----- GENERAL INFORMATION -----

DATA TITLE: Physical, Chemical and Biological Data from the Grosses Heiliges Meer, Germany

PROJECT TITLE: Seasonal phytoplankton and geochemical shifts in the subsurface chlorophyll maximum layer of a dimictic ferruginous lake: the Grosses Heiliges Meer in Germany

DATA ABSTRACT: Dataset comprises of chemical and biological data collected from a single site in Grosses Heiliges Meer, Germany from September 2014 through September 2018.

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ASSOCIATED PUBLICATIONS:

Swanner, E. D., Wuestner, M., Leung, T., and Al., E.: Seasonal phytoplankton and geochemical shifts in the subsurface chlorophyll maximum layer of a dimictic ferruginous lake, Microbiologyopen, 11, e1287, <https://doi.org/10.22541/au.165109866.69626032/v1>, 2022.

COLLECTION INFORMATION:

    Time period(s):  September 2014 through September 2018

    Location(s): 52.351714°N, 7.633964°E

----- FILE DIRECTORY -----

\* GHM\_data\_directory\_Swanner.csv – data dictionary.

\* GHM\_data\_Swanner.csv – Tabular data containing chemical and biological data.

----- VARIABLES -----

Variables, abbreviations, units are defined in the data dictionary.

----- METHODS AND MATERIALS -----

----- DATA COLLECTION METHODS -----

All data were collected in September 17, 2014, May 13, 2015, and September 13, 2018 from a single location in the Grosses Heiliges Meer, Germany. Temperature and dissolved oxygen were measured with a Thermo Scientific Orion Star A Series optical oxygen and temperature sensor. Conductivity was measured with a WTW Cond 170i meter connected to a TetraCon 325 electrode. Chlorophyll a was measured in situ using a Turner Designs SCUFA submersible fluorometer. Taxon-specific chlorophyll a data was measured by a multi-wavelength fluorometer (Walz PhytoPAM-II). Nutrients were measured by colorimetric analysis and physical parameters were measured by YSI probe. Cations in water samples were determined with ICP-OES. Anions in water samples were determined with ion chromatography. Dissolved inorganic carbon (DIC) was measured by titration, and δ13C-DIC was measured by isotope ratio mass spectrometry (IRMS). Isotope results are reported as per mil (‰) difference to the VPDB standard.

------- EQUIPMENT -------

Chlorophyll a data from the Grosses Heiliges Meer were measured by a multi-wavelength fluorometer (Walz PhytoPAM-II).

Manufacturer: Walz

Model: Compact PhytoPAM-II

Embedded Software/Firmware Name: PhytoWin Software

Additional Notes: Output are fluorescence measurements and chlorophyll a estimates

------- LICENSING -------

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