**Supplementary Table 1**: Abundances (individuals/m2) of meroplanktonic taxa found in different months north and south of the Polar Front.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  | **North** | **South** |
| **Phylum** | **Class** | **Taxon** | **Nov** | **Jan** | **Apr** | **Jun** | **Aug** | **Jan** | **Apr** | **Jun** | **Aug** |
| Annelida | Polychaeta | *Abyssoninoe* sp. | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Boccardiella hamata* 82.2 % | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bonelliidae80.1 % | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 |
| *Bylgides groenlandicus*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 397 | 0 |
| *Capitella capitata* 89.3 % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 198 | 347 |
| *Cistenides hyperborea* | 0 | 0 | 0 | 0 | 104 | 0 | 0 | 7367 | 0 |
| Dorvilleidae87.2 % | 191 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Eteone* cf. *flava*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 149 | 0 |
| *Eteone flava*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1549 | 0 |
| *Eteone* sp. CMC09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 677 | 0 |
| *Eunoe oerstedi* CMC02  | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Galathowenia oculata*  | 0 | 0 | 0 | 0 | 940 | 0 | 0 | 5938 | 10872 |
| *Gattyana cirrhosa*  | 94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Glycera capitata*  | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Glyphanostomum pallescens*  | 0 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Harmothoe* sp. CMC01  | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 199 | 0 |
| *Lumbrineris* sp. CMC01 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Nothria conchylega* CMC02 | 1302 | 0 | 0 | 0 | 0 | 203 | 0 | 0 | 0 |
| *Paramphinome jeffreysii*  | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 697 |
| *Pholoe baltica*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2989 | 0 |
| *Phyllodoce groenlandica*  | 2170 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Polyphysia crassa*  | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 |
| *Prionospio* sp.  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2870 | 0 |
| *Schistomeringos nr. rudolphii*  | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Scoletoma fragilis* CMC01 | 191 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 |
| *Sphaerodorum flavum*  | 356 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Spio* sp.  | 0 | 0 | 1105 | 0 | 0 | 0 | 77 | 0 | 0 |
| *Spiophanes kroyeri*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 |
| Arthropoda | Hexanauplia | *Balanus* sp.  | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bryozoa | Gymnolaemata | *Alcyonidium* 82.8 % | 0 | 44 | 0 | 0 | 0 | 49 | 40 | 0 | 0 |
| *Alcyonidium mamillatum*  | 0 | 44 | 0 | 0 | 0 | 592 | 228 | 0 | 0 |
| Cnidaria | Anthozoa | *Hormathia digitata*  | 0 | 24 | 0 | 0 | 0 | 23 | 0 | 0 | 0 |
| Echinodermata | Asteroidea | *Ctenodiscus crispatus*  | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 |
| Echinoidea | *Strongylocentrotus pallidus*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 478 | 0 |
| Holothuroidea | *Molpadia borealis*  | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ophiuroidea | *Ophiacantha bidentata*  | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Ophiocten gracilis*  | 0 | 0 | 1833 | 25 | 723 | 0 | 8118 | 37966 | 60941 |
| *Ophiocten sericeum*  | 334 | 0 | 1984 | 25 | 249 | 0 | 716 | 0 | 0 |
| *Ophiopholis aculeata*  | 540 | 0 | 115 | 25 | 927 | 0 | 0 | 1973 | 5297 |
| *Ophiopleura borealis*  | 191 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Ophiura robusta*  | 1624 | 0 | 0 | 0 | 253 | 0 | 0 | 1893 | 3521 |
| *Ophiura sarsii*  | 119 | 0 | 0 | 0 | 145 | 0 | 0 | 1714 | 3686 |
| Mollusca | Bivalvia | *Chlamys islandica*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 702 | 980 |
| *Ciliatocardium ciliatum*  | 0 | 0 | 0 | 0 | 448 | 0 | 0 | 3243 | 28037 |
| *Hiatella* sp. I 85.3 % | 0 | 0 | 0 | 0 | 102 | 0 | 0 | 3477 | 4355 |
| *Hiatella* sp. K | 3420 | 455 | 0 | 42 | 1497 | 67 | 0 | 33867 | 107326 |
| *Macoma calcarea*  | 0 | 0 | 0 | 0 | 655 | 0 | 0 | 9116 | 139891 |
| *Mya truncata*  | 1754 | 159 | 0 | 0 | 364 | 0 | 0 | 2396 | 22466 |
| *Serripes groenlandicus 94.1 %* | 401 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gastropoda | *Bohuslania matsmichaeli*  | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Chlamylla borealis*  | 130 | 63 | 0 | 0 | 0 | 172 | 0 | 0 | 0 |
| *Cuthonella concinna*  | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 0 |
| *Cuthonella* sp. A DS-2016 88.3 % | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Dendronotus dalli*  | 95 | 44 | 0 | 0 | 0 | 51 | 0 | 0 | 0 |
| *Dendronotus frondosus*  | 0 | 0 | 100 | 0 | 0 | 416 | 0 | 0 | 0 |
| *Dendronotus kalikal*  | 0 | 0 | 0 | 0 | 0 | 311 | 40 | 0 | 349 |
| *Dendronotus patricki*  | 0 | 75 | 35 | 0 | 0 | 641 | 215 | 0 | 349 |
| *Dendronotus* sp. MM  | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 |
| *Diaphana hiemalis*  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 478 | 0 |
| *Doto* cf*. maculata*  | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 |
| *Doto coronata*  | 0 | 0 | 0 | 0 | 0 | 305 | 0 | 0 | 0 |
| *Doto dunnei*  | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 |
| *Doto fragilis*  | 0 | 0 | 0 | 0 | 0 | 44 | 37 | 0 | 0 |
| *Eubranchus rupium*  | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Microchlamylla gracilis*  | 260 | 0 | 100 | 0 | 0 | 23 | 0 | 0 | 0 |
| *Nudibranchia*  | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Placida dendritica*  | 0 | 0 | 136 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nemertea | Hoplonemertea | Monostilifera 91.6 % | 102 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| Palaeonemertea | *Cephalothrix iwatai*  | 0 | 0 | 0 | 0 | 134 | 0 | 0 | 0 | 1392 |
| Pilidiophora | Heteronemertea 88.1 % | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lineidae  | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 280 |
| Sipuncula | Sipunculidea | *Golfingia margaritacea*  | 345 | 0 | 122 | 0 | 0 | 0 | 0 | 0 | 0 |