

Microzooplankton Community in the Browns Bank Region (February - November 1983)

South West Nova Scotia Fishery Ecology Program

Jodine C. Dugas

Marine Fish Division
Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia B2Y 4A2



August 1985

**Canadian Data Report of
Fisheries and Aquatic Sciences
No. 532**



Fisheries
and Oceans

Pêches
et Océans

Canada

Canadian Data Report of Fisheries and Aquatic Sciences

These reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of Data Reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Numbers 1-25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26-160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was changed with report number 161.

The correct citation appears above the abstract of each report.

Rapport statistique canadien des sciences halieutiques et aquatiques

Ces rapports servent de base à la compilation des données de classement et d'archives pour lesquelles il y a peu ou point d'analyse. Cette compilation aura d'ordinaire été préparée pour appuyer d'autres publications ou rapports. Les sujets des Rapports statistiques reflètent la vaste gamme des intérêts et politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les numéros 1 à 25 de cette série ont été publiés à titre de Records statistiques, Service des pêches et de la mer. Les numéros 26-160 ont été publiés à titre de Rapports statistiques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 161.

Le titre exact paraît au haut du résumé de chaque rapport.

Canadian Data Report of Fisheries and Aquatic Sciences No. 532

August 1985

MICROZOOPLANKTON COMMUNITY IN THE BROWNS BANK REGION
(FEBRUARY - NOVEMBER 1983)

by

Jodine C. Dugas

Oceanography Department
Dalhousie University
Halifax, Nova Scotia
B3H 4H6

or

16 West Main Street
Wickford, Rhode Island
02952, U.S.A.

Minister of Supply and Services Canada 1985
Cat. No. Fs 97-13/532E ISSN 0706-6465

Table of Contents

	<u>Page</u>
List of Figures	iv
Abstract	v
Introduction	1
Methods and Materials	1
Results and Disucssion	1
Acknowledgements	2
References	2

LIST OF FIGURES

	<u>Page</u>	<u>Page</u>
Figure 1. Location of stations sampled between February and November 1983. -----	3	
Figure 2. Size distribution of three <i>Calanus</i> species (CV and CIV). Measurements were made from the top of the head to the beginning of the caudal ramus. -----	4	
Figure 3. The mean seasonal abundance of (A) total zooplankton and (B) total nauplii on a log scale for each cruise. The bars indicate the 95% confidence intervals. -----	5	
Figure 4. The percent composition of the major zooplankton components for each cruise. 1= <i>C. finmarchicus</i> , 2= <i>C. glacialis</i> , 3= <i>Calanus copepodites</i> , 4= <i>Pseudocalanus</i> sp., 5= <i>C. typicus</i> , 6= <i>O. similis</i> , 7= <i>M. pygmaeus</i> , 8= <i>I. longicornis</i> , 9= <i>P. parvus</i> , 10= <i>M. norvegica</i> , 11= <i>Oncæa</i> sp., 12= <i>L. retroversa</i> (B), 13= <i>L. retroversa</i> (Sm), and 14=total nauplii. -----	6	
Figure 5. The mean log abundance (#/m ³) of <i>C. finmarchicus</i> (CIV-CVI) for each cruise.-----	7	
Figure 6. The mean log abundance (#/m ³) of <i>Calanus</i> copepodites (CIII-CI) for each cruise. -----	7	
Figure 7. The mean log abundance (#/m ³) of <i>Pseudocalanus</i> sp. for each cruise. -----	8	
Figure 8. The mean log abundance (#/m ³) of <i>O. similis</i> for each cruise. -----	8	
Figure 9. The mean log abundance (#/m ³) of <i>I. longicornis</i> for each cruise. -----	9	
Figure 10. The mean log abundance (#/m ³) of <i>M. norvegica</i> for each cruise. -----	9	
Figure 11. The mean log abundance (#/m ³) of <i>L. retroversa</i> (Sm) for each cruise. -----	10	
Figure 12. The percent composition of copepod nauplii species for each cruise. 1= <i>Calanus</i> , 2= <i>Calanoid</i> , 3= <i>Centropages</i> , 4= <i>Metridia</i> , 5= <i>Oithona</i> , 6= <i>Temora</i> , and 7= <i>Microsetella</i> . -----	12	

Abstract

Dugas, Jodine C. Microzooplankton Community in the Browns Bank Region (February-November 1983). Canadian Data Report of Fisheries and Aquatic Sciences No. 532.

A fine-mesh (0.080 mm) zooplankton survey was conducted in the Browns Bank region between February and November of 1983. Abundance estimates (#/m³) of the developmental stages (nauplii through adults) for the dominant copepods species are presented.

Résumé

Dugas, Jodine C. Microzooplankton Community in the Browns Bank Region (February-November 1983). Canadian Data Report of Fisheries and Aquatic Sciences No. 532.

Un relevé du zooplancton a été réalisé avec un filet à petites mailles (0,080 mm) dans la région du banc Browns entre février et novembre 1983. On présente les données estimées de l'abondance (nbré/m³) des principales espèces de copépodes pour les divers stades de développement (du stade nauplius au stade adulte).



Introduction

The majority of zooplankton surveys in the northwest Atlantic have been conducted using nets fitted with meshes ranging from 0.200 to 0.333 mm (Bigelow and Sears 1939; Riley et al. 1949; Grice and Hart 1962; Sameoto 1977; Sameoto and Lewis 1980 a,b; Judkins et al. 1980). Through the use of coarse-mesh samplers, the zooplankton community of the northwest Atlantic has been viewed as being dominated by *Calanus finmarchicus*, *Pseudocalanus* sp., *Centropages typicus*, and *Metridia lucens*. However, surveys using finer mesh (0.165 mm) have found the role of smaller copepods, such as *Paracalanus parvus* on Georges Bank (Davis 1982), *Dithona similis* south of Long Island (Turner and Dagg 1983), and *Microsetella norvegica* on Browns Bank (Dugas and Koslow 1984), greatly underestimated. To date, only a few surveys using fine-meshed nets (0.200 mm) have been conducted on the Scotian Shelf (Fish and Johnson 1937; Tremblay and Roff 1983).

Methods and Materials

Seven stations representative of potentially distinct oceanographic environments (Fournier et al. 1984; Koslow and Fournier in prep.) were selected: two inshore stations (7-4 and 7-6); inner and outer bank edge stations (7-8 and 7-10); a station at the western (7-9) and eastern (6-6) lobes of the bank; and a station in the deeper water (250 m) of the Northeastern Channel (7-12) (Fig. 1). The stations were sampled on six cruises, H092, H096, H097, H098, H099, and D035 (hereafter referred to as 8301, 8303, 8304, 8305, 8306, and 8307). Only stations 7-10 and 6-6 were sampled on cruise 8307 as a result of severe weather conditions.

Zooplankton samples for the February cruise were collected using 60 cm, paired Bongo nets fitted with 0.333 and 0.080 mm mesh nets with a General Oceanics Flowmeter mounted in the mouth of each net. Oblique tows were made from the surface to near bottom and back to the surface. To reduce both clogging and damage to the fine mesh nets, zooplankton samples from the subsequent cruises were collected using a 75 cm plankton net, fitted with 0.080 mm mesh, towed vertically from 50 meters to the surface. Depending on weather conditions, zero to three replicates were taken at each station (Table 1). The samples were first strained through a 0.080 mm sieve to reduce the volume and preserved in 4% buffered (CaCO₃) formalin.

Vertical profiles of salinity and temperature were obtained at each station for all cruises from 50 meters to the surface at 10 meter intervals except station 7-4 where the water was only 40 meters deep. A Guildline CTD was used on cruises 8301, 8304, 8306, and 8307. However, due to equipment failure, temperature and salinity were determined from water samples collected with 1 liter Niskin bottles equipped with reversing thermometers on cruises 8303 and 8305. Salinities were determined with a Guildline salinometer.

Table 1. Number of samples collected at each station for each cruise.

Sta.	Lat.	Long.	Cruise					
			8301	8303	8304	8305	8306	8307
7-4	43 15'	66 00'	1	1	2	2	2	0
7-6	43 00'	66 00'	1	1	1	3	1	0
7-8	42 53'	66 00'	1	2	1	2	1	0
7-9	42 45'	66 00'	3	2	1	2	1	0
7-10	42 35'	66 00'	3	2	1	4	1	2
7-12	42 23'	66 00'	2	1	2	4	2	0
6-6	42 36'	65 45'	2	1	1	2	1	2
Total			13	10	9	19	9	4

In the laboratory, a Motoda splitter was used to produce four aliquots of approximately 500 to 1500 animals, representing approximately 2% of total animals. All animals in each aliquot were counted, unless a category totalled more than 50 specimens, in which case the category was not counted in the remaining aliquots. This counting procedure had a 93% reproducibility.

Calanus copepodite stages IV and V of the three species were separated on the bases of total length (Fig. 2). The nauplii of *Pseudocalanus*, *Paracalanus*, *Microcalanus*, and *Calanus* (nauplii stages I-III) were grouped together and called calanoid nauplii because of overlap in size. Late stage *Calanus* nauplii were easily separated due to their larger size. All other nauplii were identified to genus. *Limacina retrocurva* was divided into size classes; juvenile and adults (< 2.0 mm) and old age (2.0-3.0 mm).

Results and Discussion

Total zooplankton numbers were approximately five times higher in spring (8303-8306) than winter (8301) or fall (8307) (Fig. 3a); however estimates were highly variable between stations and replicates. Copepod nauplii followed the same seasonal abundance pattern as total zooplankton (Fig. 3b). The data for each station can be found in Appendix 1.

Copepod nauplii and *Dithona similis* represented a major portion of the zooplankton community during all cruises (Fig. 4). The February (8301) cruise was numerically dominated by *Microsetella norvegica* and the pteropod *Limacina retrocurva* (both large and small forms). All spring cruises (8303-8306) were dominated by *Pseudocalanus* sp., *M. norvegica*, and *Calanus finmarchicus* while *Paracalanus parvus* and *M. norvegica* dominated the fall cruise (8307). *Centropages typicus*, although not a dominant organism, occurred in highest numbers during the fall cruise. *Microcalanus expansus* was present during the winter and fall while *Temora longicornis* was present during the

spring. The seasonal abundance pattern of the dominant organisms (all developmental stages combined) can be found in Figures 5 to 11.

Variation in zooplankton community structure was described for this data set on both the temporal and spatial scales using multivariate techniques (Dugas 1984). The results of the study showed the variability in zooplankton community structure was explained by hydrographic events.

Copepod nauplii species composition is presented in Figure 12 for each cruise. *Metridia* and *Centropages* nauplii represented a higher percent of the total nauplii in winter and fall while *Temora* nauplii were only present in the spring. In general, the percent of all other nauplii species was consistent among all cruises, varying only in absolute numbers.

These results confirm the importance of zooplankton studies based upon the use of fine-mesh samplers. Small copepods such as *Githona similis*, *Paracalanus parvus*, and *Microsetella norvegica* as well as copepod nauplii were numerically dominant in this survey. These same species were virtually absent from earlier coarse-meshed surveys in the northwest Atlantic (Bigelow and Sears 1939; Riley et al. 1949; Grice and Hart 1962; Sameoto 1977; Judkins et al. 1980). Extensive fine mesh sampling is needed for a complete understanding of the zooplankton community.

Acknowledgements

I would like to thank Dr. J.A. Koslow for his advice and help during all stages in this research. Thanks also go to the Marine Fish Division at Bedford Institute of Oceanography, and the Captain and crew of both the Lady Hammond and the Dawson.

LITERATURE CITED

- Bigelow, H.B. and M. Sears. 1939. Studies of the waters on the continental shelf, Cape Cod to Chesapeake Bay. III. A volumetric study of the zooplankton. Mem. Har. Mus. Comp. Zool. 54:179-378.
- Davis, C.S. 1982. Processes controlling zooplankton abundance on Georges Bank. Ph.D. thesis, Boston University Marine Program, Woods Hole, Mass.
- Dugas, J.C. 1984. Development of the zooplankton community in the Browns Bank region between February and November of 1983. M.Sc. thesis, Dalhousie University.
- Dugas, J.C. and J.A. Koslow. 1984. *Microsetella norvegica*: a rare report of a potentially abundant copepod on the Scotian Shelf. Mar. Biol. 84:131-134.
- Fish, C.J. and M.W. Johnson. 1937. The biology of the zooplankton population in the Bay of Fundy and Gulf of Maine with special reference to production and distribution. J. Biol. Bd. Can. 3:189-322.
- Fournier, R.O., M. Van Det, N.B. Hargraves, J.S. Wilson, T.A. Clair, and R. Ernest. 1984. Physical factors controlling summer distribution of chlorophyll a off southwest Nova Scotia. Limnol. Oceanogr. 29:517-526.
- Grice, G.D. and A.D. Hart. 1962. The abundance, seasonal occurrence, and distribution of the epizooplankton between New York and Bermuda. Ecol. Monogr. 32:287-309.
- Judkins, D.C., C.D. Wirick, and W.E. Esaias. 1980. Composition, abundance, and distribution of zooplankton in the New York Bight, Sept. 1974-Sept. 1975. Fishery Bulletin 77:669-683.
- Koslow, J.A. and R.O. Fournier. (in prep.). Spatial structure of the pelagic community in summer off southwest Nova Scotia.
- Riley, G.A., H. Stommel, and D.F. Bumpus. 1949. Quantitative ecology of the plankton of the western North Atlantic. Bull. Bingham Oceanogr. Coll. 12:1-169.
- Sameoto, D. 1977. Zooplankton biomass, density, and their association with phytoplankton on the southwestern area of the Nova Scotia shelf. Can. Tech. Rep. Fish. Aquat. Sci. No. 742:25p.
- Sameoto, D. and M. Lewis. 1980a. Zooplankton and microneuston associated with acoustic scattering layers on the Nova Scotia shelf and slope during May 1977. Can. Tech. Rep. Fish. Aquatic Sci. No. 875:44p.
- Sameoto, D. and M. Lewis. 1980b. Zooplankton and microneuston associated with acoustic scattering layers on the Nova Scotia shelf and slope during June 1978. Can. Tech. Rep. Fish. Aquatic Sci. No. 936:32p.
- Tremblay, J.M. and J.C. Roff. 1983. Community gradients in the Scotian Shelf zooplankton. Can. J. Fish. Aquat. Sci. 40:598-611.
- Turner, J.T. and M. Dagg. 1983. Vertical distributions of continental shelf zooplankton in stratified and isothermal waters. Biol. Oceanogr. 3:1-40.

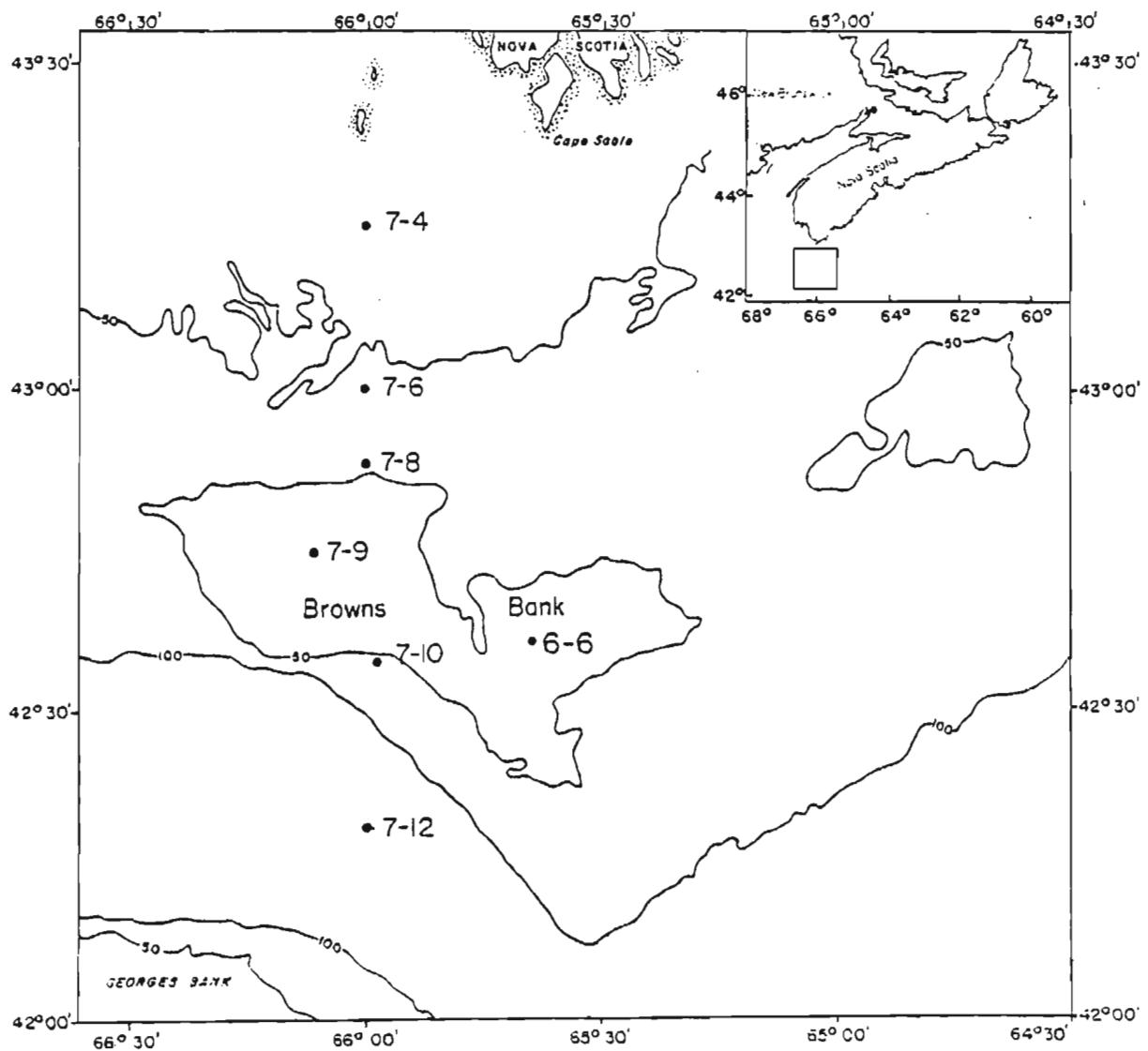


Figure 1. Location of stations sampled between February and November 1983.

