7	13.3	31.5	0.7	0.8	-	1	ship
1701	19	1	13.3	31.4	0.7	0.7	-	1	ship

Code	Name	Station Depth	15	19 7	1 1	Number per cubic meter
5	Acartia clausi F		1006	333	0	
6	Acartia clausi M		555	0	0	
7	Acartia clausi C		2666	3333	1333	
8	Acartia clausi N		7000	7333	4667	
10	Acartia californiensis F		0	0	0	
11	Acartia californiensis M		0	0	0	
12	Acartia californiensis C		0	0	0	
13	Acartia californiensis N		0	0	0	
200	Cyclopoida		0	0	0	
250	Harpacticoida		777	333	333	
300	Amphipoda		3	0	0	
370	Nauplius		1	0	0	
401	barnacle nauplius		0	0	0	
402	barnacle cypris		0	333	0	
551	Endraulis mordax egg		0	0	0	
559	other fish egg		5	0	0	
560	fish larva		0	0	0	
602	Tintinnopsis sp. A		111	0	0	
604	Tintinnid sp. C		1555	0	0	
605	Eutintinnus neriticus		111	0	0	
630	coiled Foraminifera		0	0	0	
681	flatworm sp. A		2	0	0	
701	Synchaeta sp.		777	333	167	
801	Gastropod veliger		111	333	0	
821	Bivalvia veliger		333	333	333	
851	polychaete trochophore		0	0	0	
855	spionid larva		666	667	833	
880	scaleworm larva		1	0	0	
			9	7	4	ms Carbon per cubic meter

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DATE JULIAN DATE LOCATION MESH SIZE
90779 79191 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1114	36	6	21.5	26.2	3.1	4.6	4	1	ship
1118	36	3	21.5	26.0	3.1	4.5	4	1	ship
1124	36	1	21.6	26.0	3.1	4.5	4	1	ship
1230	32	10	20.6	28.2	1.7	1.6	4	1	ship
1236	32	5	20.6	28.1	1.6	1.6	2	1	ship
1243	32	1	20.9	28.1	1.6	1.3	1	1	ship
1322	30	13	20.2	28.3	1.1	1.3	1	1	ship
1330	30	6	20.2	28.2	1.6	1.6	2	1	ship
1335	30	1	20.3	28.2	1.0	1.7	2	1	ship

		Station Depth	6	36 3	1	10	32 5	1	13	30 6	1
Code	Name	Number per cubic meter									
10	Acartia californiensis F	779	2000	1667	2333	4667	0	4667	1000	0	
11	Acartia californiensis M	6111	2778	2000	2000	1000	0	1333	1333	0	
12	Acartia californiensis C	18000	4333	7667	11000	9667	12667	7667	13667	11334	
13	Acartia californiensis N	2778	3000	14333	3667	4667	4667	333	2000	3000	
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0	
200	Cyclopoida	0	0	0	0	0	0	0	0	0	
250	Harpacticoida	556	667	333	333	1333	0	667	0	667	
280	Harpacticoid sp. A	0	0	0	0	0	0	0	0	0	
281	Harpacticoid A N	0	0	333	0	333	333	0	0	0	
321	Isopoda imm.	556	0	0	0	0	0	0	0	0	
340	Reptantia zoea	1	0	0	0	0	0	0	1	0	
401	barnacle nauplius	0	333	0	0	0	0	0	0	0	
402	barnacle cypris	0	0	0	0	0	0	0	0	0	
440	Cladocera	0	0	0	0	0	0	0	0	0	
505	echinoderm pleuteus larva	0	0	0	0	0	0	0	0	0	
551	Engraulis mordax egg	1	1	1	0	0	0	0	0	1	
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	0	
630	coiled Foraminifera	556	0	0	0	0	0	0	0	0	
681	flatworm sp. A	0	0	0	0	0	333	0	0	333	
701	Synchaeta sp.	0	0	0	1333	1667	0	0	0	0	
801	Gastropod veliger	0	333	0	0	333	0	0	0	0	
821	Rivalvia veliger	556	0	0	0	1000	0	0	1000	0	
851	polychaete trochophore	0	0	0	333	1000	0	0	0	0	
855	spionid larva	0	0	0	667	1333	1333	0	667	333	
		mg Carbon per cubic meter									
		33	15	16	22	30	14	23	18	11	

