

Zooplankton Data Collected with BIOMASS Programme at Syowa Station in 1983 by JARE-24

Atsushi TANIMURA, Kentaro WATANABE,
National Institute of Polar Research,
9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173

Hiroo SATOH,
Tokyo University of Fisheries,
5-7, Konan 4-chome, Minato-ku, Tokyo 108

Hiroshi KANDA
National Institute of Polar Research,
9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173
and
Eiji TAKAHASHI
Faculty of Science, Yamagata University,
4-12, Koshirakawa 1-chome, Yamagata-shi, Yamagata 990

As part of the international BIOMASS (Biological Investigations of Marine Antarctic Systems and Stocks) programme, the Japanese Antarctic Research Expedition (JARE) conducted a three-year programme of marine biological investigations in the fast ice area near Syowa Station during 1982 (JARE-23) through 1984 (JARE-25). Zooplankton were sampled routinely at four fixed stations near Syowa Station in JARE-24 (Fig. 1). Details of the sampling methods and the sampling frequencies are published in JARE Data Reports, No. 114 (WATANABE *et al.*, 1986).

This report summarizes the data on zooplankton collected in the JARE-24 over-wintering programme in 1983. A total of 66 samples were obtained with a twin-ring Norpac net (45 cm in diameter and 180 cm in side length) during February 1983 through January 1984 (Table 1). The mesh openings of the nets were 25 μm (P25 net) and 100 μm (NXX13 net), respectively. The results of primary sorting are presented here.

Zooplankton were sorted into 11 categories as shown in the attached zooplankton record sheets here. Category 1 was composed of four microzooplankton groups; ciliates, foraminifers, copepod nauplii and unidentified eggs. Copepoda (Category 6) includes Calanoida, Cyclopoida and Harpacticoida. Euphausiacea (Category 7) includes nauplius and calyptopis stages. Planktonic larval forms (Category 9) include benthic invertebrate larvae (*i.e.*, polychaetes, gastropods, bryozoans, brachiopods, echinoderms and ascidians). Sample processing and treatment of data were the same as described in the preceding report (*cf.* TANIMURA *et al.*, 1989); the specimens were sorted from a whole sample or subsample divided with suitable proportion according to sample size, and total number of each category per haul and a unit volume of water filtered (m³) are summed up from individual numbers obtained at each sorting stage. Specimens for each category were sorted into individual vials and preserved with formalin (3% in seawater). They are retained at the National Institute of Polar Research, Tokyo. These samples are open to the use of any scientists. Further details about data and specimens can be obtained from:

Department of Biological Data
Division of Data Collection and Processing
National Institute of Polar Research
9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173

References

- Tanimura, A., Fukuchi, M., Ohtsuka, H. and Hoshiai, T. (1989): Zooplankton data collected with BIOMASS programme at Syowa Station in the 1982 by JARE-23. I. Norpac net samples. JARE Data Rep., 147 (Mar. Biol. 15), 162p.
- Watanabe, K., Satoh, H., Kanda, H. and Takahashi, E. (1986): Oceanographic and marine biological data from routine observations near Syowa Station between February 1983 and January 1984 (JARE-24). JARE Data Rep., 114 (Mar. Biol. 9), 22p.

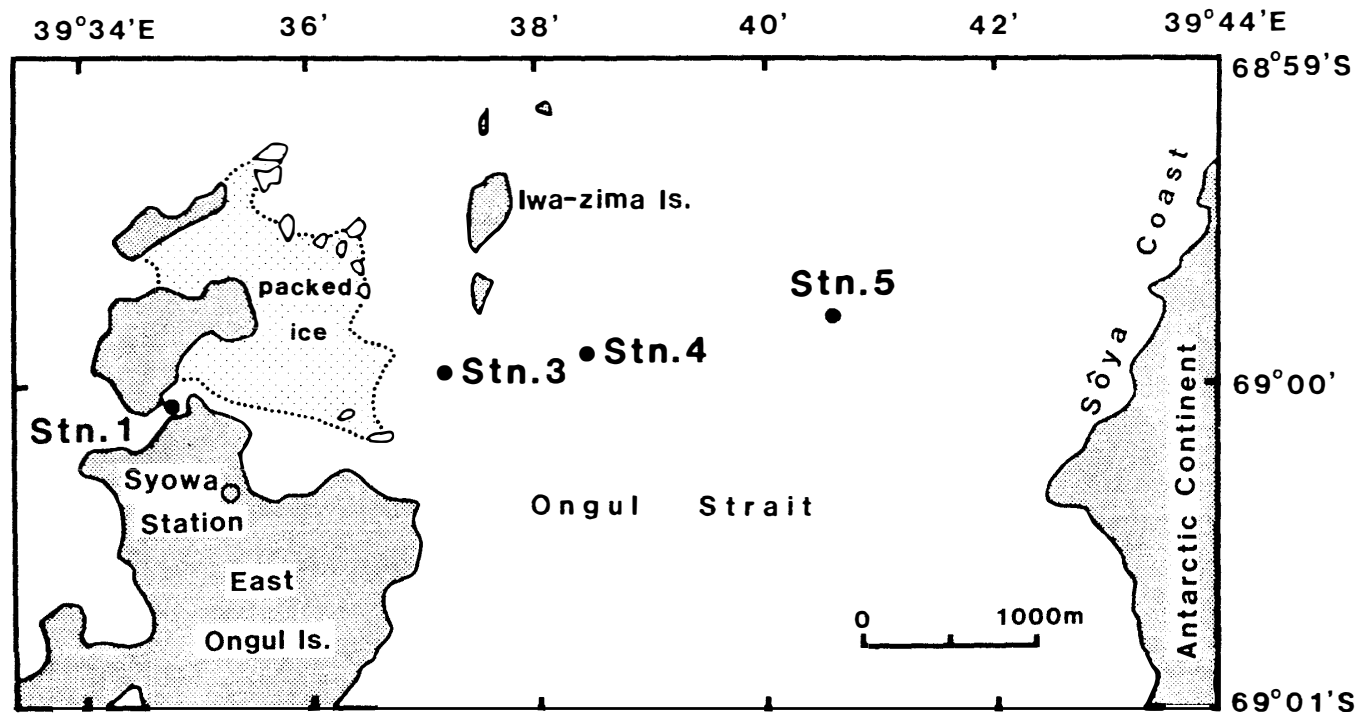


Fig. 1. Sampling locations for routine observations by JARE-24.

