

FIBEX CRUISE ZOOPLANKTON DATA

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Summary

This report summarises the sorting results of the zooplankton catches made during FIBEX (First International BIOMASS Experiment) on FRV "Walther Herwig" and RV "Meteor", from January to March 1981. In addition, a synopsis of krill larvae data collected by Polish and Argentine research vessels during FIBEX, is presented.

Zusammenfassung

Im folgenden Bericht werden die Sortierergebnisse der Zooplanktonfänge dargestellt, die während FIBEX (First International BIOMASS Experiment) auf FFS "Walther Herwig" und FS "Meteor" von Januar bis März 1981 gewonnen wurden. Außerdem wird eine Zusammenstellung von Krilllarven-Daten gegeben, die von polnischen und argentinischen Forschungsschiffen während FIBEX gesammelt wurden.

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1. Introduction

The following data lists present the results of the sorting of the zooplankton material collected during the FIBEX (First International BIOMASS Experiment) cruises on FRV "Walther Herwig" and RV "Meteor" between January and March 1981. HEMPEL et al. give a description of aims and first results of this expedition. For station lists, comments to the zooplankton sampling, treatment of the catches and descriptions of the plankton nets used, see PIATKOWSKI & KLAGES (1983).

Dr. Rakusa-Suszczewski prepared the list of the total amount of krill larvae collected by Polish and Argentine research vessels in the adjacent FIBEX areas. These data together with a station map are added in this report.

2. Sorting procedures for RMT 1- and NCN-catches

The samples were sorted primarily into the following groups:

- Euphausiids, adults and postlarvae
- Fish larvae
- Amphipods
- Chaetognaths.

The early life history stages of Euphausiids were subdivided into:

- Euphausia superba: eggs,
naupliar stages,
calyptopes,
furciliars.
- Euphausiid larvae other than krill:
naupliar stages,
calyptopes,
furciliars.

All other taxa, particularly copepods, were kept as the residual samples.

In case of very rich samples, subsamples were taken by Wiborg splitter and Folsom splitter respectively.

All numbers of individuals are given in $n/1000 \text{ m}^3$.

3. Sorting procedures for RMT 8-catches

The sorting of FRV "Walther Herwig"-samples, counting and separating krill (Euphausia superba) from the original, began during the cruise. These krill data were worked up by NAST (1982)*. The other taxa in the sample were later sorted into the following groups:

- Euphausiids (excl. E. superba)
- Amphipods
- Decapods
- Gastropods
- Cephalopods
- Polychaets
- Salps
- Chaetognaths
- Siphonophores
- Medusae
- Fish larvae
- Fish adults
- Mysidacea

Copepods and Invertebratae larvae found in the RMT 8-samples were left in the residual sample.

The individuals were counted after the volume (displacement volume) of the whole sample had been measured. Numbers of individuals are given in n/1000 m³.

Only E. superba was sorted from the RMT 8-catches taken on RV "Meteor". The results of these data will be published separately.

* The krill data were worked up by sorters of Institut für Seefischerei, Bundesforschungsanstalt Hamburg.

4. Zooplankton data lists

4.1. Station maps

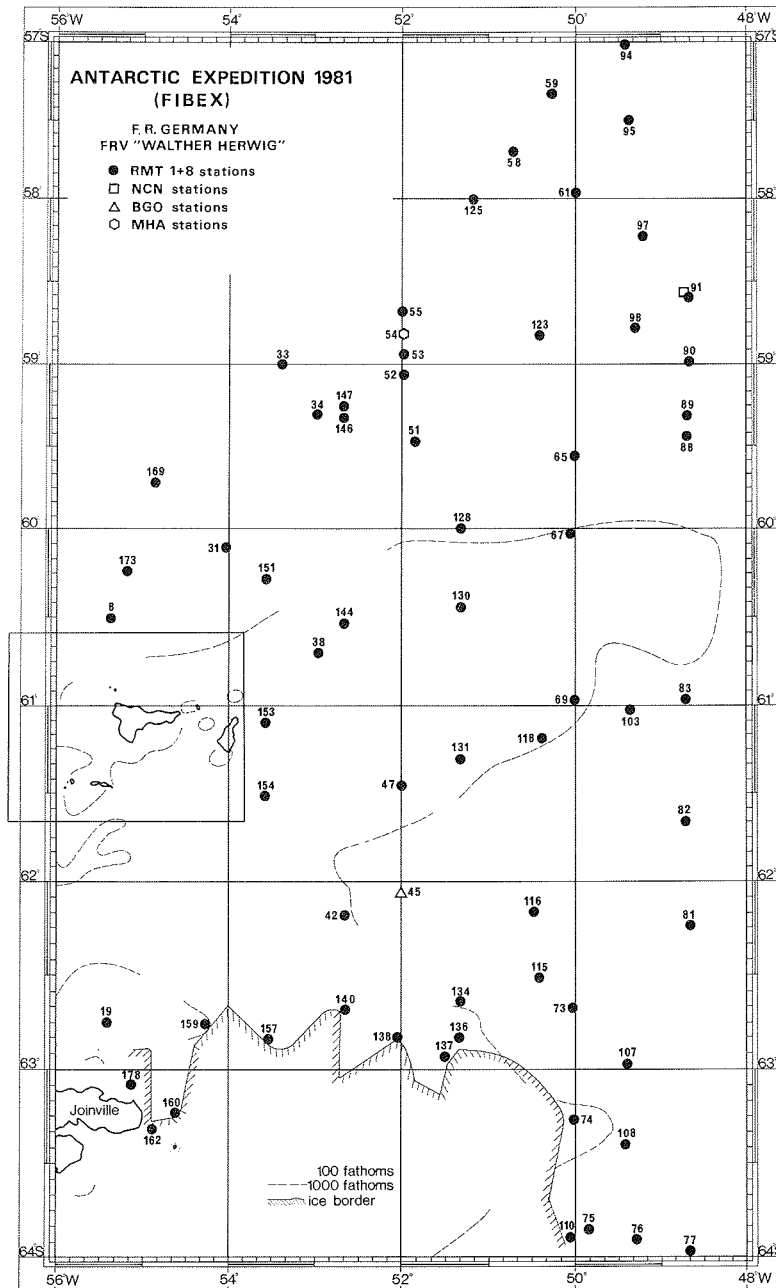


Fig. 1 Stations of zooplankton sampling during first leg of FRV "Walther Herwig"-cruise in FIBEX area (26.Jan.-1.Mar.1981). (From PIATKOWSKI & KLAGES, 1983).

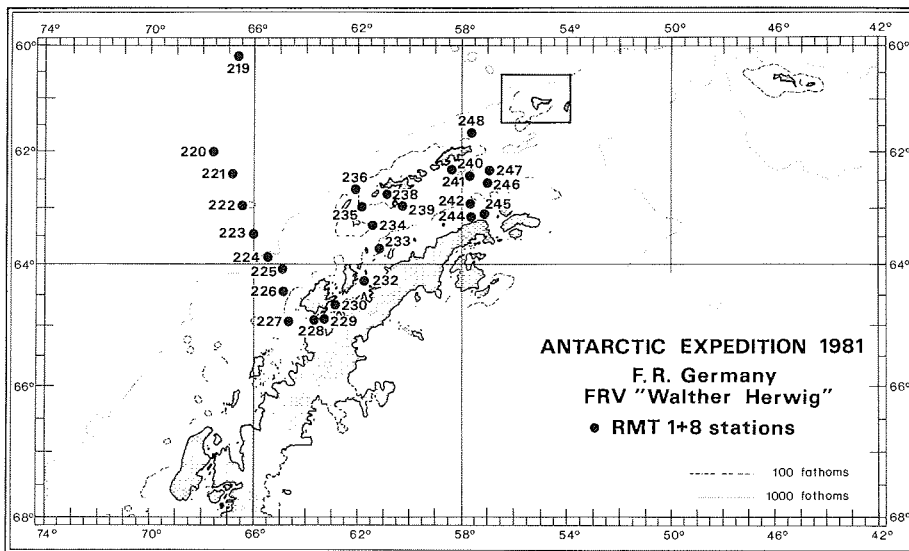


Fig. 3 Stations of zooplankton sampling during second leg of FRV "Walther Herwig"-cruise (10.Mar.-19.Mar.1981). (From PIATKOWSKI & KLAGES, 1983).

