Figures

Note that all figures are scaled by a factor of 2 for display.

Figure 1: Location of the ice camp located on the Qikiqtarjuaq Island in the Baffin Bay. Projection used: EPSG-4326.

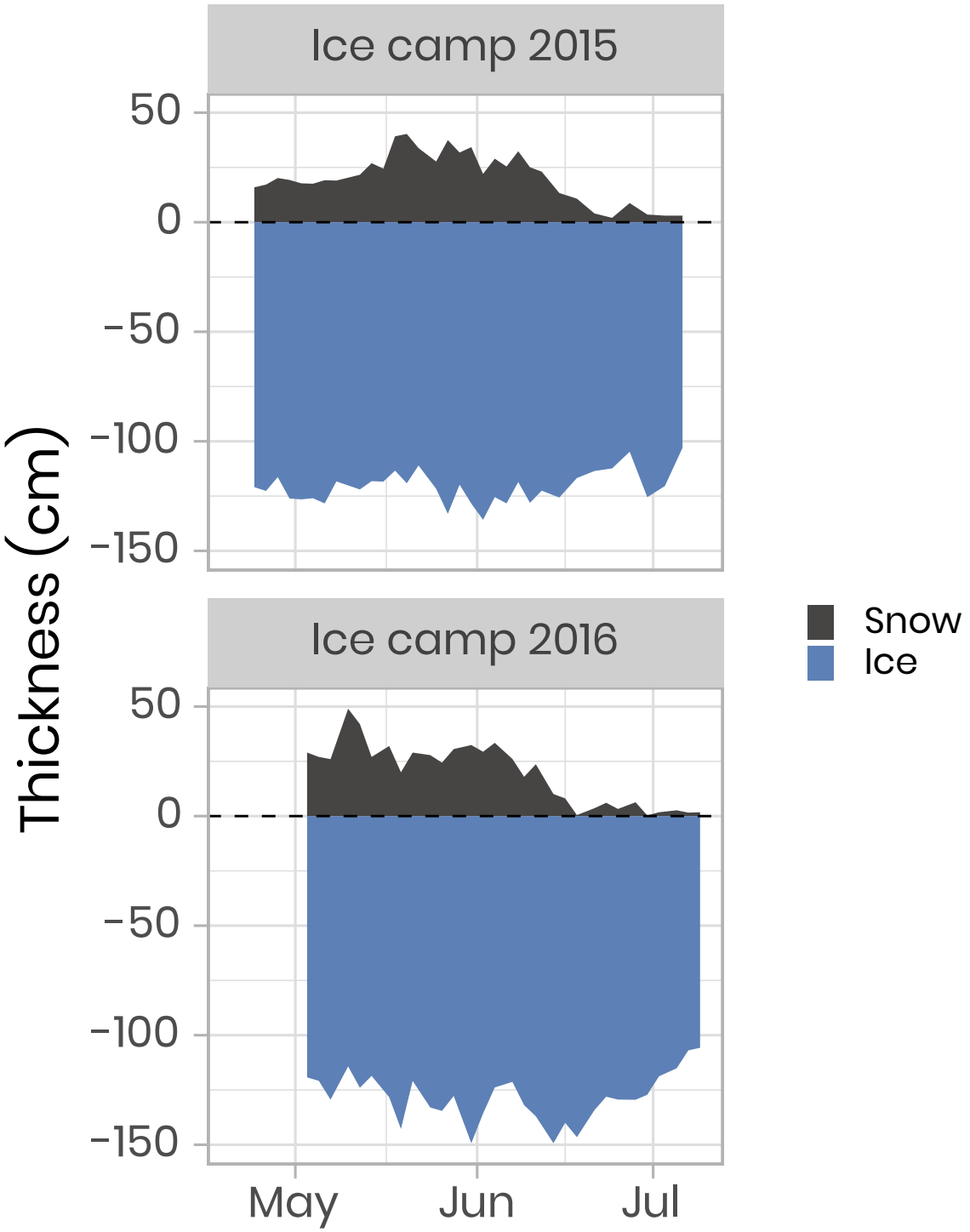

Figure 2: Temporal evolution of the snow and sea-ice thickness for both ice camp missions. The dashed horizontal line represents the snow/ice interface.