Table 1. A list of samples dealt with a primary sorting.

Stn.	Date	Length of Wire (m)	Settling Volume per Haul (ml)	Mesh size (μ m)	Sample No.	Series No.
	1983					
1	18 Feb.	8	0.8	25	2401NP01	24-001
		8	0.2	100	2401NX01	24-002
	11 Mar.	8	2.4	25	2401NP02	24-003
		8	2.4	100	2401NX02	24-004
	1 Apr.	8	0.8	25	2401NP03	24-005
		8	0.6	100	2401NX03	24-006
	4 June	11	0.3	25	2401NP04	24-007
		11	0.6	100	2401NX04	24-008
	28 July	11	0.2	25	2401NP05	24-009
		11	0.4	100	2401NX05	24-010
	8 Sep.	11	0.1	25	2401NP06	24-011
		11	0.2	100	2401NX06	24-012
	5 Oct.	11	0.1	25	2401NP07	24-013
		11	0.2	100	2401NX07	24-014
	11 Nov.	11	0.4	25	2401NP08	24-015
		11	0.4	100	2401NX08	24-016
	29 Nov.	11	0.2	25	2401NP09	24-017
		11	0.4	100	2401NX09	24-018
	16 Dec.	11	0.2	25	2401NP10	24-019
		11	0.4	100	2401NX10	24-020
	1984					
	13 Jan.	11	0.5	25	2401NP11	24-021
		11	0.4	100	2401NX11	24-022
	1983					
3	16 Feb.	38	5.0	25	2403NP12	24-023
		38	2.0	100	2403NX12	24-024
	11 Mar.	38	1.6	25	2403NP13	24-025
		38	6.0	100	2403NX13	24-026
	29 Mar.	38	2.8	25	2403NP14	24-027
		38	3.0	100	2403NX14	24-028
	3 June	38	1.0	25	2403NP15	24-029
		38	2.6	100	2403NX15	24-030
	27 July	38	0.8	25	2403NP16	24-031
		38	1.0	100	2403NX16	24-032
	10 Sep.	38	0.3	25	2403NP17	24-033
		38	1.0	100	2403NX17	24-034
	8 Oct.	38	0.4	25	2403NP18	24-035
		38	0.8	100	2403NX18	24-036
	9 Nov.	38	0.6	25	2403NP19	24-037
		38	1.0	100	2403NX19	24-038
	29 Nov.	38	0.6	25	2403NP20	24-039
		38	0.6	100	2403NX20	24-040
	15 Dec.	38	0.6	25	2403NP21	24-041
		38	0.8	100	2403NX21	24-042

Stn.	Date	Length of Wire (m)	Settling Volume per a Haul (ml)	Mesh size (μm)	Sample No.	Series No.
	1984					
	12 Jan.	38	1.6	25	2403NP22	24-043
		38	0.7	100	2403NX22	24-044
	1983					
4	17 Feb.	150	3.2	25	2404NP23	24-045
		150	0.4	100	2404NX23	24-046
	9 Mar.	150	8.2	25	2404NP24	24-047
		150	14.0	100	2404NX24	24-048
	28 Mar.	150	10.0	25	2404NP25	24-049
		150	10.2	100	2404NX25	24-050
	1983					
5	6 June	150	5.8	25	2405NP26	24-051
		150	13.6	100	2405NX26	24-052
	29 July	150	3.0	25	2405NP27	24-053
		150	4.2	100	2405NX27	24-054
	9 Sep.	150	1.6	25	2405NP28	24-055
		150	2.5	100	2405NX28	24-056
	7 Oct.	150	1.0	25	2405NP29	24-057
		150	1.0	100	2405NX29	24-058
	10 Nov.	150	1.2	25	2405NP30	24-059
		150	1.4	100	2405NX30	24-060
	30 Nov.	150	1.3	25	2405NP31	24-061
		150	1.8	100	2405NX31	24-062
	14 Dec.	150	1.2	25	2405NP32	24-063
		150	2.2	100	2405NX32	24-064
	1984					
	11 Jan.	150	2.0	25	2405NP33	24-065
		150	2.0	100	2405NX33	24-066

ZOOPLANKTON RECORD SHEET

Series No. 24-001

1. Sample. No. 2401NP01 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 8
 4. Station No. 1 10. Depth of haul (m) 8
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 10599
 6. Date & Time(LMT) 1983/2/18, 10:10

Proportion of Sample sorted	(1/1 Sample)		(1/10 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1352			13520	10400
Foraminifera								
Copepoda, nauplius			II-1	6			60	46
Eggs**	I-1	49					49	38
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-6	90					90	69
7. Euphausiacea								
8. Appendicularia	I-8	7					7	5
9. Planktonic larval forms	I-9	53					53	41
10. Others								
11. Isopoda								
Total		199		1358			13779	10599

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-002

1. Sample. No. 2401NX01 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 8
 4. Station No. 1 10. Depth of haul (m) 8
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 480X2
 6. Date & Time(LMT) 1983/2/18, 10:10

Proportion of Sample sorted	(1/1 Sample)		(1/2 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	103			206x2	158x2
Foraminifera								
Copepoda, nauplius			II-1	46			92x2	71x2
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	128			256x2	197x2
7. Euphausiacea								
8. Appendicularia	I-8	4					4x2	3x2
9. Planktonic larval forms			II-9	33			66x2	51x2
10. Others								
11. Isopoda								
Total		4		310			624x2	480x2