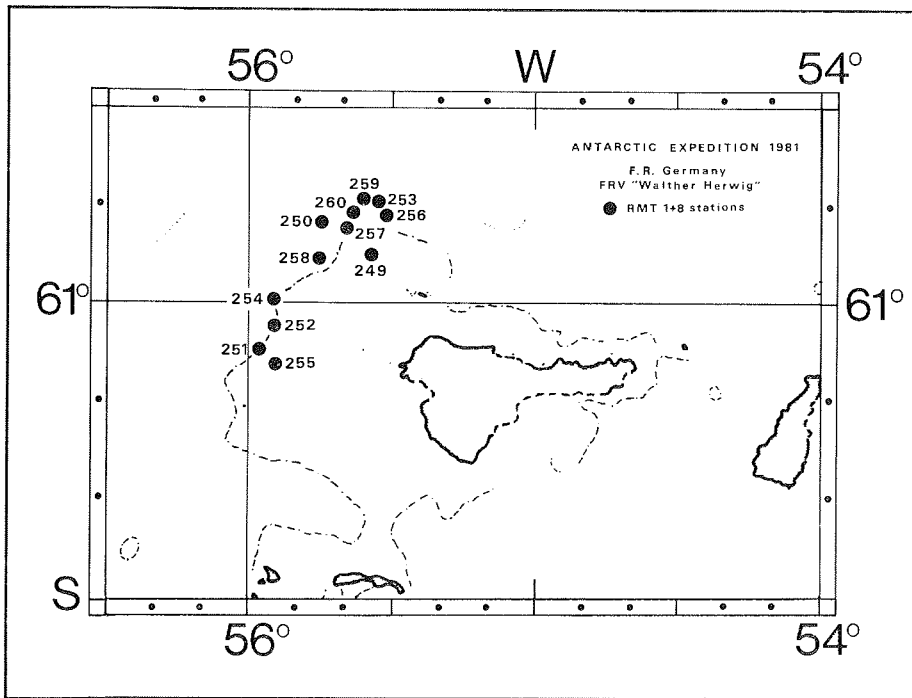


Fig. 4 Stations of zooplankton sampling near Elephant Island during second leg of FRV "Walther Herwig"-cruise (10.Mar.-19.Mar.1981). (From PIATKOWSKI & KLAGES, 1983).

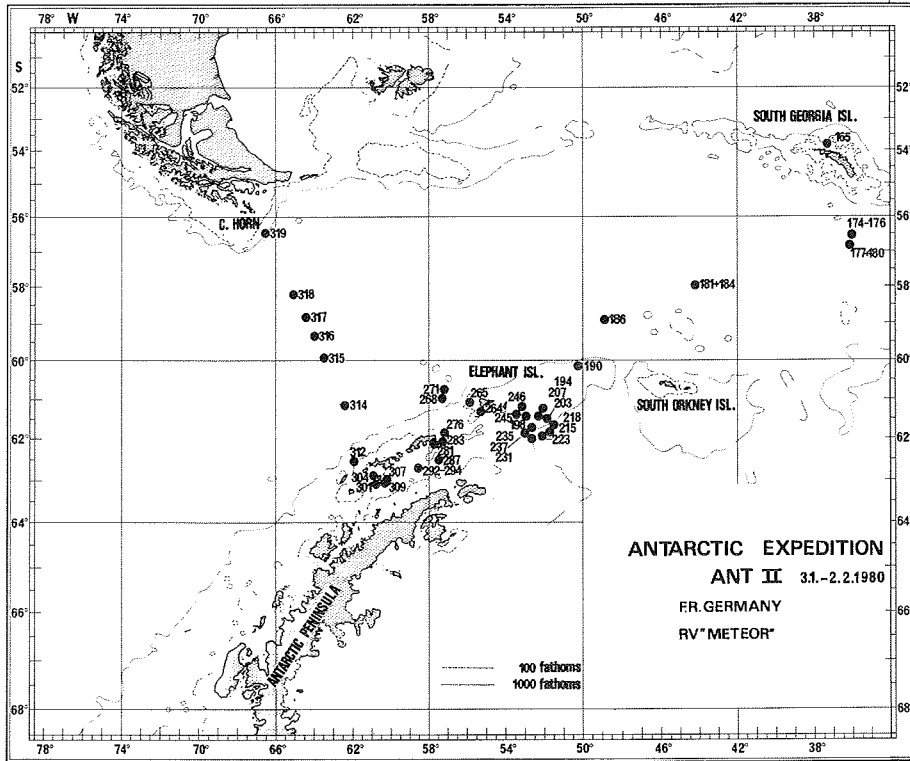


Fig. 5 Stations of zooplankton sampling during ANT II of RV "Meteor"-cruise (3.Jan.-2.Feb.1981). (From PIATKOWSKI & KLAGES, 1983).

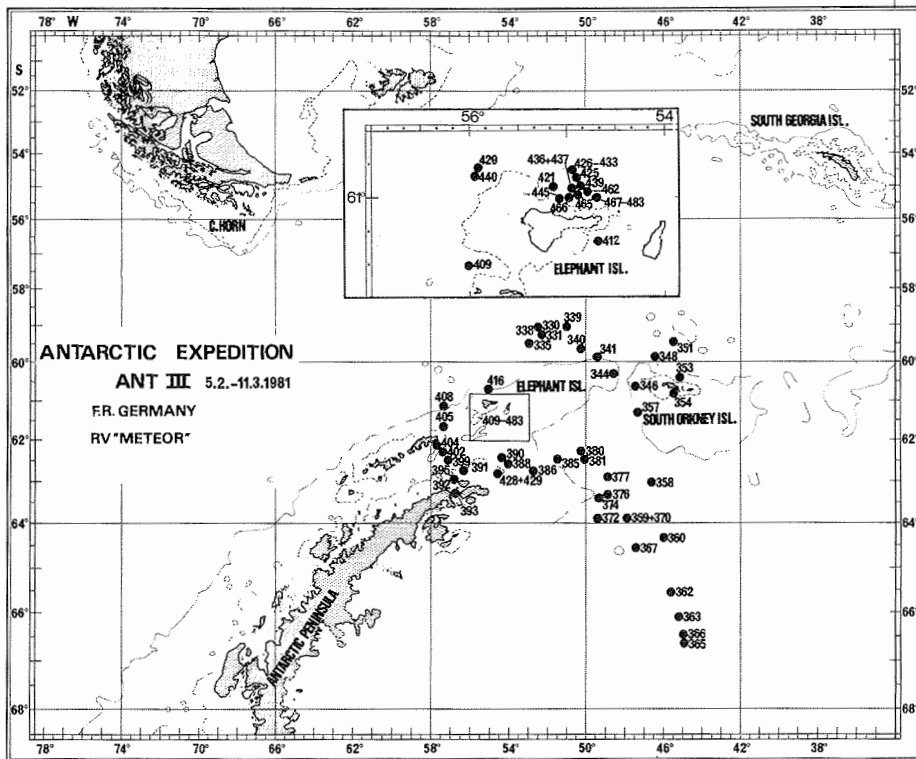


Fig. 6 Stations of zooplankton sampling during ANT III of RV "Meteor"-cruise (5.Feb.-10.Mar.1981). (From PIATKOWSKI & KLAGES, 1983).

Antarctic Expedition 1980/81 RV "Walther Herwig". Four taxonomic groups taken by RMT 1, MESSHAI (MES), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
34/10	Febr 2	RMT1	256	0	1147	305	0	
38/11	2	RMT1	10	186	611	38	0	
42/12	2	RMT1	1	103	669	78	1	
51/15	3	RMT1	25	4	n.c.	37	0	
52/16	3	RMT1	100	498	997	166	166	
53/17	3	RMT1	100	0	2511	3196	457	
54/18	3	MES	40	0	667	0	0	
55/19	4	RMT1	200	0	636	1909	0	
59/21	4	RMT1	16	0	0	483	0	
61/22	5	RMT1	100	134	n.c.	161	0	
65/23	5	RMT1	1	68	n.c.	88	0	
67/24	5	RMT1	1	29	3	94	0	
69/25	5	RMT1	2	132	n.c.	47	2	
73/26	6	RMT1	3.3	68	1164	55	13	
75/28	6	RMT1	1	808	1270	7	10	

4.2.

