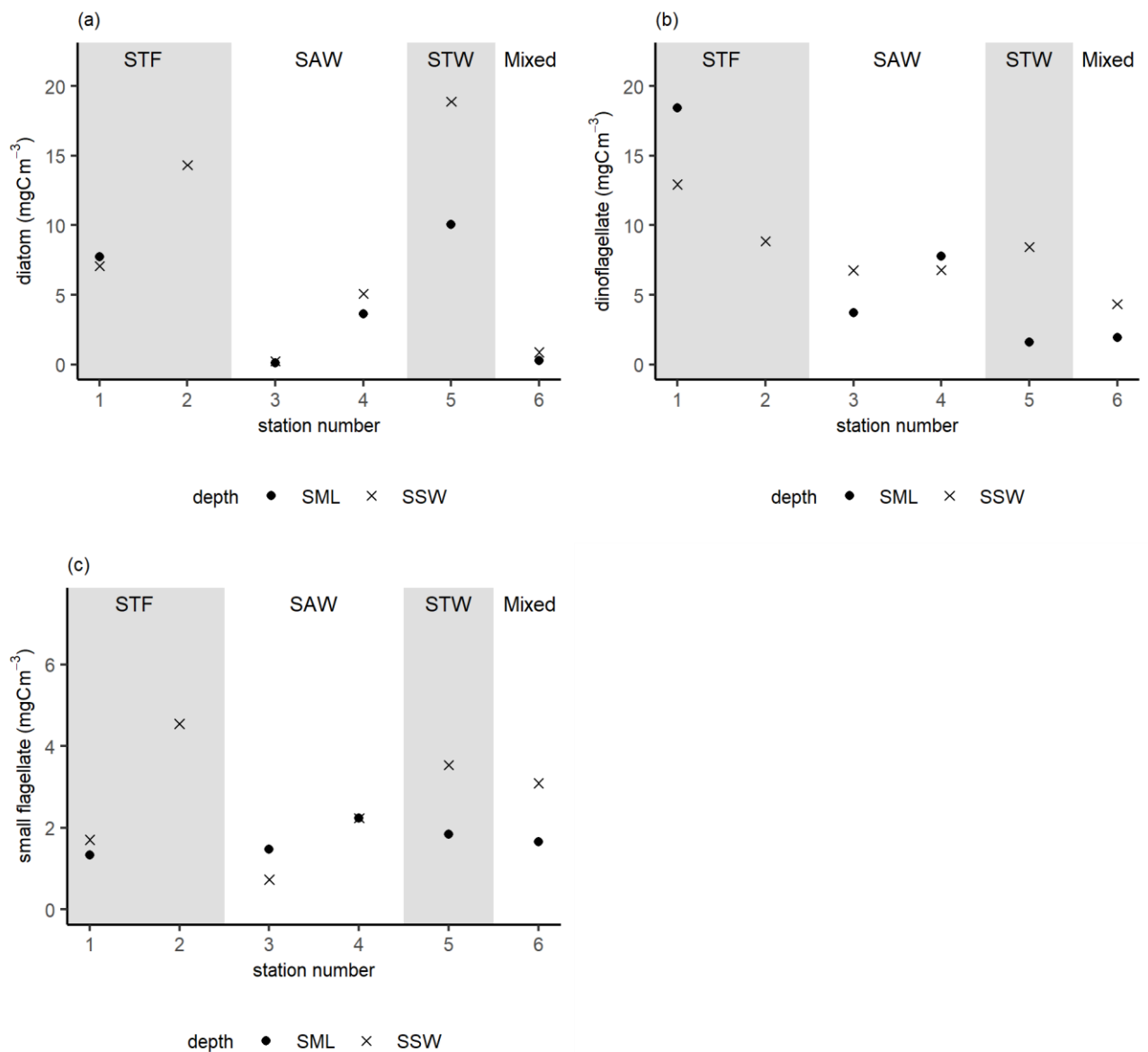


## Supplementary information



**Figure S1: Sea2Cloud phytoplankton carbon content in the SML and SSW of (a) diatom, (b) dinoflagellate, and (c) small flagellate. Water mass type is indicated by the label at the top of the figure and also the shading. There was no SML sample at station 2-STF.**

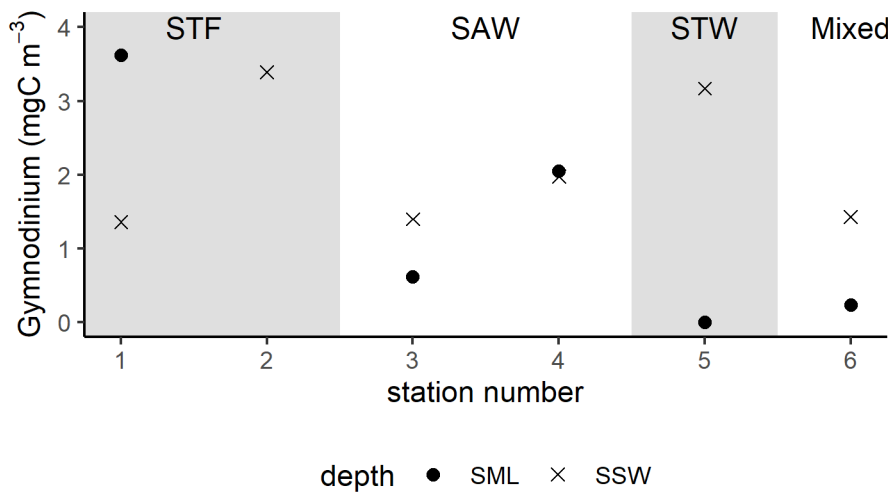


Figure S2: Gymnodinium biomass during Sea2Cloud. No data for the SML at station 2-STF. Gymnodinium was not present in the SML of station 5-STW, and there was no SML sample at station 2-STF.

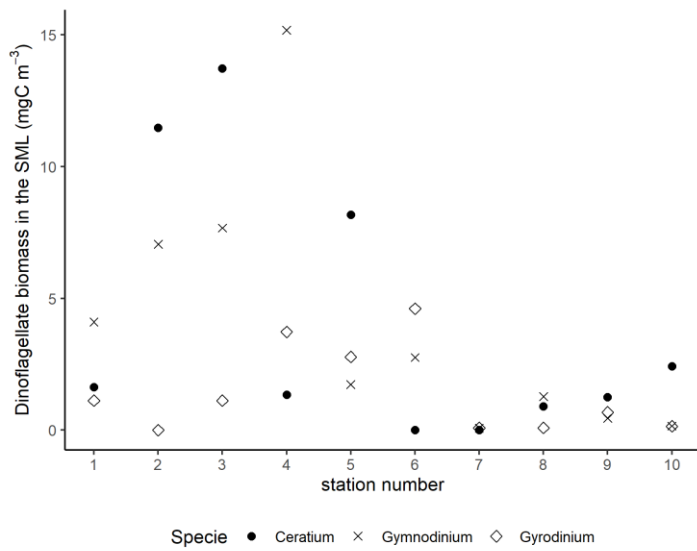


Figure S3: Biomass of the different major dinoflagellate genera in the SML during the SOAP voyage (Law et al, 2018) in the SML. Gyrodinium was not present at stations 2, 7, and 8. Ceratium was not present at station 6, 7, and 8.