Figure S1. Oxygen production at the open-water seagrass meadow in May of 2016. Time series of PAR **(a)**, dissolved oxygen **(b)**, and eddy covariance oxygen fluxes with- and without accounting for storage of oxygen within the meadow **(c)**.
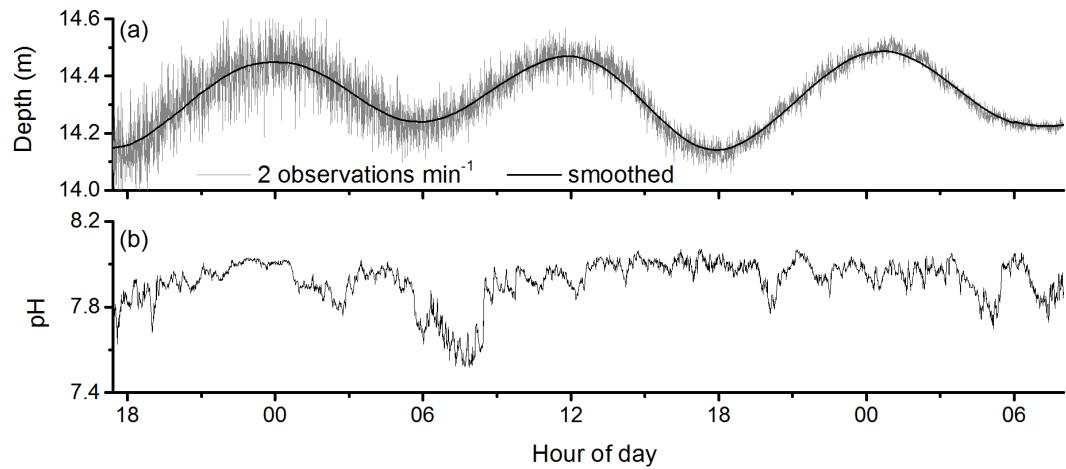
Figure S2. Time series of water depth **(a)** and bottom water pH **(b)** in the seagrass meadow at the CO_2 vent at Panarea in May of 2016. The high frequency fluctuations in water depth early in the time series are due to waves. Note that the pH minimum occurs soon after low tide.

Figure S3. Hydrozoa and calcareous epiphytes on *P. oceanica* leaves in the nearshore meadow at the island of Elba in May of 2017.