RMT 1- and NCN-samples

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
77/30	Febr 7	RMT1	10	361	1641	54	6	
83/33	8	RMT1	3.3	371	0	20	0	
88/34	8	RMT1	20	13	2313	200	0	
89/35	8	RMT1	50	0	0	0	0	
90/36	8	RMT1	80	0	0	0	0	
91/37	8	RMT1	100	0	n.c.	0	0	
91/38	8	NCN	16	0	156	7	0	
94/39	9	RMT1	100	0	n.c.	n.c.	0	
95/40	9	RMT1	40	0	n.c.	550	0	
97/41	9	RMT1	100	0	n.c.	196	0	
98/42	9	RMT1	100	73	771	59	0	
103/43	11	RMT1	1	35	0	44	0	
107/44	11	RMT1	4	25	n.c.	140	0	
108/45	11	RMT1	8	349	791	257	0	
110/46	12	RMT1	16	548	3945	142	0	
123/50	13	RMT1	50	0	n.c.	0	0	
125/51	14	RMT1	200	0	1139	385	0	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
128/52	Febr 14	RMT1	1	3	0	0	0	
131/54	15	RMT1	1	148	233	15	0	
140/59	16	RMT1	2	89	n.c.	n.c.	0	
144/60	16	RMT1	1	3	0	0	0	
146/61	16	RMT1	80	0	0	199	0	
147/62	17	RMT1	100	0	n.c.	357	0	
154/65	18	RMT1	16	220	n.c.	108	3	
159/67	18	RMT1	2	78	91	37	4	
160/68	18	RMT1	8	522	n.c.	609	52	
162/69	18	RMT1	10	42	0	0	18	
167/70	19	RMT1	50	407	n.c.	n.c.	0	
169/71	20	RMT1	1	19	4	1	0	
173/72	20	RMT1	1	0	0	26	0	
178/74	21	RMT1	50	0	n.c.	0	0	
191/75	23	NCN	1	0	n.c.	77	0	
205/84	27	RMT1	1	646	119	77	9	
228/10	12	RMT1	1	5	15	24	46	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
232/14	Febr 12	RMT1	4	87	0	16	20	
234/16	13	RMT1	1	548	25	147	0	
236/18	13	RMT1	1	352	684	155	0	
240/23	15	RMT1	1	521	555	464	0	
245/27	15	RMT1	1	9	77	17	0	
246/28	16	RMT1	1	300	11	20	3	
247/29	16	RMT1	1	189	0	27	3	
249/31	17	RMT1	2	19	n.c.	19	0	
251/33	17	RMT1	30	22	580	25	166	
252/34	17	RMT1	1	0	653	65	23	
254/36	18	RMT1	1	54	n.c.	129	3	
255/37	18	RMT1	1	0	n.c.	53	89	
256/38	18	RMT1	1	12	n.c.	41	4	
257/39	19	RMT1	8	27	n.c.	43	0	
258/40	19	RMT1	1	9	n.c.	15	0	
259/41	19	RMT1	2	0	104	28	0	
260/42	19	RMT1	1	0	0	0	0	

Antarctic Expedition 1980/81 RV "Meteor". Four taxonomic groups taken by RMT 1, MOCNESS (MOC), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
165/ 8	Jan 10	NCN	2	100	3450	150	50	
174/ 9	13	NCN1	1	0	0	0	0	
175/ 9	13	NCN2	1	21	n.c.	28	14	
176/ 9	13	NCN3	1	10	n.c.	166	0	
177/26	13	RMT1	1	3	1411	151	15	
180/27	14	RMT1	1	769	101	15	2	
181/28	16	RMT1	1	141	n.c.	12	0	
184/10	16	NCN1	1	0	39	0	0	
		NCN2	1	0	35	0	0	
		NCN3	1	0	39	0	0	
194/31	18	RMT1	1	421	34	10	1	
203/11	19	NCN1	1	0	121	7	0	
		NCN2	1	7	291	0	0	
		NCN3	1	0	471	20	0	
207/12	19	NCN	1	10	480	20	0	

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
215/13	Jan 19	NCN1 NCN2 NCN3	1 1 1	0 7 39	39 199 1343	7 0 20	0 0 0	
218/33	20	RMT1	1	574	89	6	8	
237/14	23	NCN1 NCN2	1 1	28 10	113 265	7 20	0 10	
245/37	23	RMT1	1	282	0	20	1	
246/15	24	NCN1 NCN2	1 1	0 20	435 686	24 29	0 0	
268/16	25	NCN1 NCN2	1 1	50 10	262 3039	21 98	0 0	
271/39	25	RMT1	1	7	15	7	1	
281/17	27	NCN1 NCN2	8 8	0 0	0 n.c.	0 78	0 0	
283/41	27	RMT1	1	714	82	6	1	
292/18	29	NCN1 NCN2	1 16	0 0	71 567	7 113	0 0	
294/44	29	RMT1	1	8	14	2	0	
304/19	30	NCN	1	24	0	0	0	
307/46	30	RMT1	1	257	n.c.	1	5	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
309/20	Jan 30	NCN	1	47	153	0	0	
312/47	30	RMT1	5	452	0	590	0	
330/ 1	Febr 9	MOC2 MOC3 MOC4	1 1 1	26 26 39	225 320 527	63 8 50	5 0 0	
331/ 2	9	NCN	1	0	2	0	0	
335/ 3	9	MOC	40	9	1058	117	0	
339/ 5	9	NCN	20	18	2478	62	0	
340/ 7	10	NCN	1	0	0	0	0	
341/ 8	10	MOC2 MOC3 MOC4 MOC5 MOC6 MOC7 MOC8 MOC9	25 20 1 1 1 1 1 1	0 0 35 63 21 0 73 73	n.c. n.c. 317 109 55 0 8 0	0 47 154 119 41 15 73 51	0 0 41 19 28 0 0 0	
344/ 9	10	MOC2 MOC3 MOC4 MOC5 MOC6 MOC7 MOC8 MOC9	8 2 16 25 1 100 1 50	10 27 39 80 52 0 5 0	1634 1632 1986 241 0 0 0 0	70 12 4 0 0 0 0 284	16 8 28 0 0 0 0 0	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
346/10	Febr 11	MOC	100	86	916	280	1	
348/11	11	RMT1	100	0	2488	0	50	
351/12	11	RMT1	100	10	2193	391	95	
353/13	12	RMT1	50	0	660	0	0	
354/14	12	RMT1	10	46	484	22	22	
357/15	13	RMT1	2	22	361	66	10	
358/16	14	RMT1	10	1135	230	0	0	
360/17	14	MOC2	1	6	329+	19	21	+ not complete
		MOC3	1	0	48	0	0	
		MOC4	4	27	1683	175	0	
		MOC5	16	11	4249	407	0	
362/18	14	RMT1	10	104	1780	241	27	
363/19	15	MOC2	1	7	416	34	5	
		MOC3	1	4	463	94	1	
		MOC4	1	1	19	3	1	
		MOC5	1	0	94	7	0	
		MOC6	1	1	71	10	2	
365/20	15	RMT1	10	17	915	246	0	
366/21	15	MOC	20	41	1725	624	0	
369/23	16	RMT1	20	223	3163	281	35	
370/24	16	RMT1	20	18	1193	101	0	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
372/25	Febr 16	RMT1	1	75	1198	50	11	
374/27	17	RMT1	8	303	1086	50	39	
376/28	17	NCN	1	1	151	7	2	
376/29	17	NCN	6.6	27	5432	175	58	
377/30	17	MOC2	1	0	6	3	0	
		MOC3	4	24	2476	290	28	
		MOC4	1	20	195	16	5	
		MOC5	16	4	738	16	52	
		MOC6	25	172	1897	34	0	
		MOC7	10	100	5100	205	4	
		MOC8	6.6	19	1783	143	0	
		MOC9	1	29	186	38	2	
380/31	18	RMT1	6.6	801	52	13	7	
385/33	18	RMT1	1	127	592	64	0	
386/34	18	RMT1	1	49	243	32	1	
388/35	19	RMT1	5	104	357	2	0	
390/36	19	RMT1	6.6	334	335	27	1	
391/37	19	RMT1	10	21	222	100	0	
392/38	19	RMT1	1	0	50	29	14	
393/39	20	RMT1	25	69	76	38	0	
395/40	20	RMT1	1	61	38	8	30	not quantitative

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
399/41	Febr 20	RMT1	2	6	6	25	0	
402/42	21	RMT1	50	2400	69	58	3	
404/43	21	RMT1	25	0	45	45	0	
405/44	21	RMT1	50	0	613	0	0	
408/45	21	RMT1	50	101	2397	85	0	
409/46	21	RMT1	200	390	0	390	0	
412/47	22	RMT1	50	0	110	219	110	
416/48	23	RMT1	4	0	41	4	0	
420/49	23	RMT1	100	242	3149	117	118	
421/50	24	RMT1	16.6	366	387	182	0	
425/52	24	RMT1	50	530	840	1221	0	
436/60	24	MOC3	25	43	1493	128	0	
		MOC4	50	0	1304	609	0	
		MOC5	10	0	18	144	0	
		MOC6	1	91	28	153	0	
		MOC7	1	0	13	8	0	
445/64	25	RMT1	13.3	0	276	92	0	
466/75	Mar 1	NCN	10	19	373	12	0	
467/78	1	RMT1	12.5	106	718	38	0	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Euphausiacea Adult + Postlarval	Chaetognaths	Amphipods	Fish larvae	Comment
470/79	Mar 2	RMT1	25	73	606	40	0	
483/89	3	RMT1	100	775	333	333	0	

Antarctic Expedition 1980/81 R.V. "Walther Herwig". Distribution of *Euphausia superba* eggs and larvae.
 Used nets: RMT1, MESSHAI (MES), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.
 Positive hauls are listed only.

