Table S6. Sea-ice protist taxa in first-year ice (FYI) and multiyear ice (MYI). AP: average abundance percentage; FO frequency of occurrence.

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|  |  |  |  |  |  |
| Sea-ice protist taxa | AP | FO | Sea-ice protist taxa | AP | FO |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **FYI (n=46)** |  |  | **MYI (continued)** |  |  |
| *Conticribra weissflogii* | 0.52 | 41.5 | *Navicula rotaeana* | 0.03 | 9.9 |
| *Porosira glacialis* | 0.78 | 39.8 | *Nitzschia brebissonii* | 0.01 | 9.9 |
| *Mesodinium rubrum* | 0.81 | 20.3 | *Aulacoseira alpigena* | 0.07 | 8.9 |
| *Diacronema lutheri* | 0.49 | 7.3 | *Navicula superba* | 0.03 | 8.9 |
| *Oxyrrhis* spp. | 0.05 | 7.3 | *Amphora angusta* var. *ventricosa* | 0 | 7.9 |
| *Pseudo-nitzschia* spp. | 0.18 | 6.5 | *Peridinium quadradentatum* | 0.03 | 7.9 |
| *Teleaulax* spp. | 0.01 | 5.7 | *Amphora laevis var. laevissima* | 0.02 | 6.9 |
| *Amphidinium* spp. | 0.34 | 4.9 | *Entomoneis gigantea* | 0.02 | 6.9 |
| *Emiliania huxleyi* | 0.01 | 4.1 | *Pinnularia* spp. | 0.34 | 6.9 |
| *Haslea* spp. | 0.01 | 4.1 | *Navicula transitans var. asymmetrica* | 0 | 5.9 |
| *Pyramimonas virginica* | 0.02 | 4.1 | *Brebissonia* spp. | 0 | 5 |
| *Choreotrichia* | 0 | 3.3 | *Amphora* spp*.* | 0.01 | 4 |
| *Alexandrium* spp. | 0.02 | 2.4 | *Entomoneis gigantea* var. *septentrionalis* | 0 | 4 |
| *Leucocryptos marina* | 0 | 2.4 | *Entomoneis* spp. | 0 | 4 |
| *Lohmanniella oviformis* | 0 | 2.4 | *Groenlandiella* spp. | 0.04 | 4 |
| *Cochlodinium* spp. | 0.02 | 1.6 | *Navicula kepesii* | 0 | 4 |
| *Fragilaria* spp. | 0.06 | 1.6 | *Pinnularia punctulata* | 0.02 | 4 |
| *Gymnodinium galeatum* | 0.05 | 1.6 | *Plagiotropis lepidoptera* | 0 | 4 |
| *Leegaardiella sol* | 0.03 | 1.6 | *Trochiscia americana* | 1.11 | 4 |
| *Odontella aurita* | 0 | 1.6 | *Amphipleura pellucida* | 0.02 | 3 |
| *Rhodomonas* spp. | 0 | 1.6 | *Anisonema* spp. | 0 | 3 |
| *Synedropsis* spp. | 0.01 | 1.6 | *Gyrosigma concilians* | 0 | 3 |
| *Acanthostomella norvegica* | 0 | 0.8 | *Leptocylindrus minimus* | 0.17 | 3 |
| *Amphidinium crassum* | 0 | 0.8 | *Licmophora* spp. | 0.01 | 3 |
| *Azadinium* spp. | 0.01 | 0.8 | *Nitzschia scabra* | 0.03 | 3 |
| *Chaetoceros fragilis* | 0.04 | 0.8 | *Parapedinella reticulata* | 0.04 | 3 |
| *Chaetoceros holsaticus* | 0 | 0.8 | *Petroneis glacialis* | 0 | 3 |
| *Chaetoceros simplex* | 0 | 0.8 | *Pinnularia spitsbergensis* | 0 | 3 |
| *Didinium* spp. | 0 | 0.8 | *Stauroneis anceps* | 0.54 | 3 |
| *Lennoxia faveolata* | 0 | 0.8 | *Staurosirella pinnata* | 0.06 | 3 |
| *Lessardia elongata* | 0 | 0.8 | *Thalassiosira antarctica* | 0.07 | 3 |
| *Leucocryptos remigera* | 0 | 0.8 | *Thalassiothrix* spp. | 0.3 | 3 |
| *Monosiga marina* | 0.01 | 0.8 | *Amphora lineolata* | 0 | 2 |
| *Navicula obtusa* | 0 | 0.8 | *Amylax triacantha* | 0.09 | 2 |
| *Navicula oestrupii* | 0.03 | 0.8 | *Asterionella cf. bleakeleyi* | 0.13 | 2 |
| *Navicula pellucidula* | 0 | 0.8 | *Aulacoseira* spp. | 0.02 | 2 |
| *Protoperidinium depressum* | 0 | 0.8 | *Bacillaria paxillifera var. tumidula* | 0 | 2 |