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 DATE JULIAN DATE LOCATION MESH SIZE
 90779 79191 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN g/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1430	27	12	18.9	29.3	1.1	0.8	0	0	ship
1436	27	6	19.1	29.2	1.6	0.8	1	0	ship
1442	27	1	19.1	29.2	1.8	0.7	0	0	ship
1528	24	10	16.9	30.2	2.2	0.9	1	0	ship
1533	24	5	16.9	30.2	2.3	0.9	1	0	ship
1539	24	1	17.5	30.1	3.1	0.8	1	0	ship
1625	21	8	15.6	30.7	4.2	0.9	0	0	ship
1632	21	4	16.1	30.2	3.8	0.9	0	0	ship
1638	21	1	17.4	30.0	4.8	0.8	0	0	ship

	Station Depth	12	27 6	1	10	24 5	1	8	21 4	1
Code	Name	Number per cubic meter								
10	Acartia californiensis F	0	0	333	1000	333	0	0	0	0
11	Acartia californiensis M	0	0	0	0	0	0	333	0	0
12	Acartia californiensis C	8667	7000	667	5333	5667	6667	5333	2333	1515
13	Acartia californiensis N	3000	2333	8334	4333	1000	8000	2000	10000	12423
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0
200	Cyclopoids	0	0	0	0	0	0	0	0	0
250	Harpacticoids	1667	6667	0	667	2000	667	3333	1333	0
260	Harpacticoid sp. A	0	0	0	333	0	0	0	0	0
281	Harpacticoid A H	2333	2778	1000	0	333	0	0	0	0
321	Isopods imm.	0	0	0	0	0	0	0	0	0
340	Reptantia zoea	0	0	0	0	1	0	0	0	0
401	barnacle nauplius	0	333	0	333	667	0	333	0	0
402	barnacle cypris	0	0	0	333	0	0	0	0	0
440	Cladocera	0	0	0	0	0	0	333	0	0
505	echinoderm Pleuteus larva	0	0	0	0	0	0	0	3	0
551	Engraulis mordax egg	0	0	0	0	0	0	0	0	0
604	Tintinnid sp. C	0	0	0	0	0	0	1667	0	12423
630	coiled Foraminifera	0	0	0	0	333	0	0	0	0
681	flatworm sp. A	333	333	0	333	1000	0	0	333	0
701	Synchaeta sp.	333	1000	0	333	1667	0	333	0	1212
801	Gastropod veliger	0	0	0	0	0	333	0	0	0
821	Rivalvia veliger	0	0	0	0	0	0	0	0	0
851	polychaete trochophore	667	333	0	0	333	0	333	333	0
855	spionid larva	667	333	333	1000	3333	1000	4333	4333	4545
	ms Carbon per cubic meter	12	16	3	13	19	9	20	15	13

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 DATE JULIAN DATE LOCATION MESH SIZE
 90779 79191 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1726	19	10	14.7	31.5	7.6	1.0	0	-1	ship
1730	19	7	14.8	31.5	7.6	1.0	0	-1	ship
1735	19	1	14.6	31.4	7.6	0.9	0	-1	ship

Station	Depth	10	19	7	1
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Code	Name	Number per cubic meter		
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10	Acartia californiensis F	556	0	0
11	Acartia californiensis M	0	333	0
12	Acartia californiensis C	3889	1667	1333
13	Acartia californiensis N	5000	7000	2333
62	Paracalanus parvus C	0	333	0
200	Cyclopoids	0	333	0
250	Harpacticoids	2778	1667	333
280	Harpacticoid sp. A	0	0	0
281	Harpacticoid A N	0	0	0
321	Isopoda imm.	0	0	0
340	Reptantia zoea	0	0	0
401	barnacle nauplius	0	1667	333
402	barnacle cypris	0	0	0
440	Cladocera	0	0	0
505	echinoderm pleuteus larva	0	0	0
551	Endraulis mordax egg	0	0	0
604	Tintinnid sp. C	17222	667	6667
630	coiled Foraminifera	556	0	0
681	flatworm sp. A	0	0	0
701	Synchaeta sp.	1111	0	1667
801	Gastropod veliger	0	0	0
821	Bivalvia veliger	0	0	0
851	polychaete trochophore	0	0	0
855	spionid larva	2222	3000	333