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Eggs	Nau- plii	Meta- naupl.	Calyptopis			Furcilia			Total number of larvae	Comment
							I	II	III	Early	Mean	Late		
34/10	Febr 2	RMT1	256				134665	55471	1630				191 767	
51/15	3	RMT1	25				15151	202					15 353	
52/16	3	RMT1	100				1113372	70598	14534				1 217 608	
53/17	3	RMT1	100				202404	81835	7945	596			292 781	
54/18	3	MES	40				28186	3246	463				31 900	
55/19	4	RMT1	200				2489262	501849	72168				3 063 280	
59/21	4	RMT1	16				173	414					587	
61/22	5	RMT1	100				8175	305	61				8 541	
65/23	5	RMT1	2				296	16					313	
69/25	5	RMT1	2				862	14	10				887	
88/34	8	RMT1	20				16856	16312	10493	815			44 477	
89/35	8	RMT1	50				18288	1731		109			20 129	
90/36	8	RMT1	80				322815	67281	29223	679			420 000	
91/37	8	RMT1	100				400844	22942	8249	1289			433 331	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Eggs	Nau- plii	Meta- naupl.	Calyptopis			Furcilia			Total number of larvae	Comment
							I	II	III	Early	Mean	Late		
91/38	Febr 8	NCN	16				38314	7057	3600				48 971	
94/39	9	RMT1	100				10524	4677	5730	1988			22 919	
95/40	9	RMT1	40				7743	27396	24418	171			63 047	
97/41	9	RMT1	100				86829	54588	7335	170			148 923	
98/42	10	RMT1	100				304883	24816	5653				335 352	
103/43	11	RMT1	1				39						39	
107/44	11	RMT1	4				7						7	
110/46	12	RMT1	16							29			29	
123/50	13	RMT1	50				258795	7973					266 372	
125/51	14	RMT1	200				276774	438226	411258	171032			1 297 290	
128/52	14	RMT1	50				3818	818	683				5 320	
140/59	16	RMT1	2				43	24	12	6			86	
144/60	16	RMT1	1				272	68	19	3			363	
146/61	16	RMT1	80				652054	89614	14209	1133			757 011	
147/62	17	RMT1	100				87311	203726	253996	144896			689 930	
154/65	18	RMT1	16				4215	3758	1191	434			9 600	
159/67	18	RMT1	2					21	25				46	

Stat./Haul	Date	Gear	Aliquot counted n-1	Eggs	Nau- plii	Meta- naupl.	I	Calyptopis II	III	Furcilia Early Mean Late	Total number of larvae	Comment
	Febr											
162/69	18	RMT1	10	16							0	
167/70	19	RMT1	50		419		313	103	523		1 359	
169/71	20	RMT1	200		329612		41750	6592	220		378 175	
173/72	20	RMT1	100		127740		33117	3285	788		164 932	
178/74	21	RMT1	50		80		2715	80			2 875	
191/75	23	RMT1	1		4615		116384	43846	9154	77	174 077	
	Mar											
232/14	12	RMT1	4						1137	828	1 966	
249/31	17	RMT1	2					12	1765	432	2 210	
251/33	17	RMT1	30					72	16519	1580	18 171	
252/34	17	RMT1	1					5	463	51	519	
254/36	18	RMT1	4		27				6925	1578	394	8 924
255/37	18	RMT1	1		6			18	1633		1 657	
256/38	18	RMT1	1						913	144	20	1 078
257/39	19	RMT1	1		5			5	3263	446	3 721	
258/40	19	RMT1	1						319	21	340	
259/41	19	RMT1	2	9				9	3887	226	4 122	
260/42	19	RMT1	1						545		545	

Antarctic Expedition 1980/81 R.V. "Meteor". Distribution of *Euphausia superba* eggs and larvae.
 Used nets: RMT1, MOCNESS (MOC), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.
 Positive hauls are listed only.

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Eggs	Nau- plii	Meta- naupl.	I	Calyptopsis II	III	Furcilia Early Mean	Late	Total number of larvae	Comment
165/ 8	Jan 10	NCN	2	50								0	
174/ 9	13	NCN1	1	32	10	7						17	
177/26	13	RMT1	1							3		3	
181/28	16	RMT1	8				28	71	28			128	
184/10	16	NCN1 NCN2	1 1		1332 3	25 424	7					1 357 434	
203/11	19	NCN1 NCN2 NCN3	1 1 1	42 85	21 14	7 35 59	59	39	7			28 56 157	
207/12	19	NCN	1		88	108	29	29				254	
215/13	19	NCN1 NCN2 NCN3	1 1 1	7	7	7	42 49	49				14 687 137	
218/33	20	RMT1	1	2								0	
237/14	23	NCN1 NCN2	1 1	120 10	21 10	234 98	42 68					297 176	
246/15	24	NCN1 NCN2	1 1	70 578	106 372	235 176	23 166	78	10			364 804	

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Eggs	Nau- plii	Meta- naupl.	I	Calyptopsis II	III	Furcilia Early Mean Late	Total number of larvae	Comment
268/16	Jan 25	NCN1 NCN2	1 1	10	7	7		7	7		21 0	
281/17	27	NCN1 NCN2	8 8	281 314	4845 706	63887 6510	1127 15686	3608			69 859 26 510	
283/41	27	RMT1	1				1	5		4	10	
292/18	29	NCN1 NCN2	1 16	42 113	149 113	390	780 15886	28 454			1 347 16 453	
294/44	29	RMT1	1						2	1	3	
304/19	30	NCN	16		381		762	381			1 524	
307/46	30	RMT1	1						34	3	37	
309/20	30	NCN	1	200	3953	8517	670				13 140	
330/ 1	Febr 9	MOC2 MOC3 MOC4	1 1 1	3	5		17015 4034	9442			17 015 4 034 9 446	
331/ 2	9	NCN	1		4			42			46	
335/ 3	9	MOC1	40				100900	460			101 365	
339/ 5	9	NCN	20				98601	6371	1433		106 407	
340/ 6	10	NCN	1				2035	62		9	2 106	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Eggs	Nau- plii	Meta- naupl.	Calvptopis			Furcilia			Total number of larvae	Comment
							I	II	III	Early	Mean	Late		
341/ 8	10	MOC2	25	46			9422	93					9 515	
		MOC3	20			5759	40					5 799		
		MOC4	1				95	76	32			203		
		MOC5	1			62						62		
		MOC6	1			1379						1 379		
		MOC7	1			10	2	2				15		
		MOC8	1					336			23	359		
		MOC9	25			2564	382	651	67			3 612		
		344/ 9	10		MOC2	8	15	436	6023	31	15			
MOC3	2				12	5538	53				5 591			
MOC4	16			28		9532	340				9 872			
MOC5	25			70		15244	701				15 945			
MOC6	100			253		286290	3035	1264	253		290 843			
MOC7	100					1106435	6397				1 112 835			
MOC8	200					2190180	20068				2 211 161			
MOC9	50					22244	1238	250			23 732			
346/10	11	MOC1	100	111	22	310	67376	908	155			68 771		
348/11	11	RMT1	100			130586	2683	562	43			133 875		
351/12	11	RMT1	100			36823	40913	24300	2488			104 524		
353/13	12	RMT1	50			3811	469	52				4 334		
354/14	12	RMT1	10	354								0		
357/15	13	RMT1	2	2		15		2	2			20		
358/16	14	RMT1	10			14	27	14	14			69		

