**SUPPLEMENTARY TABLE**

**S1.** The list of phytoplankton species was observed in the study.

|  | **TAXA** | **Occurrence frequency at the stations (%)** |
| --- | --- | --- |
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|  | **CYANOPHYTA** |  |
|  | **Cyanophyceae** |  |
| 1 | *Richelia intracellularis* Schmidt, 1901 | 93.3 |
|  | **Species number of Cyanophyceae** | **1** |
|  | **CHROMOPHYTA** |  |
|  | **Bacillariophyceae** |  |
| 1 | *Bacteriastrum delicatulum* Cleve, 1897 | 6.7 |
| 2 | *Cerataulina pelagica* (Cleve) Hendey, 1937 | 40.0 |
| 3 | *Chaetoceros affinis* Lauder, 1864 | 20.0 |
| 4 | *Chaetoceros danicus* Cleve, 1889 | 6.7 |
| 5 | *Chaetoceros decipiens* Cleve 1873 | 20.0 |
| 6 | *Chaetoceros* sp.1 | 20.0 |
| 7 | *Chaetoceros* sp.2 | 13.3 |
| 8 | *Coscinodiscus centralis* Ehrenberg, 1844 | 13.3 |
| 9 | *Coscinodiscus concinnus* W.Smith, 1856 | 6.7 |
| 10 | *Coscinodiscus perforatus* Ehrenberg, 1844 | 13.3 |
| 11 | *Coscinodiscus radiatus* Ehrenberg, 1840 | 40.0 |
| 12 | *Cyclotella meneghiniana*Kützing, 1844 | 13.3 |
| 13 | *Cylindrotheca closterium* (Ehrenberg) Reimann & J.C.Lewin, 1964 | 6.7 |
| 14 | *Cymbella* sp. | 46.7 |
| 15 | *Dactyliosolen fragilissimus* (Bergon) Hasle, 1996 | 93.3 |
| 16 | *Ditylum brightwellii* (T.West) Grunow, 1885 | 13.3 |
| 17 | *Eucampia* cf. *groenlandica* Cleve, 1896 | 6.7 |
| 18 | *Guinardia flaccida* (Castracane) H.Peragallo, 1892 | 80.0 |
| 19 | *Hemiaulus hauckii*Grunow ex Van Heurck, 1882 | 93.3 |
| 20 | *Hemiaulus membranaceus*Cleve, 1873 | 13.3 |
| 21 | *Hemiaulus sinensis*Greville, 1865 | 66.7 |
| 22 | *Licmophora flabellata* (Greville) C.Agardh, 1831 | 13.3 |
| 23 | *Navicula* sp. | 13.3 |
| 24 | *Nitzschia longissima* (Brébisson) Ralfs, 1861 | 6.7 |
| 25 | *Pleurosigma formosum* W.Smith 1852 | 6.7 |
| 26 | *Proboscia alata* (Brightwell) Sundström, 1986 | 73.3 |
| 27 | *Pseudosolenia calcar-avis* (Schultze) Sundström, 1986 | 80.0 |
| 28 | *Pseudo-nitzschia* sp.1 | 6.7 |
| 29 | *Pseudo-nitzschia* sp.2 | 6.7 |
| 30 | *Rhizosolenia hebetata* Bailey, 1856 | 6.7 |
| 31 | *Rhizosolenia setigera* Brightwell, 1858 | 6.7 |
| 32 | *Skeletonema costatum* (Greville) Cleve, 1873 | 6.7 |
| 33 | *Skeletonema marinoi* Sarno & Zingone, 2005 | 6.7 |
| 34 | *Thalassionema nitzschioides* (Grunow) Mereschkowsky, 1902 | 53.3 |
| 35 | *Thalassiosira eccentrica* (Ehrenberg) Cleve, 1904 | 20.0 |
| 36 | *Thalassiosira rotula* Meunier, 1910 | 6.7 |
| 37 | *Trachyneis aspera* (Ehrenberg) Cleve, 1894 | 6.7 |
| 38 | *Ulnaria* sp.1 | 6.7 |
| 39 | *Ulnaria* sp.2 | 6.7 |
|  | **Species number of Bacillariophyceae** | **39** |
|  | **Dinophyceae** |  |
| 1 | *Alexandrium* cf. *minutum* Halim, 1960 | 26.7 |
| 2 | *Amphidinium operculatum* Claparède & Lachmann, 1859 | 6.7 |
| 3 | *Amphidinium sphenoides* Wulff, 1919 | 6.7 |
| 4 | *Cochlodinium* sp. | 6.7 |
| 5 | *Diplopsalis lenticula* Bergh, 1881 | 13.3 |
| 6 | *Gonyaulax fragilis* (Schütt) Kofoid, 1911 | 100.0 |
| 7 | *Gonyaulax scrippsae* Kofoid, 1911 | 6.7 |
| 8 | *Gonyaulax verior* Sournia, 1973*= Amylax diacantha* | 13.3 |
| 9 | *Gymnodinium* sp.1 | 20.0 |
| 10 | *Gyrodinium* *fusiforme* Kofoid & Swezy, 1921 | 53.3 |
| 11 | *Heterocapsa minima* A.J.Pomroy, 1989 | 20.0 |
| 12 | *Heterocapsa niei* (Loeblich III) Morrill & Loeblich III, 1981 | 13.3 |