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-003

1. Sample. No. 2401NP02 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 8
 4. Station No. 1 10. Depth of haul (m) 8
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 3200
 6. Date & Time(LMT) 1983/3/11, 14:50

Proportion of Sample sorted	(1/10 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	330					3300	2539
Foraminifera								
Copepoda, nauplius	I-1	2					20	15
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda	I-5	1					10	8
6. Copepoda	I-1	12					120	92
7. Euphausiacea								
8. Appendicularia	I-8	67					670	515
9. Planktonic larval forms	I-9	4					40	31
10. Others								
11. Isopoda								
Total		416					4160	3200

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-004

1. Sample. No. 2401NX02 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 8
 4. Station No. 1 10. Depth of haul (m) 8
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 4393
 6. Date & Time(LMT) 1983/3/11, 14:50

Proportion of Sample sorted	(1/16 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	160					2560	1969
Foraminifera								
Copepoda, nauplius	I-1	53					848	652
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	104					1664	1280
7. Euphausiacea								
8. Appendicularia	I-8	31					496	382
9. Planktonic larval forms	I-9	8					128	98
10. Others	I-10	1					16	12
11. Isopoda								
Total		357					5712	4393

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-005

1. Sample No. 2401NP03 7. Net used NORPAC(25 μ m)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 8

4. Station No. 1 10. Depth of haul (m) 8

5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
39° 35' 00" E 12. Total number per m³ 323

6. Date & Time(LMT) 1983/4/1, 11:22

Proportion of Sample sorted	(2/5 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	144					360	277
Foraminifera								
Copepoda, nauplius	I-1	5					12	9
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	12					30	23
7. Euphausiacea								
8. Appendicularia	I-8	7					18	14
9. Planktonic larval forms								
10. Others								
11. Isopoda								
Total		168					420	323

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-006

1. Sample. No. 2401NX03 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 8
 4. Station No. 1 10. Depth of haul (m) 8
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 1238
 6. Date & Time(LMT) 1983/4/1, 11:22

Proportion of Sample sorted	(1/1 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	858					858	660
Foraminifera								
Copepoda, nauplius	I-1	314					314	241
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	399					399	307
7. Euphausiacea								
8. Appendicularia	I-8	25					25	19
9. Planktonic larval forms	I-9	14					14	11
10. Others								
11. Isopoda								
Total		1610					1610	1238

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-008

1. Sample No. 2401NX04 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 1772
 6. Date & Time(LMT) 1983/6/4, 11:50

Proportion of Sample sorted	(1/8 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	9					72	55
Foraminifera								
Copepoda, nauplius	I-1	22					176	135
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	257					2056	1582
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms								
10. Others								
11. Isopoda								
Total		288					2304	1772

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-009

1. Sample No. 2401NP05 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 318
 6. Date & Time(LMT) 1983/7/28, 11:48

Proportion of Sample sorted	(1/1 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	5					5	4
Foraminifera								
Copepoda, nauplius	I-1	24					24	18
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	381					381	293
7. Euphausiacea								
8. Appendicularia	I-8	1					1	1
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		413					413	318

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-010

1. Sample. No. 2401NX05 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 2524
 6. Date & Time(LMT) 1983/7/28, 11:48

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			8	6
Foraminifera								
Copepoda, nauplius			II-1	31			248	191
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	377			3016	2320
7. Euphausiacea								
8. Appendicularia	I-8	1					1	1
9. Planktonic larval forms	I-9	8					8	6
10. Others								
11. Isopoda								
Total		9		409			3281	2524

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-011

1. Sample No. 2401NP06 7. Net used NORPAC(25 μ m)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 11

4. Station No. 1 10. Depth of haul (m) 11

5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3

39° 35' 00" E 12. Total number per m³ 172

6. Date & Time(LMT) 1983/9/8, 14:10

Proportion of Sample sorted	(1/1 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	21					21	16
Foraminifera	I-1	1					1	1
Copepoda, nauplius	I-1	15					15	11
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	182					182	140
7. Euphausiacea								
8. Appendicularia	I-8	2					2	2
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		223					223	172

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-012

1. Sample No. 2401NX06 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 744
 6. Date & Time(LMT) 1983/9/8, 14:10

Proportion of Sample sorted	(1/1 Sample)		(1/2 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	6			12	9
Foraminifera								
Copepoda, nauplius			II-1	46			92	71
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	II-1	861					861	662
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	1					1	1
10. Others	I-10	1					1	1
11. Isopoda								
Total		863		52			967	744

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-013

1. Sample No.	<u>2401NP07</u>	7. Net used	<u>NORPAC(25µm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>11</u>
4. Station No.	<u>1</u>	10. Depth of haul (m)	<u>11</u>
5. Position	<u>69° 00' 00" S</u> <u>39° 35' 00" E</u>	11. Volume of water filtered*(m ³)	<u>1.3</u>
6. Date & Time(LMT)	<u>1983/10/5, 10:15</u>	12. Total number per m ³	<u>118</u>

Proportion of Sample sorted	(1/1 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	7					7	5
Foraminifera								
Copepoda, nauplius	I-1	10					10	8
Eggs**	I-1	27					27	21
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	96					96	74
7. Euphausiacea								
8. Appendicularia	I-8	1					1	1
9. Planktonic larval forms	I-9	12					12	9
10. Others								
11. Isopoda								
Total		153					153	118

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-014

1. Sample. No. 2401NX07 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
39° 35' 00" E 12. Total number per m³ 1384
 6. Date & Time(LMT) 0983/10/5, 10:15

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata								
Foraminifera								
Copepoda, nauplius			II-1	13			208	160
Eggs**			II-1'	59			944	726
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	40			640	492
7. Euphausiacea								
8. Appendicularia	I-8	5					5	4
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		7		112			1799	1384

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-015

1. Sample No. 2401NP08 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 127
 6. Date & Time(LMT) 1983/11/11, 10:36

Proportion of Sample sorted	(1/3 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	2					6	5
Foraminifera								
Copepoda, nauplius	I-1	14					42	32
Eggs**	I-1	2					6	5
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	36					108	83
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	1					3	2
10. Others								
11. Isopoda								
Total		55					165	127