mg Carbon per cubic meter

14	15	3
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DATE JULIAN DATE LOCATION MESH SIZE
130879 79225 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
914	32	8	20.3	29.3	33.5	3.6	1	0	ship
926	32	4	20.3	29.3	33.5	3.6	1	0	ship
932	32	1	20.3	29.3	34.1	3.7	1	0	ship
1017	30	12	20.3	29.7	26.0	4.1	1	-1	ship
1024	30	6	20.3	29.7	26.7	3.9	1	-1	ship
1030	30	1	20.3	29.7	27.6	3.2	1	-1	ship
1130	27	10	20.1	30.1	3.8	1.8	1	-1	ship
1137	27	5	20.1	30.1	3.8	2.0	1	-1	ship
1143	27	1	20.1	30.1	3.3	2.2	1	-1	ship

		Station Depth	8	32 4	1	12	30 6	1	10	27 5	1
Code	Name	Number per cubic meter									
5	Acartia clausi F	0	0	0	0	0	0	0	0	0	0
6	Acartia clausi M	0	0	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	0	0	0	0	0
8	Acartia clausi N	0	0	0	0	0	0	0	0	0	0
10	Acartia californiensis F	7467	3667	2000	6452	4000	1000	3871	1000	0	0
11	Acartia californiensis M	2333	6333	4667	7097	8000	3000	2903	1333	333	0
12	Acartia californiensis C	2800	15667	12000	5806	12000	18000	10968	6667	11667	0
13	Acartia californiensis N	467	13333	16000	1935	3000	7667	2581	4000	15000	0
17	Acartia tonsa F	0	0	0	0	0	0	0	0	0	0
18	Acartia tonsa M	0	0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C	0	0	0	0	0	0	0	0	0	0
220	Corycaeus sp.	0	0	0	0	0	0	0	0	0	0
250	Harpacticoida	467	333	667	645	0	667	0	0	0	0
270	Microsetella sp.	0	0	0	0	0	0	0	0	0	0
280	Harpacticoid sp. A	0	0	0	0	0	0	645	0	333	0
315	Cumacea	0	0	0	0	0	0	0	0	0	0
321	Isopoda imm.	0	0	0	0	0	333	0	0	0	0
401	barnacle nauplius	0	0	333	0	0	0	0	0	0	0
440	Cladocera	0	0	0	0	0	0	0	0	0	0
551	Ensaurelia mordax egg	0	0	333	0	0	0	0	0	0	0
560	fish larva	0	0	0	0	0	0	0	0	0	0
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	0	0
681	flatworm sp. A	0	0	0	0	0	333	322	0	0	0
691	Pilidium larva	0	0	0	0	0	0	0	0	0	0
701	Synchaeta sp.	0	0	0	0	0	0	0	0	0	0
801	Gastropod veliger	0	0	0	645	0	333	0	0	333	0
821	Bivalvia veliger	0	0	0	0	0	667	0	0	333	0
851	polychaete trochophore	0	0	0	0	0	0	0	0	0	0
855	spionid larva	0	333	0	0	0	0	645	0	0	0
		mg Carbon per cubic meter									
		28	36	26	36	34	24	27	11	12	

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DATE JULIAN DATE LOCATION MESH SIZE
130879 79225 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1237	24	8	18.5	30.6	0.3	0.5	1	1	ship
1243	24	4	18.5	30.6	0.3	0.5	0	1	ship
1249	24	1	18.6	30.6	1.2	0.6	0	1	ship
1350	21	9	17.1	31.4	1.3	0.8	1	1	ship
1357	21	5	17.1	31.4	1.1	0.9	1	1	ship
1403	21	1	17.3	31.4	2.1	0.8	1	1	ship
1523	19	11	15.4	32.5	4.2	0.9	2	1	ship
1529	19	6	15.3	32.5	4.5	0.9	2	1	ship
1535	19	1	15.3	32.5	2.5	0.5	2	1	ship