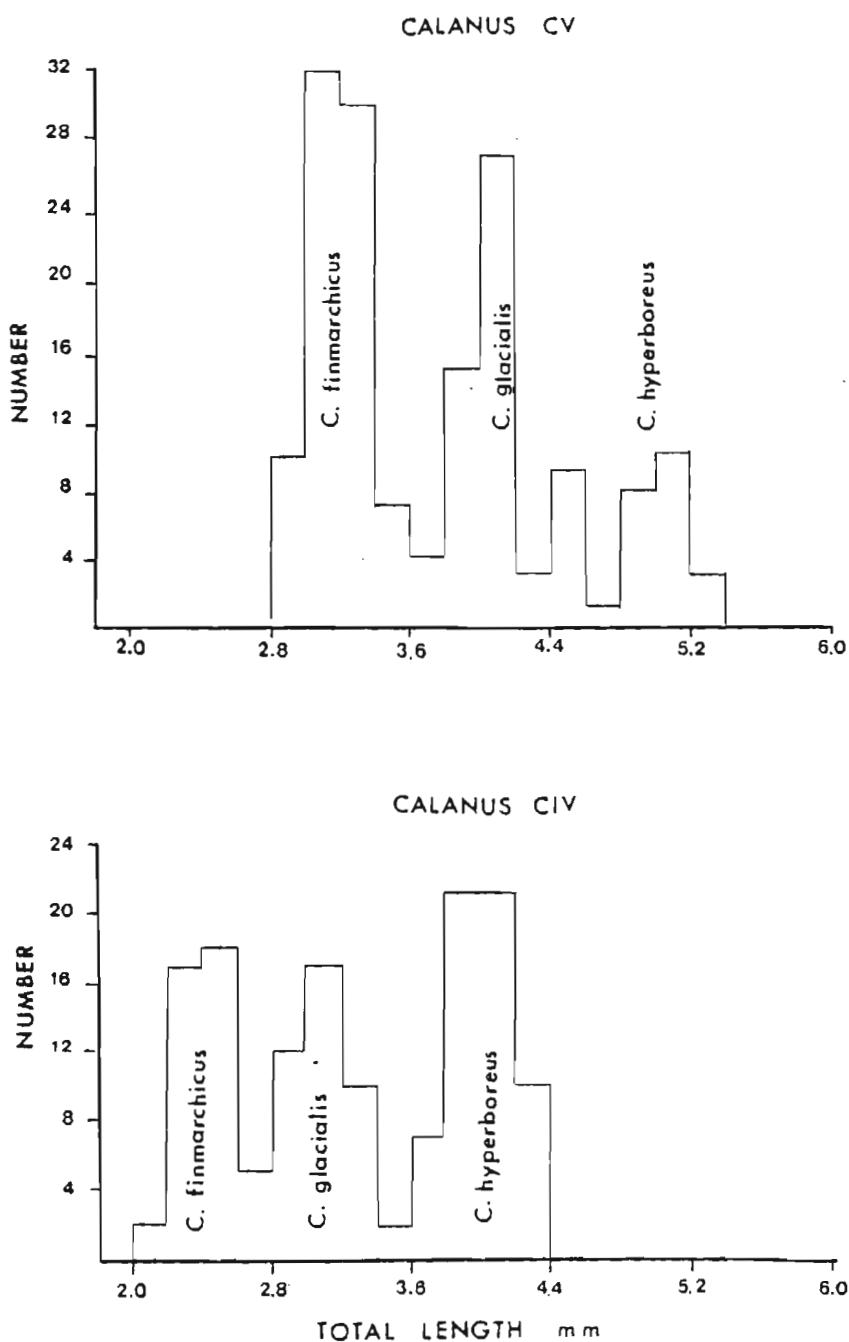


Figure 2. Size distribution of three *Calanus* species (CV and CIV). Measurements were made from the top of the head to the beginning of the caudal ramus.

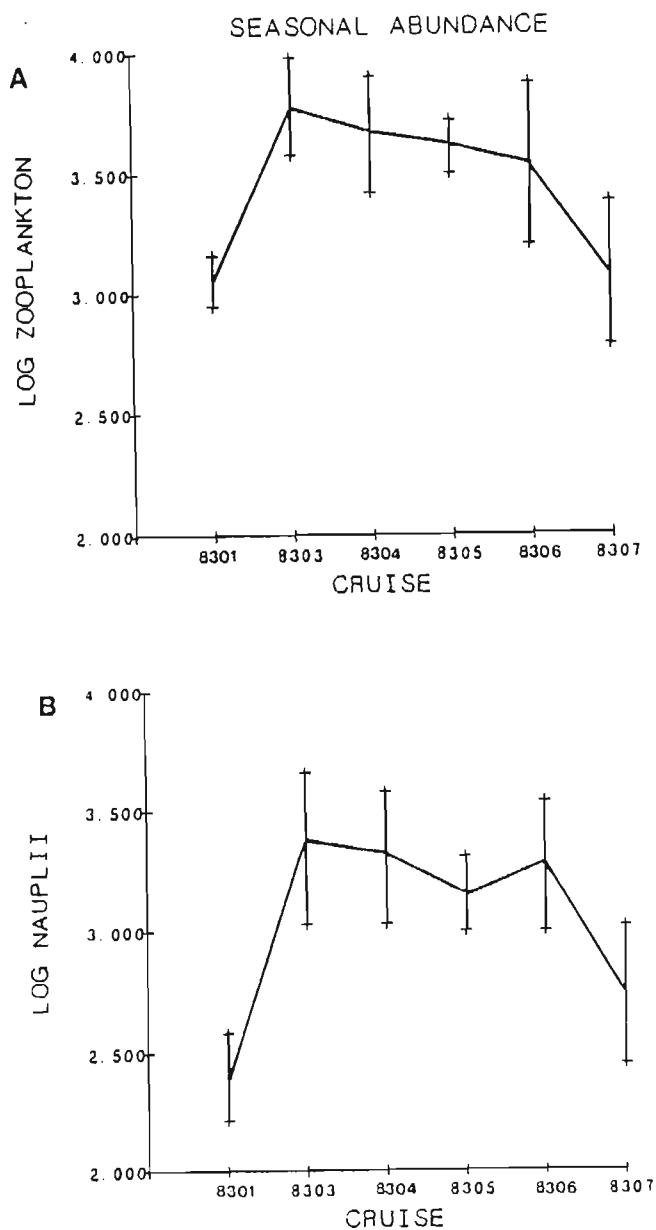


Figure 3. The mean seasonal abundance of (A) total zooplankton and (B) total nauplii on a log scale for each cruise. The bars indicate the 95% confidence intervals.

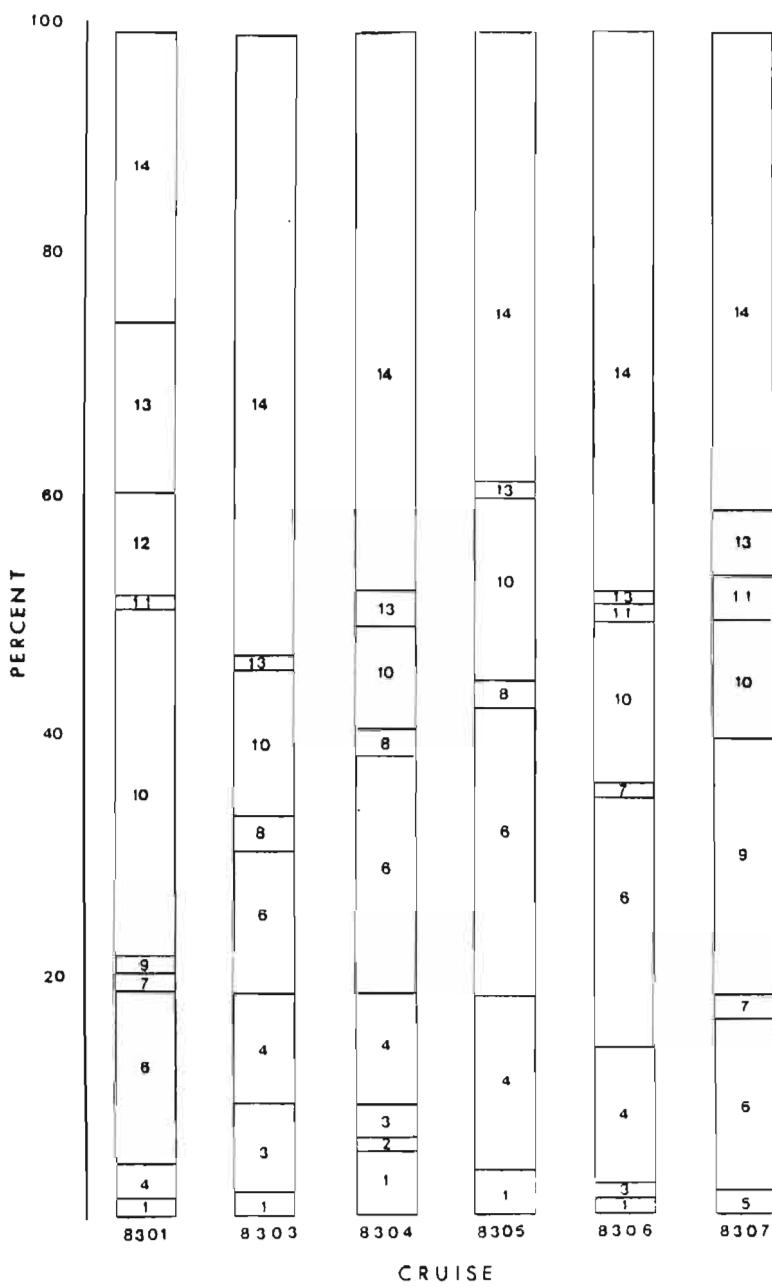


Figure 4. The percent composition of the major zooplankton components for each cruise. 1=*C. finmarchicus*, 2=*C. glacialis*, 3=*Calanus copepodites*, 4=*Pseudocalanus* sp., 5=*C. typicus*, 6=*Q. similis*, 7=*M. pygmaeus*, 8=*T. longicornis*, 9=*P. parvus*, 10=*M. norvegica*, 11=*Oncæa* sp., 12=*L. retroversa* (B), 13=*L. retroversa* (Sm), and 14=total nauplii.

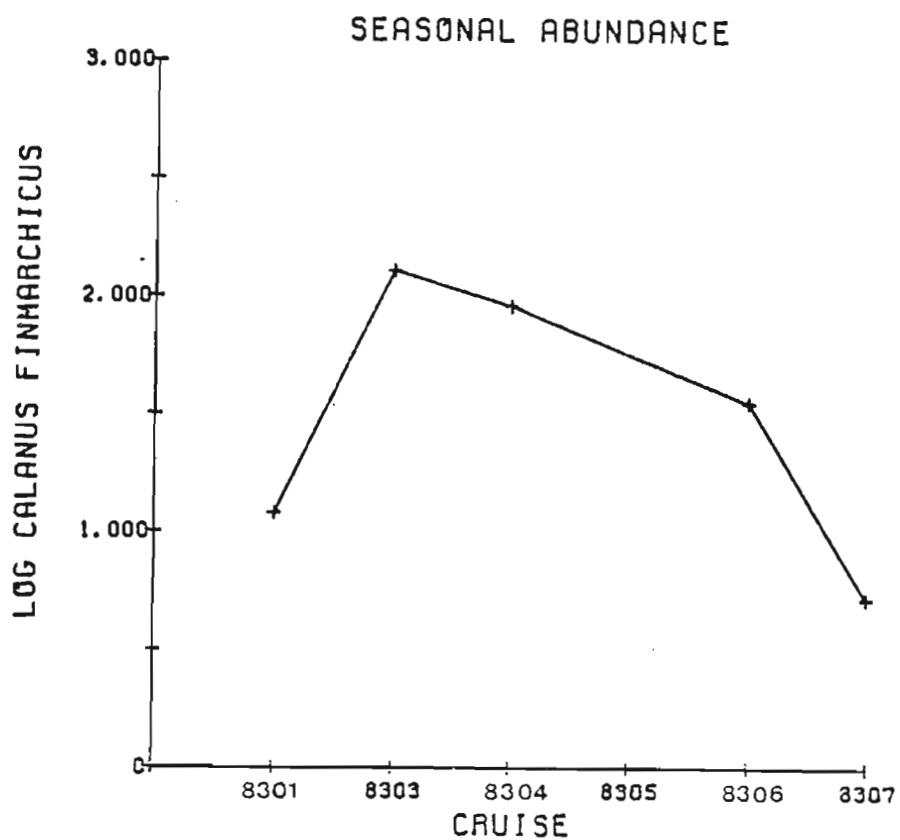


Figure 5. The mean log abundance ($\#/m^3$) of *C. finmarchicus* for each cruise.

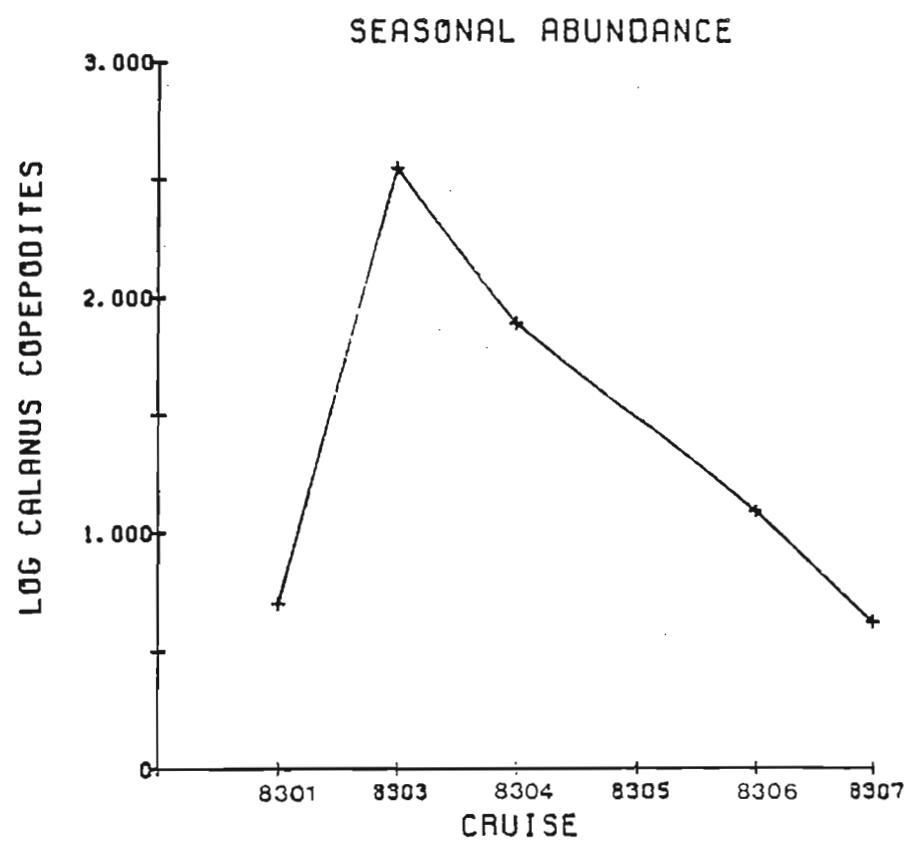


Figure 6. The mean log abundance ($\#/m^3$) of *Calanus* copepodites for each cruise.

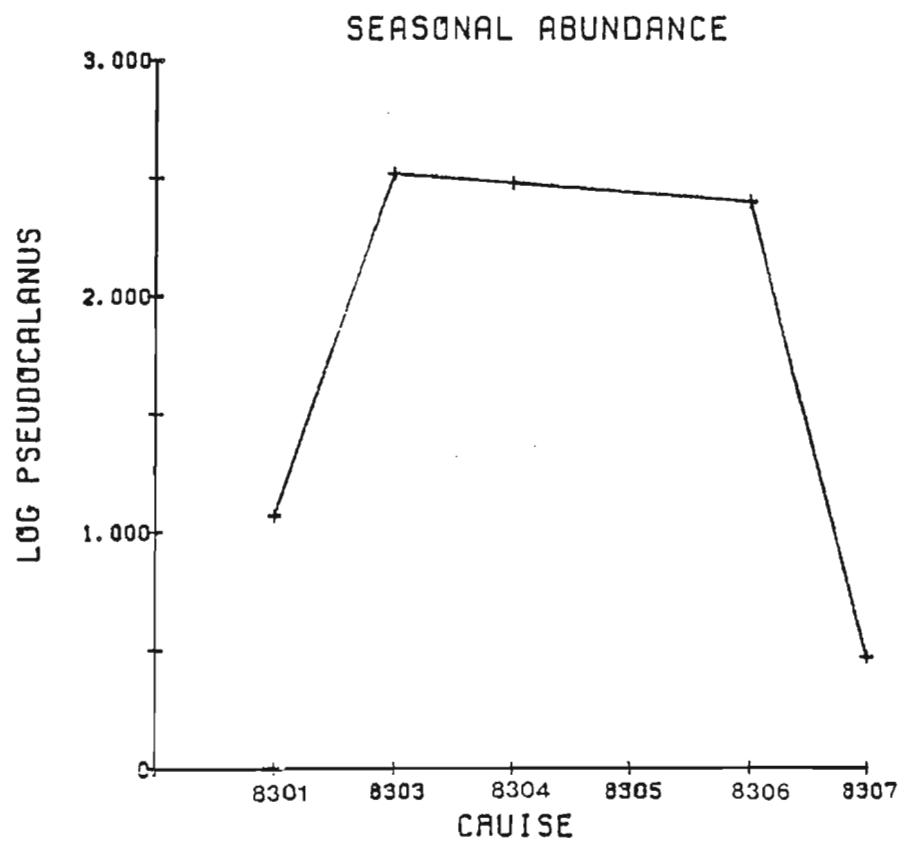


Figure 7. The mean log abundance ($\#/m^3$) of *Pseudocalanus* sp. for each cruise.

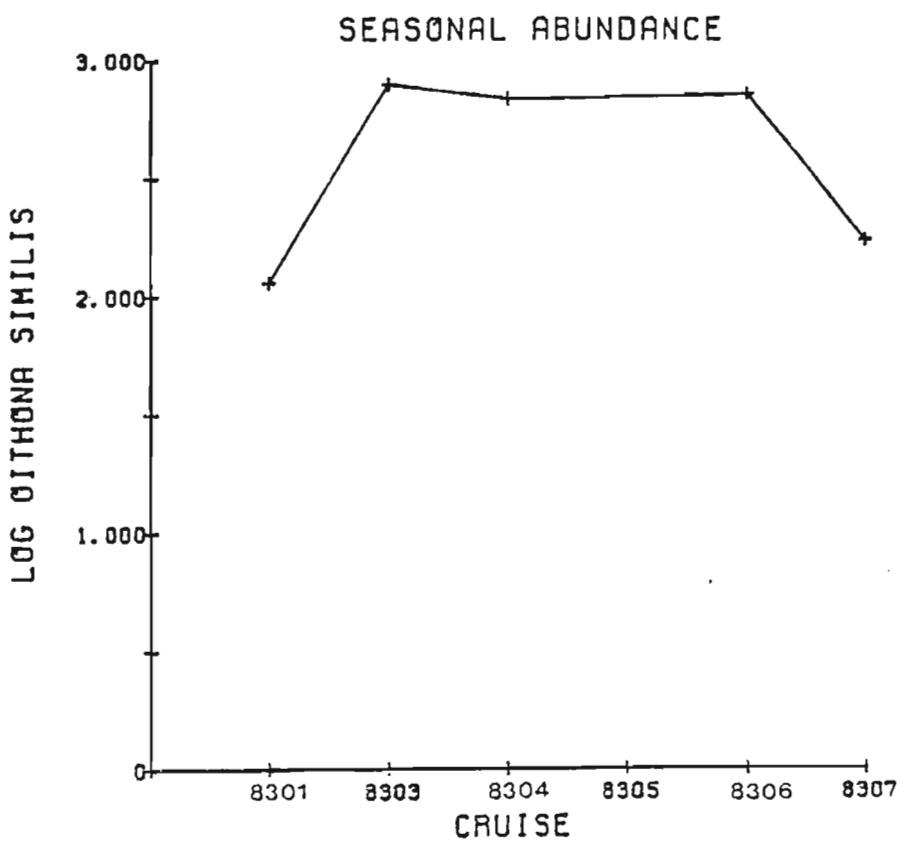


Figure 8. The mean log abundance ($\#/m^3$) of *O. similis* for each cruise.