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-016

1. Sample No. 2401NX08 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 1048
 6. Date & Time(LMT) 1983/11/11, 10:36

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	4			32	25
Foraminifera								
Copepoda, nauplius			II-1	21			168	129
Eggs**			II-1'	8			64	49
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	137			1096	843
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		2		170			1362	1048

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-017

1. Sample No. 2401NP09 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 47
 6. Date & Time(LMT) 1983/11/29, 09:48

Proportion of Sample sorted	(1/1 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	1					1	1
Foraminifera								
Copepoda, nauplius	I-1	7					7	5
Eggs**	I-1	3					3	2
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	50					50	39
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms								
10. Others								
11. Isopoda								
Total		61					61	47

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-018

1. Sample. No. 2401NX09 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 426
 6. Date & Time(LMT) 1983/11/29, 09:48

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata								
Foraminifera								
Copepoda, nauplius			II-1	11			88	68
Eggs**	I-1	19					19	14
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	55			440	338
7. Euphausiacea	I-7	2					2	2
8. Appendicularia	I-8	3					3	2
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		26		66			554	426

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-019

1. Sample No. 2401NP10 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 58
 6. Date & Time(LMT) 1983/12/16, 09:21

Proportion of Sample sorted	(1/1 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	2					2	2
Foraminifera								
Copepoda, nauplius	I-1	9					9	7
Eggs**	I-1	9					9	7
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	54					54	41
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	1					1	1
10. Others								
11. Isopoda								
Total		75					75	58

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-020

1. Sample. No. 2401NX10 7. Net used NORPAC(100µm)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 11

4. Station No. 1 10. Depth of haul (m) 11

5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
39° 35' 00" E 12. Total number per m³ 263

6. Date & Time(LMT) 1983/12/16, 09:21

Proportion of Sample sorted	(1/1 Sample) Sort I		(1/4 Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			4	3
Foraminifera								
Copepoda, nauplius			II-1	6			24	18
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	78			312	240
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	2					2	2
10. Others								
11. Isopoda								
Total		2		85			342	263

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-021

1. Sample No. 2401NP11 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 187
 6. Date & Time(LMT) 1984/1/13, 09:05

Proportion of Sample sorted	(1/2 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	9					18	14
Foraminifera								
Copepoda, nauplius	I-1	10					20	15
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	91					182	140
7. Euphausiacea								
8. Appendicularia	I-8	10					20	15
9. Planktonic larval forms	I-9	2					4	3
10. Others								
11. Isopoda								
Total		122					244	187

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-022

1. Sample No. 2401NX11 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 11
 4. Station No. 1 10. Depth of haul (m) 11
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 1.3
 39° 35' 00" E 12. Total number per m³ 905
 6. Date & Time(LMT) 1984/1/13, 09:05

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	5			40	31
Foraminifera								
Copepoda, nauplius			II-1	13			104	80
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	128			1024	787
7. Euphausiacea								
8. Appendicularia	I-8	5					5	4
9. Planktonic larval form:	I-9	2					2	2
10. Others	I-10	1					1	1
11. Isopoda								
Total		8		146			1176	905

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-023

1. Sample. No. 2403NP12 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 340
 6. Date & Time(LMT) 1983/2/16, 15:10

Proportion of Sample sorted	(1/4 Sample)		(1/20 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	7			140	23
Foraminifera								
Copepoda, nauplius			II-1	29			580	95
Eggs**			II-1	1			20	3
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	58			1160	190
7. Euphausiacea								
8. Appendicularia	I-8	8	I-8	7			172	28
9. Planktonic larval forms	I-9	2					8	1
10. Others								
11. Isopoda								
Total		10		102			2080	340

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv./m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-024

1. Sample No. 2403NX12 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 413
 6. Date & Time(LMT) 1983/2/16, 15:10

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	12			192	31
Foraminifera								
Copepoda, nauplius			II-1	7			112	86
Eggs**								
2. Hydroida								
3. Siphonophora	I-3	1					1	+
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	114			1824	299
7. Euphausiacea	I-7	3					3	1
8. Appendicularia			II-8	6			96	16
9. Planktonic larval forms	I-9	2	I-9	18			290	48
10. Others	I-10	2					2	+
11. Isopoda								
Total		8		157			2520	413

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-025

1. Sample. No.	<u>2403NP13</u>	7. Net used	<u>NORPAC(25μm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>38</u>
4. Station No.	<u>3</u>	10. Depth of haul (m)	<u>38</u>
5. Position	<u>68° 59' 57" S</u> <u>39° 37' 16" E</u>	11. Volume of water filtered*(m ³)	<u>6.1</u>
6. Date & Time(LMT)	<u>1983/3/11, 09:55</u>	12. Total number per m ³	<u>2511</u>

Proportion of Sample sorted	(1/3 Sample)		(1/9 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1692			15228	2469
Foraminifera								
Copepoda, nauplius	I-1	1					3	1
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	2					6	1
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	26					78	13
10. Others								
11. Isopoda								
Total		29		1692			15315	2511

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-026

1. Sample. No. 2403NX13 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 4926
 6. Date & Time(LMT) 1983/3/11, 09:55

Proportion of Sample sorted	(1/1 Sample)		(1/32 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	664			21248	3483
Foraminifera								
Copepoda, nauplius			II-1	49			1568	257
Eggs**								
2. Hydroida	I-2	1					1	+
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	111			3552	582
7. Euphausiacea								
8. Appendicularia			II-8	74			2368	388
9. Planktonic larval forms			II-9	41			1312	215
10. Others								
11. Isopoda								
Total		1		939			30049	4926

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-027

1. Sample No. 2403NP14 7. Net used NORPAC(25µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 167
 6. Date & Time(LMT) 1983/3/29, 15:10