Code	Name	Station Depth	8	24 4	1	9	21 5	1	11	19 6	1
Number per cubic meter											
5	Acartia clausi F		0	0	0	0	0	0	533	233	0
6	Acartia clausi M		0	0	0	0	0	0	267	0	0
7	Acartia clausi C		0	0	0	0	0	0	800	2333	1067
8	Acartia clausi N		0	0	0	0	0	0	0	233	0
10	Acartia californiensis F		667	111	1067	200	267	0	0	0	0
11	Acartia californiensis M		1667	111	262	400	0	0	267	0	0
12	Acartia californiensis C		7333	4444	5067	3000	1867	3467	2133	467	0
13	Acartia californiensis N		333	2778	8533	3400	2133	9600	2933	4667	533
17	Acartia tonsa F		0	0	0	0	0	0	267	0	267
18	Acartia tonsa M		0	0	0	0	0	0	267	0	0
62	Paracalanus parvus C		0	0	0	0	0	0	267	0	267
220	Corycaeus sp.		0	0	0	0	0	0	0	0	267
250	Haracticoida		0	111	267	0	0	1067	267	233	267
270	Microsetella sp.		0	0	0	800	0	0	267	233	0
280	Haracticoid sp.A		0	222	0	200	0	0	267	0	0
315	Cumacea		0	0	0	0	0	0	267	0	0
321	Isopoda imm.		0	0	0	0	0	0	0	0	0
401	barnacle nauplius		0	0	0	0	0	0	533	0	800
440	Cladocera		0	0	0	0	0	0	267	0	0
551	Endraulis mordax egg		0	0	0	0	0	0	1	0	0
560	fish larva		0	0	0	0	0	0	1	0	0
604	Tintinnid sp.C		0	0	0	0	0	0	0	467	0
681	flatworm sp. A		0	222	0	1000	1067	0	0	0	0
691	Pilidium larva		0	0	0	0	0	0	0	233	0
701	Synchaeta sp.		0	111	0	0	0	267	0	0	0
801	Gastropod veliger		0	0	267	600	0	0	0	0	0
821	Bivalvia veliger		0	1000	267	1000	0	1600	1333	1400	533
851	Polychaete trochophore		0	0	267	400	267	267	0	0	0
855	spionid larva		333	111	267	200	0	0	0	233	1067
ms Carbon per cubic meter											
			11	6	10	8	4	6	8	5	6

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 DATE JULIAN DATE LOCATION MESH SIZE
 170879 79229 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1025	36	3	20.4	27.8	-	-	0	1	ship
1031	36	1	20.4	27.8	-	-	0	1	ship
1211	32	12	21.3	29.7	-	-	0	-1	ship
1204	32	5	21.3	29.7	-	-	0	-1	ship
1218	32	1	21.3	29.7	-	-	0	-1	ship

		Station Depth	36	1	12	32 5	1
Code	Name						Number per cubic meter
10	Acartia californiensis F	1667	0		10333	1000	0
11	Acartia californiensis M	3000	0		9000	1667	667
12	Acartia californiensis C	11667	5400		3000	9333	8000
13	Acartia californiensis N	10000	12600		667	2667	11333
102	Eurytemora affinis C	333	0		0	0	0
197	copepod nauplius B	667	0		0	0	0
250	Harpacticoida	0	0		0	0	667
270	Microsetella sp.	0	0		0	0	0
280	Harpacticoid sp. A	333	600		0	333	333
281	Harpacticoid A N	0	0		0	333	0
370	Natantia zoea	0	0		333	0	0
401	barnacle nauplius	333	0		0	0	0
460	Halocarida	0	0		1	0	0
551	Engraulis mordax egg	0	0		1	0	0
603	Tintinnopsis sp. B	0	200		0	0	0
801	Gastropod veliger	1000	1200		2333	2333	667
821	Bivalvia veliger	0	1800		0	0	0
851	polychaete trochophore	0	200		0	0	0
855	spionid larva	0	400		0	0	333
							ms Carbon per cubic meter
		21	8		48	14	11