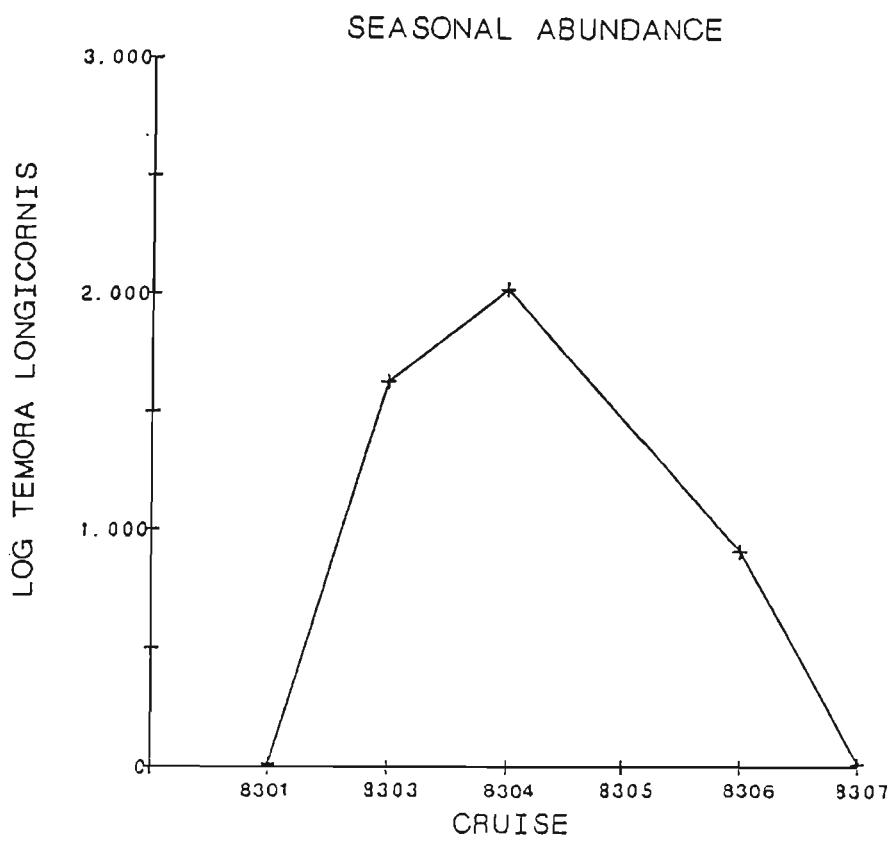


Figure 9. The mean log abundance ($\#/m^3$) of *T. longicornis* for each cruise.

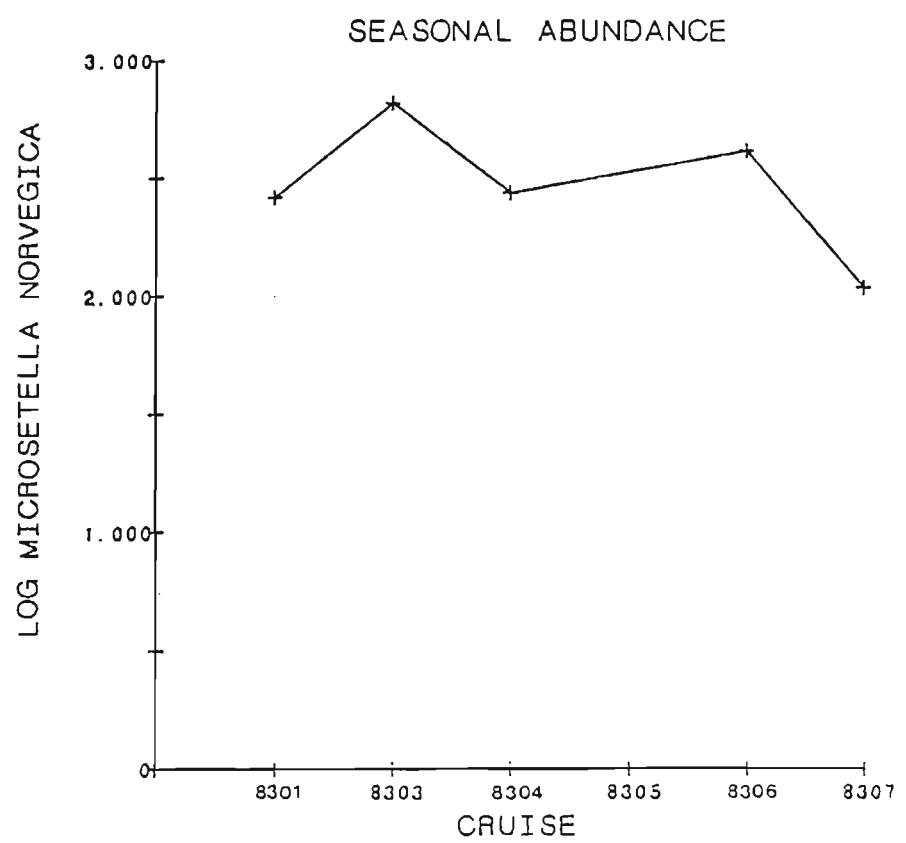


Figure 10. The mean log abundance ($\#/m^3$) of *M. norvegica* for each cruise.

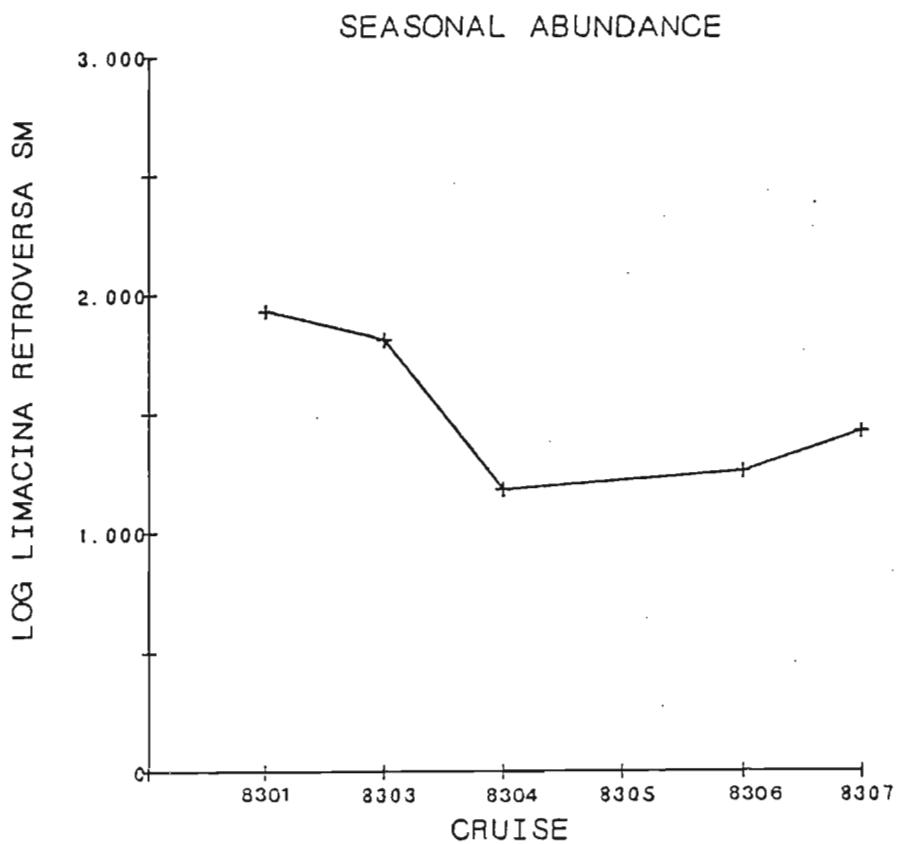


Figure 11. The mean log abundance ($\#/m^3$) of *L. retroversa* (Sm) for each cruise.

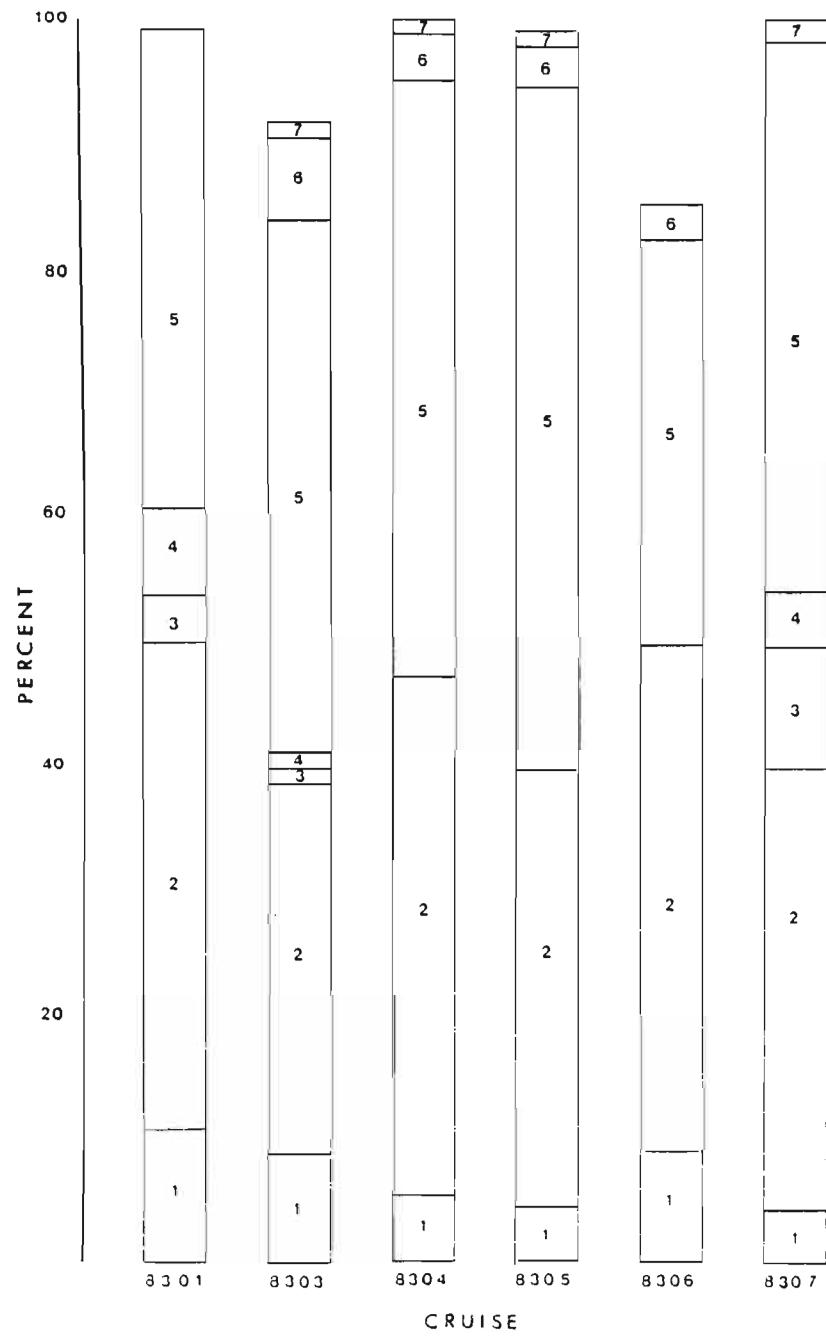


Figure 12. The percent composition of copepod nauplii species for each cruise. 1=Calanus, 2=Calanoid, 3=Centropages, 4=Metrinia, 5=Oithona, 6=Temora, and 7=Microsetella.

Cruise 8301 Latitude 43 13.5N Surface Temperature 3.0 C
 Station 7-04 Longitude 66 01.6 W Surface Salinity 31.46 o/oo
 Replicate A Time 1940 hrs Date Feb. 22, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 1.2	Calanus glacialis	AF 0.0
	AM 0.0	AM	0.0
	CV 0.8	CV	0.0
	CIV 0.4	CIV	0.0
	AF 0.0	Calanus sp.	CIII 0.0
Calanus hyperboreus	AM 0.0	CII	0.4
	CV 0.0	CI	0.4
	CIV 0.0		
	AF 24.6	Centropages typicus	AF 1.6
	AM 3.7	AM	0.4
Pseudocalanus sp.	CV 11.1	CV	1.2
	CIV 15.1	CIV	2.1
	CIII 10.6	CIII	0.8
	CII 5.7	CII	0.0
	CI 2.9	CI	0.0

Metridia lucens	AF 0.8	Oithona similis	AD 28.2
	AM 0.0	C 147.1	
	CV 0.4		
	CIV 0.4	Microcalanus pygmaeus	AD 2.9
	CIII 0.4	C	0.0
	CII 0.0		
	CI 0.0		

Temora longicornis	AD 3.3	Paracalanus parvus	AD 1.2
	C 1.6	C	0.4

Microsetella norvegica All	322.5	Oncaeaa sp.	ALL 0.0
----------------------------	-------	-------------	---------

NAUPLII

Calanus	45.7	Oithona	40.3
Pseudo-Micro-Para	166.0	Temora	2.7
Centropages	0.0	Microsetella	0.0
Metridia	10.7	Unidentified	39.0

OTHER

Limacina retroversa B	75.2	Euphausiid nauplii	0.0
Limacina retroversa Sm	10.1	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.6

Cruise 8301 Latitude 42 57.9N Surface Temperature 3.12 C
 Station 7-06 Longitude 66 00.9 W Surface Salinity 31.44 o/oo
 Replicate A Time 0110 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 19.0	Calanus glacialis	AF 1.7
	AM 0.0	AM	0.0
	CV 9.0	CV	0.0
	CIV 1.7	CIV	0.0
	AF 0.0	Calanus sp.	CIII 1.7
Calanus hyperboreus	AM 0.0	CII	2.8
	CV 0.0	CI	10.6
	CIV 0.0		
	AF 21.8	Centropages typicus	AF 5.0
	AM 1.7	AM	2.8
Pseudocalanus sp.	CV 7.3	CV	2.2
	CIV 3.9	CIV	4.5
	CIII 2.8	CIII	0.0
	CII 3.9	CII	0.0
	CI 2.8	CI	1.1

Metridia lucens	AF 10.1	Oithona similis	AD 23.5
	AM 0.6	C 138.8	
	CV 0.0		
	CIV 0.6	Microcalanus pygmaeus	AD 3.4
	CIII 1.7	C	3.9
	CII 0.0		
	CI 0.0		

Temora longicornis	AD 0.0	Paracalanus parvus	AD 16.2
	C 0.6	C	43.7

Microsetella norvegica All	60.5	Oncaeaa sp.	ALL 0.6
----------------------------	------	-------------	---------

NAUPLII

Calanus	118.7	Oithona	100.1
Pseudo-Micro-Para	264.3	Temora	9.0
Centropages	7.8	Microsetella	0.0
Metridia	44.8	Unidentified	71.7

OTHER

Limacina retroversa B	391.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	508.3	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.6

Cruise 8301 Latitude 42 52.8N Surface Temperature 3.06 C
 Station 7-08 Longitude 66 00.6 W Surface Salinity 31.50 o/oo
 Replicate A Time 0230 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 5.5 AM 0.0 CV 2.8 CIV 1.4	Calanus glacialis	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 0.0 CII 0.5 CI 6.0
Pseudocalanus sp.	AF 9.2 AM 0.9 CV 2.3 CIV 1.4 CIII 3.2 CII 3.2 CI 6.4	Centropages typicus	AF 3.7 AM 0.0 CV 0.9 CIV 1.8 CIII 0.9 CII 0.0 CI 0.0

Metridia lucens	AF 4.6 AM 1.4 CV 2.8 CIV 3.2 CIII 2.8 CII 2.3 CI 3.7	Oithona similis	AD 74.4 C 155.4
		Microcalanus pygmaeus	AD 39.1 C 89.6

Temora longicornis	AD 0.0 C 0.0	Paracalanus parvus	AD 11.5 C 21.1
--------------------	-----------------	--------------------	-------------------

Microsetella norvegica All	376.7	Oncaea sp.	ALL 6.9
----------------------------	-------	------------	---------

NAUPLII

Calanus	58.8	Oithona	84.1
Pseudo-Micro-Para	127.3	Temora	0.0
Centropages	0.9	Microsetella	0.0
Metridia	18.4	Unidentified	28.5

OTHER

Limacina retroversa B	120.7	Euphausiid nauplii	0.0
Limacina retroversa Sm	224.9	Euphausiid All	1.4
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 45.3N Surface Temperature 4.12 C
 Station 7-09 Longitude 66 02.5 W Surface Salinity 32.15 o/oo
 Replicate A Time 1650 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 2.1 AM 0.1 CV 0.9 CIV 1.4	Calanus glacialis	AF 0.1 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 0.1 CII 0.7 CI 0.2
Pseudocalanus sp.	AF 2.4 AM 0.4 CV 1.2 CIV 0.1 CIII 0.3 CII 0.4 CI 0.4	Centropages typicus	AF 0.3 AM 0.4 CV 0.4 CIV 0.3 CIII 0.0

Metridia lucens	AF 0.7 AM 0.1 CV 1.3 CIV 0.4 CIII 0.3 CII 0.4 CI 0.2	Oithona similis	AD 8.9 C 54.2
		Microcalanus pygmaeus	AD 4.8 C 4.1

Temora longicornis	AD 0.0 C 0.0	Paracalanus parvus	AD 1.9 C 1.9
--------------------	-----------------	--------------------	-----------------

Microsetella norvegica All	337.7	Oncaea sp.	ALL 2.1
----------------------------	-------	------------	---------

NAUPLII

Calanus	2.4	Oithona	21.7
Pseudo-Micro-Para	8.9	Temora	0.0
Centropages	1.2	Microsetella	0.0
Metridia	2.7	Unidentified	1.5