Proportion of Sample sorted	(1/4 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	97					388	64
Foraminifera								
Copepoda, nauplius	I-1	28					112	18
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	44					176	29
7. Euphausiacea								
8. Appendicularia	I-8	81					324	53
9. Planktonic larval forms	I-9	5					20	3
10. Others								
11. Isopoda								
Total		255					1020	167

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-028

1. Sample. No. 2403NX14 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 1054
 6. Date & Time(LMT) 1983/3/29, 15:10

Proportion of Sample sorted	(1/16 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	210					3360	551
Foraminifera								
Copepoda, nauplius	I-1	26					416	68
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	103					1648	270
7. Euphausiacea								
8. Appendicularia	I-8	46					736	121
9. Planktonic larval forms	I-9	17					272	44
10. Others								
11. Isopoda								
Total		402					6432	1054

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-029

1. Sample No. 2403NP15 7. Net used NORPAC(25μm)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 38

4. Station No. 3 10. Depth of haul (m) 38

5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
39° 37' 16" E 12. Total number per m³ 248

6. Date & Time(LMT) 1983/6/3, 14:38

Proportion of Sample sorted	(1/3 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	107					321	52
Foraminifera								
Copepoda, nauplius	I-1	38					114	19
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	359					1077	176
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	1					3	1
10. Others								
11. Isopoda								
Total		505					1515	248

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-030

1. Sample No. 2403NX15 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 1369
 6. Date & Time(LMT) 1983/6/3, 14:38

Proportion of Sample sorted	(1/16 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	21					336	55
Foraminifera								
Copepoda, nauplius	I-1	72					1152	189
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	429					6864	1125
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms								
10. Others								
11. Isopoda								
Total		522					8352	1369

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-031

1. Sample. No. 2403NP16 7. Net used NORPAC(25µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 181
 6. Date & Time(LMT) 1983/7/27, 11:25

Proportion of Sample sorted	(2/3 Sample)		(1/3 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	5			15	2
Foraminifera								
Copepoda, nauplius			II-1	5			15	2
Eggs**			II-1	1			3	1
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	342			1026	168
7. Euphausiacea								
8. Appendicularia	I-8	10					15	2
9. Planktonic larval forms	I-9	2	I-9	11			36	6
10. Others								
11. Isopoda								
Total		12		364			1110	181

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-033

1. Sample. No.	<u>2403NP17</u>	7. Net used	<u>NORPAC(25μm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>38</u>
4. Station No.	<u>3</u>	10. Depth of haul (m)	<u>38</u>
5. Position	<u>68° 59' 57" S</u> <u>39° 37' 16" E</u>	11. Volume of water filtered*(m ³)	<u>6.1</u>
6. Date & Time(LMT)	<u>1983/9/10, 10:58</u>	12. Total number per m ³	<u>123</u>

Proportion of Sample sorted	(1/1 Sample)		(1/2 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	11			22	4
Foraminifera								
Copepoda, nauplius			II-1	19			38	6
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	333			666	109
7. Euphausiacea								
8. Appendicularia			II-8	7			14	2
9. Planktonic larval forms	I-9	11					11	2
10. Others								
11. Isopoda								
Total		11		370			751	123

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-034

1. Sample. No. 2403NX17 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 1950
 6. Date & Time(LMT) 1983/9/10, 10:58

Proportion of Sample sorted	(1/1 Sample) Sort I		(1/16 Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	9			144	24
Foraminifera								
Copepoda, nauplius			II-1	53			848	139
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	679			10864	1781
7. Euphausiacea								
8. Appendicularia	I-8	7					7	1
9. Planktonic larval forms	I-9	32					32	5
10. Others								
11. Isopoda								
Total		39		741			11895	1950

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-035

1. Sample No. 2403NP18 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 278
 6. Date & Time(LMT) 1983/10/8, 10:15

Proportion of Sample sorted	(1/4 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	21					84	14
Foraminifera								
Copepoda, nauplius	I-1	9					36	6
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	390					1560	255
7. Euphausiacea								
8. Appendicularia	I-8	1					4	1
9. Planktonic larval forms	I-9	3					12	2
10. Others								
11. Isopoda								
Total		424					1696	278

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-036

1. Sample. No. 2403NX18 7. Net used NORPAC(100µm)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 38

4. Station No. 3 10. Depth of haul (m) 38

5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
39° 37' 16" E 12. Total number per m³ 1447

6. Date & Time(LMT) 1983/10/8, 10:15

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata								
Foraminifera								
Copepoda, nauplius			II-1	20			320	52
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	529			8464	1388
7. Euphausiacea	I-9'	1					1	+
8. Appendicularia	I-8	18					18	3
9. Planktonic larval forms	I-9	16					16	3
10. Others	I-10	7					7	1
11. Isopoda								
Total		42		549			8826	1447

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-037

1. Sample. No.	<u>2403NP19</u>	7. Net used	<u>NORPAC(25µm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>38</u>
4. Station No.	<u>3</u>	10. Depth of haul (m)	<u>38</u>
5. Position	<u>68° 59' 57" S</u> <u>39° 37' 16" E</u>	11. Volume of water filtered*(m ³)	<u>6.1</u>
6. Date & Time(LMT)	<u>1983/11/9, 14:18</u>	12. Total number per m ³	<u>144</u>

Proportion of Sample sorted	(1/3 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	4					12	2
Foraminifera								
Copepoda, nauplius	I-1	26					78	13
Eggs**	I-1	7					21	3
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	251					753	123
7. Euphausiacea								
8. Appendicularia	I-8	1					3	1
9. Planktonic larval forms	I-9	4					12	2
10. Others								
11. Isopoda								
Total		293					879	144

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-038

1. Sample. No. 2403NX19 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 761
 6. Date & Time(LMT) 1983/11/9, 14:18

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			16	2
Foraminifera								
Copepoda, nauplius			II-1	35			560	92
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	253			4048	664
7. Euphausiacea	I-7	11					11	2
8. Appendicularia	I-8	2					2	+
9. Planktonic larval forms	I-9	8					8	1
10. Others								
11. Isopoda								
Total		21		289			4645	761