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DATE JULIAN DATE LOCATION MESH SIZE
170979 79260 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
921	36	6	23.0	28.9	4.3	1.2	0	1	ship
927	36	3	23.0	28.8	4.4	1.2	0	1	ship
933	36	1	23.0	28.6	4.0	1.2	2	1	ship
1027	32	12	22.4	30.8	2.9	1.1	2	1	ship
1033	32	6	22.5	30.7	2.9	1.2	2	1	ship
1039	32	1	22.6	30.7	2.4	1.2	2	1	ship
1128	30	12	21.9	31.0	1.7	1.2	2	1	ship
1134	30	6	21.9	31.0	1.6	1.1	3	1	ship
1140	30	1	22.0	30.9	1.5	1.0	1	1	ship

Code	Name	Station Depth	6	36 3	1	12	32 6	1	12	30 6	1
5	Acartia clausi F		0	0	0	0	0	0	0	0	0
7	Acartia clausi C		0	0	0	0	0	0	0	0	0
8	Acartia clausi N		0	0	0	0	0	0	0	0	0
10	Acartia californiensis F		3000	0	0	1333	667	667	4000	667	333
11	Acartia californiensis M		1000	0	333	1667	1667	0	1333	667	0
12	Acartia californiensis C		14000	13667	4000	10000	7667	6667	8333	11667	5000
13	Acartia californiensis N		10000	14667	11333	10000	7333	28333	2333	1333	13000
36	Calanus tenuicornis C		0	0	0	0	0	0	0	0	0
60	Paracalanus parvus F		0	0	0	0	0	0	0	0	0
62	Paracalanus parvus C		0	0	0	0	0	0	0	0	0
102	Eurytemora affinis C		0	667	0	0	0	0	0	0	0
196	copepod nauplius A		0	0	333	667	0	3000	333	667	1000
200	Cyclopoida		0	0	0	0	333	0	0	0	0
210	Oithona spp.		0	0	0	0	0	0	0	0	0
250	Harpacticoida		0	0	0	1000	333	2000	1333	333	0
280	Harpacticoid sp. A		0	333	667	0	0	0	333	0	0
281	Harpacticoid A N		0	333	333	333	0	0	0	0	333
321	Isopoda imm.		0	0	0	0	0	0	0	0	0
345	Grapsid zoea		0	0	0	0	0	0	0	0	0
401	barnacle nauplius		0	0	0	0	0	0	0	0	0
440	Cladocera		0	0	0	0	0	333	0	0	0
604	Tintinnid sp. C		0	0	0	0	0	0	0	0	0
681	flatworm sp. A		0	0	0	0	0	333	0	333	0
701	Synchaeta sp.		0	0	0	0	0	0	0	0	0
710	Rotifera sp. B		0	0	0	0	0	0	0	0	0
801	Gastropod veliger		0	667	667	667	1333	1333	333	667	1000
821	Bivalvia veliger		0	0	0	1000	333	2000	0	0	667
855	spionid larva		0	1000	1000	2000	1667	1333	3333	1333	667
880	scaleworm larva		0	0	0	0	0	0	0	0	0
			23	16	8	mg Carbon per cubic meter					
						22	17	18	30	17	8

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1230	27	11	21.0	31.3	1.3	0.9	2	0	lab
1236	27	5	21.1	31.3	2.2	0.8	2	0	ship
1242	27	1	21.5	31.3	1.8	1.1	0	0	ship
1330	24	9	19.6	31.5	0.8	0.8	2	-1	ship
1336	24	5	19.7	31.5	1.0	0.8	1	-1	ship
1342	24	1	20.0	31.5	1.8	0.6	1	-1	ship
1428	21	9	18.2	31.5	1.8	1.1	1	-1	ship
1434	21	6	18.3	31.5	2.0	0.8	1	-1	ship
1440	21	1	18.6	31.4	3.1	0.7	1	-1	ship