OTHER

Limacina retroversa B	41.7	Euphausiid nauplii	0.0
Limacina retroversa Sm	152.2	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 44.3N Surface Temperature 4.05 C
 Station 7-09 Longitude 66 00.9 W Surface Salinity 32.07 o/oo
 Replicate A Time 0420 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 17.0	Calanus glacialis	AF 0.4
AM 0.4		AM 0.0	
CV 4.9		CV 0.0	
CIV 3.2		CIV 0.0	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 0.8
AM 0.0		CII 0.8	
CV 0.0		CI 1.6	
CIV 0.0			
Pseudocalanus sp.	AF 9.7	Centropages typicus	AF 3.2
AM 2.4		AM 1.6	
CV 2.0		CV 1.2	
CIV 1.6		CIV 1.6	
CIII 2.0		CIII 0.0	
CII 2.0		CII 0.0	
CI 2.0		CI 0.0	

Metridia lucens	AF 6.5	Oithona similis	AD 92.8
AM 0.8		C 314.0	
CV 0.0			
CIV 0.0		Microcalanus pygmaeus	AD 14.2
CIII 0.4		C 40.0	
CII 0.4			
CI 0.8			

Temora longicornis	AD 0.0	Paracalanus parvus	AD 6.5
C 0.0		C 6.9	

Microsetella norvegica All	1266.3	Oncaea sp.	ALL 5.3
----------------------------	--------	------------	---------

NAUPLII

Calanus	61.9	Oithona	298.3
Pseudo-Micro-Para	77.8	Temora	0.0
Centropages	6.3	Microsetella	0.0
Metridia	76.7	Unidentified	42.0

OTHER

Limacina retroversa B	126.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	58.8	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 44.8N Surface Temperature 4.10 C
 Station 7-09 Longitude 66 02.3 W Surface Salinity 32.15 o/oo
 Replicate B Time 1710 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 11.0	Calanus glacialis	AF 0.0
AM 0.0		AM 0.0	
CV 3.7		CV 0.0	
CIV 1.2		CIV 0.0	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 0.8
AM 0.0		CII 0.6	
CV 0.0		CI 0.1	
CIV 0.0			
Pseudocalanus sp.	AF 0.7	Centropages typicus	AF 0.4
AM 0.1		AM 0.2	
CV 1.2		CV 0.0	
CIV 0.1		CIV 0.0	
CIII 0.0		CIII 0.0	
CII 0.0		CII 0.0	
CI 0.2		CI 0.0	

Metridia lucens	AF 0.0	Oithona similis	AD 9.3
AM 0.2		C 40.4	
CV 0.2			
CIV 0.2		Microcalanus pygmaeus	AD 8.5
CIII 0.1		C 12.4	
CII 0.1			
CI 0.2			

Temora longicornis	AD 0.1	Paracalanus parvus	AD 1.9
C 0.0		C 2.2	

Microsetella norvegica All	211.3	Oncaea sp.	ALL 3.7
----------------------------	-------	------------	---------

NAUPLII

Calanus	2.2	Oithona	43.2
Pseudo-Micro-Para	7.3	Temora	0.0
Centropages	0.7	Microsetella	0.3
Metridia	4.4	Unidentified	8.3

OTHER

Limacina retroversa B	30.1	Euphausiid nauplii	0.0
Limacina retroversa Sm	6.8	Euphausiid All	1.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 34.9N Surface Temperature 4.25 C
 Station 7-10 Longitude 66 00.6 W Surface Salinity 32.29 o/oo
 Replicate A Time 1438 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF	3.0	AF	0.0
AM	0.2	AM	0.0
CV	3.0	CV	0.0
CIV	0.8	CIV	0.0
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF	0.0	CIII	1.1
AM	0.0	CII	0.6
CV	0.0	CI	0.4
CIV	0.0		
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF	3.1	AF	0.4
AM	0.4	AM	0.4
CV	0.6	CV	0.4
CIV	0.1	CIV	0.1
CIII	0.3	CIII	0.1
CII	0.3	CII	0.2
CI	0.5	CI	0.3
<i>Metridia lucens</i>		<i>Oithona similis</i>	
AF	1.0	AD	15.8
AM	0.1	C	31.1
CV	0.4		
CIV	0.0	<i>Microcalanus pygmæus</i>	AD 0.9
CIII	0.2	C	2.0
CII	0.0		
CI	0.4		
<i>Temora longicornis</i>		<i>Paracalanus parvus</i>	
AD	0.0	AD	0.6
C	0.0	C	1.7
<i>Microsetella norvegica</i> All	112.3	<i>Oncaea sp.</i>	ALL 0.7

NAUPLII

<i>Calanus</i>	15.0	<i>Oithona</i>	24.8
<i>Pseudo-Micro-Para</i>	56.7	<i>Temora</i>	0.0
<i>Centropages</i>	0.2	<i>Microsetella</i>	0.4
<i>Metridia</i>	16.6	Unidentified	5.9

OTHER

<i>Limacina retroversa</i> B	21.3	Euphausiid nauplii	0.1
<i>Limacina retroversa</i> Sm	88.6	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 34.5N Surface Temperature 4.24 C
 Station 7-10 Longitude 66 30.3 W Surface Salinity 32.19 o/oo
 Replicate B Time 1450 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF	3.8	AF	1.8
AM	0.0	AM	0.0
CV	2.5	CV	0.0
CIV	2.2	CIV	0.0
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF	0.0	CIII	1.6
AM	0.0	CII	0.6
CV	0.0	CI	0.3
CIV	0.0		
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF	2.9	AF	0.2
AM	1.2	AM	0.3
CV	0.6	CV	0.1
CIV	0.9	CIV	0.0
CIII	0.8	CIII	0.0
CII	0.5	CII	0.0
CI	1.0	CI	0.2
<i>Metridia lucens</i>		<i>Oithona similis</i>	
AF	4.5	AD	10.7
AM	0.5	C	62.2
CV	1.8		
CIV	0.5	<i>Microcalanus pygmæus</i>	AD 5.0
CIII	0.5	C	9.3
CII	0.7		
CI	0.5		
<i>Temora longicornis</i>		<i>Paracalanus parvus</i>	
AD	0.0	AD	2.4
C	0.0	C	1.7
<i>Microsetella norvegica</i> All	109.2	<i>Oncaea sp.</i>	ALL 1.7

NAUPLII

<i>Calanus</i>	7.4	<i>Oithona</i>	22.2
<i>Pseudo-Micro-Para</i>	25.3	<i>Temora</i>	0.0
<i>Centropages</i>	0.7	<i>Microsetella</i>	0.2
<i>Metridia</i>	4.5	Unidentified	1.4

OTHER

<i>Limacina retroversa</i> B	18.6	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	61.7	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 34.9N Surface Temperature 4.30 C
 Station 7-10 Longitude 66 00.5 W Surface Salinity 32.25 o/oo
 Replicate A Time 0535 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF	5.5	AF	0.3
AM	0.0	AM	0.0
CV	3.4	CV	0.0
CIV	3.4	CIV	0.0
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF	0.0	CIII	7.9
AM	0.0	CII	4.2
CV	0.0	CI	2.6
CIV	0.0		
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF	10.7	AF	1.3
AM	0.3	AM	0.3
CV	3.4	CV	0.3
CIV	1.6	CIV	0.3
CIII	2.9	CIII	0.3
CII	2.1	CII	0.3
CI	4.2	CI	0.0
<i>Metridia lucens</i>		<i>Oithona similis</i>	
AF	8.1	AD	35.2
AM	1.1	C	63.7
CV	1.6		
CIV	0.8	<i>Microcalanus pygmaeus</i>	AD 6.3
CIII	0.0	C	11.5
CII	1.3		
CI	0.3		
<i>Temora longicornis</i>		<i>Paracalanus parvus</i>	
AD	0.0	AD	7.1
C	0.0	C	10.2
<i>Microsetella norvegica</i> All	1596.4	<i>Oncaea sp.</i>	ALL 4.4

Cruise 8301 Latitude 42 20.6N Surface Temperature 4.52 C
 Station 7-12 Longitude 65 58.7 W Surface Salinity 32.41 o/oo
 Replicate A Time 1214 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF	4.4	AF	0.0
AM	1.3	AM	0.0
CV	14.1	CV	0.0
CIV	1.3	CIV	0.0
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF	0.0	CIII	0.6
AM	0.0	CII	1.3
CV	0.0	CI	0.6
CIV	0.0		
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF	0.3	AF	0.0
AM	0.2	AM	0.0
CV	0.2	CV	0.0
CIV	0.0	CIV	0.2
CIII	0.0	CIII	0.0
CII	0.2	CII	0.0
CI	0.9	CI	0.0
<i>Metridia lucens</i>		<i>Oithona similis</i>	
AF	0.6	AD	6.8
AM	0.3	C	58.4
CV	0.6		
CIV	0.0	<i>Microcalanus pygmaeus</i>	AD 1.0
CIII	0.0	C	4.4
CII	0.6		
CI	1.2		
<i>Temora longicornis</i>		<i>Paracalanus parvus</i>	
AD	0.0	AD	0.3
C	0.0	C	0.2
<i>Microsetella norvegica</i> All	64.5	<i>Oncaea sp.</i>	ALL 12.3

NAUPLII

<i>Calanus</i>	42.8	<i>Oithona</i>	84.2
<i>Pseudo-Micro-Para</i>	66.7	<i>Temora</i>	0.0
<i>Centropages</i>	2.2	<i>Microsetella</i>	1.8
<i>Metridia</i>	97.0	Unidentified	34.2

OTHER

<i>Limacina retroversa</i> B	113.8	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	60.6	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

NAUPLII

<i>Calanus</i>	1.4	<i>Oithona</i>	34.8
<i>Pseudo-Micro-Para</i>	24.6	<i>Temora</i>	0.0
<i>Centropages</i>	0.3	<i>Microsetella</i>	0.3
<i>Metridia</i>	7.2	Unidentified	1.0

OTHER

<i>Limacina retroversa</i> B	15.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	84.0	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 19.9N Surface Temperature 4.52 C
 Station 7-12 Longitude 65 57.7 W Surface Salinity 32.41 o/oo
 Replicate B Time 1233 hrs Date Feb. 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 6.9 AM 3.7 CV 27.3 CIV 1.3	Calanus glacialis	AF 1.0 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 2.2 CII 0.9 CI 0.3
Pseudocalanus sp.	AF 0.4 AM 0.3 CV 0.3 CIV 1.2 CIII 0.4 CII 0.6 CI 0.7	Centropages typicus	AF 0.2 AM 0.0 CV 0.0 CIV 0.3 CIII 0.0 CII 0.0 CI 0.0
Metridia lucens	AF 1.2 AM 0.2 CV 0.3 CIV 0.2 CIII 0.3 CII 1.8 CI 1.2	Oithona similis	AD 10.2 C 76.8
		Microcalanus pygmaeus	AD 3.2 C 18.8

Temora longicornis	AD 0.0 C 0.0	Paracalanus parvus	AD 1.9 C 1.2
Microsetella norvegica All	224.3	Oncaea sp.	ALL 47.1

NAUPLII

Calanus	2.1	Oithona	62.5
Pseudo-Micro-Para	37.9	Temora	0.0
Centropages	0.7	Microsetella	0.7
Metridia	12.6	Unidentified	6.1

OTHER

Limacina retroversa B	39.6	Euphausiid nauplii	0.0
Limacina retroversa Sm	105.5	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 36.8N Surface Temperature 5.26 C
 Station 6-06 Longitude 65 40.3 W Surface Salinity 32.77 o/oo
 Replicate A Time 1245 hrs Date Feb. 25, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 2.1 AM 0.0 CV 2.3 CIV 1.7	Calanus glacialis	AF 0.4 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 1.9 CII 4.1 CI 4.5
Pseudocalanus sp.	AF 1.5 AM 0.9 CV 0.8 CIV 0.8 CIII 0.4 CII 0.9 CI 3.1	Centropages typicus	AF 0.0 AM 0.2 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0
Metridia lucens	AF 3.4 AM 0.0 CV 0.2 CIV 0.2 CIII 0.2 CII 0.0 CI 1.0	Oithona similis	AD 25.7 C 158.3
		Microcalanus pygmaeus	AD 1.9 C 8.7
Temora longicornis	AD 0.0 C 0.0	Paracalanus parvus	AD 4.9 C 12.9
Microsetella norvegica All	318.7	Oncaea sp.	ALL 2.3

NAUPLII

Calanus	29.2	Oithona	233.3
Pseudo-Micro-Para	185.4	Temora	0.0
Centropages	0.7	Microsetella	1.4
Metridia	23.6	Unidentified	0.7

OTHER

Limacina retroversa B	9.3	Euphausiid nauplii	0.0
Limacina retroversa Sm	164.5	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8301 Latitude 42 36.N Surface Temperature 5.26 C
 Station 6-0E Longitude 65 40.5 W Surface Salinity 32.77 o/oo
 Replicate B Time 1340 hrs Date Feb. 25, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus		Calanus glacialis	
AF	3.6	AF	0.0
AM	0.7	AM	0.0
CV	0.0	CV	0.0
CIV	0.7	CIV	0.0
Calanus hyperboreus		Calanus sp.	
AF	0.0	CIII	1.4
AM	0.0	CII	2.2
CV	0.0	CI	2.7
CIV	0.0		
Pseudocalanus sp.		Centropages typicus	
AF	1.9	AF	0.0
AM	1.2	AM	0.0
CV	1.2	CV	0.0
CIV	0.5	CIV	0.0
CIII	0.7	CIII	0.0
CII	1.0	CII	0.0
CI	1.4	CI	0.0

Metridia lucens	AF	5.0	Oithona similis	AD	29.5
	AM	1.7		C	202.7
	CV	2.7			
	CIV	0.7	Microcalanus pygmæus	AD	6.5
	CIII	0.5		C	12.8
	CII	1.2			
	CI	0.0			

Temora longicornis	AD	0.0	Paracalanus parvus	AD	9.7
	C	0.0		C	14.2

Microsetella norvegica	All	470.5	Oncaea sp.	All	3.4
------------------------	-----	-------	------------	-----	-----

NAUPLII

Calanus	10.9	Oithona	100.1
Pseudo-Micro-Para	191.8	Temora	0.0
Centropages	5.2	Microsetella	2.6
Metridia	26.9	Unidentified	1.6

OTHER

Limacina retroversa B	4.8	Euphausiid nauplii	0.0
Limacina retroversa Sm	228.0	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.2

Cruise 8303 Latitude 43 00.0N Surface Temperature 4.40 C
 Station 7-04 Longitude 65 59.9 W Surface Salinity 30.95 o/oo
 Replicate A Time 1600 hrs Date Apr. 27, 1983

SPECIES	no/m-3	SPECIES	no/m-3		
Calanus finmarchicus	AF	0.0	Calanus glacialis	AF	1.4
	AM	0.0		AM	0.0
	CV	5.7		CV	7.2
	CIV	8.7		CIV	13.0
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	23.1
	AM	0.0		CII	13.0
	CV	0.0		CI	7.2
	CIV	0.0			
Pseudocalanus sp.	AF	73.6	Centropages typicus	AF	0.0
	AM	31.7		AM	1.4
	CV	111.1		CV	0.0
	CIV	57.7		CIV	0.0
	CIII	23.1		CIII	0.0
	CII	31.7		CII	1.4
	CI	30.3		CI	0.0

Metridia lucens	AF	0.0	Oithona similis	AD	10.1
	AM	0.0		C	83.7
	CV	0.0			
	CIV	0.0	Microcalanus pygmæus	AD	0.0
	CIII	0.0		C	0.0
	CII	0.0			
	CI	0.0			

Temora longicornis	AD	11.5	Paracalanus parvus	AD	0.0
	C	221.7		C	0.0

Microsetella norvegica	All	173.3	Oncaea sp.	All	0.0
------------------------	-----	-------	------------	-----	-----

NAUPLII

Calanus	16.1	Oithona	165.3
Pseudo-Micro-Para	302.3	Temora	169.3
Centropages	4.0	Microsetella	4.0
Metridia	0.0	Unidentified	318.5

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	16.1	Euphausiid All	0.0
pluteus	16.1	Barnacle nauplii	5.8

Cruise 8303 Latitude 42 59.9N Surface Temperature 5.40 C
 Station 7-06 Longitude 65 59.7 W Surface Salinity 31.65 o/oo
 Replicate A Time 1245 hrs Date Apr. 27, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 29.0	Calanus glacialis	AF 10.4	
	AM 15.6		AM 5.2	
	CV 171.6		CV 20.8	
	CIV 306.7		CIV 15.6	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 265.1	
	AM 0.0		CII 270.3	
	CV 5.2		CI 239.1	
	CIV 0.0			
Pseudocalanus sp.	AF 46.8	Centropages typicus	AF 0.0	
	AM 46.8		AM 0.0	
	CV 78.9		CV 0.0	
	CIV 20.8		CIV 0.0	
	CIII 88.4		CIII 0.0	
	CII 145.6		CII 0.0	
	CI 265.1		CI 0.0	

Metridia lucens	AF 0.0	Oithona similis	AD 545.4	
	AM 0.0		C 1236.3	
	CV 0.0			
	CIV 5.2	Microcalanus pygmaeus	AD 0.0	
	CIII 5.2		C 36.4	
	CII 0.0			
	CI 10.4			

Temora longicornis	AD 0.0	Paracalanus parvus	AD 0.0	
	C 83.2		C 0.0	

Microsetella norvegica All	642.4	Oncaea sp.	ALL 0.0	
----------------------------	-------	------------	---------	--

NAUPLII

Calanus	412.1	Oithona	2182.1	
Pseudo-Micro-Para	1478.7	Temora	52.0	
Centropages	0.0	Microsetella	104.0	
Metridia	124.8	Unidentified	133.0	

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	10.4	
Limacina retroversa Sm	145.4	Euphausiid All	0.0	
pluteus	0.0	Barnacle nauplii	0.0	

Cruise 8303 Latitude 42 55.0N Surface Temperature 5.70 C
 Station 7-08 Longitude 66 01.6 W Surface Salinity 32.17 o/oo
 Replicate A Time 1056 hrs Date Apr. 27, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 9.7	Calanus glacialis	AF 14.5	
	AM 0.0		AM 0.0	
	CV 24.3		CV 19.4	
	CIV 144.5		CIV 48.6	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 310.9	
	AM 0.0		CII 262.3	
	CV 0.0		CI 238.0	
	CIV 0.0			
Pseudocalanus sp.	AF 43.7	Centropages typicus	AF 0.0	
	AM 9.7		AM 0.0	
	CV 48.6		CV 0.0	
	CIV 29.1		CIV 0.0	
	CIII 29.1		CIII 0.0	
	CII 58.3		CII 0.0	
	CI 121.5		CI 0.0	

Metridia lucens	AF 0.0	Oithona similis	AD 373.8	
	AM 0.0		C 1524.9	
	CV 0.0			
	CIV 0.0	Microcalanus pygmaeus	AD 0.0	
	CIII 4.9		C 0.0	
	CII 14.6			
	CI 0.0			

Temora longicornis	AD 19.4	Paracalanus parvus	AD 0.0	
	C 145.7		C 0.0	

Microsetella norvegica All	3907.9	Oncaea sp.	ALL 0.0	
----------------------------	--------	------------	---------	--