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv./m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-039

1. Sample. No. 2403NP20 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 168
 6. Date & Time(LMT) 1983/11/29, 14:05

Proportion of Sample sorted	(1/3 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	2					6	1
Foraminifera								
Copepoda, nauplius	I-1	107					321	52
Eggs**	I-1	2					6	1
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	221					663	109
7. Euphausiacea								
8. Appendicularia	I-8	1					3	1
9. Planktonic larval forms	I-9	8					24	4
10. Others								
11. Isopoda								
Total		341					1023	168

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-040

1. Sample No. 2403NX20 7. Net used NORPAC(100μm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 1019
 6. Date & Time(LMT) 1983/11/29, 14:05

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			16	3
Foraminifera								
Copepoda, nauplius			II-1	33			528	86
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	353			5648	926
7. Euphausiacea	I-7	20					20	3
8. Appendicularia	I-8	1					1	+
9. Planktonic larval forms	I-9	4					4	1
10. Others								
11. Isopoda								
Total		25		387			6217	1019

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-041

1. Sample. No. 2403NP21 7. Net used NORPAC(25µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 226
 6. Date & Time(LMT) 1983/12/15, 09:55

Proportion of Sample sorted	(1/1 Sample)		(1/3 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			3	1
Foraminifera								
Copepoda, nauplius			II-1	68			204	33
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	385			1155	189
7. Euphausiacea	I-7	1					1	+
8. Appendicularia	I-8	4					4	1
9. Planktonic larval forms	I-9	11	I-9	1			14	2
10. Others								
11. Isopoda								
Total		16	455				1381	226

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-042

1. Sample. No. 2403NX21 7. Net used NORPAC(100μm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 38
 4. Station No. 3 10. Depth of haul (m) 38
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 6.1
 39° 37' 16" E 12. Total number per m³ 1076
 6. Date & Time(LMT) 1983/12/15, 09:55

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	2			16	3
Foraminifera								
Copepoda, nauplius			II-1	23			184	30
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	788			6304	1033
7. Euphausiacea	I-7	59					59	9
8. Appendicularia								
9. Planktonic larval forms								
10. Others	I-10	3					3	1
11. Isopoda								
Total		62		813			6566	1076

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-043

1. Sample. No.	<u>2403NP22</u>	7. Net used	<u>NORPAC(25μm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>38</u>
4. Station No.	<u>3</u>	10. Depth of haul (m)	<u>38</u>
5. Position	<u>68° 59' 57" S</u>	11. Volume of water filtered*(m ³)	<u>6.1</u>
	<u>39° 37' 16" E</u>	12. Total number per m ³	<u>589</u>
6. Date & Time(LMT)	<u>1984/1/12, 09:43</u>		

Proportion of Sample sorted	(1/7 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	68					476	78
Foraminifera								
Copepoda, nauplius	I-1	223					1561	256
Eggs**	I-1	2					14	2
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	207					1449	238
7. Euphausiacea								
8. Appendicularia	I-8	5					35	6
9. Planktonic larval forms	I-9	8					56	9
10. Others								
11. Isopoda								
Total		513					3591	589

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-045

1. Sample. No. 2404NP23 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 4 10. Depth of haul (m) 150
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
 39° 38' 20" E 12. Total number per m³ 58
 6. Date & Time(LMT) 1983/2/17, 15:35

Proportion of Sample sorted	(1/15 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata								
Foraminifera								
Copepoda, nauplius	I-1	24					360	15
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda	I-5	1					15	1
6. Copepoda	I-1	55					825	34
7. Euphausiacea								
8. Appendicularia	I-8	3					45	2
9. Planktonic larval forms	I-9	9					135	6
10. Others								
11. Isopoda								
Total		92					1380	58

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-046

1. Sample. No. 2404NX23 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 4 10. Depth of haul (m) 150
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
 39° 38' 20" E 12. Total number per m³ 63
 6. Date & Time(LMT) 1983/2/17, 15:35

Proportion of Sample sorted	(1/1 Sample)		(1/32 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	4			128	5
Foraminifera								
Copepoda, nauplius			II-1	13			416	18
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	18			576	24
7. Euphausiacea								
8. Appendicularia			II-8	1			32	1
9. Planktonic larval forms	I-9	1	I-9	11			353	15
10. Others								
11. Isopoda								
Total		1		47			1505	63

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-047

1. Sample. No. 2404NP24 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 4 10. Depth of haul (m) 150
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
 39° 38' 20" E 12. Total number per m³ 286
 6. Date & Time(LMT) 1983/3/9, 10:40

Proportion of Sample sorted	(1/10 Sample)		(1/20 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	117			2340	97
Foraminifera								
Copepoda, nauplius			II-1	16			320	13
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha	I-4	1					10	+
5. Ostracoda			II-5	1			20	1
6. Copepoda			II-1	133			2660	111
7. Euphausiacea								
8. Appendicularia	I-8	102					1020	43
9. Planktonic larval forms	I-9	50					500	21
10. Others								
11. Isopoda								
Total		153		267			6870	286

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-048

1. Sample. No. 2404NX24 7. Net used NORPAC(100µm)

2. JARE 24 8. Method of haul Vertical

3. Area Syowa Station 9. Wire run out (m) 150

4. Station No. 4 10. Depth of haul (m) 150

5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
39° 38' 20" E 12. Total number per m³ 3425

6. Date & Time(LMT) 1983/3/9, 10:40

Proportion of Sample sorted	(1/1 Sample)		(1/128 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	492			62976	2624
Foraminifera								
Copepoda, nauplius			II-1	4			512	21
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha	I-4	6					6	+
5. Ostracoda								
6. Copepoda			II-1	92			11776	491
7. Euphausiacea	I-7	5					5	+
8. Appendicularia			II-8	37			4736	197
9. Planktonic larval forms			II-9	17			2176	91
10. Others	I-10	10					10	+
11. Isopoda								
Total		21		642			82197	3425