| 13 | *Heterocapsa pygmaea* Lobelich III, R.J.Schmidt & Sherley, 1981 | 33.3 |
| 14 | *Heterocapsa rotundata* (Lohmann) Hansen, 1995 | 6.7 |
| 15 | *Karenia* cf. *brevis* (Davis) Hansen & Moestrup, 2000 | 33.3 |
| 16 | *Karenia* cf. *mikimotoi* (Oda) Hansen & Moestrup, 2000 | 13.3 |
| 17 | *Karenia* cf. *selliformis* Haywood, Steidinger & MacKenzie, 2004 | 6.7 |
| 18 | *Lebouridinium glaucum* (Lebour) Gómez, Takayama, Moreira & López-García, 2016*= Katodinium glaucum* | 40.0 |
| 19 | *Mesoporos perforatus* (Gran) Lillick, 1937 | 66.7 |
| 20 | *Oxytoxum* *caudatum* Schiller, 1937 | 6.7 |
| 21 | *Oxytoxum* sp. | 6.7 |
| 22 | *Pronoctiluca pelagica* Fabre-Domergue, 1889 | 6.7 |
| 23 | *Prorocentrum* cf. *balticum* (Lohmann) Loeblich III, 1970 | 60.0 |
| 24 | *Prorocentrum compressum* (Bailey) Abé ex Dodge, 1975 | 93.3 |
| 25 | *Prorocentrum cordatum* (Ostenfeld) J.D.Dodge, 1976*= P. minimum* | 53.3 |
| 26 | *Prorocentrum dentatum* Stein, 1883 | 6.7 |
| 27 | *Prorocentrum emarginatum* Fukuyo, 1981 | 6.7 |
| 28 | *Prorocentrum micans* Ehrenberg, 1834 | 100.0 |
| 29 | *Prorocentrum shikokuense* Hada, 1975 | 33.3 |
| 30 | *Prorocentrum triestinum* Schiller, 1918 | 6.7 |
| 31 | *Protoceratium reticulatum* (Claparède & Lachmann) Bütschli, 1885= *Gonyaulax grindleyii* | 6.7 |
| 32 | *Protoperidinium depressum* (Bailey, 1854) Balech, 1974 | 6.7 |
| 33 | *Protoperidinium divergens* (Ehrenberg) Balech, 1974 | 6.7 |
| 34 | *Protoperidinium steinii* (Jørgensen, 1899) Balech, 1974 | 40.0 |
| 35 | *Scrippsiella acuminata* (Ehrenberg) Kretschmann et al., 2015= *S.trochoidea* | 66.7 |
| 36 | *Spatulodinium* sp. | 6.7 |
| 37 | *Tripos furca* (Ehrenberg) F.Gómez, 2013 | 93.3 |
| 38 | *Tripos fusus* (Ehrenberg) F.Gómez, 2013 | 33.3 |
| 39 | *Tripos muelleri* Bory, 1826 | 73.3 |
|  | **Species number of Dinophyceae** | **39** |
|  | **Raphidophyceae** |  |
| 1 | *Heterosigma akashiwo* (Hada) Hada ex Hara & Chihara, 1987 | 6.7 |
|  | **Species number of Raphidophyceae** | **1** |
|  | **Chrysophyceae** |  |
| 1 | *Chrysophaeum taylorii*Lewis & Bryan, 1941 | 6.7 |
| 2 | *Sarcinochrysis marina* Geitler, 1930 | 26.7 |
|  | **Species number of Chrysophyceae** | **2** |
|  | **Dictyochophyceae** |  |
| 1 | *Dictyocha fibula* Ehrenberg, 1839 | 13.3 |
|  | **Species number of Dictyochophyceae** | **1** |
|  | **Prymnesiophyceae** |  |
| 1 | *Chrysochromulina* sp. | 13.3 |
| 2 | *Dicrateria* sp. | 6.7 |
| 3 | *Emiliania huxleyi* (Lohmann) W.W.Hay & H.Mohler, 1967 | 20.0 |
| 4 | *Phaeocystis* *pouchetii* (Hariot) Lagerheim, 1896 | 26.7 |
| 5 | *Phaeocystis* sp. | 6.7 |
|  | **Species number of Prymnesiophyceae** | **5** |
|  | **CHLOROPHYTA** |  |
|  | **Euglenophyceae** |  |
| 1 | *Astasia* sp. | 6.7 |
| 2 | *Eutreptiella* spp. | 13.3 |
| 3 | *Trachelomonas* sp. | 20.0 |
|  | **Species number of Euglenophyceae** | **3** |
|  | **Chlorophyceae** |  |
| 1 | *Characium* sp. | 13.3 |
| 2 | *Pediastrum* sp*.* | 6.7 |
| 3 | *Pseudopediastrum boryanum*var. *cornutum* (Turpin) Hegewald, 2005= *Pediastrum boryanum* | 6.7 |
|  | **Species number of Chlorophyceae** | **3** |
|  | **Ulvophyceae** |  |
| 1 | *Binuclearia lauterbornii =Planctonema lauterbornii*(Schmidle) Proshkina-Lavrenko, 1966 | 6.7 |
|  | **Species number of Ulvophyceae** | **1** |
|  | **TOTAL NUMBER OF PHYTOPLANKTON TAXA** | **95** |