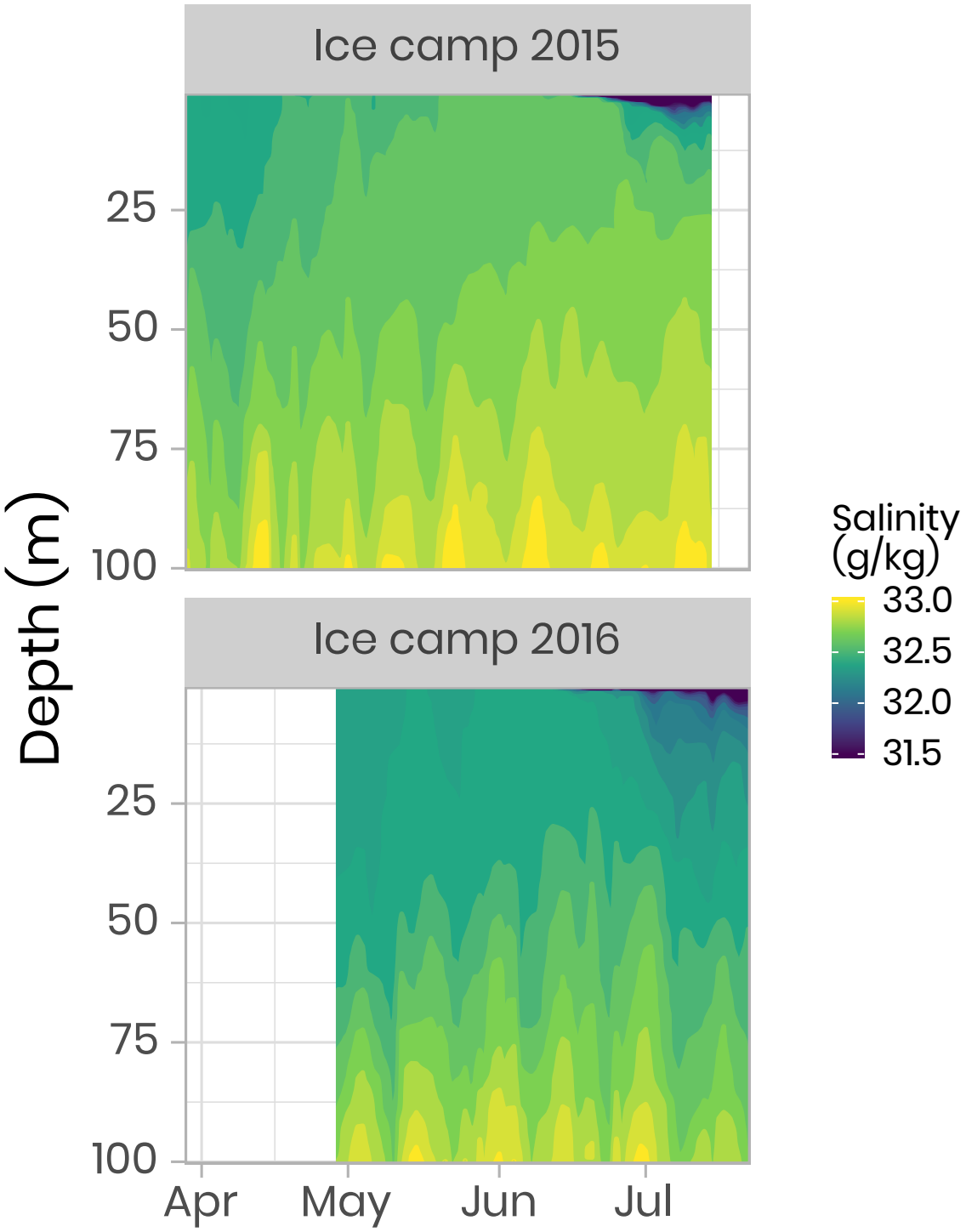

Figure 3: Temporal ecolution of the salinity for both ice camp missions. Note that for visualization, salinity below 31.5 g kg^{-1} have been squished at 31.5 g kg^{-1}.