NAUPLII

Calanus	456.9	Oithona	2444.8	
Pseudo-Micro-Para	1428.1	Temora	301.7	
Centropages	20.7	Microsetella	62.3	
Metridia	425.7	Unidentified	508.8	

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0	
Limacina retroversa Sm	16.3	Euphausiid All	0.0	
pluteus	0.0	Barnacle nauplii	0.0	

Cruise 8303 Latitude 42 53.4N Surface Temperature 5.40 C
 Station 7-08 Longitude 65 59.6 W Surface Salinity 32.34 o/oo
 Replicate A Time 0345 hrs Date Apr. 28, 1983

SPECIES		no/m-3		SPECIES		no/m-3	
Calanus finmarchicus	AF	19.4	Calanus glacialis	AF	0.0		
	AM	0.0		AM	0.0		
	CV	14.6		CV	24.3		
	CIV	72.9		CIV	14.6		
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	136.0	Calanus finmarchicus	AF
	AM	0.0		CII	170.0		AM
	CV	0.0		CI	208.9		CV
	CIV	0.0					CIV
Pseudocalanus sp.	AF	48.6	Centropages typicus	AF	0.0	Calanus hyperboreus	AF
	AM	19.4		AM	0.0		AM
	CV	29.1		CV	0.0		CV
	CIV	34.0		CIV	0.0		CIV
	CIII	29.1		CIII	0.0	Pseudocalanus sp.	AF
	CII	48.6		CII	0.0		122.7
Metridia lucens	CI	121.5		CI	0.0	Centropages typicus	AF
	AF	0.0	Oithona similis	AD	197.3		0.0
	AM	0.0		C	1040.8		AM
	CV	4.9					CV
CIV	0.0	Microcalanus pygmaeus	AD	0.0	Metridia lucens	AF	0.0
	CIII	9.7		C	0.0		AM
	CII	4.9					CV
	CI	9.7					CIV
Temora longicornis		AD	0.0	Paracalanus parvus	AD	4.9	Microcalanus pygmaeus
		C	126.3		C	4.9	AD
							C
							0.0
Microsetella norvegica All		3980.3	Oncaea sp.	ALL	0.0	Microsetella norvegica All	131.8
						Oncaea sp.	
						ALL	0.0

NAUPLII

Calanus	321.9	Oithona	1524.9
Pseudo-Micro-Para	1258.7	Temora	353.0
Centropages	0.0	Microsetella	155.7
Metridia	103.8	Unidentified	467.2

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	20.8
Limacina retroversa Sm	93.4	Euphausiid All	19.4
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8303 Latitude 42 47.0N Surface Temperature 4.30 C
 Station 7-09 Longitude 66 02.4 W Surface Salinity 32.16 o/oo
 Replicate A Time 0923 hrs Date Apr. 27, 1983

SPECIES		no/m-3		SPECIES		no/m-3	
Calanus finmarchicus	AF	4.6	Calanus glacialis	AF	0.0		
	AM	0.0		AM	0.0		
	CV	6.8		CV	0.0		
	CIV	27.3		CIV	0.0		
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	45.5	Calanus finmarchicus	AF
	AM	0.0		CII	36.4		AM
	CV	2.3		CI	43.3		CV
	CIV	0.0					CIV
Pseudocalanus sp.	AF	122.7	Centropages typicus	AF	0.0	Calanus hyperboreus	AF
	AM	109.1		AM	0.0		AM
	CV	204.6		CV	0.0		CV
	CIV	285.0		CIV	0.0		CIV
	CIII	321.4		CIII	0.0		CIII
	CII	303.2		CII	0.0		CII
Metridia lucens	CI	309.3		CI	0.0		CI
	AF	0.0	Oithona similis	AD	127.3	Metridia lucens	AF
	AM	0.0		C	503.3		AM
	CV	0.0					CV
CIV	0.0	Microcalanus pygmaeus	AD	0.0	Microcalanus pygmaeus	AD	20
	CIII	0.0		C	0.0		C
	CII	0.0					0.0
	CI	0.0					
Temora longicornis		AD	6.8	Paracalanus parvus	AD	0.0	Microcalanus pygmaeus
		C	70.6		C	0.0	AD
							C
Microsetella norvegica All		3980.3	Oncaea sp.	ALL	0.0		0.0

NAUPLII

Calanus	278.9	Oithona	539.7
Pseudo-Micro-Para	927.4	Temora	109.1
Centropages	12.1	Microsetella	40.9
Metridia	0.0	Unidentified	206.2

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	13.6
Limacina retroversa Sm	31.8	Euphausiid All	9.1
pluteus	36.4	Barnacle nauplii	4.5

Cruise 8303 Latitude 42 45.2N Surface Temperature 5.40 C
 Station 7-09 Longitude 65 59.9 W Surface Salinity 31.65 o/oo
 Replicate A Time 0200 hrs Date Apr. 28, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 2.4	<i>Calanus glacialis</i>	AF 0.0
AM 0.0		AM 0.0	
CV 11.8		CV 2.9	
CIV 42.9		CIV 4.7	
<i>Calanus hyperboreus</i>	AF 0.0	<i>Calanus sp.</i>	CIII 60.0
AM 0.0		CII 39.4	
CV 1.2		CI 21.2	
CIV 0.0			
<i>Pseudocalanus sp.</i>	AF 58.9	<i>Centropages typicus</i>	AF 0.0
AM 9.4		AM 0.0	
CV 43.0		CV 0.0	
CIV 30.0		CIV 0.0	
CIII 17.1		CIII 0.0	
CII 13.5		CII 0.0	
CI 26.5		CI 0.0	
<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 48.5
AM 0.0		C 278.9	
CV 0.0			
CIV 0.6		<i>Microcalanus pygmaeus</i>	AD 0.0
CIII 0.0		C 0.0	
CII 0.0			
CI 0.0			
<i>Temora longicornis</i>	AD 1.2	<i>Paracalanus parvus</i>	AD 1.2
C 54.6		C 1.2	
<i>Microsetella norvegica</i> All	272.9	<i>Oncaea sp.</i>	All 1.2

NAUPLII

<i>Calanus</i>	97.0	<i>Oithona</i>	460.9
<i>Pseudo-Micro-Para</i>	345.6	<i>Temora</i>	168.7
<i>Centropages</i>	0.0	<i>Microsetella</i>	8.5
<i>Metridia</i>	0.0	<i>Unidentified</i>	67.5

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	1.2
<i>Limacina retroversa</i> Sm	24.3	Euphausiid All	0.0
pluteus	34.0	Barnacle nauplii	0.0

Cruise 8303 Latitude 42 35.5N Surface Temperature 5.30 C
 Station 7-10 Longitude 66 00.2 W Surface Salinity 31.95 o/oo
 Replicate A Time 0015 hrs Date Apr. 24, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 18.2	<i>Calanus glacialis</i>	AF 0.0
AM 0.0		AM 0.0	
CV 72.7		CV 0.0	
CIV 109.1		CIV 36.4	
<i>Calanus hyperboreus</i>	AF 0.0	<i>Calanus sp.</i>	CIII 463.7
AM 0.0		CII 245.5	
CV 0.0		CI 90.9	
CIV 0.0			
<i>Pseudocalanus sp.</i>	AF 9.1	<i>Centropages typicus</i>	AF 0.0
AM 9.1		AM 0.0	
CV 9.1		CV 0.0	
CIV 9.1		CIV 0.0	
CIII 9.1		CIII 0.0	
CII 27.3		CII 0.0	
CI 127.3		CI 18.2	
<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 272.8
AM 0.0		C 1527.5	
CV 0.0			
CIV 0.0		<i>Microcalanus pygmaeus</i>	AD 0.0
CIII 0.0		C 0.0	
CII 27.3			
CI 18.2			
<i>Temora longicornis</i>	AD 0.0	<i>Paracalanus parvus</i>	AD 0.0
C 0.0		C 0.0	
<i>Microsetella norvegica</i> All	1745.7	<i>Oncaea sp.</i>	All 0.0

NAUPLII

<i>Calanus</i>	309.1	<i>Oithona</i>	3690.8
<i>Pseudo-Micro-Para</i>	2062.5	<i>Temora</i>	145.5
<i>Centropages</i>	181.8	<i>Microsetella</i>	390.9
<i>Metridia</i>	54.6	<i>Unidentified</i>	581.9

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	163.7
<i>Limacina retroversa</i> Sm	852.7	Euphausiid All	0.0
pluteus	563.7	Barnacle nauplii	0.0

Cruise 8303 Latitude 42 33.2N Surface Temperature 5.50 C
 Station 7-10 Longitude 65 59.8 W Surface Salinity 32.06 o/oo
 Replicate A Time 0345 hrs Date Apr. 27, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 36.4 AM 0.0 CV 41.6 CIV 187.1	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 5.2 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i> CIII 369.1 CII 145.6 CI 140.4	
<i>Pseudocalanus sp.</i>	AF 2.4 AM 4.9 CV 2.4 CIV 2.4 CIII 9.7 CII 21.8 CI 80.0	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 2.4 CI 0.0	<i>Oithona similis</i> AD 78.0 C 322.3	
<i>Temora longicornis</i>	AD 0.0 C 20.8	<i>Paracalanus parvus</i> AD 0.0 C 0.0	
<i>Microsetella norvegica</i>	All 593.9	<i>Ornaea sp.</i> ALL 0.0	

NAUPLII

<i>Calanus</i>	1042.4	<i>Oithona</i>	703.0
<i>Pseudo-Micro-Para</i>	1103.0	<i>Temora</i>	351.5
<i>Centropages</i>	242.4	<i>Microsetella</i>	36.4
<i>Metridia</i>	12.1	Unidentified	121.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	93.6
<i>Limacina retroversa</i> Sm	315.1	Euphausiid All	0.0
pluteus	171.6	Barnacle nauplii	0.0

Cruise 8303 Latitude 42 23.3N Surface Temperature 3.71 C
 Station 7-12 Longitude 66 00.5 W Surface Salinity 99.99 o/oo
 Replicate A Time 0115 hrs Date Apr. 27, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 2.4 AM 0.0 CV 33.9 CIV 70.3	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 4.9 CIV 9.7	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i> CIII 203.7 CII 121.3 CI 87.3	
<i>Pseudocalanus sp.</i>	AF 24.3 AM 2.4 CV 17.0 CIV 2.4 CIII 9.7 CII 7.2 CI 43.7	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	
<i>Metridia lucens</i>	AF 2.4 AM 0.0 CV 2.4 CIV 0.0 CIII 0.0 CII 0.0 CI 2.4	<i>Oithona similis</i> AD 176.8 C 848.4	
<i>Temora longicornis</i>	AD 2.4 C 2.4	<i>Paracalanus parvus</i> AD 0.0 C 0.0	
<i>Microsetella norvegica</i>	All 379.5	<i>Ornaea sp.</i> ALL 0.0	

NAUPLII

<i>Calanus</i>	150.8	<i>Oithona</i>	2618.6
<i>Pseudo-Micro-Para</i>	824.2	<i>Temora</i>	72.8
<i>Centropages</i>	0.0	<i>Microsetella</i>	26.0
<i>Metridia</i>	52.4	Unidentified	5.2

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	46.8	Euphausiid All	0.0
pluteus	46.0	Barnacle nauplii	0.0

Cruise 8303 Latitude 42 23.3N Surface Temperature 3.71 C
 Station 6-06 Longitude 66 00.5 W Surface Salinity 99.99 o/oo
 Replicate A Time 0115 hrs Date Apr. 27, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 7.3 AM 0.0 CV 7.3 CIV 53.4	Calanus glacialis	AF 0.0 AM 0.0 CV 19.4 CIV 60.6	
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 272.5 CII 208.6 CI 208.6	
Pseudocalanus sp.	AF 72.8 AM 7.3 CV 97.0 CIV 48.5 CIII 84.9 CII 150.4 CI 186.8	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	

Metridia lucens	AF 0.0 AM 0.0 CV 0.0 CIV 2.4 CIII 2.4 CII 0.0 CI 0.0	Oithona similis	AD 291.1 C 1115.1
		Microcalanus pygmaeus	AD 2.4 C 4.9

Temora longicornis	AD 7.3 C 80.0	Paracalanus parvus	AD 0.0 C 0.0
--------------------	------------------	--------------------	-----------------

Microsetella norvegica	All 597.8	Oncaea sp.	All 0.0
------------------------	-----------	------------	---------

NAUPLII

Calanus	233.9	Oithona	2291.2
Pseudo-Micro-Para	1139.3	Temora	135.2
Centropages	5.2	Microsetella	15.6
Metridia	15.6	Unidentified	0.0

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	31.2	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8304 Latitude 43 15.0N Surface Temperature 7.70 C
 Station 7-04 Longitude 66 00.0 W Surface Salinity 31.82 o/oo
 Replicate A Time 2200 hrs Date May 9, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 0.0 AM 0.0 CV 20.6 CIV 13.3	Calanus glacialis	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 7.3 CII 7.3 CI 1.2	
Pseudocalanus sp.	AF 59.4 AM 2.4 CV 91.0 CIV 31.5 CIII 18.2 CII 15.8 CI 29.1	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	

Metridia lucens	AF 0.0 AM 0.0 CV 0.0 CIV 1.2 CIII 0.0 CII 1.2 CI 0.0	Oithona similis	AD 25.5 C 272.9
		Microcalanus pygmaeus	AD 0.0 C 0.0

Temora longicornis	AD 10.9 C 40.0	Paracalanus parvus	AD 0.0 C 0.0
--------------------	-------------------	--------------------	-----------------

Microsetella norvegica	All 272.0	Oncaea sp.	All 0.0
------------------------	-----------	------------	---------

NAUPLII

Calanus	33.7	Oithona	272.9
Pseudo-Micro-Para	927.4	Temora	46.7
Centropages	5.2	Microsetella	13.0
Metridia	0.0	Unidentified	5.2

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	0.0	Euphausiid All	0.0
pluteus	10.4	Barnacle nauplii	0.0

Cruise 8304 Latitude 43 27.0N Surface Temperature 5.50 C
 Station 7-04 Longitude 66 00.0 W Surface Salinity 31.61 o/oo
 Replicate A Time 2345 hrs Date May 9, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF 0.0		AM 0.0	
AM 0.0		CV 0.0	
CV 0.0		CIV 3.7	
CIV 0.0			
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF 0.0		CIII 0.0	
AM 0.0		CII 0.0	
CV 0.0		CI 0.0	
CIV 0.0			
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF 162.7		AF 0.0	
AM 140.5		AM 0.0	
CV 340.1		CV 0.0	
CIV 266.2		CIV 0.0	
CIII 151.6		CIII 0.0	
CII 55.5		CII 0.0	
CI 37.0		CI 0.0	

<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 7.4
AM 0.0		AM 0.0	C 37.0
CV 0.0		CV 0.0	
CIV 0.0		<i>Microcalanus pygmaeus</i>	AD 0.0
CIII 0.0		CIII 0.0	C 0.0
CII 0.0			
CI 0.0			

<i>Temora longicornis</i>	AD 37.0	<i>Paracalanus parvus</i>	AD 0.0
C 188.5		C 0.0	

<i>Microsetella norvegica</i> All	110.9	<i>Oncaea sp.</i>	ALL 3.7
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	11.1	<i>Oithona</i>	48.1
<i>Pseudo-Micro-Para</i>	639.1	<i>Temora</i>	22.2
<i>Centropages</i>	0.0	<i>Microsetella</i>	3.7
<i>Metridia</i>	0.0	Unidentified	166.4

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	11.1	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	7.4

Cruise 8304 Latitude 43 00.0N Surface Temperature 5.20 C
 Station 7-06 Longitude 43 00.0 W Surface Salinity 32.32 o/oo
 Replicate A Time 2010 hrs Date May 9, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 3.5	<i>Calanus glacialis</i>	AF 3.5
AM 5.2		AM 0.0	
CV 50.1		CV 0.0	
CIV 101.9		CIV 12.1	
<i>Calanus hyperboreus</i>	AF 0.0	<i>Calanus sp.</i>	CIII 48.4
AM 0.0		CII 29.4	
CV 0.0		CI 10.4	
CIV 0.0			
<i>Pseudocalanus sp.</i>	AF 34.5	<i>Centropages typicus</i>	AF 0.0
AM 6.9		AM 0.0	
CV 41.4		CV 0.0	
CIV 13.8		CIV 0.0	
CIII 22.5		CIII 1.7	
CII 19.0		CII 1.7	
CI 27.6		CI 1.7	

<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 44.9
AM 0.0		AM 0.0	C 509.5
CV 1.7		CV 1.7	
CIV 1.7		<i>Microcalanus pygmaeus</i>	AD 0.0
CIII 8.6		CIII 1.7	C 1.7
CII 3.5			
CI 1.7			

<i>Temora longicornis</i>	AD 5.2	<i>Paracalanus parvus</i>	AD 0.0
C 46.6		C 5.2	

<i>Microsetella norvegica</i> All	492.3	<i>Oncaea sp.</i>	ALL 1.7
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	147.9	<i>Oithona</i>	269.9
<i>Pseudo-Micro-Para</i>	777.3	<i>Temora</i>	51.8
<i>Centropages</i>	18.5	<i>Microsetella</i>	118.3
<i>Metridia</i>	11.1	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	6.9
<i>Limacina retroversa</i> Sm	51.8	Euphausiid All	0.0
pluteus	51.8	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 94.0N Surface Temperature 6.80 C
 Station 7-08 Longitude 66 00.0 W Surface Salinity 32.09 o/oo
 Replicate A Time 1747 hrs Date May 9, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 0.8 AM 0.0 CV 5.5 CIV 29.9	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i> CIII 15.0 CII 13.4 CI 16.5	
<i>Pseudocalanus sp.</i>	AF 7.1 AM 3.1 CV 15.7 CIV 19.7 CIII 9.4 CII 16.5 CI 28.3	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 1.6 CIII 2.4 CII 9.4 CI 10.2	

<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	<i>Oithona similis</i> AD 77.9 C 285.0
		<i>Microcalanus pygmaeus</i> AD 0.0 C 0.0

<i>Temora longicornis</i>	AD 2.4 C 67.7	<i>Paracalanus parvus</i> AD 0.0 C 0.8
---------------------------	------------------	---

<i>Microsetella norvegica</i> All	44.1	<i>Oncaea sp.</i> ALL 0.0
-----------------------------------	------	---------------------------

NAUPLII

Calanus	85.7	<i>Oithona</i>	764.0
Pseudo-Micro-Para	345.6	<i>Temora</i>	51.9
Centropages	13.0	<i>Microsetella</i>	10.4
Metridia	0.0	Unidentified	15.6