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-049

1. Sample No. 2404NP25 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 4 10. Depth of haul (m) 150
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
 39° 38' 20" E 12. Total number per m³ 169
 6. Date & Time(LMT) 1983/3/28, 15:50

Proportion of Sample sorted	(1/10 Sample)		(1/20 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	45			900	37
Foraminifera								
Copepoda, nauplius			II-1	29			580	24
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	77			1540	64
7. Euphausiacea								
8. Appendicularia			II-8	49			980	41
9. Planktonic larval forms	I-9	6					60	3
10. Others								
11. Isopoda								
Total		6		200			4060	169

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-050

1. Sample No. 2404NX25 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 4 10. Depth of haul (m) 150
 5. Position 69° 00' 00" S 11. Volume of water filtered*(m³) 24
 39° 38' 20" E 12. Total number per m³ 3174
 6. Date & Time(LMT) 1983/3/28, 15:50

Proportion of Sample sorted	(1/1 Sample) Sort I		(1/32 Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1568			50176	2090
Foraminifera								
Copepoda, nauplius			II-1	138			4416	184
Eggs**								
2. Hydroida								
3. Siphonophora	I-3	2					2	+
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	335			10720	447
7. Euphausiacea								
8. Appendicularia			II-8	321			10272	428
9. Planktonic larval forms			II-9	18			576	24
10. Others	I-10	14					14	1
11. Isopoda								
Total		16		2380			76176	3174

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-051

1. Sample. No.	<u>2405NP26</u>	7. Net used	<u>NORPAC(25μm)</u>
2. JARE	<u>24</u>	8. Method of haul	<u>Vertical</u>
3. Area	<u>Syowa Station</u>	9. Wire run out (m)	<u>150</u>
4. Station No.	<u>5</u>	10. Depth of haul (m)	<u>150</u>
5. Position	<u>68° 59' 57" S</u>	11. Volume of water filtered*(m ³)	<u>24</u>
	<u>39° 40' 25" E</u>	12. Total number per m ³	<u>552</u>
6. Date & Time(LMT)	<u>1983/6/6, 12:27</u>		

Proportion of Sample sorted	(1/10 Sample)		(1/20 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	38			760	32
Foraminifera								
Copepoda, nauplius			II-1	114			2280	95
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	508			10160	423
7. Euphausiacea								
8. Appendicularia	I-8	1					10	+
9. Planktonic larval forms	I-9	3					30	1
10. Others								
11. Isopoda								
Total		4		660			13240	552

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-052

1. Sample. No. 2405NX26 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 1591
 6. Date & Time(LMT) 1983/6/6, 12:27

Proportion of Sample sorted	(1/1 Sample)		(1/16 Sample)		(1/64 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata					III-1	42	2688	112
Foraminifera								
Copepoda, nauplius					III-1	101	6464	269
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha	I-4	3					3	+
5. Ostracoda								
6. Copepoda					III-6	452	28928	1205
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms			II-9	7			112	5
10. Others								
11. Isopoda								
Total		3		7		595	38195	1591

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-053

1. Sample No. 2405NP27 7. Net used NORPAC(25µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 361
 6. Date & Time(LMT) 1983/7/29, 11:55

Proportion of Sample sorted	(1/20 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	27					540	23
Foraminifera								
Copepoda, nauplius	I-1	9					180	8
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	393					7860	327
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	4					80	3
10. Others								
11. Isopoda								
Total		433					8660	361

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-055

1. Sample No. 2405NP28 7. Net used NORPAC(25µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 278
 6. Date & Time(LMT) 1983/9/9, 10:46

Proportion of Sample sorted	(1/10 Sample)		(/ Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	28					280	12
Foraminifera								
Copepoda, nauplius	I-1	76					760	32
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	544					5440	226
7. Euphausiacea								
8. Appendicularia	I-8	8					80	3
9. Planktonic larval forms	I-9	12					120	5
10. Others								
11. Isopoda								
Total		668					6680	278

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-056

1. Sample. No. 2405NX28 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 947
 6. Date & Time(LMT) 1983/9/9, 10:46

Proportion of Sample sorted	(1/1 Sample)		(1/8 Sample)		(1/16 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata					III-1	16	1024	43
Foraminifera								
Copepoda, nauplius					III-1	29	1856	77
Eggs**								
2. Hydroida			II-2	3			24	1
3. Siphonophora								
4. Chaetognatha	I-4	1					1	+
5. Ostracoda								
6. Copepoda					III-1	308	19712	821
7. Euphausiacea								
8. Appendicularia			II-8	5			40	2
9. Planktonic larval forms			II-9	8			64	3
10. Others								
11. Isopoda								
Total		1		16		353	22721	947

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-057

1. Sample No. 2405NP29 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 208
 6. Date & Time(LMT) 1983/10/7, 10:40

Proportion of Sample sorted	(1/9 Sample) Sort I		(/ Sample) Sort II		(/ Sample) Sort III		Indiv. No. per haul	Indiv. No. per m ³
	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata	I-1	6					54	2
Foraminifera								
Copepoda, nauplius	I-1	75					675	28
Eggs**								
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda	I-1	446					4014	168
7. Euphausiacea								
8. Appendicularia	I-8	6					54	2
9. Planktonic larval forms	I-9	21					189	8
10. Others								
11. Isopoda								
Total		554					4986	208

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-058

1. Sample. No. 2405NX29 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 301
 6. Date & Time(LMT) 1983/10/7, 10:40

Proportion of Sample sorted	(1/4 Sample)		(1/10 Sample)		(1/32 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	5			50	2
Foraminifera								
Copepoda, nauplius			II-1	65			650	27
Eggs**								
2. Hydroida	I-2	2					8	+
3. Siphonophora								
4. Chaetognatha	I-4	1					4	+
5. Ostracoda	I-5	1					4	+
6. Copepoda					III-6	201	6432	268
7. Euphausiacea								
8. Appendicularia	I-8	8					32	1
9. Planktonic larval forms	I-9	13	I-9	2			72	3
10. Others								
11. Isopoda								
Total		25		72		201	7252	301