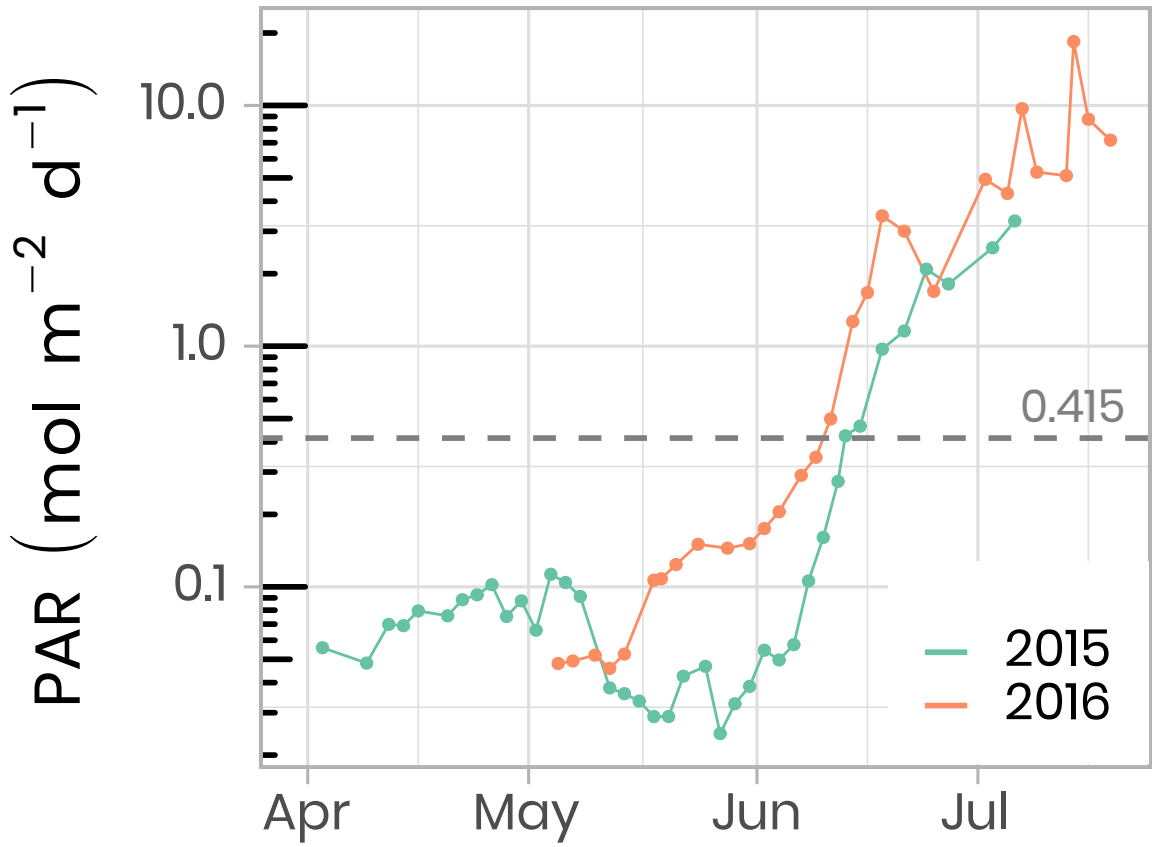

Figure 4: Temporal evolution of daily photosynthetically available radiation (PAR) at the sea-ice/water interface (1.3 m depth) for both ice camp missions. The horizontal dashed line show the 0.415 mol photons m^{-2} d^{-1} threshold often used in the literature as the minimum light requirement for primary production.