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Eggs	Nau- plii	Meta- naupl.	I	Calyptopsis II	III	Furcilia Early Mean Late	Total number of larvae	Comment
360/17	Febr 14	MOC2 MOC5	1 16.6				8 45	2	4		14 45	
362/18	14	RMT1	10				12	12			24	
372/25	16	RMT1	1				3		1	3	7	
374/27	17	RMT1	8					9			9	
376/28	17	NCN	1	8	1						1	
377/30	17	MOC2 MOC4 MOC9	1 1 1				1	2			1 2 0	
386/34	18	RMT1	1	12			1		1		2	
392/38	19	RMT1	1						3	3	6	
395/40	20	RMT1	1						7		7	not quantitative
399/41	20	RMT1	2	11			643	574	142		1 359	
402/42	21	RMT1	50				3333	11913	14691	3765	33 703	
404/43	21	RMT1	25				235	935	195	195	1 559	
405/44	21	RMT1	50	60			1185	5097	770	1244	9 481	
408/45	21	RMT1	50				3718	3718	967		8 402	
409/46	21	RMT1	200				23641	987356	111251	7290	1 129 540	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Eggs	Nau- plii	Meta- naupl.	I	II	III	Furcilia Early Mean Late	Total number of larvae	Comment
	Febr											
412/47	22	RMT1	50	285				381			381	
416/48	23	RMT1	4				8	1267	70	16	1 362	
420/49	23	RMT1	100				3853	63775	8416	405	76 150	
421/50	24	RMT1	16.6							113	113	
425/52	24	RMT1	50				2058	664	265	597 995	4 582	
436/60	24	MOC3	25				259	594	259	891	2 003	
		MOC4	50	75			15	75			75	
		MOC5	10	16			17	15	15		46	
		MOC6	1				13	40	40	11	107	
		MOC7	1					15	2	5	35	
445/64	25	RMT1	13.3				38	280	239	38 38	639	
	Mar											
466/75	1	NCN	10	216			161	217	919	540	1 838	
467/78	1	RMT1	12.5	57				20	38		57	
470/79	2	RMT1	25				143		1150	526	1 819	
483/89	3	RMT1	100						7527	1447	8 974	

Antarctic Expedition 1980/81 R.V. "Walther Herwig". Distribution of euphausiid larvae other than krill.
 Used nets: RMT1, MESSHAI (MES), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.
 E. fr. = Euphausia frigida; E. tr. = Euphausia triacantha; T. sp. = Thysanoessa sp..
 Positive hauls are listed only.

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment
						I	II	III	Early	Mean	Late		
34/10	Febr 2	RMT1	256		T.sp.	----- 752 -----			----- 1469 -----			2 221	
51/15	3	RMT1	25	E.fr.		202			41			243	
					T.sp.				326			326	
52/16	3	RMT1	100	E.fr.		12458	3737					16 196	
					T.sp.				1661	415	2076	4 152	
53/17	3	RMT1	100	E.fr.		2185	397	397	198			3 376	
					T.sp.	1986			----- 3938 -----			11 123	+ 198 postlarvae
54/18	3	MES	40		T.sp.				233			233	
55/19	4	RMT1	200	E.fr.		12213						12 213	
					T.sp.				12213	12213	28867	53 293	
59/21	4	RMT1	16	E.fr.		----- 1244 -----			138			1 382	
					T.sp.	----- 1382 -----			----- 20561 -----			21 943	
61/22	5	RMT1	100	E.fr.		61	183	61				305	
					T.sp.	----- 427 -----			----- 3599 -----			4 026	
65/23	5	RMT1	2		T.sp.	----- 6 -----			----- 93 -----			99	
69/25	5	RMT1	2		T.sp.				41	104		145	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopsis I II III	Early Mean	Furcilia Late	Total number of larvae	Comment
88/34	8	RMT1	20	T.sp.			706		706	
89/35	8	RMT1	50	T.sp.		109			109	
90/36	8	RMT1	80	E.fr.		1359 1359	1699		2 718 3 058	
91/37	8	RMT1	100	T.sp.			5413		5 413	
91/38	8	NCN	16	E.fr.		257	143		257 286	
94/39	9	RMT1	100	E.fr.		117 117 351 234 1286	818 8185		701 10 524	
95/40	9	RMT1	40	E.fr.		594	5530		594 7 571	
97/41	9	RMT1	100	T.sp.		2900	1365		4 265	
98/42	10	RMT1	100	T.sp.		1437	191		1 628	
103/43	11	RMT1	1	T.sp.			177		177	
107/44	11	RMT1	4	T.sp.		625	692		1 317	+ 6 postlarvae
108/45	9	RMT1	8	T.sp.			3384		3 384	
110/46	12	RMT1	16	T.sp.		4176	353		4 529	
123/50	13	RMT1	50	T.sp.			64		64	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopsis I II III	Furcilia Early Mean Late	Total number of larvae	Comment
125/51	Febr 14	RMT1	200	E.fr.	355	355	6032	709 6 032	
128/52	14	RMT1	50	T.sp.			953	953	
140/59	16	RMT1	2	T.sp.		40	49 92	181	
144/60	16	RMT1	1	E.fr.	10	8 14	3 3	36 163	
146/61	16	RMT1	80	E.fr.	174	87	4184	261 4 184	
147/62	17	RMT1	100	E.fr.	2646	5291		2 646 5 291	
154/65	18	RMT1	16	T.sp.			265	265	
162/69	18	RMT1	10	T.sp.			31	31	+ 16 postlarvae
167/70	19	RMT1	50	E.fr.		103	313	313 626	+ 523 postlarvae
169/71	20	RMT1	200	E.fr.	2197		6812	9 009	
173/72	20	RMT1	100	T.sp.			4205	4 205	
191/75	23	RMT1	1	T.sp.			2461	2 461	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment
						I	II	III	Early	Mean	Late		
232/14	Mar 12	RMT1	4	E.fr.					101			101	possibly also E.cryst.
					T.sp.					— 256 —		256	
249/31	17	RMT1	2	E.fr.					185			185	
					T.sp.				— 580 —			580	
251/33	17	RMT1	30		T.sp.					431		431	
252/34	17	RMT1	1		T.sp.					— 176 —		176	
254/36	18	RMT1	4		T.sp.				— 2830 —			2 830	
255/37	18	RMT1	1		T.sp.				497			497	
256/38	18	RMT1	1		T.sp.				— 772 —			772	
257/39	19	RMT1	1		T.sp.				— 97 —			97	
258/40	19	RMT1	1		T.sp.							1 311	partly fragments
259/41	19	RMT1	2		T.sp.				— 1056 —			1 056	

Antarctic Expedition 1980/81 R.V. "Meteor". Distribution of euphausiid larvae other than krill.
 Used nets: RMT1, MOCNESS (MOC), NANSEN-CLOSING-NET (NCN). Individuals per 1000 m³.
 E. fr. = *Euphausia frigida*; E. tr. = *Euphausia triacantha*; T. sp. = *Thysanoessa* sp..
 Positive hauls are listed only.

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment						
						I	II	III	Early	Mean	Late								
165/ 8	Jan 10	NCN	2	E.fr.	T.sp.			50	50	250	250	100							
175/9	13	NCN2	1	E.fr.	T.sp.	7						7							
														E.tr.	7	7			
															21	21			
177/26	13	RMT1	1	E.fr.	T.sp.			6	3198	62	26	88	6	3 204					
															E.tr.	6	6		
180/27	14	RMT1	1	E.fr.	T.sp.					2		2	2	184					
															E.tr.	2	2		
181/28	16	RMT1	8		T.sp.			43	374			417							
194/31	18	RMT1	1		T.sp.				9			9							
203/11	19	NCN1	1		T.sp.			14				14							
		NCN2	1		T.sp.				14			14							
		NCN3	1		T.sp.	19		108	10			137							
207/12	19	NCN3	1		T.sp.				49		49								
215/13	19	NCN2	1		T.sp.			7			7								

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment	
						I	II	III	Early	Mean	Late			
218/33	Jan 20	RMT1	1	T.sp.					4			4		
237/14	23	NCN2	1	T.sp.		----- 88 -----						88		
245/37	23	RMT1	1	T.sp.					----- 78 -----			78		
246/15	24	NCN2	1	T.sp.		----- 18 -----			49			67		
268/16	25	NCN2	1	T.sp.			----- 49 -----					49		
271/39	25	RMT1	1	T.sp.						----- 40 -----			40	
281/17	27	NCN2	8	T.sp.		----- 1019 -----						1 019		
283/41	27	RMT1	1	T.sp.					----- 20 -----			20		
292/18	29	NCN1	1	T.sp.			7					7		
		NCN2	16	T.sp.		----- 1362 -----			794	340	113	2 610		
294/44	29	RMT1	1	T.sp.					----- 13 -----			13		
307/46	30	RMT1	1	T.sp.					----- 13 -----			13		
309/20	30	NCN	1	T.sp.		----- 47 -----				23		70		
330/ 1	Febr 9	MOC2	1	T.sp.					10		5	15		
		MOC3	1	E.fr.	3							3		
		MOC4	1	E.fr.			4					4		
				T.sp.					----- 66 -----			66		
335/ 3	9	MOC1	40	T.sp.					276	92	153	522		