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-060

1. Sample. No. 2405NX30 7. Net used NORPAC(100µm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 297

6. Date & Time(LMT) 1983/11/10, 11:07

Proportion of Sample sorted	(1/1 Sample)		(1/10 Sample)		(1/32 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	14			140	6
Foraminifera								
Copepoda, nauplius			II-1	69			690	29
Eggs**								
2. Hydroida								
3. Siphonophora	I-3	4					4	+
4. Chaetognatha	I-4	9					9	+
5. Ostracoda								
6. Copepoda					III-6	192	6144	256
7. Euphausiacea								
8. Appendicularia	I-8	22					22	1
9. Planktonic larval forms	I-9	54			I-9	2	118	5
10. Others	I-10	1					1	+
11. Isopoda								
Total		90		83		194	7128	297

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-061

1. Sample. No. 2405NP31 7. Net used NORPAC(25μm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 102
 6. Date & Time(LMT) 1983/11/30, 11:39

Proportion of Sample sorted	(1/2 Sample)		(1/8 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	3			24	1
Foraminifera								
Copepoda, nauplius			II-1	8			64	3
Eggs**			II-1	5			40	2
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	268			2144	89
7. Euphausiacea	I-7	2					4	+
8. Appendicularia			II-8	2			16	1
9. Planktonic larval forms			II-9	20			160	6
10. Others								
11. Isopoda								
Total		2		306			2452	102

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-062

1. Sample. No. 2405NX31 7. Net used NORPAC(100μm)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 471
 6. Date & Time(LMT) 1983/11/30, 11:39

Proportion of Sample sorted	(1/1 Sample)		(1/10 Sample)		(1/32 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			10	+
Foraminifera								
Copepoda, nauplius			II-1	40			400	17
Eggs**								
2. Hydroida								
3. Siphonophora	I-3	4					4	+
4. Chaetognatha	I-4	3					3	+
5. Ostracoda								
6. Copepoda					III-6	329	10528	439
7. Euphausiacea								
8. Appendicularia	I-8	3			I-8	1	35	1
9. Planktonic larval forms	I-9	9			I-9	9	297	12
10. Others	I-10	17					17	1
11. Isopoda								
Total		36		41		339	11294	471

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-063

1. Sample. No. 2405NP32 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 208
 6. Date & Time(LMT) 1983/12/14, 10:05

Proportion of Sample sorted	(3/10 Sample)		(1/10 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	2			20	1
Foraminifera								
Copepoda, nauplius			II-1	43			430	18
Eggs**			II-1	2			20	1
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda			II-1	449			4490	187
7. Euphausiacea			II-7	1			10	+
8. Appendicularia	I-8	1					3	+
9. Planktonic larval forms			II-9	3			30	1
10. Others								
11. Isopoda								
Total		1		500			5003	208

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-064

1. Sample No. 2405NX32 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 532
 6. Date & Time(LMT) 1983/12/14, 10:05

Proportion of Sample sorted	(1/4 Sample)		(1/10 Sample)		(1/64 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	1			10	+
Foraminifera								
Copepoda, nauplius			II-1	30			300	13
Eggs**								
2. Hydroida	I-2	2					8	+
3. Siphonophora								
4. Chaetognatha	I-4	2					8	+
5. Ostracoda								
6. Copepoda					III-6	194	12416	517
7. Euphausiacea								
8. Appendicularia								
9. Planktonic larval forms	I-9	7					28	1
10. Others	I-10	1					4	+
11. Isopoda								
Total		12		31		194	12774	532

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-065

1. Sample. No. 2405NP33 7. Net used NORPAC(25 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 67
 6. Date & Time(LMT) 1984/1/11, 10:00

Proportion of Sample sorted	(1/2 Sample)		(2/5 Sample)		(1/5 Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata					III-1	8	40	2
Foraminifera								
Copepoda, nauplius					III-1	25	125	5
Eggs**					III-1	26	130	5
2. Hydroida								
3. Siphonophora								
4. Chaetognatha								
5. Ostracoda								
6. Copepoda					III-1	252	1260	53
7. Euphausiacea								
8. Appendicularia	I-8	5					10	+
9. Planktonic larval forms			II-9	14	II-9	1	40	2
10. Others								
11. Isopoda								
Total		5		14		312	1605	67

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.

ZOOPLANKTON RECORD SHEET

Series No. 24-066

1. Sample No. 2405NX33 7. Net used NORPAC(100 μ m)
 2. JARE 24 8. Method of haul Vertical
 3. Area Syowa Station 9. Wire run out (m) 150
 4. Station No. 5 10. Depth of haul (m) 150
 5. Position 68° 59' 57" S 11. Volume of water filtered*(m³) 24
 39° 40' 25" E 12. Total number per m³ 608
 6. Date & Time(LMT) 1984/1/11, 10:00

Proportion of Sample sorted	(1/1 Sample)		(1/20 Sample)		(/ Sample)		Indiv. No. per haul	Indiv. No. per m ³
	Sort I		Sort II		Sort III			
Category	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial	Vial No.	Indiv. No. in vial		
1. Ciliata			II-1	23			460	19
Foraminifera								
Copepoda, nauplius			II-1	27			540	23
Eggs**								
2. Hydroida	I-2	2					2	+
3. Siphonophora	I-3	16					16	1
4. Chaetognatha	I-4	3					3	+
5. Ostracoda								
6. Copepoda			II-1	654			13080	545
7. Euphausiacea	I-7	6					6	+
8. Appendicularia	I-8	18					18	1
9. Planktonic larval forms	I-9	5	I-9	23			465	19
10. Others								
11. Isopoda								
Total		50		727			14590	608

Remarks; * calculated by assumption.
 ** unidentified eggs which may be of copepods and/or benthic invertebrate.
 + less than 1 indiv. /m³.