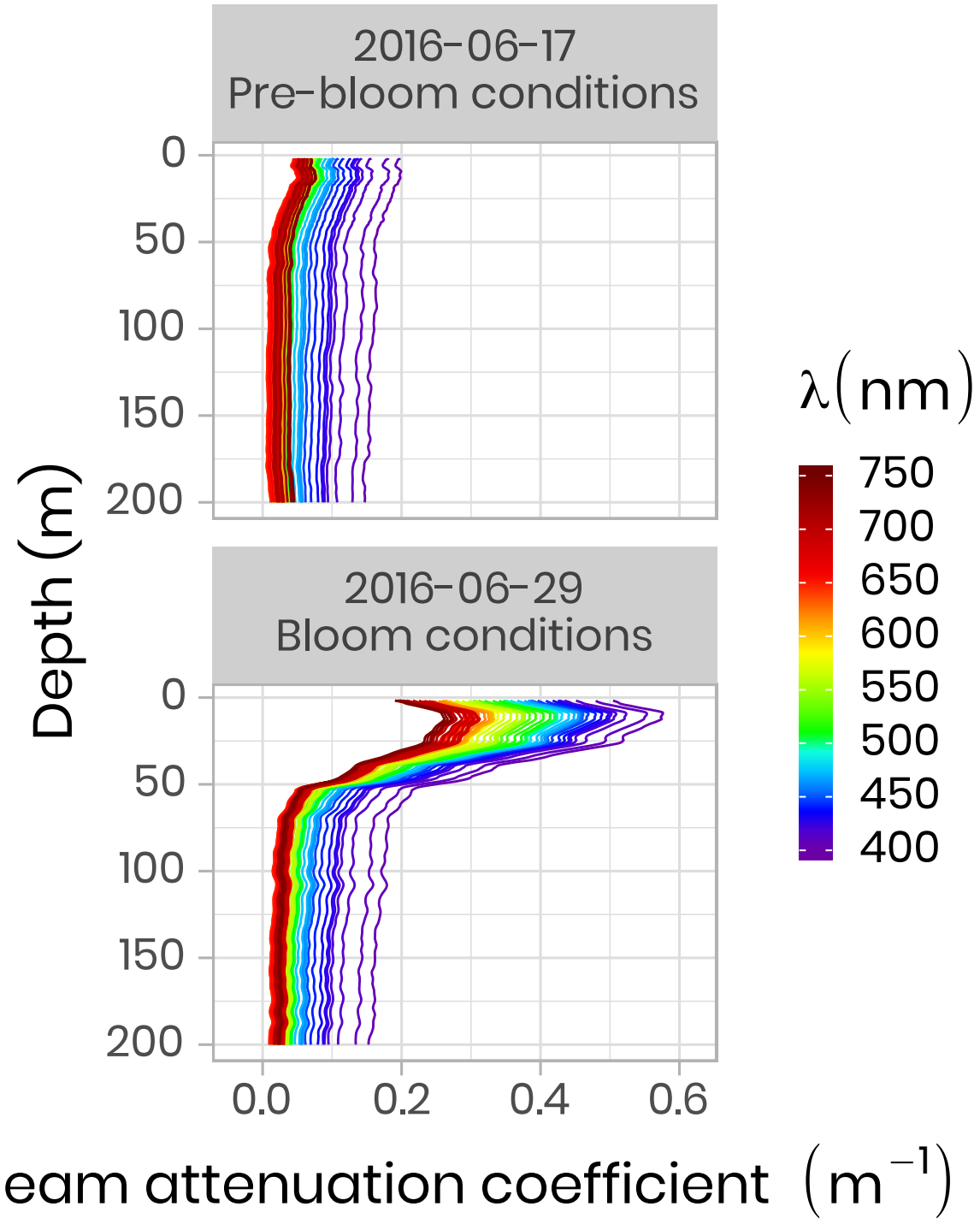

Figure 5: Beam attenuation coefficients (c, m^{-1}) measured in 2016 using an ACS before and during the phytoplankton bloom. Note that the colors of the lines correspond to wavelength frequencies.