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Species	Naupliar Stages	Calyptopis			Furcilia		Total number of larvae	Comment
						I	II	III	Early	Late		
339/ 5	9	NCN	20					478	159	637	1 274	
341/ 8	10	MOC9	25						45		45	
344/ 9	10	MOC3 MOC8 MOC9	2 200 50					4			4 912 6 420	
346/10	11	MOC1	100					88	332	44	686	
348/11	11	RMVT1	100	E.fr.		86		130	173	86	86 562	
351/12	11	RMVT1	100	E.fr.		83		1161		2322	166 3 815	
353/13	12	RMVT1	50			1044			1358		2 402	
354/14	12	RMVT1	10			95		114	582		793	
357/15	13	RMVT1	2			2		92	285		379	
358/16	14	RMVT1	10			55		41	138		234	
360/17	14	MOC2 MOC3 MOC4 MOC5	1 1 4 16.6			31 8 131 1989		2 16 87 497			33 24 218 1 486	
362/18	14	RMVT1	10			506			1036		1 542	
365/20	15	RMVT1	10			7		137	53	7	206	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment
						I	II	III	Early	Mean	Late		
366/21	Febr 15	RMT1	20	T.sp.			70	222	161		453		
369/23	16	RMT1	20	T.sp.		126	190	316	158	95	885		
370/24	16	RMT1	20	T.sp.		233		116		52	401		
372/25	16	RMT1	1	T.sp.			74	409			483		
374/27	17	RMT1	8	T.sp.			217	269			486		
376/29	17	NCN	7	T.sp.		62	124	1053			1 239		
377/30	17	MOC3	4	T.sp.			28	14			42		
		MOC4	1	T.sp.			5	2			7		
		MOC5	16	T.sp.			fragments					766	
		MOC6	25	T.sp.			682	589				1 271	
		MOC7	10	T.sp.			144	1156				1 300	
		MOC8	7	T.sp.					347			347	
		MOC9	1	T.sp.			7	40	42			89	
380/31	18	RMT1	6.6	T.sp.				28	151		180		
385/33	18	RMT1	1	T.sp.		171		313	70		455		
386/34	18	RMT1	1	T.sp.		29		42	6		77		
390/36	19	RMT1	6.6	T.sp.		8	8	74	8		98		
391/37	19	RMT1	10	T.sp.				10		10	20		
392/38	19	RMT1	1	E.fr.	T.sp.			3	18		21		
								11	25		50	+ 14 postlarvae	

Stat./Haul	Date 1981	Gear	Aliquot counted n-1	Species	Maupliar Stages	Calyptopsis I II III	Furcilia Early Mean Late	Total number of larvae	Comment
393/39	Febr 20	RMT1	25	T.sp.			99	99	
395/40	20	RMT1	1	T.sp.		30		30	not quanti- tative
399/41	20	RMT1	2	T.sp.		108	108	216	
402/42	21	RMT1	50	T.sp.		185	62 247 185	679	
404/43	21	RMT1	25	E.fr.		195	39	39	
405/44	21	RMT1	50	T.sp.		532	623	818	
408/45	21	RMT1	50	T.sp.	73		1778	2 310	
409/46	21	RMT1	200	E.fr.			446	519	+ 73 postlarvae
412/47	22	RMT1	50	E.fr.			1093 364	1 093 1 056	
416/48	23	RMT1	4	E.fr.	94	191	285 94 943	94	
420/49	23	RMT1	100	E.fr.	8		8 4 8	8	
421/50	24	RMT1	16.6	E.fr.	101	304	101 405	101 811	
						342	775	90	
								1 118	

Stat./Haul	Date 1981	Gear	Aliquot counted n ⁻¹	Species	Naupliar Stages	Calyptopis			Furcilia			Total number of larvae	Comment	
						I	II	III	Early	Mean	Late			
425/52	Febr 24	RMT1	50	E.fr.	T.sp.	198	65	133	-----862-----			198		
											464	1 526		
436/60	24	MOC3	25	E.fr.	T.sp.				-----334-----			556		
		MOC4	50	E.fr.	T.sp.				334			668		
						T.sp.				682		756	1 436	
		MOC5	10		T.sp.				46	156	485	687		
		MOC6	1		T.sp.			5	34	-----341-----		380		
		MOC7	1		T.sp.				-----119-----		119			
445/64	25	RMT1	13.3		T.sp.				38	481	602	1 121		
466/75	Mar 1	NCN	10		T.sp.							161	322	
467/78	1	RMT1	12.5		T.sp.		116			175	156		448	
470/79	2	RMT1	25		T.sp.			48		1198	623	1 867		
483/89	3	RMT1	100		T.sp.		145	145					290	

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Antarctic Expedition 1980/81 RV "Walther Herwig". Macrozooplankton composition of catches from surface waters.

Maximum haul depth: 200 m.

Used net: RMT 8, mesh size 4.5 mm.

Individuals per 1000 m³, +: less than 1 per 1000 m³.

Stat. Haul	Date 1981	Aliquot counted [n ⁻¹]	Total catch [ml]	Euph. sup.	other Euph.	Amphi pods	Deca pods	Gastro pods	Cepha lopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
	Jan																
11/ 3	26	1	415	1	4	1	0	+	0	+	43	+	1	0	+	0	0
19/ 4	30	1	80	+	5	+	0	+	0	+	0	1	+	0	7	0	0
25/ 5	31	1	475	+	1	3	+	4	0	+	53	+	0	0	3	0	0
27/ 6	31	2.25	4500	206	10	9	0	+	0	0	4	+	2	+	1	+	0
28/ 7	31	5	10000	542	2	3	0	+	0	0	1	1	0	0	0	0	0
31/ 8	31	1.75	3500	+	446	120	0	0	0	2	117	0	0	0	0	0	0
	Febr																
33/ 9	1	1	310	6	1	12	0	1	0	1	+	+	0	0	0	0	0
34/10	1	1	500	+	3	3	0	+	+	3	6	+	+	+	+	0	0
38/11	2	1	750	1	25	20	+	1	+	+	3	10	4	1	+	1	0
42/12	2	1.1	1100	83	27	+	+	2	0	1	0	5	11	0	+	0	0
47/14	3	1	1200	52	20	1	0	2	0	+	79	22	4	1	+	0	0
51/15	3	1	200	1	0	13	0	+	0	2	6	2	0	+	0	0	0

4.3.

RMT 8-samples

Stat. Haul	Date 1981	Aliquot counted [n ⁻¹]	Total catch [ml]	Euph. sup.	other Euph.	Amphi pods	Deca pods	Gastro pods	Cepha lopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.	
	Febr																	
	52/16	3	1	360	0	1	4	0	+	+	3	13	2	+	+	+	+	0
	53/17	3	1	740	0	4	50	0	+	0	4	68	9	+	+	+	0	0
	55/19	3	4.5	9000	+	35	129	0	+	0	4	478	3	0	0	0	4	0
	58/20	4	1	200	0	2	33	0	+	+	2	1	1	0	0	+	0	0
	59/21	4	1	16	0	+	5	0	1	+	1	+	5	0	0	0	0	0
	61/22	5	1	184	0	3	+	0	0	0	+	3	+	0	0	+	+	0
	65/23	5	1	231	7	66	30	+	+	0	1	0	1	0	0	0	0	0
	67/24	5	1	402	9	11	21	+	+	0	0	0	+	0	0	+	0	0
	69/25	5	1	500	3	18	3	+	+	0	+	5	+	3	0	+	0	0
	73/26	6	1	130	2	11	1	+	4	+	1	+	14	12	0	+	+	0
	74/27	6	1	100	3	8	2	1	6	+	+	0	22	7	+	1	0	0
	75/28	6	1	90	25	5	3	1	5	0	1	0	10	7	+	+	0	0
	76/29	6	1230.77	32000	88946	+	0	0	0	0	0	0	0	0	0	0	0	0
	77/30	7	1	400	8	42	3	1	2	+	+	14	3	7	0	1	1	0
	81/31	7	1	80	+	50	+	0	5	0	+	0	5	8	0	0	0	0
43	82/32	7	1	50	1	28	2	1	3	0	0	0	2	7	0	0	0	0