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	1.6
<i>Limacina retroversa</i> Sm	10.2	Euphausiid All	0.0
pluteus	15.7	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 75.0N Surface Temperature 7.10 C
 Station 7-09 Longitude 66 00.0 W Surface Salinity 31.53 o/oo
 Replicate A Time 1400 hrs Date May 9, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 2.7 AM 0.0 CV 53.9 CIV 97.0	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 10.8 CIV 13.5	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i> CIII 78.2 CII 27.0 CI 27.0	
<i>Pseudocalanus sp.</i>	AF 27.0 AM 13.5 CV 51.2 CIV 83.5 CIII 88.9 CII 153.6 CI 186.0	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 8.1	
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 2.7 CII 0.0 CI 5.4	<i>Oithona similis</i> AD 75.5 C 1428.1	
		<i>Microcalanus pygmaeus</i> AD 0.0 C 2.7	25

<i>Temora longicornis</i>	AD 2.7 C 223.7	<i>Paracalanus parvus</i> AD 0.0 C 0.0
---------------------------	-------------------	---

<i>Microsetella norvegica</i> All	204.8	<i>Oncaea sp.</i> ALL 0.0
-----------------------------------	-------	---------------------------

NAUPLII

Calanus	350.3	<i>Oithona</i>	2251.1
Pseudo-Micro-Para	1379.7	<i>Temora</i>	85.9
Centropages	26.4	<i>Microsetella</i>	59.5
Metridia	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	16.2
<i>Limacina retroversa</i> Sm	27.0	Euphausiid All	0.0
pluteus	39.7	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 58.6N Surface Temperature 6.90 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 31.47 o/oo
 Replicate A Time 1100 hrs Date May 9, 1983

SPECIES	no/m-3		SPECIES	no/m-3	
<i>Calanus finmarchicus</i>	AF	50.4	<i>Calanus glacialis</i>	AF	5.6
	AM	0.0		AM	5.6
	CV	319.0		CV	89.5
	CIV	455.3		CIV	139.9
<i>Calanus hyperboreus</i>	AF	0.0	<i>Calanus sp.</i>	CIII	363.7
	AM	0.0		CII	111.9
	CV	0.0		CI	22.4
	CIV	0.0			
<i>Pseudocalanus sp.</i>	AF	156.7	<i>Centropages typicus</i>	AF	0.0
	AM	5.6		AM	0.0
	CV	89.5		CV	0.0
	CIV	33.6		CIV	0.0
	CIII	44.8		CIII	0.0
	CII	44.8		CII	0.0
	CI	56.0		CI	0.0

<i>Metridia lucens</i>	AF	5.6	<i>Dithona similis</i>	AD	117.1
	AM	16.8		C	1177.1
	CV	0.0			
	CIV	0.0	<i>Microcalanus pygmæus</i>	AD	0.0
	CIII	28.0		C	0.0
	CII	5.6			
	CI	5.6			

<i>Temora longicornis</i>	AD	16.8	<i>Paracalanus parvus</i>	AD	0.0
	C	173.5		C	0.0

<i>Microsetella norvegica</i>	All	755.7	<i>Oriacea sp.</i>	All	0.0
-------------------------------	-----	-------	--------------------	-----	-----

NAUPLII

<i>Calanus</i>	100.7	<i>Dithona</i>	770.2
<i>Pseudo-Micro-Para</i>	509.2	<i>Temora</i>	44.8
<i>Centropages</i>	0.0	<i>Microsetella</i>	0.0
<i>Metridia</i>	5.6	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	28.0	Euphausiid All	0.0
<i>pluteus</i>	16.8	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 36.0N Surface Temperature 5.60 C
 Station 7-12 Longitude 66 00.0 W Surface Salinity 31.62 o/oo
 Replicate A Time 0451 hrs Date May 9, 1983

SPECIES	no/m-3		SPECIES	no/m-3	
<i>Calanus finmarchicus</i>	AF	2.4	<i>Calanus glacialis</i>	AF	2.4
	AM	1.2		AM	0.0
	CV	38.8		CV	8.5
	CIV	99.4		CIV	4.9
<i>Calanus hyperboreus</i>	AF	0.0	<i>Calanus sp.</i>	CIII	84.9
	AM	0.0		CII	26.7
	CV	2.4		CI	6.1
	CIV	2.4			
<i>Pseudocalanus sp.</i>	AF	14.6	<i>Centropages typicus</i>	AF	0.0
	AM	1.2		AM	0.0
	CV	17.0		CV	0.0
	CIV	12.1		CIV	0.0
	CIII	20.6		CIII	0.0
	CII	24.3		CII	0.0
	CI	40.0		CI	0.0

<i>Metridia lucens</i>	AF	0.0	<i>Dithona similis</i>	AD	150.6
	AM	0.0		C	836.8
	CV	3.6			
	CIV	4.8	<i>Microcalanus pygmæus</i>	AD	6.1
	CIII	0.0		C	14.6
	CII	3.6			
	CI	2.4			

<i>Temora longicornis</i>	AD	1.2	<i>Paracalanus parvus</i>	AD	9.7
	C	40.0		C	17.0

<i>Microsetella norvegica</i>	All	521.5	<i>Oriacea sp.</i>	All	1.2
-------------------------------	-----	-------	--------------------	-----	-----

NAUPLII

<i>Calanus</i>	93.4	<i>Dithona</i>	1291.1
<i>Pseudo-Micro-Para</i>	848.9	<i>Temora</i>	41.5
<i>Centropages</i>	0.0	<i>Microsetella</i>	7.8
<i>Metridia</i>	15.6	Unidentified	10.4

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	15.6	Euphausiid All	0.0
<i>pluteus</i>	26.0	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 47.0N Surface Temperature 6.50 C
 Station 7-12 Longitude 66 00.0 W Surface Salinity 31.50 o/oo
 Replicate A Time 0858 hrs Date May 9, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 10.4 AM 5.2 CV 93.4 CIV 189.5	<i>Calanus glacialis</i> AF 2.6 AM 0.0 CV 7.8 CIV 26.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 5.2	<i>Calanus sp.</i> CIII 129.8 CII 49.3 CI 10.4	
<i>Pseudocalanus sp.</i>	AF 67.5 AM 13.0 CV 54.5 CIV 46.7 CIII 15.6 CII 31.1 CI 36.3	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	

<i>Metridia lucens</i>	AF 0.0 AM 2.6 CV 2.6 CIV 13.0 CIII 7.9 CII 5.2 CI 18.2	<i>Dithona similis</i> AD 101.2 C 1054.7
<i>Microcalanus pygmaeus</i>	AD 7.8 C 64.9	

<i>Temora longicornis</i>	AD 2.6 C 103.8	<i>Paracalanus parvus</i> AD 5.2 C 18.2
---------------------------	-------------------	--

<i>Microsetella norvegica</i>	All 225.8	<i>Oncaea sp.</i> ALL 13.0
-------------------------------	-----------	----------------------------

NAUPLII

<i>Calanus</i>	41.5	<i>Dithona</i>	1800.3
<i>Pseudo-Micro-Para</i>	442.7	<i>Temora</i>	106.4
<i>Centropages</i>	5.2	<i>Microsetella</i>	5.2
<i>Metridia</i>	2.6	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	5.2	Euphausiid All	0.0
pluteus	46.7	Barnacle nauplii	0.0

Cruise 8304 Latitude 42 57.0N Surface Temperature 6.50 C
 Station 6-06 Longitude 66 00.0 W Surface Salinity 31.05 o/oo
 Replicate A Time 0950 hrs Date May 8, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 14.6 AM 0.0 CV 446.3 CIV 761.6	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 43.7 CIV 111.6	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 9.7 CIV 19.4	<i>Calanus sp.</i> CIII 519.1 CII 339.6 CI 82.5	
<i>Pseudocalanus sp.</i>	AF 72.8 AM 14.6 CV 101.9 CIV 38.8	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0	
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 19.4 CIV 14.6 CIII 14.6 CII 19.4 CI 4.9	<i>Dithona similis</i> AD 737.2 C 4631.6 Microcalanus pygmaeus AD 14.6 C 53.4	
<i>Temora longicornis</i>	AD 0.0 C 169.8	<i>Paracalanus parvus</i> AD 0.0 C 29.1	

NAUPLII

<i>Calanus</i>	207.7	<i>Dithona</i>	5500.0
<i>Pseudo-Micro-Para</i>	1984.3	<i>Temora</i>	62.3
<i>Centropages</i>	31.1	<i>Microsetella</i>	0.0
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	62.3	Euphausiid All	14.6
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8305 Latitude 43 15.5N Surface Temperature 6.20 C
 Station 7-04 Longitude 66 01.5 W Surface Salinity 31.54 o/oo
 Replicate A Time 0054 hrs Date May 20, 1983

SPECIES		no/m-3		SPECIES		no/m-3	
Calanus finmarchicus	AF	0.0	Calanus glacialis	AF	0.0	Calanus finmarchicus	AF
	AM	0.0		AM	0.0		AM
	CV	19.0		CV	0.0		CV
	CIV	81.5		CIV	0.0		CIV
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	30.6	Calanus hyperboreus	AF
	AM	0.0		CII	1.1		AM
	CV	0.0		CI	1.1		CV
	CIV	0.0					CIV
Pseudocalanus sp.	AF	121.4	Centropages typicus	AF	0.0	Pseudocalanus sp.	AF
	AM	41.1		AM	0.0		AM
	CV	146.4		CV	0.0		CV
	CIV	93.2		CIV	0.0		CIV
	CIII	41.1		CIII	0.0		CIII
	CII	25.3		CII	0.0		CII
	CI	19.0		CI	0.0		CI
Metridia lucens	AF	0.0	Oithona similis	AD	9.5	Metridia lucens	AF
	AM	0.0		C	106.5		AM
	CV	0.0					CV
	CIV	0.0	Microcalanus pygmæus	AD	0.0		CIV
	CIII	0.0		C	0.0		CIII
	CII	0.0					CII
	CI	0.0					CI
Temora longicornis	AD	7.4	Paracalanus parvus	AD	0.0	Temora longicornis	AD
	C	66.4		C	0.0		C
Microsetella norvegica	All	745.9	Oncæa sp.	All	0.0	Microsetella norvegica	All

NAUPLII

Calanus	3.3	Oithona	69.6
Pseudo-Micro-Para	194.1	Temora	15.8
Centropages	0.0	Microsetella	2.1
Metridia	0.0	Unidentified	0.0

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	25.0	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	4.2

Cruise 8305 Latitude 43 15.3N Surface Temperature 5.20 C
 Station 7-04 Longitude 66 02.5 W Surface Salinity 31.57 o/oo
 Replicate A Time 0453 hrs Date May 21, 1983

SPECIES		no/m-3		SPECIES		no/m-3	
Calanus finmarchicus	AF	0.0	Calanus glacialis	AF	0.0	Calanus finmarchicus	AF
	AM	0.0		AM	0.0		AM
	CV	9.2		CV	0.0		CV
	CIV	83.5		CIV	4.6		CIV
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	20.3	Calanus hyperboreus	AF
	AM	0.0		CII	3.6		AM
	CV	0.0		CI	0.0		CV
	CIV	0.0					CIV
Pseudocalanus sp.	AF	54.1	Centropages typicus	AF	0.0	Pseudocalanus sp.	AF
	AM	23.0		AM	0.0		AM
	CV	71.5		CV	0.0		CV
	CIV	62.4		CIV	0.0		CIV
	CIII	34.0		CIII	0.0		CIII
	CII	44.0		CII	0.0		CII
	CI	21.1		CI	0.0		CI
Metridia lucens	AF	0.0	Oithona similis	AD	35.8	Metridia lucens	AF
	AM	0.0		C	177.4		AM
	CV	0.0					CV
	CIV	0.0	Microcalanus pygmæus	AD	0.0		CIV
	CIII	0.0		C	0.0		CIII
	CII	0.0					CII
	CI	0.0					CI
Temora longicornis	AD	26.7	Paracalanus parvus	AD	0.0	Temora longicornis	AD
	C	45.1		C	0.0		C
Microsetella norvegica	All	428.1	Oncæa sp.	All	1.8	Microsetella norvegica	All

NAUPLII

Calanus	16.4	Oithona	154.0
Pseudo-Micro-Para	115.5	Temora	26.7
Centropages	0.0	Microsetella	6.0
Metridia	0.0	Unidentified	10.4

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	7.4	Euphausiid All	1.5
pluteus	1.5	Barnacle nauplii	3.0

Cruise 8305 Latitude 43 00.1N Surface Temperature 6.90 C
 Station 7-06 Longitude 66 00.4 W Surface Salinity 31.39 o/oo
 Replicate A Time 0045 hrs Date May 26, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 21.7	Calanus glacialis	AF 1.5	
	AM 3.1		AM 0.0	
	CV 92.9		CV 6.2	
	CIV 49.5		CIV 10.8	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 6.2	
	AM 0.0		CII 0.0	
	CV 1.6		CI 7.7	
	CIV 17.0			
Pseudocalanus sp.	AF 4.6	Centropages typicus	AF 0.0	
	AM 26.3		AM 0.0	
	CV 24.8		CV 0.0	
	CIV 20.1		CIV 0.0	
	CIII 18.6		CIII 1.5	
	CII 21.7		CII 0.0	
	CI 32.5		CI 0.0	

Metridia lucens	AF 0.0	Oithona similis	AD 61.9	
	AM 0.0		C 726.9	
	CV 4.6			
	CIV 3.1	Microcalanus pygmæus	AD 3.1	
	CIII 3.1		C 15.5	
	CII 0.0			
	CI 0.0			

Temora longicornis	AD 4.6	Paracalanus parvus	AD 0.0	
	C 20.1		C 0.0	

Microsetella norvegica All	866.1	Oncæa sp.	ALL 0.0	
----------------------------	-------	-----------	---------	--

NAUPLII

Calanus	80.5	Oithona	618.6	
Pseudo-Micro-Para	409.9	Temora	10.8	
Centropages	3.3	Microsetella	4.6	
Metridia	0.0	Unidentified	3.1	

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0	
Limacina retroversa Sm	9.3	Euphausiid All	0.0	
pluteus	3.1	Barnacle nauplii	0.0	

Cruise 8305 Latitude 42 59.9N Surface Temperature 8.05 C
 Station 7-06 Longitude 66 01.0 W Surface Salinity 31.39 o/oo
 Replicate A Time 1850 hrs Date May 26, 1983

	SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 11.2	Calanus glacialis	AF 0.9	
	AM 0.9		AM 0.0	
	CV 101.4		CV 0.9	
	CIV 26.7		CIV 7.7	
Calanus hyperboreus	AF 0.0	Calanus sp.	CIII 5.2	
	AM 0.0		CII 0.0	
	CV 0.9		CI 1.7	
	CIV 1.7			
Pseudocalanus sp.	AF 34.4	Centropages typicus	AF 0.0	
	AM 12.9		AM 0.0	
	CV 32.7		CV 0.0	
	CIV 18.1		CIV 0.0	
	CIII 29.2		CIII 0.0	
	CII 33.5		CII 0.0	
	CI 36.1		CI 0.0	

Metridia lucens	AF 0.9	Oithona similis	AD 43.8	
	AM 0.0		C 386.6	
	CV 0.9			
	CIV 0.0	Microcalanus pygmæus	AD 0.0	
	CIII 0.0		C 0.0	62
	CII 0.0			
	CI 0.0			

Temora longicornis	AD 5.2	Paracalanus parvus	AD 0.0	
	C 0.9		C 0.0	

Microsetella norvegica All	202.4	Oncæa sp.	ALL 0.9	
----------------------------	-------	-----------	---------	--

NAUPLII

Calanus	12.0	Oithona	742.4	
Pseudo-Micro-Para	109.6	Temora	12.9	
Centropages	0.0	Microsetella	1.7	
Metridia	0.0	Unidentified	15.5	

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0	
Limacina retroversa Sm	3.4	Euphausiid All	0.0	
pluteus	0.0	Barnacle nauplii	0.0	

Cruise 8305 Latitude 42 59.3N Surface Temperature 6.90 C
 Station 7-06 Longitude 66 00.5 W Surface Salinity 31.48 o/oo
 Replicate A Time 0655 hrs Date May 27, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 15.5 AM 0.0 CV 113.0 CIV 57.3	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 0.0 CIV 4.6
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i>	CIII 3.1 CII 1.5 CI 1.5
<i>Pseudocalanus sp.</i>	AF 31.0 AM 12.4 CV 26.3 CIV 29.4 CIII 32.5 CII 34.0 CI 55.7	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0

<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 3.1 CII 0.0 CI 1.5	<i>Oithona similis</i>	AD 149.3 C 765.6
		<i>Microcalanus pygmaeus</i>	AD 0.0 C 4.6

<i>Temora longicornis</i>	AD 17.0 C 26.3	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
---------------------------	-------------------	---------------------------	-----------------

<i>Microsetella norvegica</i> All	417.6	<i>Oncaea sp.</i>	ALL 0.0
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	59.7	<i>Oithona</i>	1121.3
<i>Pseudo-Micro-Para</i>	222.2	<i>Temora</i>	23.2
<i>Centropages</i>	0.0	<i>Microsetella</i>	3.3
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	1.5
<i>Limacina retroversa</i> Sm	17.0	Euphausiid All	0.0
pluteus	4.6	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 54.1N Surface Temperature 7.10 C
 Station 7-08 Longitude 66 01.5 W Surface Salinity 31.96 o/oo
 Replicate A Time 2150 hrs Date May 26, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 12.4 AM 0.0 CV 151.7 CIV 68.1	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 3.1 CIV 6.2
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 3.1 CIV 6.2	<i>Calanus sp.</i>	CIII 27.9 CII 40.2 CI 37.1
<i>Pseudocalanus sp.</i>	AF 194.9 AM 24.8 CV 219.7 CIV 210.5	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
	CIII 145.5 CII 167.1 CI 133.1		CIII 0.0 CII 0.0 CI 0.0
<i>Metridia lucens</i>	AF 0.0 AM 3.1 CV 0.0 CIV 0.0	<i>Oithona similis</i>	AD 152.4 C 1312.6
	CIII 0.0 CII 0.0 CI 0.0	<i>Microcalanus pygmaeus</i>	AD 0.0 C 3.1

<i>Temora longicornis</i>	AD 37.1 C 61.9	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
		<i>Microsetella norvegica</i> All	2409.2

NAUPLII

<i>Calanus</i>	509.6	<i>Oithona</i>	1374.5
<i>Pseudo-Micro-Para</i>	1204.6	<i>Temora</i>	218.6
<i>Centropages</i>	13.2	<i>Microsetella</i>	33.1
<i>Metridia</i>	0.0	Unidentified	125.9

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	3.1
<i>Limacina retroversa</i> Sm	251.7	Euphausiid All	0.0
pluteus	86.1	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 52.8N Surface Temperature 7.05 C
 Station 7-08 Longitude 65 52.8 W Surface Salinity 32.19 o/oo
 Replicate A Time 0312 hrs Date May 27, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 9.3 AM 1.5 CV 13.9 CIV 13.9	Calanus glacialis	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 6.2 CII 9.3 CI 6.2
Pseudocalanus sp.	AF 61.9 AM 13.9 CV 97.5 CIV 74.3 CIII 46.4 CII 40.2 CI 58.8	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 1.5 CI 4.6
Metridia lucens	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	Oithona similis	AD 35.6 C 255.4
		Microcalanus pygmæus	AD 0.0 C 1.5
Temora longicornis	AD 27.9 C 26.3	Paracalanus parvus	AD 0.0 C 0.0
Microsetella norvegica	All 494.9	Oncæa sp.	All 0.0