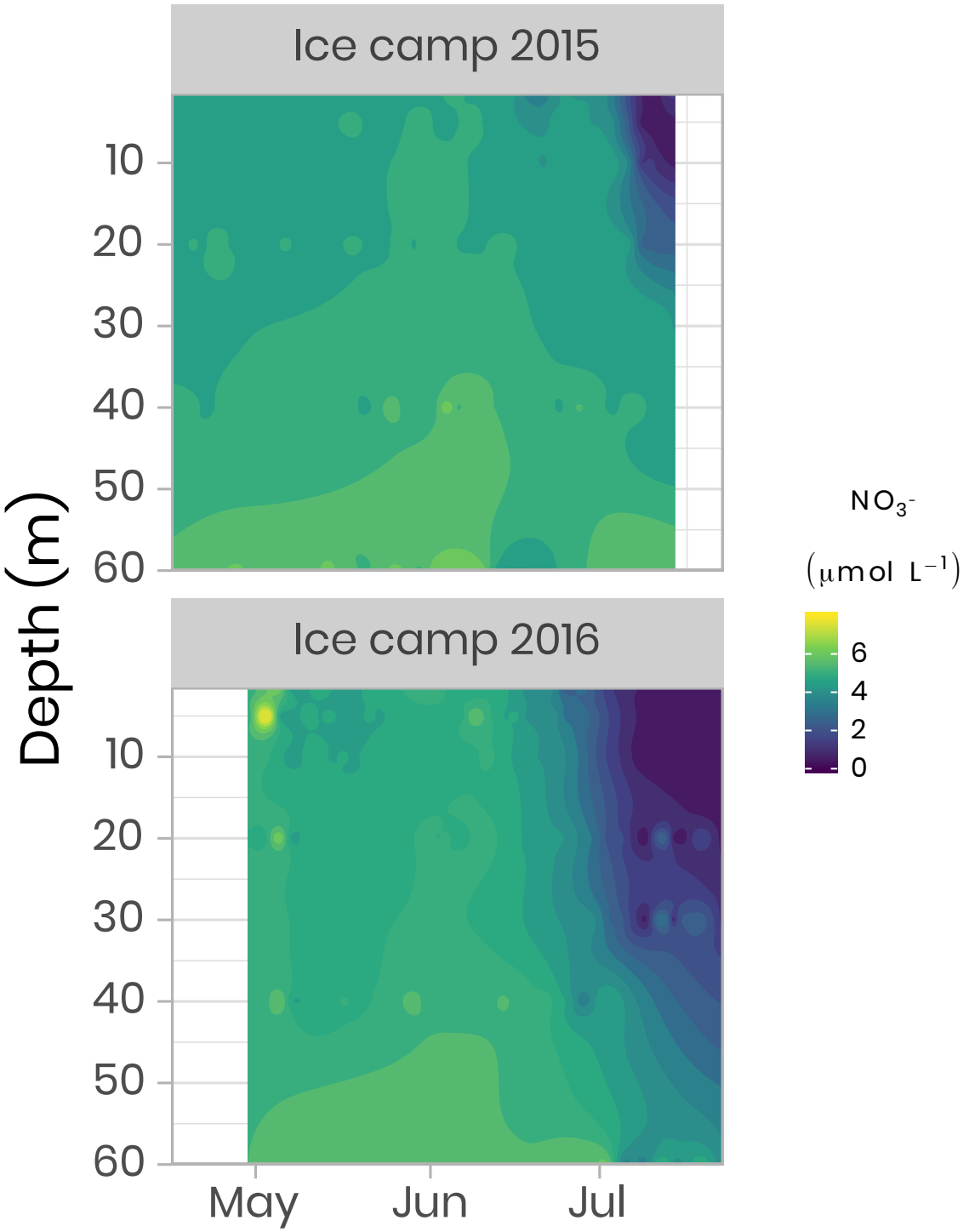

Figure 6: Temporal evolution of the nitrates in the first 60 m of the water column for both ice camp missions.