| *Psammodictyon panduriforme* var. *delicatulum* | 0 | 0.8 | *Bacillaria socialis* | 0.01 | 2 |
| *Raphidophyceae* | 0 | 0.8 | *Dinophysis* spp. | 0 | 2 |
| *Rhizosolenia* spp. | 0 | 0.8 | *Fragilaria islandica* | 0.7 | 2 |
| *Salpingella secata* | 0 | 0.8 | *Gonyaulax* spp. | 0 | 2 |
| *Scenedesmus quadricauda* | 0 | 0.8 | *Navicula cryptocephala* | 0 | 2 |
| *Scotiella* spp. | 0 | 0.8 | *Pinnularia quadratarea* var. *interrupta* | 0 | 2 |
| *Telonema* spp. | 0 | 0.8 | *Pseudogomphonema septentrionale* | 0 | 2 |
| *Thalassiosira angulata* | 0.03 | 0.8 | *Raphidosphaera tenerrima* | 0.05 | 2 |
| *Uronema marinum* | 0 | 0.8 | *Rhizosolenia setigera* | 0.02 | 2 |
|  |  |  | *Amphora hyalina* | 0 | 1 |
| **MYI (n=108)** |  |  | *Amphora obtusa* | 0 | 1 |
| *Chlamydomonas nivalis* | 1.99 | 32.7 | *Amphora proteus* | 0 | 1 |
| *Cosmioneis pusilla* | 0.27 | 27.7 | *Asterionella formosa* | 0 | 1 |
| *Gomphoneis exigua* | 0.49 | 27.7 | *Bacillariophyta* | 0 | 1 |
| *Trochiscia cryophila* | 3.25 | 27.7 | *Biremis ambigua* | 0 | 1 |
| *Navicula retusa* var. *cancellata* | 0.19 | 26.7 | *Caloneis* spp. | 0 | 1 |
| *Pseudogomphonema groenlandicum* | 0.27 | 26.7 | *Detonula confervacea* | 0 | 1 |
| *Pleurosigma elongatum* | 0.21 | 25.7 | *Dinophysis norvegica* | 0.01 | 1 |
| *Diploneis litoralis* | 0.31 | 24.8 | *Diploneis didyma* | 0 | 1 |
| *Fallacia forcipata* | 0.3 | 24.8 | *Fogedia finmarchica* | 0 | 1 |
| *Amphora pediculus* | 0.18 | 22.8 | *Gomphonema acuminatum* | 0.01 | 1 |
| *Nitzschia acicularis* | 0.35 | 22.8 | *Manguinea* spp. | 0.01 | 1 |
| *Navicula valida* | 0.21 | 21.8 | *Navicula debilissima* | 0 | 1 |
| *Halamphora exigua* | 0.05 | 19.8 | *Navicula kariana* var. *detersa* | 0 | 1 |
| *Coscinodiscus oculus-iridis* | 0.01 | 18.8 | *Navicula novadecipiens* | 0 | 1 |
| *Cryocystis brevispina* | 1.63 | 17.8 | *Nitzschia angularis* | 0 | 1 |
| *Eunotia* spp. | 0.03 | 17.8 | *Nitzschia scalpelliformis* | 0 | 1 |
| *Amphora ovalis* | 0.02 | 15.8 | *Phaeodactylum tricornutum* | 0.01 | 1 |
| *Pinnularia quadratarea* | 0.07 | 15.8 | *Phalacroma rotundatum* | 0 | 1 |
| *Thalassiosira decipiens* | 0.24 | 15.8 | *Pinnularia quadratarea* var. *bicontracta* | 0 | 1 |
| *Amphora crassa* | 0.06 | 14.9 | *Pinnularia quadratarea* var. *densestriata* | 0 | 1 |
| *Placoneis elginensis* | 0 | 13.9 | *Protoperidinium bipes* | 0.01 | 1 |
| *Placoneis gastrum* | 0.02 | 13.9 | *Protoperidinium pallidum* | 0 | 1 |
| *Nitzschia pellucida* | 1.06 | 12.9 | *Protoperidinium thorianum* | 0 | 1 |
| *Diploneis litoralis* var. *arctica* | 0.39 | 11.9 | *Scuticociliatia* | 0 | 1 |
| *Nitzschia sigma* | 0.02 | 11.9 | *Stauroneis phoenicenteron* | 0 | 1 |
| *Navicula bipennata* | 0 | 10.9 | *Stenoneis* spp. | 0.01 | 1 |
| *Amphora ovalis* var. *gracilis* | 0.02 | 9.9 | *Surirella* spp. | 0.07 | 1 |
| *Chaetoceros neogracilis* | 0.16 | 9.9 | *Synedra* spp. | 0 | 1 |
| *Haslea crystallina* | 0 | 9.9 | *Thalassionema nitzschioides* | 0 | 1 |
| *Mesotaenium berggrenii* | 2.25 | 9.9 | *Trachyneis aspera* | 0 | 1 |
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