NAUPLII

Calanus	119.4	Oithona	394.4
Pseudo-Micro-Para	463.9	Temora	102.8
Centropages	10.0	Microsetella	10.0
Metridia	0.0	Unidentified	29.9

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	82.9	Euphausiid All	0.0
pluteus	23.2	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 46.2N Surface Temperature 7.30 C
 Station 7-09 Longitude 66 01.3 W Surface Salinity 32.09 o/oo
 Replicate A Time 1850 hrs Date May 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 3.0 AM 0.0 CV 27.2 CIV 27.2	Calanus glacialis	AF 0.0 AM 0.0 CV 1.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 10.0 CII 12.0 CI 7.1
Pseudocalanus sp.	AF 116.1 AM 43.1 CV 272.0 CIV 255.4	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
Metridia lucens	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	Oithona similis	AD 76.3 C 413.2
		Microcalanus pygmæus	AD 3.3 C 3.3
Temora longicornis	AD 23.2 C 43.1	Paracalanus parvus	AD 0.0 C 3.3
Microsetella norvegica	All 320.3	Oncæa sp.	All 0.0

NAUPLII

Calanus	129.4	Oithona	260.0
Pseudo-Micro-Para	455.0	Temora	46.4
Centropages	10.0	Microsetella	6.6
Metridia	0.0	Unidentified	3.3

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	99.5	Euphausiid All	0.0
pluteus	6.6	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 45.4N Surface Temperature 6.70 C
 Station 7-09 Longitude 66 00.1 W Surface Salinity 32.12 o/oo
 Replicate A Time 0231 hrs Date May 26, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 7.6 AM 1.5 CV 59.3 CIV 31.9	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 0.0 CIV 1.5
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 3.0	<i>Calanus sp.</i>	CIII 10.6 CII 3.0 CI 15.2
<i>Pseudocalanus sp.</i>	AF 108.8 AM 28.8 CV 115.2 CIV 185.5 CIII 182.3 CII 176.0 CI 163.2	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 3.2 CII 3.2 CI 3.2

<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	<i>Dithona similis</i>	AD 102.3 C 1242.4
		<i>Microcalanus pygmaeus</i>	AD 0.0 C 3.2

<i>Temora longicornis</i>	AD 96.0 C 51.2	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
---------------------------	-------------------	---------------------------	-----------------

<i>Microsetella norvegica</i>	All 378.2	<i>Oncaea sp.</i>	All 12.8
-------------------------------	-----------	-------------------	----------

NAUPLII

<i>Calanus</i>	199.8	<i>Dithona</i>	613.7
<i>Pseudo-Micro-Para</i>	1038.4	<i>Temora</i>	96.0
<i>Centropages</i>	3.2	<i>Microsetella</i>	9.6
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	70.4	Euphausiid All	3.2
pluteus	16.0	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 35.5N Surface Temperature 7.80 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 32.09 o/oo
 Replicate A Time 0245 hrs Date May 22, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 10.8 AM 0.0 CV 43.3 CIV 68.1	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 1.5 CIV 4.6
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i>	CIII 29.4 CII 1.5 CI 6.2
<i>Pseudocalanus sp.</i>	AF 41.8 AM 21.7 CV 102.1 CIV 136.0 CIII 192.4 CII 182.4 CI 225.5	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 1.5

<i>Metridia lucens</i>	AF 1.5 AM 0.0 CV 1.5 CIV 0.0 CIII 1.5 CII 0.0 CI 0.0	<i>Dithona similis</i>	AD 125.3 C 1461.8
		<i>Microcalanus pygmaeus</i>	AD 0.0 C 20.1

<i>Temora longicornis</i>	AD 18.6 C 37.1	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
---------------------------	-------------------	---------------------------	-----------------

<i>Microsetella norvegica</i>	All 417.6	<i>Oncaea sp.</i>	All 4.6
-------------------------------	-----------	-------------------	---------

NAUPLII

<i>Calanus</i>	122.7	<i>Dithona</i>	1253.0
<i>Pseudo-Micro-Para</i>	928.0	<i>Temora</i>	56.4
<i>Centropages</i>	3.3	<i>Microsetella</i>	13.3
<i>Metridia</i>	6.6	Unidentified	10.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	116.1	Euphausiid All	0.0
pluteus	10.0	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 35.7N Surface Temperature 7.80 C
 Station 7-10 Longitude 66 00.3 W Surface Salinity 32.10 o/oo
 Replicate A Time 0925 hrs Date May 22, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 14.1 AM 2.0 CV 42.4 CIV 84.8	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 0.0 CIV 2.0
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i>	CIII 20.2 CII 12.1 CI 26.2
<i>Pseudocalanus sp.</i>	AF 155.4 AM 26.2 CV 304.7 CIV 318.0 CIII 397.5 CII 324.6 CI 364.3	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 2.0 CII 2.0 CI 0.0
<i>Metridia lucens</i>	AF 2.0 AM 2.0 CV 4.0 CIV 6.1 CIII 0.0 CII 0.0 CI 0.0	<i>Dithona similis</i>	AD 245.1 C 2447.1 AD 0.0 C 10.0
<i>Temora longicornis</i>	AD 22.2 C 24.2	<i>Paracalanus parvus</i>	AD 2.0 C 2.0
<i>Microsetella norvegica</i> All	1281.8	<i>Oncaea sp.</i>	ALL 0.0

NAUPLII

<i>Calanus</i>	119.2	<i>Dithona</i>	2447.1
<i>Pseudo-Micro-Para</i>	1667.9	<i>Temora</i>	46.4
<i>Centropages</i>	19.9	<i>Microsetella</i>	79.5
<i>Metridia</i>	0.0	<i>Unidentified</i>	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	205.4	Euphausiid All	4.0
pluteus	59.6	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 35.0N Surface Temperature 7.30 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 99.99 o/oo
 Replicate A Time 0058 hrs Date May 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 6.2 AM 1.5 CV 63.4 CIV 34.0	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 1.5 CIV 1.5
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i>	CIII 6.2 CII 3.1 CI 7.7
<i>Pseudocalanus sp.</i>	AF 136.2 AM 44.9 CV 108.3 CIV 122.2 CIII 133.1 CII 108.3 CI 143.9	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 1.5 CII 0.0 CI 1.5
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	<i>Dithona similis</i>	AD 57.3 C 471.7
<i>Temora longicornis</i>	AD 6.2 C 10.8	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
<i>Microsetella norvegica</i> All	363.5	<i>Oncaea sp.</i>	ALL 0.0

NAUPLII

<i>Calanus</i>	86.2	<i>Dithona</i>	750.1
<i>Pseudo-Micro-Para</i>	456.2	<i>Temora</i>	39.8
<i>Centropages</i>	6.6	<i>Microsetella</i>	16.6
<i>Metridia</i>	0.0	<i>Unidentified</i>	61.9

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	73.0	Euphausiid All	3.3
pluteus	10.0	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 35.5N Surface Temperature 7.80 C
 Station 7-10 Longitude 66 01.1 W Surface Salinity 32.27 o/oo
 Replicate A Time 0950 hrs Date May 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF	8.0	AF	0.0
AM	3.0	AM	0.0
CV	44.4	CV	0.0
CIV	29.3	CIV	2.0
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF	0.0	CIII	1.0
AM	0.0	CII	2.0
CV	0.0	CI	3.0
CIV	0.0		
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF	32.3	AF	0.0
AM	11.1	AM	0.0
CV	33.3	CV	0.0
CIV	23.2	CIV	0.0
CIII	33.3	CIII	0.0
CII	36.3	CII	1.0
CI	48.4	CI	0.0

<i>Metridia lucens</i>	AF	0.0	<i>Dithona similis</i>	AD	51.5
	AM	0.0		C	773.3
	CV	0.0			
	CIV	0.0	<i>Microcalanus pygmaeus</i>	AD	0.0
	CIII	1.0		C	7.1
	CII	0.0			
	CI	1.0			

<i>Temora longicornis</i>	AD	10.1	<i>Paracalanus parvus</i>	AD	0.0
	C	13.1		C	0.0

<i>Microsetella norvegica</i> All	340.3	<i>Oncaea sp.</i>	All	4.0
-----------------------------------	-------	-------------------	-----	-----

NAUPLII

<i>Calanus</i>	66.3	<i>Dithona</i>	518.1
<i>Pseudo-Micro-Para</i>	541.3	<i>Temora</i>	49.8
<i>Centropages</i>	6.6	<i>Microsetella</i>	23.2
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	4.0
<i>Limacina retroversa</i> Sm	16.1	Euphausiid All	0.0
pluteus	4.0	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 18.8N Surface Temperature 7.80 C
 Station 7-12 Longitude 65 59.8 W Surface Salinity 31.90 o/oo
 Replicate A Time 2314 hrs Date May 21, 1983

SPECIES	no/m-3	SPECIES	no/m-3		
<i>Calanus finmarchicus</i>	AF	35.9	<i>Calanus glacialis</i>	AF	0.0
	AM	3.0		AM	0.0
	CV	185.7		CV	4.5
	CIV	70.4		CIV	1.5
<i>Calanus hyperboreus</i>	AF	0.0	<i>Calanus sp.</i>	CIII	15.0
	AM	0.0		CII	18.0
	CV	0.0		CI	10.5
	CIV	0.0			
<i>Pseudocalanus sp.</i>	AF	18.0	<i>Centropages typicus</i>	AF	1.5
	AM	4.5		AM	0.0
	CV	16.5		CV	0.0
	CIV	15.0		CIV	0.0
	CIII	15.0		CIII	0.0
	CII	13.5		CII	4.5
	CI	7.5		CI	1.5

<i>Metridia lucens</i>	AF	4.5	<i>Dithona similis</i>	AD	52.6
	AM	0.0		C	988.1
	CV	1.5			
	CIV	3.1	<i>Microcalanus pygmaeus</i>	AD	0.0
	CIII	1.5		C	52.4
	CII	3.0			
	CI	0.0			

<i>Temora longicornis</i>	AD	4.5	<i>Paracalanus parvus</i>	AD	21.0
	C	6.0		C	70.4

<i>Microsetella norvegica</i> All	1142.5	<i>Oncaea sp.</i>	All	18.0
-----------------------------------	--------	-------------------	-----	------

NAUPLII

<i>Calanus</i>	55.7	<i>Dithona</i>	543.2
<i>Pseudo-Micro-Para</i>	219.7	<i>Temora</i>	21.7
<i>Centropages</i>	0.0	<i>Microsetella</i>	12.4
<i>Metridia</i>	9.3	Unidentified	3.1

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	37.1	Euphausiid All	0.0
pluteus	6.2	Barnacle nauplii	0.0

Cruise B305 Latitude 42 18.9N Surface Temperature 7.70 C
 Station 7-12 Longitude 66 00.6 W Surface Salinity 31.86 o/oo
 Replicate 5 Time 0527 hrs Date May 22, 1983

SPECIES		no/m-3	SPECIES		no/m-3
Calanus finmarchicus	AF	31.5	Calanus glacialis	AF	1.7
	AM	6.6		AM	0.0
	CV	172.2		CV	0.0
	CIV	94.4		CIV	1.7
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	14.9
	AM	0.0		CII	3.3
	CV	1.7		CI	5.0
	CIV	1.7			
Pseudocalanus sp.	AF	8.3	Centropages typicus	AF	0.0
	AM	0.0		AM	0.0
	CV	8.3		CV	0.0
	CIV	5.0		CIV	5.0
	CIII	10.0		CIII	1.7
	CII	14.9		CII	0.0
	CI	24.6		CI	5.0

Metridia lucens	AF	1.7	Dithona similis	AD	433.3
	AM	0.0		C	3271.7
	CV	0.0			
	CIV	0.0	Microcalanus pygmæus	AD	0.0
	CIII	0.0		C	18.2
	CII	0.0			
	CI	0.0			

Temora longicornis	AD	3.3	Paracalanus parvus	AD	18.2
	C	3.3		C	38.1

Microsetella norvegica	All	812.1	Oncaea sp.	All	1.7
------------------------	-----	-------	------------	-----	-----

NAUPLII

Calanus	34.8	Dithona	1972.3
Pseudo-Micro-Para	765.7	Temora	0.0
Centropages	0.0	Microsetella	38.7
Metridia	0.0	Unidentified	0.0

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	5.0
Limacina retroversa Sm	135.4	Euphausiid All	0.0
pluteus	13.2	Barriacle nauplii	0.0

Cruise B305 Latitude 42 19.0N Surface Temperature 8.80 C
 Station 7-12 Longitude 65 59.8 W Surface Salinity 31.92 o/oo
 Replicate A Time 1512 hrs Date May 22, 1983

SPECIES		no/m-3	SPECIES		no/m-3
Calanus finmarchicus	AF	23.2	Calanus glacialis	AF	0.0
	AM	4.6		AM	0.0
	CV	215.6		CV	0.0
	CIV	48.0		CIV	0.0
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	17.0
	AM	0.0		CII	13.9
	CV	0.0		CI	13.9
	CIV	10.8			
Pseudocalanus sp.	AF	12.4	Centropages typicus	AF	0.0
	AM	4.6		AM	0.0
	CV	12.4		CV	0.0
	CIV	13.9		CIV	0.0
	CIII	21.7		CIII	0.0
	CII	35.6		CII	0.0
	CI	86.7		CI	7.7

Metridia lucens	AF	0.0	Dithona similis	AD	471.7
	AM	0.0		C	5290.4
	CV	0.0			
	CIV	0.0	Microcalanus pygmæus	AD	0.0
	CIII	0.0		C	18.6
	CII	0.0			
	CI	0.0			

Temora longicornis	AD	0.0	Paracalanus parvus	AD	3.1
	C	4.6		C	57.3

Microsetella norvegica	All	866.1	Oncaea sp.	All	6.2
------------------------	-----	-------	------------	-----	-----

NAUPLII

Calanus	96.2	Dithona	3527.0
Pseudo-Micro-Para	1206.6	Temora	23.2
Centropages	10.0	Microsetella	23.2
Metridia	43.0	Unidentified	6.6

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	6.6
Limacina retroversa Sm	293.9	Euphausiid All	0.0
pluteus	13.3	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 19.0N Surface Temperature 8.20 C
 Station 7-12 Longitude 66 00.0 W Surface Salinity 31.86 o/oo
 Replicate A Time 0420 hrs Date May 23, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 18.6 AM 9.3 CV 496.8 CIV 130.0	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 3.1 CIV 0.0
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 6.2	<i>Calanus sp.</i>	CIII 31.0 CII 15.5 CI 3.1
<i>Pseudocalanus sp.</i>	AF 15.5 AM 0.0 CV 12.4 CIV 12.4 CIII 15.5 CII 18.6 CI 77.4	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 3.1 CIII 3.1 CII 3.1 CI 3.1
<i>Metridia lucens</i>	AF 6.2 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	<i>Dithona similis</i>	AD 437.2 C 2631.8
		<i>Microcalanus pygmaeus</i>	AD 0.0 C 77.4

<i>Temora longicornis</i>	AD 3.1 C 3.1	<i>Paracalanus parvus</i>	AD 18.6 C 148.6
<i>Microsetella norvegica</i>	All 364.3	<i>Oncaea sp.</i>	All 12.4

NAUPLII

<i>Calanus</i>	33.1	<i>Dithona</i>	2170.0
<i>Pseudo-Micro-Para</i>	695.6	<i>Temora</i>	6.6
<i>Centropages</i>	33.1	<i>Microsetella</i>	26.5
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	3.1
<i>Limacina retroversa</i> Sm	218.6	Euphausiid All	0.0
pluteus	13.2	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 36.6N Surface Temperature 7.30 C
 Station 6-06 Longitude 65 40.53W Surface Salinity 31.86 o/oo
 Replicate A Time 2035 hrs Date May 25, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 20.1 AM 3.1 CV 145.5 CIV 58.8	<i>Calanus glacialis</i>	AF 0.0 AM 0.0 CV 6.2 CIV 1.5
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 1.5 CIV 3.1	<i>Calanus sp.</i>	CIII 7.7 CII 9.3 CI 10.8
<i>Pseudocalanus sp.</i>	AF 88.2 AM 27.8 CV 126.9 CIV 66.5	<i>Centropages typicus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
	CIII 77.4 CII 108.3 CI 63.4		CIII 0.0 CII 0.0 CI 0.0
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 3.1 CIV 1.5	<i>Dithona similis</i>	AD 73.0 C 1276.2
	CIII 1.5 CII 0.0 CI 0.0	<i>Microcalanus pygmaeus</i>	AD 1.5 C 3.0
<i>Temora longicornis</i>	AD 9.3 C 17.0	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
<i>Microsetella norvegica</i>	All 371.2	<i>Oncaea sp.</i>	All 0.0

NAUPLII

<i>Calanus</i>	49.8	<i>Dithona</i>	1067.4
<i>Pseudo-Micro-Para</i>	564.5	<i>Temora</i>	59.7
<i>Centropages</i>	0.0	<i>Microsetella</i>	10.0
<i>Metridia</i>	0.0	Unidentified	3.3

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	1.5
<i>Limacina retroversa</i> Sm	76.6	Euphausiid All	0.0
pluteus	16.6	Barnacle nauplii	0.0

Cruise 8305 Latitude 42 36.6N Surface Temperature 6.70 C
 Station 6-06 Longitude 65 39.8 W Surface Salinity 32.12 o/oo
 Replicate A Time 0545 hrs Date May 26, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF 9.3		AF 1.5	
AM 1.5		AM 0.0	
CV 43.3		CV 0.0	
CIV 26.3		CIV 0.0	
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF 1.5		CIII 9.3	
AM 0.0		CII 7.7	
CV 1.5		CI 3.1	
CIV 1.5			
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF 69.6		AF 0.0	
AM 12.3		AM 0.0	
CV 88.2		CV 0.0	
CIV 78.9		CIV 0.0	
CIII 51.1		CIII 1.5	
CII 82.0		CII 0.0	
CI 106.8		CI 0.0	
<i>Metridia lucens</i>		<i>Dithona similis</i>	
AF 1.5		AD 31.0	
AM 0.0		C 610.9	
CV 0.0			
CIV 0.0		<i>Microcalanus pygmæus</i>	
CIII 0.0		AD 0.0	
CII 0.0		C 1.5	
CI 1.5			
<i>Temora longicornis</i>		<i>Paracalanus parvus</i>	
AD 43.3		AD 0.0	
C 52.6		C 0.0	
<i>Microsetella norvegica</i> All	225.5	<i>Oncaea sp.</i>	All 0.0