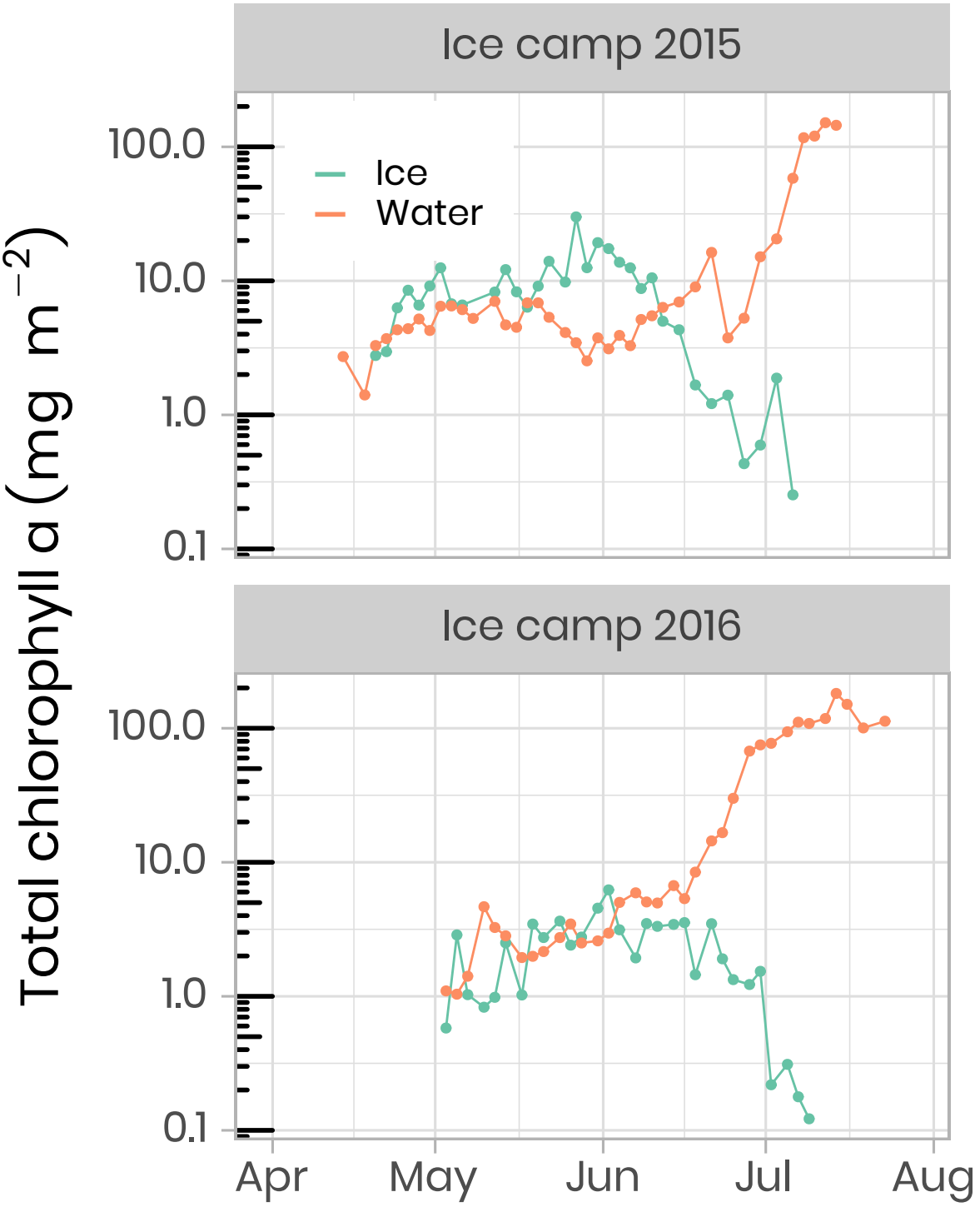

Figure 7: Temporal evolution of chlorophyll a in ice and water (depth-integrated) for both ice camp missions. Note that the water chlorophyll a have been integrated over the first 100 m of the water column whereas the ice chlorophyll a was measured on the bottom 0-10 cm of the ice cores.

