



Fig. 5.2: Map of meroplanktic sampling stations

5.4 Spatial distribution of zooplankton in the southern Kara Sea

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Introduction

The previous scientific cruises within the SIRRO project (BP-97, BP-99 and BP-00) covered in particular the Ob and Yenisei Rivers estuaries and the southern Kara Sea (Halsband and Hirche 1999, Fetzer and Arndt 1999, Suck 2001). Analysis of the plankton samples collected during these three expeditions produced detailed information on the spatial distribution and abundance of zooplankton species in the above regions (Fetzer and Hirche 2002). Nevertheless, the picture remained incomplete because little was known about other important parts of the Kara Sea, i.e. the areas north of 77°N and east of 85°E. To close this gap this year's cruise focused on these two regions.

Sampling of Mesozooplankton

Zooplankton samples were obtained at 39 stations (Tab. 5.3) using a Nansen-Closing-Net (NCN) with a mouth diameter of 0.75 m and a mesh size of 150 μm . The net was hauled vertically with approximately 0.5 ms^{-1} . At each station a near-bottom to surface haul was taken. When the previously made CTD cast gave evidence of the presence of a pycnocline an extra two hauls were usually made (one from near-bottom to below-pycnocline and a second from above-pycnocline to surface). Subsequently, samples were transferred to 250 ml Kautex bottles and preserved in 4% borax buffered formalin for later identification and counting.

Table 5.3: Zooplankton sampling stations

Station	Date	Time (GMT)	Latitude ° N	Longitude ° E	Depth (m)	Haul 1 Depth range	Haul 2 Depth range	Haul 3 Depth range
BP01-01	14.08.01	12:00	74°59.12	76°23.41	38	35-0 m	35-23 m	12-0 m
BP01-04	16.08.01	8:54	71°05.5	83°06.2	22	16-0 m	16-0 m	-
BP01-05	16.08.01	14:00	70°45.5	83°33.1	13	11-0 m	-	-
BP01-06	17.08.01	4:30	70°20.2	83°8.2	17	14-0 m	-	-
BP01-08	17.08.01	11:00	70°04.1	83°3.9	28	28-0 m	-	-
BP01-09	18.08.01	6:00	72°06.9	82°10.7	11	8-0 m	-	-
BP01-11	18.08.01	12:00	72°05.6	81°41.8	12	8-0 m	5-0 m	-
BP01-14	19.08.01	7:20	71°49.3	82°27.2	21	19-0 m	-	-
BP01-16	19.08.01	14:30	71°41.7	83°31.2	28	27-0 m	27-0m	-
BP01-19	21.08.01	11:00	72°35.7	80°06.4	28	24-0 m	24-8 m	3-0 m
BP01-23	22.08.01	7:00	73°29.0	78°50.9	22	20-0 m	20-9 m	3-0 m
BP01-26	23.08.01	4:30	74°00.0	80°01.4	33	32-0 m	32-18 m	4-0 m
BP01-28	24.08.01	4:15	75°56.34	89°15.9	51	50-0 m	18-0 m	-
BP01-30	24.08.01	13:30	76°24.75	88°10.76	47	47-0 m	47-27 m	5-0 m
BP01-31	25.08.01	4:30	77°34.2	87°54.5	88	88-0 m	88-17 m	12-0 m
BP01-34	25.08.01	15:20	77°54.29	89°20.15	91	90-0 m	90-30 m	18-0 m
BP01-35	26.08.01	4:30	77°54.31	83°45.94	160	155-0 m	155-40 m	12-0 m
BP01-37	26.08.01	13:52	77°48.9	86°11.9	144	130-0 m	130-23 m	13-0 m
BP01-38	27.08.01	4:30	77°5.29	86°55.48	110	100-0 m	100-20 m	10-0 m
BP01-40	27.08.01	16:30	76°25.2	85°39.9	52	45-0 m	45-20 m	4-0 m
BP01-41	28.08.01	4:00	75°41.4	87°07.8	42	35-0 m	35-23 m	6-0 m
BP01-43	28.08.01	11:30	75°22.99	85°49.90	48	40-0 m	40-27 m	7-0 m
BP01-45	29.08.01	8:00	77°6.83	84°44.0	87	80-0 m	80-33 m	17-0 m
BP01-46	30.08.01	4:53	77°55.43	75°57.35	323	300-0 m	30-0 m	10-0 m
BP01-48	31.08.01	4:30	77°53.49	81°29.94	202	180-0 m	30-0 m	-
BP01-51	31.08.01	14:30	77°54.68	79°29.48	158	140-0 m	140-25 m	5-0 m
BP01-52	01.09.01	4:19	77°29.94	79°52.0	75	58-0 m	58-25 m	8-0 m
BP01-55	01.09.01	11:48	77°2.97	79°43.99	83	60-0 m	60-30 m	15-0 m
BP01-58	02.09.01	12:20	76°48.12	78°21.24	94	75-0 m	75-35 m	15-0 m
BP01-59	03.09.01	4:30	76°31.16	74°30.95	176	155-0 m	155-35 m	5-0 m
BP01-61b	03.09.01	13:15	76°12.9	75°53.15	111	95-0 m	95-38 m	3-0 m
BP01-62	04.09.01	4:30	76°12.05	74°12.15	135	100-0 m	100-30 m	3-0 m
BP01-65	05.09.01	4:18	75°42.98	75°50.79	63	48-0 m	48-30 m	3-0 m
BP01-66	05.09.01	11:28	75°10.04	76°55.13	55	45-0 m	45-32 m	4-0 m
BP01-67	06.09.01	4:30	75°14.65	73°45.78	49	38-0 m	38-25 m	4-0 m
BP01-68	06.09.01	12:25	74°35.05	72°14.97	31	25-0 m	25-17 m	5-0 m
BP01-70	07.09.01	7:15	72°40.16	74°0.22	22	25-0 m !!	15-0 m !!	10-0 m !!
BP01-72	08.09.01	4:20	70°49.88	73°44.34	26	20-0 m	-	-
BP01-82	11.09.01	4:17	73°11.83	73°01.65	29	22-0 m	22-9 m	5-0 m