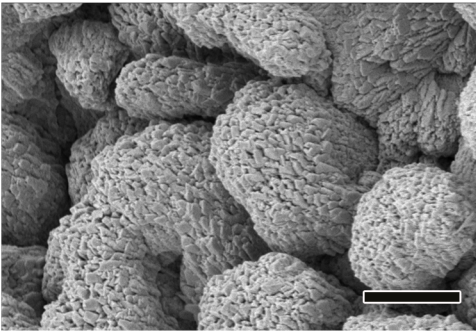
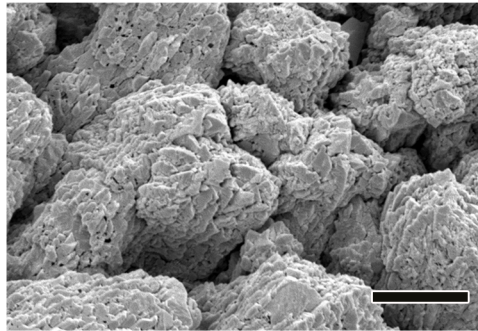


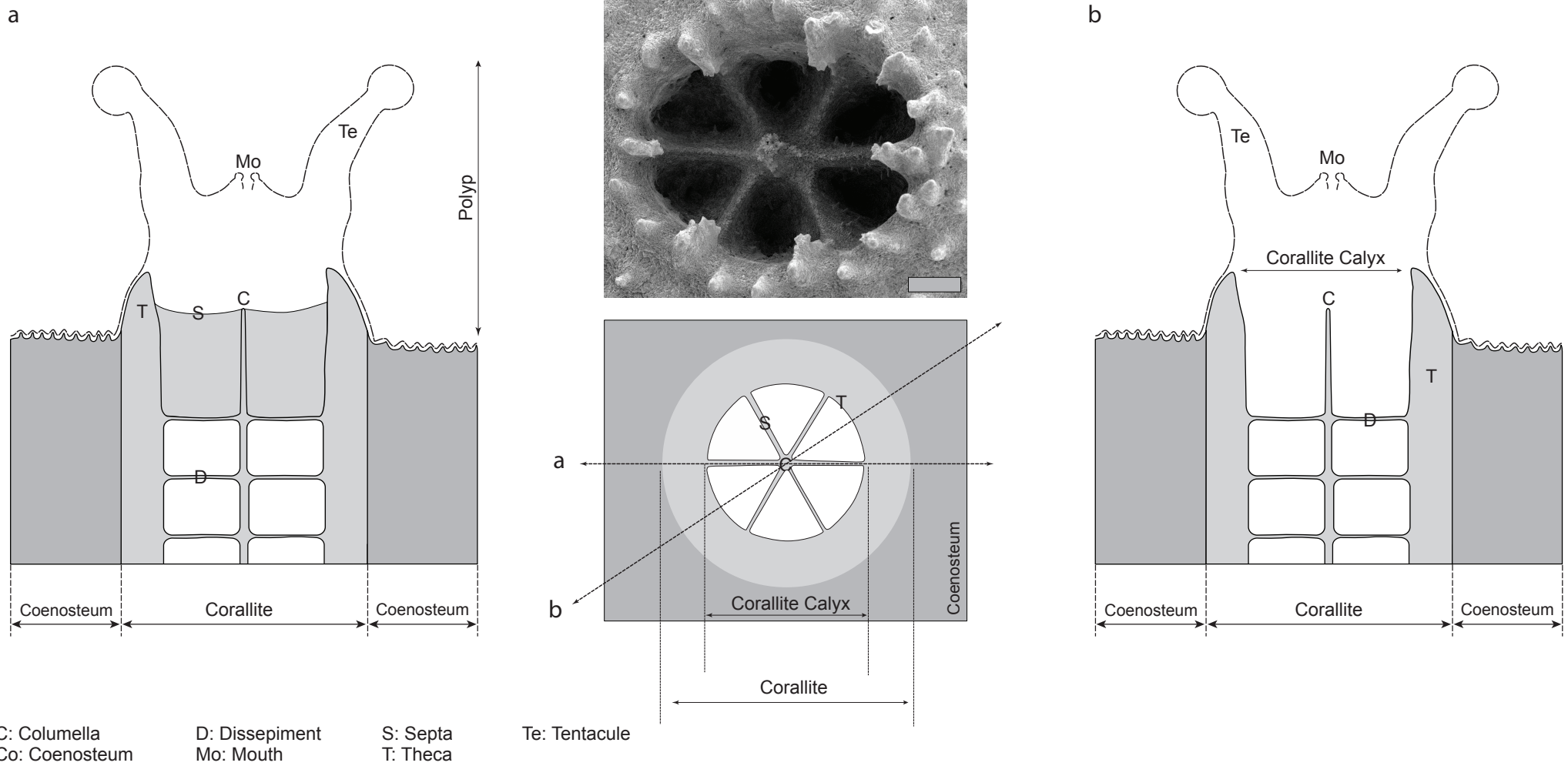
a



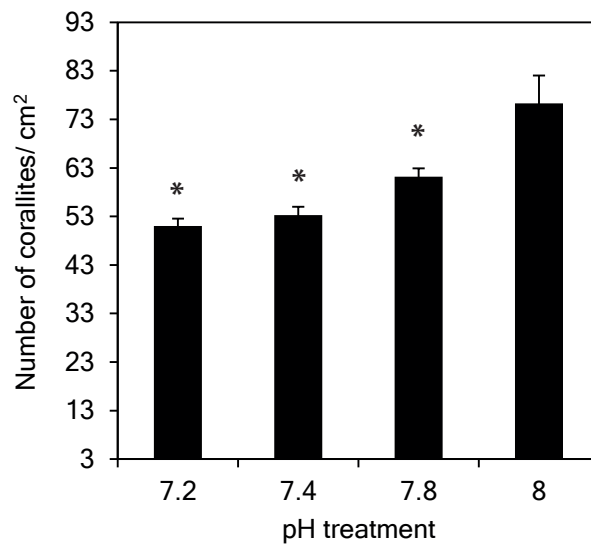
b



Supplementary Figure. 1. Scanning electron micrographs of aragonite crystals in the skeleton of *Stylophora pistillata*. a) and b) Aragonite crystals in samples after 12 h in darkness (end of night-time period) in treatments pH 8.0 and pH 7.2 respectively. Scale bar = 5 $\mu$ m.



Supplementary Figure 2. Nomenclature of structures in the coral skeleton. a and b are cross sections of the corallite calyx at different positions. Scanning electron micrograph shows a corallite of *Stylophora pistillata* (scale bar = 200 microns).



Supplementary Figure 3. Number of corallites normalized to skeleton surface area (one way ANOVA,  $n = 9$ ,  $F_{3,32} = 14.50.6$ ,  $P < 0.001$ ). Data are means and SEM. \* denotes values that are significantly different to pH 8 ( $P < 0.05$ ).