Stat. Haul	Date 1981	Aliquot counted [n ⁻¹]	Total catch [ml]	Euph. sup.	other Euph.	Amphi pods	Deca pods	Gastro pods	Cepha lopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
	Febr																
83/33	8	1	80	+	25	2	0	2	0	+	7	+	1	0	0	1	0
89/35	8	1	555	34	+	1	0	0	0	2	+	0	0	0	+	0	0
90/36	8	1	300	0	4	9	+	+	0	1	47	0	+	+	0	0	0
91/37	8	1	44	0	0	1	0	+	+	3	+	1	0	+	0	0	0
94/39	9	1	32	0	+	2	0	+	0	+	0	3	0	0	+	0	0
95/40	9	1	50	0	+	28	0	1	+	0	0	4	0	0	0	0	0
97/41	9	1	43	0	1	7	0	+	+	+	0	2	0	0	0	0	0
98/42	10	1	2800	+	6	16	0	0	0	2	140	1	+	+	+	2	0
103/43	10	1	998	56	1	18	0	4	0	3	0	1	0	0	0	0	0
107/44	11	1	100	25	1	2	1	3	+	1	0	9	14	+	1	+	0
108/45	11	1	196	60	35	3	1	3	+	2	0	24	+	0	+	0	0
110/46	12	1	182	122	20	11	1	4	+	1	0	12	0	0	+	0	0
115/47	12	1	220	31	1	+	0	6	0	+	0	1	0	0	+	0	0
116/48	12	1	51	1	5	1	1	1	0	+	0	2	5	0	+	0	0
118/49	12	1.7	2500	98	0	8	0	1	0	0	0	+	0	0	1	0	0
123/50	13	1	20	+	0	5	0	1	0	+	0	+	0	0	0	0	0
125/51	14	2.7	5000	0	11	8	0	1	1	1	428	1	1	0	0	1	0

Stat. Haul	Date 1981	Aliquot counted [n ⁻¹]	Total catch [ml]	Euph. sup.	other Euph. pods	Amphi pods	Deca pods	Gastro pods	Cephalopods	Poly chaets	Salps	Chae togn.	Sipho. noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
128/52	Febr 14	1	21	1	0	2	0	+	0	2	+	0	0	0	+	0	0
130/53	14	1	10	0	0	2	0	+	0	+	0	0	0	0	0	0	0
131/54	15	1	150	+	6	1	+	+	0	+	13	2	3	+	+	0	0
134/55	15	3	6000	535	0	+	0	3	0	0	0	0	0	0	2	0	0
136/56	15	1	200	7	35	1	0	5	0	0	0	+	+	0	0	0	0
137/57	15	1	300	34	3	2	+	2	0	0	0	12	2	0	+	0	0
138/58	15	3	6000	668	0	1	0	1	0	1	0	+	0	0	0	0	0
140/59	16	1	203	5	5	3	2	2	0	+	+	1	3	0	+	1	0
144/60	16	1	65	+	2	14	0	1	0	+	8	2	0	0	0	0	0
146/61	16	2.5	5000	0	27	8	0	0	0	1	113	1	0	0	0	0	0
147/62	17	2.5	5000	1	14	30	0	0	0	15	386	+	3	1	0	+	0
151/63	17	1	70	3	1	4	0	0	0	2	0	0	0	0	+	0	0
153/64	17	1	20	+	6	6	0	+	0	0	0	0	0	0	0	0	0
154/65	18	1	1500	8	29	16	0	+	0	+	203	+	+	0	+	+	0
157/66	18	1	60	7	13	1	0	1	0	+	0	4	5	0	1	0	0
159/67	18	1	1100	96	1	1	1	+	0	0	0	1	0	0	+	0	0
162/69	18	1	356	30	1	+	1	0	0	0	1	1	+	0	1	0	0

Stat. Haul	Date 1981	Aliquot counted [n-1]	Total catch [ml]	Euph. sup.	other Euph. pods	Amphi pods	Deca pods	Gastro pods	Cepha lopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
167/70	19	2	4000	414	15	19	+	+	0	0	38	1	1	0	+	1	0
169/71	20	1	1100	+	30	5	+	+	0	2	31	24	0	+	+	1	0
173/72	20	1	90	0	0	13	0	0	0	1	0	3	0	0	0	0	0
178/74	21	1	27	+	1	1	+	+	0	0	0	2	1	0	1	+	0
203/82	26	1	250	+	15	199	0	0	0	0	0	0	0	0	+	0	0
204/83	26	10	5000	288	11	361	0	0	0	0	0	0	0	0	0	0	0
205/84	27	1	200	+	48	47	+	+	0	0	+	+	0	0	+	0	0
207/85	27	1	1000	230	144	389	0	0	0	0	1	0	0	0	0	0	0
208/86	27	3.5	7000	403	79	226	0	0	0	0	0	0	0	0	+	0	0
210/89	28	26	52000	1975	19	61	0	0	0	0	8	0	0	0	+	0	0
211/90	28	1	450	2	46	415	0	0	0	0	0	1	0	0	0	0	0
219/1	10	1	60	0	+	30	0	1	0	1	0	1	0	0	+	0	0
220/2	11	1	100	0	67	6	0	2	0	1	2	3	0	0	1	0	0
221/3	11	1	200	0	2	181	0	3	1	2	1	6	0	0	0	0	0
222/4	11	1	n.e.m.	0	0	23	0	2	0	3	1	3	0	0	+	+	0
223/5	11	1	25	0	27	9	0	+	+	1	0	0	0	0	2	0	0
224/6	11	1	30	0	21	23	0	+	0	2	0	1	0	0	4	0	0

Stat. Haul	Date 1981	Aliquot counted [n-1]	Total catch [ml]	Euph. sup.	other Euph.	Amphi pods	Deca pods	Gastro pods	Cephalopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
	Mar																
225/7	11	1	270	0	34	200	0	0	0	0	0	0	0	0	2	0	0
226/8	12	1	230	1	363	126	0	0	0	0	+	1	0	0	3	+	0
227/9	12	1	600	90	61	4	0	0	0	0	5	0	0	0	8	0	0
228/10	12	1	60	1	3	3	0	+	0	0	2	+	0	0	4	0	0
229/11	12	1	100	1	0	4	0	+	0	0	4	+	0	0	2	0	+
230/12	12	5	7500	581	6	1	0	0	0	0	3	+	3	+	22	0	0
232/14	12	2	1800	103	56	+	0	0	0	0	2	+	0	0	18	0	0
233/15	13	15	30000	3960	25	3	0	0	0	0	134	0	0	0	10	0	0
234/16	13	1	200	15	39	34	0	+	0	+	0	+	0	0	1	0	0
235/17	13	1	100	0	97	5	0	0	0	+	0	6	0	0	+	0	0
236/18	13	1	50	+	69	110	0	0	0	1	0	11	0	0	0	0	0
238/21	13	4.7	7000	843	21	23	0	0	0	0	0	0	0	0	0	0	0
239/22	13	1	100	3	60	19	0	0	0	+	0	+	0	0	+	0	0
240/23	15	1	100	1	65	180	0	0	0	0	0	12	0	0	+	0	0
241/24	15	1	150	+	133	1	0	0	0	0	1	0	0	0	+	0	0
242/25	15	1	200	35	3	1	+	+	0	0	0	2	+	0	2	1	0
244/26	15	1	50	1	7	1	+	1	0	0	0	12	1	0	1	0	0

Stat. Haul	Date 1981	Aliquot counted [n-]	Total catch [ml]	Euph. sup.	other Euph. pods	Amphi pods	Deca pods	Gastro pods	Cephalopods	Poly chaets	Salps	Chae togn.	Sipho noph.	Medu sae	Fish larv.	Fish adult	Mysi dac.
245/27	15	1	50	3	2	+	0	2	0	+	0	4	1	0	2	0	0
246/28	16	1	40	10	29	+	0	0	0	0	+	+	0	0	+	0	0
247/29	16	1	200	4	114	9	0	+	0	0	+	+	0	0	1	0	0
248/30	16	1	200	+	33	83	0	+	0	0	0	0	0	0	+	0	0
249/31	17	1	200	2	3	8	0	0	0	0	25	7	1	0	2	0	0
250/32	17	1	500	18	12	17	0	0	0	0	40	8	1	0	1	0	0
251/33	17	1	200	12	9	22	0	+	0	0	+	16	0	0	12	0	0
252/34	17	1	200	1	5	19	0	0	0	0	41	32	2	0	11	0	0
253/35	18	1	500	67	15	11	0	+	0	+	2	9	0	+	1	0	0
254/36	18	1	1100	144	9	66	0	0	0	0	0	+	0	0	+	0	0
255/37	18	1	50	1	2	7	0	0	0	0	4	12	0	0	17	0	0
257/39	19	1	500	85	1	8	0	0	0	1	0	0	0	0	0	0	0
258/40	19	1	150	+	11	3	0	+	0	0	8	1	0	+	0	0	0
259/41	19	1	60	+	13	4	0	0	0	+	1	8	1	0	1	0	0
260/42	19	1	80	2	0	4	0	+	0	+	1	0	1	0	+	0	0

4.4. Polish and Argentine krill larvae data

Total amount of krill larvae in the Atlantic Sector of the Southern Ocean during FIBEX 1981.
Stations with positive catch only.