Code	Name	Station Depth								ms Carbon per cubic meter
		11	27 5	1	9	24 5	1	9	21 6	
5	Acartia clausi F	0	0	0	0	0	0	0	0	0
7	Acartia clausi C	0	0	0	0	0	4533	6333	1000	800
8	Acartia clausi N	0	0	0	0	0	0	2000	0	1867
10	Acartia californiensis F	1333	0	0	1667	0	0	0	0	0
11	Acartia californiensis M	267	200	0	1667	0	800	0	0	0
12	Acartia californiensis C	1067	7000	11200	5667	10400	3467	0	0	0
13	Acartia californiensis N	0	200	8267	667	533	8000	0	0	0
36	Calanus tenuicornis C	0	0	0	0	0	0	0	0	0
60	Paracalanus parvus F	0	0	267	0	0	267	0	0	267
62	Paracalanus parvus C	0	0	0	0	0	0	0	333	0
102	Eurytemora affinis C	0	0	0	0	0	0	0	0	0
196	copepod nauplius A	0	0	533	0	0	1600	333	0	0
200	Cyclopoids	0	0	0	0	0	0	0	0	0
210	Oithona spp.	0	0	0	0	0	0	0	0	0
250	Harpacticoids	533	200	1067	333	1600	0	2333	667	533
280	Harpacticoid sp. A	0	0	0	333	0	0	0	0	0
281	Harpacticoid A N	0	200	0	0	0	0	0	0	0
321	Isopoda imm.	0	200	0	0	0	0	0	0	0
345	Grapsid zoea	0	0	0	0	267	0	0	0	0
401	barnacle nauplius	0	0	0	0	0	0	0	0	0
440	Cladocera	0	0	0	0	0	0	0	0	0
604	Tintinnid sp. C	0	0	0	0	0	0	0	0	267
681	flatworm sp. A	0	200	0	0	267	0	1000	667	267
701	Synchaeta sp.	0	0	0	0	0	0	0	0	267
710	Rotifera sp. B	0	200	0	0	0	0	0	0	0
801	Gastropod veliger	0	200	0	0	533	0	0	333	267
821	Bivalvia veliger	800	400	533	1667	2400	533	0	333	267
855	spionid larva	267	200	533	333	0	0	1333	667	2400
880	scaleworm larva	0	0	0	0	0	0	0	333	267
		7	7	13	14	12	9	13	5	9

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1530	19	14	16.2	32.2	3.2	0.8	1	-1	ship
1536	19	7	16.5	32.1	3.4	0.7	1	-1	ship
1542	19	1	16.5	32.1	3.9	0.6	1	-1	ship

Station	Depth	14	19	7	1
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Code	Name	Number per cubic meter			
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5	Acartia clausi F	0	667	0	
7	Acartia clausi C	2133	1667	0	
8	Acartia clausi N	1067	2333	2333	
10	Acartia californiensis F	0	0	0	
11	Acartia californiensis M	0	0	0	
12	Acartia californiensis C	0	0	0	
13	Acartia californiensis N	0	0	0	
36	Calanus tenuicornis C	0	0	333	
60	Paracalanus parvus F	0	0	0	
62	Paracalanus parvus C	267	0	667	
102	Eurytemora affinis C	0	0	0	
196	Copepod nauplius A	0	0	0	
200	Cyclopoida	0	333	0	
210	Oithona spp.	267	0	0	
250	Haracticoida	533	1000	0	
280	Haracticoid sp. A	0	0	0	
281	Haracticoid A N	0	0	0	
321	Isopoda imm.	0	0	0	
345	Grapsid zoea	0	0	1	
401	barnacle nauplius	267	0	0	
440	Cladocera	0	0	0	
604	Tintinnid sp. C	0	333	0	
681	flatworm sp. A	0	0	333	
701	Synchaeta sp.	0	0	0	
710	Rotifera sp. B	0	333	0	
801	Gastropod veliger	0	333	333	
821	Bivalvia veliger	0	0	333	
855	spionid larva	800	667	1333	
880	scaleworm larva	0	0	0	

ms Carbon per cubic meter

5	7	6
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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
956	30	13	20.8	30.8	1.7	-	0	-1	ship
1006	30	6	20.8	30.8	1.7	-	0	-1	ship
1012	30	1	20.8	30.0	1.7	-	0	-1	ship
1122	32	12	20.8	30.0	1.8	-	0	1	ship
1128	32	6	20.8	29.7	1.8	-	0	1	ship
1134	32	1	20.8	29.5	1.8	-	0	1	ship
1238	34	7	20.6	29.3	1.7	-	1	1	ship
1244	34	3	22.3	29.2	1.7	-	1	1	ship
1250	34	1	20.4	28.7	1.7	-	0	1	ship