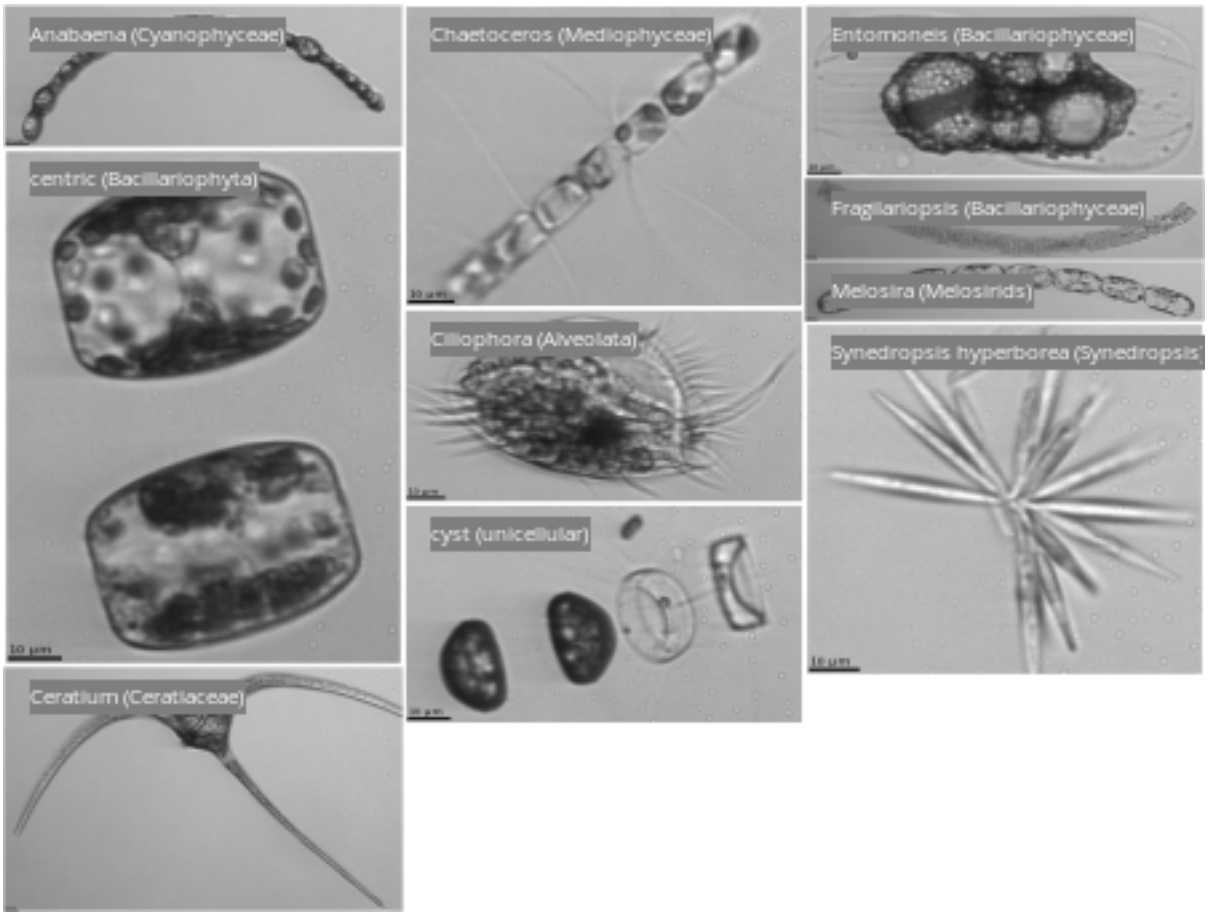

Figure 8: Taxo. TODO: I asked P.-L. to produce a better composite image.

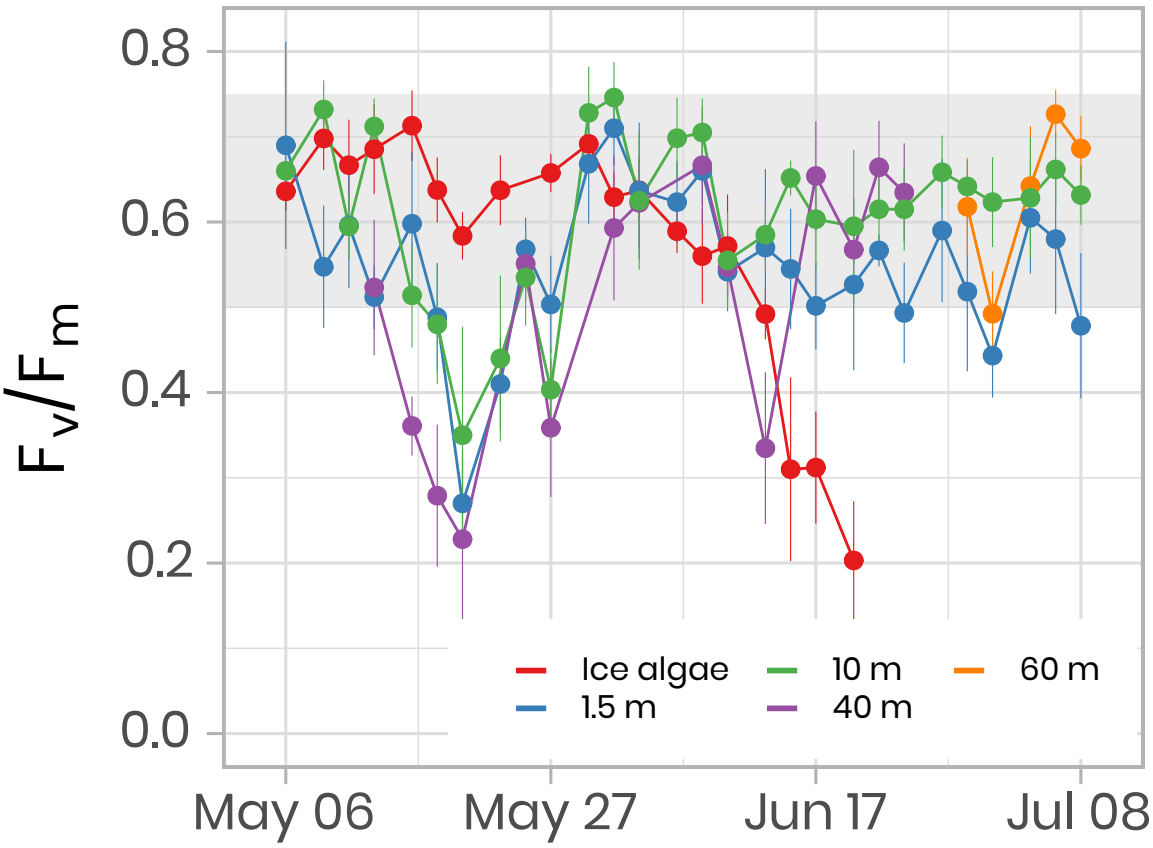

Figure 9: Temporal evolution of F_v/F_m for ice (last cm) and water underneath the ice (depths 1.5 m, 10 m, 40 m) samples for the ice camp 2016 between May 6th and July 8th. F_v/F_m monitoring on ice samples stopped on Day 172-June 20th because the Chl a fluorescence signal was not reliable anymore. F_v/F_m monitoring on 40 m and 60 m depth samples was limited between May 13th and June 24th and between June 29th-July 08th, respectively. The gray shaded area represents the range at which the algae are optimally growing.