Number of station A - Argentina P - Poland	Date 1981	Position		Total number of krill larvae per 1000 m ³
Jan				
2A	19	59°38'S	46°08'W	144
4A	20	58°17'S	45°05'W	185
5A	21	58°43'S	45°06'W	23 782
6A	22	58°33'S	43°23'W	211 584
7A	24	59°23'S	43°28'W	26
13A	26	60°52'S	47°13'W	65
Febr				
14A	7	58°30'S	42°26'W	28 779
15A	7	60°16'S	42°28'W	9 261
16A	8	59°58'S	42°44'W	221
17A	8	58°45'S	42°40'W	302 259
18A	9	58°27'S	42°56'W	428
19A	9	59°47'S	45°01'W	38 196
20A	10	59°53'S	43°47'W	65
21A	10	58°32'S	43°48'W	4 286
22A	11	58°34'S	44°31'W	34 013
23A	11	60°01'S	54°27'W	304 156
24A	12	58°00'S	45°36'W	103 584
25A	12	59°58'S	45°36'W	102 545
26A	13	58°32'S	45°44'W	22 415
27A	13	59°35'S	46°02'W	172 348
28A	14	59°25'S	46°46'W	54 753
29A	14	58°17'S	46°53'W	33 196
30A	15	60°10'S	47°04'W	13
31A	15	61°50'S	47°48'W	1 441
6P	15	63°02'S	66°00'W	1 500
32A	16	59°45'S	47°57'W	87 740

Number of station A - Argentina P - Poland	Date 1981	Position		Total number of krill larvae per 1000 m ³
Febr				
33A	16	57°58'S	48°01'W	201 454
17P	18	62°14'S	64°59'W	2 890
22P	19	61°49'S	64°02'W	4 200
25P	19	62°55'S	64°01'W	28 788
31P	20	63°40'S	62°58'W	30
32P	21	62°11'S	62°60'W	35 310
36P	22	60°05'S	62°01'W	60 090
38P	22	61°17'S	61°59'W	1 900
46P	24	60°55'S	61°03'W	4 630
47P	24	60°02'S	59°60'W	120 295
49P	25	61°29'S	60°01'W	224 250
53P	25	61°59'S	59°30'W	900
55P	26	61°15'S	58°59'W	32 750
56P	26	60°32'S	58°59'W	1 500
58P	26	60°17'S	58°60'W	1 970
61P	27	61°28'S	58°31'W	38 000
62P	27	61°49'S	58°32'W	1 730
65P	28	61°01'S	57°20'W	640
67P	28	61°60'S	56°36'W	8 240
Mar				
68P	4	61°00'S	56°30'W	60 750
69P	4	61°45'S	56°30'W	1 500
70P	4	62°18'S	56°29'W	10 770
73P	5	62°56'S	57°29'W	840
76P	5	62°32'S	57°30'W	1 680
77P	5	62°19'S	57°31'W	8 170
79P	6	62°12'S	58°00'W	12 280
81P	6	62°32'S	57°56'W	7 890
84P	6	63°05'S	58°20'W	370
86P	7	62°19'S	58°20'W	2 728
87P	7	62°09'S	58°28'W	26 680
88P	8	62°22'S	58°41'W	2 620

Number of station	Date	Position		Total number of krill larvae per 1000 m ³
A - Argentina	1981			
P - Poland				
	Mar			
92P	9	63°28'S	59°30'W	200
94P	9	63°11'S	59°30'W	1 500
97P	10	62°43'S	59°57'W	2 640
100P	10	63°35'S	61°01'W	620
102P	11	63°13'S	60°58'W	320
103P	11	62°46'S	61°00'W	30

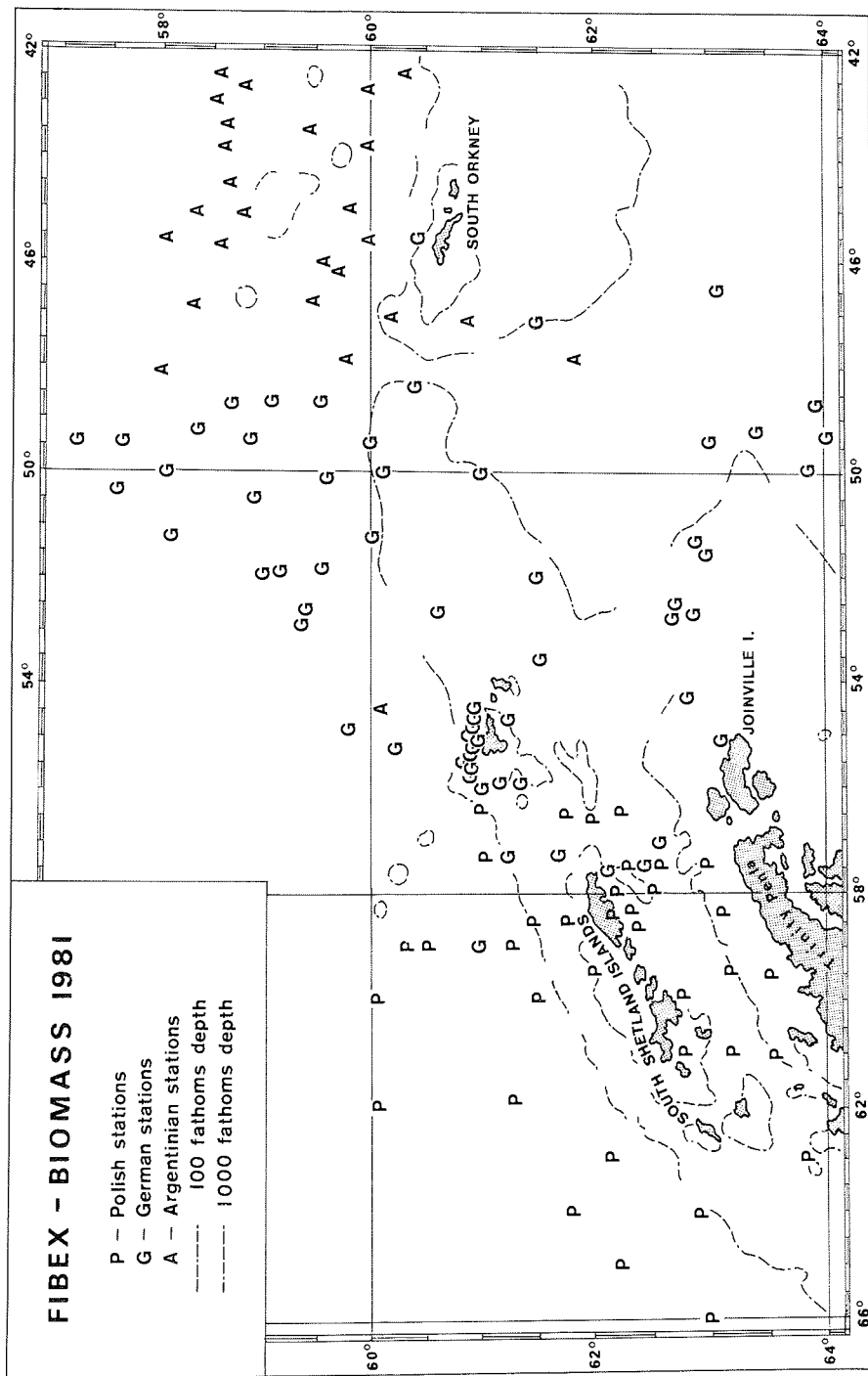


Fig. 7 Stations of krill larvae sampling during FIBEX 1981.

Acknowledgement

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5. References

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