NAUPLII

<i>Calanus</i>	106.1	<i>Dithona</i>	463.9
<i>Pseudo-Micro-Para</i>	525.8	<i>Temora</i>	69.7
<i>Centropages</i>	6.6	<i>Microsetella</i>	16.6
<i>Metridia</i>	0.0	Unidentified	0.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	3.0
<i>Limacina retroversa</i> Sm	76.3	Euphausiid All	0.0
pluteus	6.6	Barnacle nauplii	0.0

Cruise 8306 Latitude 43 12.0N Surface Temperature 6.50 C
 Station 7-04 Longitude 66 00.0 W Surface Salinity 31.36 o/oo
 Replicate A Time 0540 hrs Date June 8, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>		<i>Calanus glacialis</i>	
AF 19.9		AF 0.0	
AM 2.2		AM 0.0	
CV 6.6		CV 0.0	
CIV 4.4		CIV 2.2	
<i>Calanus hyperboreus</i>		<i>Calanus sp.</i>	
AF 0.0		CIII 4.4	
AM 0.0		CII 0.0	
CV 0.0		CI 2.2	
CIV 0.0			
<i>Pseudocalanus sp.</i>		<i>Centropages typicus</i>	
AF 146.2		AF 0.0	
AM 42.1		AM 0.0	
CV 110.7		CV 0.0	
CIV 70.9		CIV 0.0	
CIII 77.5		CIII 0.0	
CII 99.7		CII 0.0	
CI 225.9		CI 0.0	

<i>Metridia lucens</i>	AF 0.0	<i>Dithona similis</i>	AD 330.4
AM 0.0			C 2819.6
CV 8.9			
CIV 2.2		<i>Microcalanus pygmæus</i>	AD 0.0
CIII 2.2			C 11.1
CII 4.4			
CI 0.0			

<i>Temora longicornis</i>	AD 6.6	<i>Paracalanus parvus</i>	AD 2.2
C 4.4		C 8.9	

<i>Microsetella norvegica</i> All	361.4	<i>Oncaea sp.</i>	All 0.0
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	160.4	<i>Dithona</i>	1967.5
<i>Pseudo-Micro-Para</i>	1394.4	<i>Temora</i>	55.4
<i>Centropages</i>	6.6	<i>Microsetella</i>	0.0
<i>Metridia</i>	4.4	Unidentified	247.8

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	11.1	Euphausiid All	0.0
pluteus	15.5	Barnacle nauplii	0.0

Cruise 8306 Latitude 43 27.0N Surface Temperature 6.70 C
 Station 7-04 Longitude 66 00.0 W Surface Salinity 31.00 o/oo
 Replicate A Time 0720 hrs Date June 8, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 0.0	<i>Calanus glacialis</i>	AF 0.0
AM 0.0		AM 0.0	
CV 11.1		CV 0.0	
CIV 4.5		CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0	<i>Calanus sp.</i>	CIII 2.2
AM 0.0		CII 0.0	
CV 0.0		CI 4.5	
CIV 0.0			
<i>Pseudocalanus sp.</i>	AF 133.9	<i>Centropages typicus</i>	AF 0.0
AM 46.9		AM 0.0	
CV 102.7		CV 0.0	
CIV 107.1		CIV 0.0	
CIII 69.2		CIII 0.0	
CII 44.6		CII 0.0	
CI 84.8		CI 0.0	

<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 40.2
AM 2.2		C 515.9	
CV 2.2			
CIV 0.0		<i>Microcalanus pygmaeus</i>	AD 0.0
CIII 2.2		C 0.0	
CII 0.0			
CI 0.0			

<i>Temora longicornis</i>	AD 8.9	<i>Paracalanus parvus</i>	AD 0.0
C 20.1		C 0.0	

<i>Microsetella norvegica</i> All	469.5	<i>Oncaea sp.</i>	All 0.0
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	6.7	<i>Oithona</i>	307.2
<i>Pseudo-Micro-Para</i>	486.9	<i>Temora</i>	73.6
<i>Centropages</i>	6.7	<i>Microsetella</i>	0.0
<i>Metridia</i>	0.0	Unidentified	75.9

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	17.2	Euphausiid All	0.0
pluteus	11.2	Barnacle nauplii	26.8

Cruise 8306 Latitude 43 00.0N Surface Temperature 7.10 C
 Station 7-06 Longitude 66 00.0 W Surface Salinity 31.69 o/oo
 Replicate A Time 0255 hrs Date June 8, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 38.2	<i>Calanus glacialis</i>	AF 4.2
AM 2.1		AM 0.0	
CV 51.0		CV 0.0	
CIV 10.6		CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0	<i>Calanus sp.</i>	CIII 2.1
AM 0.0		CII 12.7	
CV 0.0		CI 29.7	
CIV 0.0			
<i>Pseudocalanus sp.</i>	AF 76.5	<i>Centropages typicus</i>	AF 0.0
AM 12.7		AM 0.0	
CV 38.2		CV 0.0	
CIV 34.0		CIV 0.0	
CIII 42.5		CIII 2.1	
CII 76.5		CII 0.0	
CI 125.3		CI 0.0	

<i>Metridia lucens</i>	AF 0.0	<i>Oithona similis</i>	AD 241.9
AM 0.0		C 2008.9	
CV 0.0			
CIV 0.0		<i>Microcalanus pygmaeus</i>	AD 2.1
CIII 0.0		C 8.5	∞
CII 0.0			
CI 0.0			

<i>Temora longicornis</i>	AD 12.7	<i>Paracalanus parvus</i>	AD 2.1
C 17.0		C 4.2	

<i>Microsetella norvegica</i> All	602.6	<i>Oncaea sp.</i>	All 0.0
-----------------------------------	-------	-------------------	---------

NAUPLII

<i>Calanus</i>	186.9	<i>Oithona</i>	2691.6
<i>Pseudo-Micro-Para</i>	2410.4	<i>Temora</i>	99.0
<i>Centropages</i>	0.0	<i>Microsetella</i>	11.0
<i>Metridia</i>	0.0	Unidentified	723.0

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	6.4
<i>Limacina retroversa</i> Sm	29.3	Euphausiid All	0.0
pluteus	40.3	Barnacle nauplii	0.0

Cruise 8306 Latitude 42 88.0N Surface Temperature 7.40 C
 Station 7-08 Longitude 66 00.0 W Surface Salinity 32.12 o/oo
 Replicate A Time 2358 hrs Date June 7, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 2.2 AM 2.2 CV 33.2 CIV 1.1	Calanus glacialis	AF 0.0 AM 0.0 CV 3.3 CIV 1.1
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 3.3	Calanus sp.	CIII 0.0 CII 2.2 CI 2.2
Pseudocalanus sp.	AF 42.0 AM 7.7 CV 67.4 CIV 55.3 CIII 42.0 CII 37.6 CI 40.9	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0
Metridia lucens	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	Oithona similis	AD 75.7 C 179.7
		Microcalanus pygmaeus	AD 4.4 C 5.5

Temora longicornis	AD 9.9 C 8.8	Paracalanus parvus	AD 0.0 C 0.0
Microsetella norvegica All	545.9	Oncaea sp.	ALL 7.1

NAUPLII

Calanus	144.3	Oithona	158.5
Pseudo-Micro-Para	639.6	Temora	80.4
Centropages	4.7	Microsetella	7.1
Metridia	0.0	Unidentified	325.3

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	9.5
Limacina retroversa Sm	37.8	Euphausiid All	0.0
pluteus	23.7	Barnacle nauplii	0.0

Cruise 8306 Latitude 42 75.0N Surface Temperature 9.99 C
 Station 7-09 Longitude 66 00.0 W Surface Salinity 99.99 o/oo
 Replicate A Time 2127 hrs Date June 7, 1983

SPECIES	no/m-3	SPECIES	no/m-3
Calanus finmarchicus	AF 0.0 AM 0.0 CV 7.0 CIV 0.0	Calanus glacialis	AF 0.0 AM 0.0 CV 0.0 CIV 0.0
Calanus hyperboreus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	Calanus sp.	CIII 1.0 CII 3.0 CI 4.0
Pseudocalanus sp.	AF 19.0 AM 6.0 CV 22.0 CIV 26.0 CIII 17.0 CII 61.0 CI 57.9	Centropages typicus	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0
Metridia lucens	AF 0.0 AM 0.0 CV 2.0 CIV 1.0 CIII 0.0 CII 0.0 CI 0.0	Oithona similis	AD 70.0 C 353.5
		Microcalanus pygmaeus	AD 0.0 C 2.0

Temora longicornis	AD 0.0 C 2.0	Paracalanus parvus	AD 0.0 C 0.0
Microsetella norvegica All	90.8	Oncaea sp.	ALL 3.0

NAUPLII

Calanus	99.1	Oithona	198.8
Pseudo-Micro-Para	353.5	Temora	24.8
Centropages	4.1	Microsetella	4.1
Metridia	0.0	Unidentified	190.2

OTHER

Limacina retroversa B	0.0	Euphausiid nauplii	2.0
Limacina retroversa Sm	28.9	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8306 Latitude 42 60.0N Surface Temperature 9.80 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 31.66 o/oo
 Replicate A Time 1860 hrs Date June 7, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 22.9 AM 2.3 CV 100.9 CIV 4.6	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 9.2 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 4.6 CIV 13.8	<i>Calanus sp.</i> CIII 2.3 CII 379.5 CI 379.5	
<i>Pseudocalanus sp.</i>	AF 103.2 AM 43.6 CV 183.4 CIV 61.9 CIII 50.4 CII 78.0 CI 107.8	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	

<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 2.3 CI 0.0	<i>Oithona similis</i> AD 258.8 C 1582.6	<i>Microcalanus pygmaeus</i> AD 0.0 C 6.9
------------------------	--	---	--

<i>Temora longicornis</i>	AD 6.9 C 11.5	<i>Paracalanus parvus</i> AD 2.3 C 0.0	
<i>Microsetella norvegica</i> All	1274.3	<i>Oncaea sp.</i> ALL 2.3	

NAUPLII

<i>Calanus</i>	863.2	<i>Oithona</i>	1192.1
<i>Pseudo-Micro-Para</i>	2199.2	<i>Temora</i>	230.6
<i>Centropages</i>	0.0	<i>Microsetella</i>	5.6
<i>Metridia</i>	0.0	Unidentified	349.4

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	22.5
<i>Limacina retroversa</i> Sm	61.9	Euphausiid All	5.6
pluteus	11.3	Barnacle nauplii	-0.0

Cruise 8306 Latitude 42 39.0N Surface Temperature 10.1 C
 Station 7-12 Longitude 66 00.0 W Surface Salinity 31.99 o/oo
 Replicate A Time 1307 hrs Date June 7, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 1.0 AM 1.5 CV 8.1 CIV 0.0	<i>Calanus glacialis</i> AF 0.5 AM 0.0 CV 0.0 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 2.5	<i>Calanus sp.</i> CIII 0.5 CII 0.0 CI 0.0	
<i>Pseudocalanus sp.</i>	AF 0.5 AM 0.0 CV 1.0 CIV 0.0 CIII 0.0 CII 0.0 CI 3.0	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	

<i>Metridia lucens</i>	AF 0.5 AM 0.0 CV 2.0 CIV 3.0 CIII 0.0 CII 0.5 CI 0.5	<i>Microcalanus pygmaeus</i> AD 9.6 C 47.4

<i>Temora longicornis</i>	AD 0.0 C 0.0	<i>Paracalanus parvus</i> AD 21.7 C 12.1
<i>Microsetella norvegica</i> All	243.2	<i>Oncaea sp.</i> ALL 16.1

NAUPLII

<i>Calanus</i>	36.4	<i>Oithona</i>	258.7
<i>Pseudo-Micro-Para</i>	355.2	<i>Temora</i>	5.0
<i>Centropages</i>	0.0	<i>Microsetella</i>	14.9
<i>Metridia</i>	11.6	Unidentified	29.8

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.5
<i>Limacina retroversa</i> Sm	0.0	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8306 Latitude 42 50.0N Surface Temperature 10.0 C
 Station 7-12 Longitude 66 00.0 W Surface Salinity 31.67 o/oo
 Replicate A Time 1543 hrs Date June 7, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 11.6 AM 0.0 CV 119.0 CIV 8.7	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.0	<i>Calanus sp.</i> CIII 0.0 CII 1.0 CI 7.7	
<i>Pseudocalanus sp.</i>	AF 25.2 AM 3.9 CV 11.6 CIV 13.5 CIII 7.7 CII 20.3 CI 31.9	<i>Centropages typicus</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	
<i>Metridia lucens</i>	AF 2.9 AM 0.0 CV 4.8 CIV 1.0 CIII 1.0 CII 2.9 CI 0.0	<i>Oithona similis</i> AD 183.4 C 736.1 <i>Microcalanus pygmaeus</i> AD 9.7 C 59.0	

<i>Temora longicornis</i>	AD 1.0 C 1.0	<i>Paracalanus parvus</i>	AD 5.8 C 3.9
<i>Microsetella norvegica</i> All	1645.3	<i>Oncæa sp.</i>	ALL 4.8

NAUPLII

<i>Calanus</i>	82.8	<i>Oithona</i>	468.3
<i>Pseudo-Micro-Para</i>	487.6	<i>Temora</i>	4.1
<i>Centropages</i>	0.0	<i>Microsetella</i>	2.1
<i>Metridia</i>	8.3	Unidentified	2.1

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	0.0
<i>Limacina retroversa</i> Sm	31.1	Euphausiid All	0.0
pluteus	10.6	Barnacle nauplii	0.0

Cruise 8306 Latitude 42 51.0N Surface Temperature 7.80 C
 Station 6-06 Longitude 66 00.0 W Surface Salinity 31.35 o/oo
 Replicate A Time 1920 hrs Date June 6, 1983

SPECIES	no/m-3	SPECIES	no/m-3
<i>Calanus finmarchicus</i>	AF 2.2 AM 1.1 CV 18.5 CIV 1.1	<i>Calanus glacialis</i> AF 0.0 AM 0.0 CV 0.0 CIV 0.0	
<i>Calanus hyperboreus</i>	AF 0.0 AM 0.0 CV 0.0 CIV 1.7	<i>Calanus sp.</i> CIII 0.6 CII 1.7 CI 1.1	
<i>Pseudocalanus sp.</i>	AF 15.1 AM 4.5 CV 16.2 CIV 12.9 CIII 9.0 CII 16.2 CI 11.8	<i>Centropages typicus</i> AF 0.0 AM 0.6 CV 0.0 CIV 0.0 CIII 0.0 CII 0.0 CI 0.0	
<i>Metridia lucens</i>	AF 0.0 AM 0.0 CV 0.0 CIV 0.6 CIII 0.0 CII 1.1 CI 0.6	<i>Oithona similis</i> AD 30.3 C 169.4 <i>Microcalanus pygmaeus</i> AD 0.6 C 1.1	

<i>Temora longicornis</i>	AD 0.0 C 2.8	<i>Paracalanus parvus</i>	AD 0.0 C 0.0
<i>Microsetella norvegica</i> All	134.4	<i>Oncæa sp.</i>	ALL 1.7

NAUPLII

<i>Calanus</i>	73.7	<i>Oithona</i>	364.9
<i>Pseudo-Micro-Para</i>	223.3	<i>Temora</i>	60.8
<i>Centropages</i>	0.0	<i>Microsetella</i>	3.7
<i>Metridia</i>	3.7	Unidentified	197.5

OTHER

<i>Limacina retroversa</i> B	0.0	Euphausiid nauplii	1.1
<i>Limacina retroversa</i> Sm	12.9	Euphausiid All	0.6
pluteus	5.5	Barnacle nauplii	0.0

Cruise 8307 Latitude 42 35.0N Surface Temperature 10.3 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 31.19 o/oo
 Replicate A Time 2100 hrs Date Nov. 15, 1983

SPECIES		no/m-3	SPECIES		no/m-3
Calanus finmarchicus	AF	5.8	Calanus glacialis	AF	0.0
	AM	0.0		AM	0.0
	CV	1.0		CV	0.0
	CIV	0.0		CIV	0.0
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	1.0
	AM	0.0		CII	0.0
	CV	0.0		CI	1.0
	CIV	0.0			
Pseudocalanus sp.	AF	1.0	Centropages typicus	AF	2.0
	AM	0.0		AM	2.0
	CV	0.0		CV	0.0
	CIV	0.0		CIV	0.0
	CIII	0.0		CIII	2.9
	CII	0.0		CII	2.9
	CI	0.0		CI	21.2
Metridia lucens	AF	3.8	Oithona similis	AD	3.0
	AM	0.0		C	211.4
	CV	0.0			
	CIV	0.0	Microcalanus pygmaeus	AD	1.0
	CIII	0.0		C	3.9
	CII	0.0			
	CI	0.0			
Temora longicornis	AD	1.0	Paracalanus parvus	AD	71.3
	C	0.0		C	319.0
Microsetella norvegica All	139.0	Dreæa sp.	All	68.4	

NAUPLII

Calanus	37.6	Oithona	371.3
Pseudo-Micro-Para	223.0	Temora	0.0
Centropages	81.1	Microsetella	8.7
Metridia	31.9	Unidentified	0.0
OTHER			
Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	133.2	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0

Cruise 8307 Latitude 42 35.0N Surface Temperature 10.3 C
 Station 7-10 Longitude 66 00.0 W Surface Salinity 31.19 o/oo
 Replicate B Time 2100 hrs Date Nov. 15, 1983

SPECIES		no/m-3	SPECIES		no/m-3
Calanus finmarchicus	AF	3.3	Calanus glacialis	AF	8.0
	AM	0.8		AM	0.0
	CV	5.8		CV	0.0
	CIV	0.8		CIV	0.0
Calanus hyperboreus	AF	0.0	Calanus sp.	CIII	0.0
	AM	0.0		CII	0.8
	CV	0.0		CI	3.3
	CIV	0.0			
Pseudocalanus sp.	AF	2.5	Centropages typicus	AF	0.8
	AM	0.0		AM	0.0
	CV	0.0		CV	1.7
	CIV	1.7		CIV	0.0
	CIII	0.8		CIII	0.0
	CII	0.0		CII	6.6
	CI	0.0		CI	8.2
Metridia lucens	AF	0.8	Oithona similis	AD	2.5
	AM	0.8		C	123.7
	CV	0.0			
	CIV	0.8	Microcalanus pygmaeus	AD	0.0
	CIII	0.8		C	0.0
	CII	0.0			
	CI	0.0			
Temora longicornis	AD	0.0	Paracalanus parvus	AD	83.1
	C	0.0		C	295.8
Microsetella norvegica All	67.9	Dreæa sp.	All	108.2	

NAUPLII

Calanus	56.0	Oithona	429.3
Pseudo-Micro-Para	152.6	Temora	0.0
Centropages	34.8	Microsetella	0.8
Metridia	22.6	Unidentified	0.0
OTHER			
Limacina retroversa B	0.0	Euphausiid nauplii	0.0
Limacina retroversa Sm	148.8	Euphausiid All	0.0
pluteus	0.0	Barnacle nauplii	0.0