		Station Depth	13	30 6	1	12	32 6	1	7	34 3	1
Code	Name	Number per cubic meter									
10	Acartia californiensis F	1333	1067	667	1867	533	267	5000	1600	1600	
11	Acartia californiensis M	1600	1333	333	1600	800	0	4333	1600	0	
12	Acartia californiensis C	6133	12267	39333	13867	12533	9600	6333	5333	12000	
13	Acartia californiensis N	267	2400	27333	2667	3733	10400	1333	267	7467	
102	Eurytemora affinis C	0	0	0	267	0	0	0	0	0	
197	copepod nauplius B	0	0	1000	0	0	0	0	0	0	
250	Haracticoida	267	267	333	267	267	267	0	0	0	
280	Haracticoid sp. A	0	0	2333	267	267	1333	333	267	0	
281	Haracticoid A N	0	0	333	0	0	533	0	0	0	
440	Cladocera	0	533	0	0	0	0	0	0	0	
460	Halocarida	0	267	0	0	0	0	0	0	0	
681	flatworm sp. A	0	0	0	0	267	0	0	0	0	
801	Gastropod veliger	0	800	0	267	0	0	667	267	0	
821	Bivalvia veliger	0	0	0	0	267	267	0	0	0	
851	polychaete trochophore	0	533	0	0	0	0	0	0	0	
855	spionid larva	267	533	1333	0	267	267	0	0	267	
		12	19	42	mg Carbon per cubic meter						
					20	15	12	27	12	16	

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1410	36	7	20.7	29.1	2.5	-	0	1	ship
1416	36	3	20.7	29.1	2.5	1.0	0	1	ship
1423	36	1	20.7	28.7	2.5	-	0	1	ship

Station	Depth	7	36	3	1
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Code	Name	Number per cubic meter		
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10	Acartia californiensis F	4267	267	533
11	Acartia californiensis M	3467	267	0
12	Acartia californiensis C	11467	9333	12533
13	Acartia californiensis N	6400	3200	14133
102	Eurytemora affinis C	0	0	0
197	copepod nauplius B	0	0	0
250	Harpacticoida	267	267	533
280	Harpacticoid sp. A	800	267	800
281	Harpacticoid A N	0	0	267
440	Cladocera	0	0	0
460	Halocarida	0	0	0
681	flatworm sp. A	0	0	0
801	Gastropod veliger	0	0	0
821	Bivalvia veliger	0	267	0
851	polychaete trochophore	0	0	0
855	spionid larva	0	0	267

mg Carbon per cubic meter

29	10	15
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 DATE JULIAN DATE LOCATION MESH SIZE
 241079 79297 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1111	362	2	17.5	25.3	5.5	2.5	1	1	ship
1100	362	1	17.6	20.4	5.5	2.5	0	1	ship
1143	36	3	18.0	29.0	1.9	1.9	1	1	ship
1150	36	1	18.0	29.0	1.9	1.9	1	1	ship

		Station Depth	362 2	1	36 3	1
Code	Name		Number per cubic meter			
10	Acartia californiensis F	1204	0		111	65
11	Acartia californiensis M	463	120		0	65
12	Acartia californiensis C	1019	120		2222	1231
13	Acartia californiensis N	278	421		1611	454
197	copepod nauplius B	93	0		0	0
200	Cyclopoida	93	60		56	0
220	Corycaeus sp.	0	0		0	65
250	Haracticoida	0	60		0	0
280	Haracticoid sp.A	463	60		222	130
281	Haracticoid A N	185	0		0	65
321	Isopoda imm.	0	60		0	0
325	Synidotea laticauda imm.	0	0		1	0
401	barnacle nauplius	0	0		0	65
801	Gastropod veliser	278	0		389	194
821	Bivalvia veliser	0	60		0	0
855	spionid larva	0	60		0	65
			mg Carbon per cubic meter			
		6	1		3	2

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81179 79312 South S.F. Bay 64

TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1126	362	3	17.0	24.5	1.5	-	1	1	lab
1121	362	1	17.0	24.5	1.5	-	1	1	lab
1205	36	3	17.5	27.2	1.9	-	1	1	lab
1150	36	1	17.5	27.2	1.9	-	1	1	lab
1256	34	3	16.8	28.5	1.9	-	1	1	lab
1251	34	1	16.8	28.5	1.9	-	1	1	lab