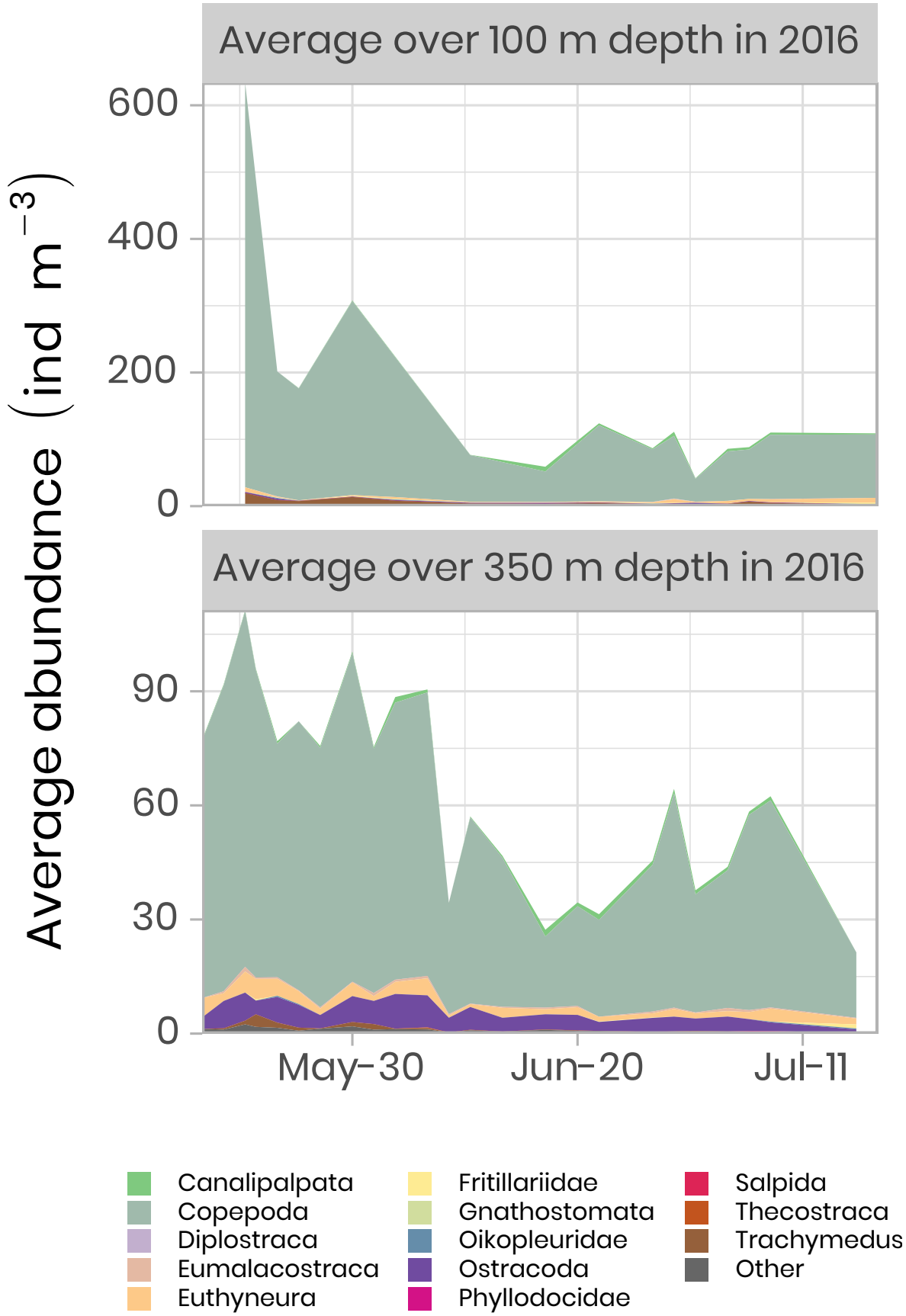

Figure 10: Time series of the abundance of the zooplankton community (ind m^{-1}) measured over the first 100 m and 350 m of the water column in 2016 using the zooscan.