

Meso-zooplankton abundance data series for cruise Dana D1198

Principal Investigator

Dr. Andy Visser, Danish Institute for Fisheries Research (DIFRES), Charlottenlund, Denmark.

Collaborator

Dr. Hiroaki Saito – DIFRES.

List of species and associated parameter codes for abundance per litre

Parameter	Parameter code
<i>Acartia clausi</i> adult female	Z301M01U
<i>Acartia clausi</i> adult male	Z301M01Y
<i>Acartia</i> spp. C1	Z301M00A
<i>Acartia</i> spp. C2	Z301M00B
<i>Acartia</i> spp. C3	Z301M00C
<i>Acartia</i> spp. C4	Z301M00D
<i>Acartia</i> spp. C5	Z301M00E
Balanus larvae	Z211M00R
Bivalve larvae	Z510M00R
<i>Calanus</i> spp. adult female	Z302M00U
<i>Calanus</i> spp. adult male	Z302M00Y
<i>Calanus</i> spp. C1	Z302M00A
<i>Calanus</i> spp. C2	Z302M00B
<i>Calanus</i> spp. C3	Z302M00C
<i>Calanus</i> spp. C4	Z302M00D
<i>Calanus</i> spp. C5	Z302M00E
<i>Candacia armata</i> adult female	Z359M01U
<i>Candacia armata</i> adult male	Z359M01Y
<i>Candacia armata</i> C2	Z359M01B
<i>Candacia armata</i> C3	Z359M01C
<i>Candacia armata</i> C4	Z359M01D
<i>Candacia armata</i> C5	Z359M01E
<i>Centropages typicus</i> adult female	Z349M01U
<i>Centropages typicus</i> adult male	Z349M01Y
<i>Centropages typicus</i> C1	Z349M01A
<i>Centropages typicus</i> C2	Z349M01B
<i>Centropages typicus</i> C3	Z349M01C
<i>Centropages typicus</i> C4	Z349M01D
<i>Centropages typicus</i> C5	Z349M01E
Gastropod Larvae	Z420M00R
<i>Harpacticoida</i> spp.	Z363M00Z
<i>Limacina helicina</i>	Z421M03Z
<i>Metridia lucens</i> adult female	Z304M01U
<i>Metridia lucens</i> adult male	Z304M01Y
<i>Metridia lucens</i> C1	Z304M01A
<i>Metridia lucens</i> C2	Z304M01B
<i>Metridia lucens</i> C3	Z304M01C
<i>Metridia lucens</i> C4	Z304M01D
<i>Metridia lucens</i> C5	Z304M01E
<i>Microcalanus pusillus</i> adult female	Z323M02U
<i>Microcalanus pusillus</i> adult male	Z323M02Y
<i>Microcalanus pusillus</i> C1	Z323M02A
<i>Microcalanus pusillus</i> C2	Z323M02B

BODC Data Documentation
PROVSS Project MAS3-CT97-0159

<i>Microcalanus pusillus</i> C3	Z323M02C
<i>Microcalanus pusillus</i> C4	Z323M02D
<i>Microcalanus pusillus</i> C5	Z323M02E
Nematoda	Z530M00Z
<i>Oithona atlantica</i> adult female	Z306M02U
<i>Oithona similis</i> adult female	Z306M04U
<i>Oithona similis</i> adult male	Z306M04Y
<i>Oithona similis</i> C1	Z306M04A
<i>Oithona similis</i> C2	Z306M04B
<i>Oithona similis</i> C3	Z306M04C
<i>Oithona similis</i> C4	Z306M04D
<i>Oithona similis</i> C5	Z306M04E
Ostracoda	Z290M00Z
<i>Paracalanus parvus</i> adult female	Z314M01U
<i>Paracalanus parvus</i> adult male	Z314M01Y
<i>Paracalanus parvus</i> C1	Z314M01A
<i>Paracalanus parvus</i> C2	Z314M01B
<i>Paracalanus parvus</i> C3	Z314M01C
<i>Paracalanus parvus</i> C4	Z314M01D
<i>Paracalanus parvus</i> C5	Z314M01E
<i>Paraeuchaeta norvegica</i> adult male	Z303M01Y
<i>Pseudocalanus minutus</i> adult female	Z322M01U
<i>Pseudocalanus minutus</i> adult male	Z322M01Y
<i>Pseudocalanus minutus</i> C1	Z322M01A
<i>Pseudocalanus minutus</i> C2	Z322M01B
<i>Pseudocalanus minutus</i> C3	Z322M01C
<i>Pseudocalanus minutus</i> C4	Z322M01D
<i>Pseudocalanus minutus</i> C5	Z322M01E
<i>Scolecithricella minor</i> adult female	Z346M01U
<i>Scolecithricella minor</i> adult male	Z346M01Y
<i>Scolecithricella minor</i> C3	Z346M01C
<i>Scolecithricella minor</i> C4	Z346M01D
<i>Scolecithricella minor</i> C5	Z346M01E
<i>Temora longicornis</i> adult male	Z34CM01Y

Originator's protocol

Zooplankton samples were collected using an *in situ* underwater plankton pump through a 30 µm mesh. The pump was initially deployed 4 times daily and at 8 depths (5, 10, 20, 30, 40, 50, 60 and 80 m) with a pumping time of 3 to 5 minutes in each layer. Problems with the power cable led to low initial filtering rates of ca. 0.2 m³ per minute. Following repair of the power cable, the pumping rate increased to 1.2 m³ per minute from station 33. The nets were carefully washed down, and the contents of the cod ends filtered through a 40 µm mesh. Samples were then preserved in 4% borax buffered formaline sea water for future analysis. Problems with the net mesh being frequently ripped led to a decrease in the sampling frequency. After 22 October 1998, the plankton pump was only deployed twice a day and at 5 depths (10 to 50 m).

Zooplankton data were also obtained with an underwater video camera (BugWatcher) operating at two standard magnifications, a low magnification at ca. 10x (LM) and high magnification at ca. 40x (HM). These correspond to a scanned volume per video frame of about 25 ml and 0.2 ml respectively. Frames were recorded at 50 s⁻¹. Observations were generally made at 8 depths between 5 and 80 m. Three minutes of observations were recorded at each depth. From 22 October, the Bug Watcher was deployed more frequently at about 4 hourly intervals to compensate for the fewer plankton pump samples to be taken. Data from the BugWatcher have not been included in the data set submitted to BODC.

BODC processing

In order to standardise parameter units with that held in BODC's parameter dictionary, zooplankton abundance was converted from number of individual per cubic metre to number of individual per litre by dividing the value by 1000. The data were then loaded into a database under the ORACLE Relational Database Management System without modification.

Comments on data quality from data originator

Throughout the period of study *Calanus spp.* refers to two co-occurring *Calanus* species *C. finmarchicus* and *C. helgolandicus*.