Code	Name	Station						ms Carbon per cubic meter
		Depth	362	1	36	1	34	
		3					1	
10	Acartia californiensis F	4100	4500		1600	1132	2333	1200
11	Acartia californiensis M	2900	2000		867	233	1067	1700
12	Acartia californiensis C	1300	1600		533	1066	10400	7800
13	Acartia californiensis N	0	200		67	167	8400	7000
27	Tortanus discaudatus F	0	0		0	0	0	0
60	Paracalanus parvus F	0	0		0	0	0	0
61	Paracalanus parvus M	0	0		0	0	0	0
62	Paracalanus parvus C	0	0		0	0	0	0
102	Eurytemora affinis C	0	0		0	0	0	0
200	Cyclopoida	0	0		0	0	1	0
220	Corycaeus sp.	0	0		0	0	0	0
250	Harpacticoida	0	200		0	100	1	200
270	Microsetella sp.	0	0		4	0	5	200
300	Amphipoda	0	0		1	0	0	0
305	Ampelisca milleri	0	1		0	0	0	1
321	Isopoda imm.	0	0		1	0	3	0
325	Synidotea laticauda imm.	1	2		9	2	0	2
333	Neomysis mercedis juv.	1	0		0	0	2	0
341	Reptantia mesalops	0	0		0	0	0	1
342	Majid zoea	0	0		0	0	0	0
355	Cancer zoea	0	0		0	0	0	0
360	Pinnotherid zoea	0	0		0	0	1	0
401	barnacle nauplius	0	0		0	0	200	0
402	barnacle cypris	0	0		0	0	0	0
420	Ostracoda	9	0		0	0	0	0
460	Halocarida	0	0		0	0	0	0
560	fish larva	0	0		0	0	1	0
602	Tintinnopsis sp. A	0	0		0	0	0	0
630	coiled Foraminifera	2	0		0	0	0	0
681	flatworm sp. A	0	0		0	0	0	0
701	Synchaeta sp.	0	0		0	0	67	0
801	Gastropod veliger	1	0		0	67	200	1
821	Bivalvia veliger	4	0		0	0	0	1
851	Polyschaete trochophore	0	0		0	2	0	0
855	spionid larva	0	0		2	1	3	3
901	Insecta	0	0		0	0	2	0
		18	18		6	5	18	14

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TIME	STATION	DEPTH m	TEMP C	SALIN o/oo	CHL a ug/l	EXCOF /m	DETRITUS	TIDE	COUNT type
1335	30	3	17.8	30.5	1.4	-	1	1	lab
1330	30	1	17.8	30.5	1.4	-	0	1	lab

Code	Name	Station Depth	30 3	1	Number per cubic meter
10	Acartia californiensis F		733	133	
11	Acartia californiensis M		400	100	
12	Acartia californiensis C		1500	667	
13	Acartia californiensis N		0	0	
27	Tortanus discaudatus F		1	0	
60	Paracalanus parvus F		33	0	
61	Paracalanus parvus M		33	0	
62	Paracalanus parvus C		67	0	
102	Eurytemora affinis C		0	1	
200	Cyclopoida		67	0	
220	Corycaeus sp.		0	2	
250	Harpacticoida		0	33	
270	Microsetella sp.		233	100	
300	Amphipoda		0	0	
305	Ampelisca milleri		0	0	
321	Isopoda imm.		0	0	
325	Synidotea laticauda imm.		0	0	
333	Neomysis mercedis Juv.		1	0	
341	Reptantia mesalops		2	1	
342	Majid zoea		16	5	
355	Cancer zoea		0	2	
360	Pinnotherid zoea		0	1	
401	barnacle nauplius		0	0	
402	barnacle cypris		1	2	
420	Ostracoda		0	0	
460	Halocarida		1	0	
560	fish larva		0	0	
602	Tintinnopsis sp. A		67	0	
630	coiled Foraminifera		0	0	
681	flatworm sp. A		33	67	
701	Synchaeta sp.		0	0	
801	Gastropod veliger		100	67	
821	Bivalvia veliger		67	67	
851	polychaete trochophore		0	0	
855	spionid larva		1	7	
901	Insects		0	0	

mg Carbon per cubic meter

5 1