**S3\_Table. Phytoplankton species composition and sampling methods.**

Weekly, we sampled phytoplankton, chlorophyll *a*, zooplankton, and oxygen concentrations. We sampled algal assemblages in 100-mL water samples collected from ~40-cm below the surface. We used 10mL subsamples for the identification and counting from each mesocosm. Subsamples were placed in settling chambers and allowed to settle for 24h. We counted and identified cells to taxon level using an inverted microscope and the Utermöhl sedimentation method [35] . Phytoplankton density was corrected for volume in each sample using:

#cells/L = avg cells/field \* (F/chamber volume)

Cell sizes of phytoplankton taxa were not measured directly, we assigned average cell sizes to each taxon from literature data using the databases [www.algaebase.](http://www.algaebase.)org and [www.diatom.org](http://www.diatom.org).

100 to 300mL volume of water samples from each mesocosm was filtered onto a 0.2μm GF/F filter; the water volume varied with the chlorophyll *a* content. Chlorophyll *a* was extracted from the filters in 90% acetone. Chlorophyll *a* concentration, measured in μg/L, was determined fluorometrically using a Trilogy fluorometer (Turner Designs) following Wetzel and Liken (2000).

|  |  |
| --- | --- |
| Taxon | Group |
| Amoeboid | Amoeboid |
| Gloeocystis | Chlorophyta |
| Arthrodesmus | Chlorophyta |
| Chlamydomonas | Chlorophyta |
| Paramecium | Ciliate |
| Chrysosphaerella | Cryptophyte |
| Dinobryon | Cryptophyte |
| Fragilaria | Cryptophyte |
| Fragilaria | Cryptophyte |
| Chrysophyte | Cryptophyte |
| Microcystis | Cyanobacteria |
| Oscillatoria | Cyanobacteria |
| Anabaena | Cyanobacteria |
| Coelosphaerium | Cyanobacteria |
| Planktothrix | Cyanobacteria |
| Merismopedia | Cyanobacteria |
| Chroococcus | Cyanobacteria |
| Synechococcus | Cyanobacteria |
| Merismopedia | Cyanobacteria |
| Fischerella | Cyanobacteria |
| Tabellaria | Diatom |
| Eunotia | Diatom |
| Melosira | Diatom |
| Diatom3 | Diatom |
| Gymnodinium | Dinoflagelate |