

Electronic supplementary material (ESM): Photoacclimation and induction of light-enhanced calcification in the mesophotic coral *Euphyllia paradivisa*

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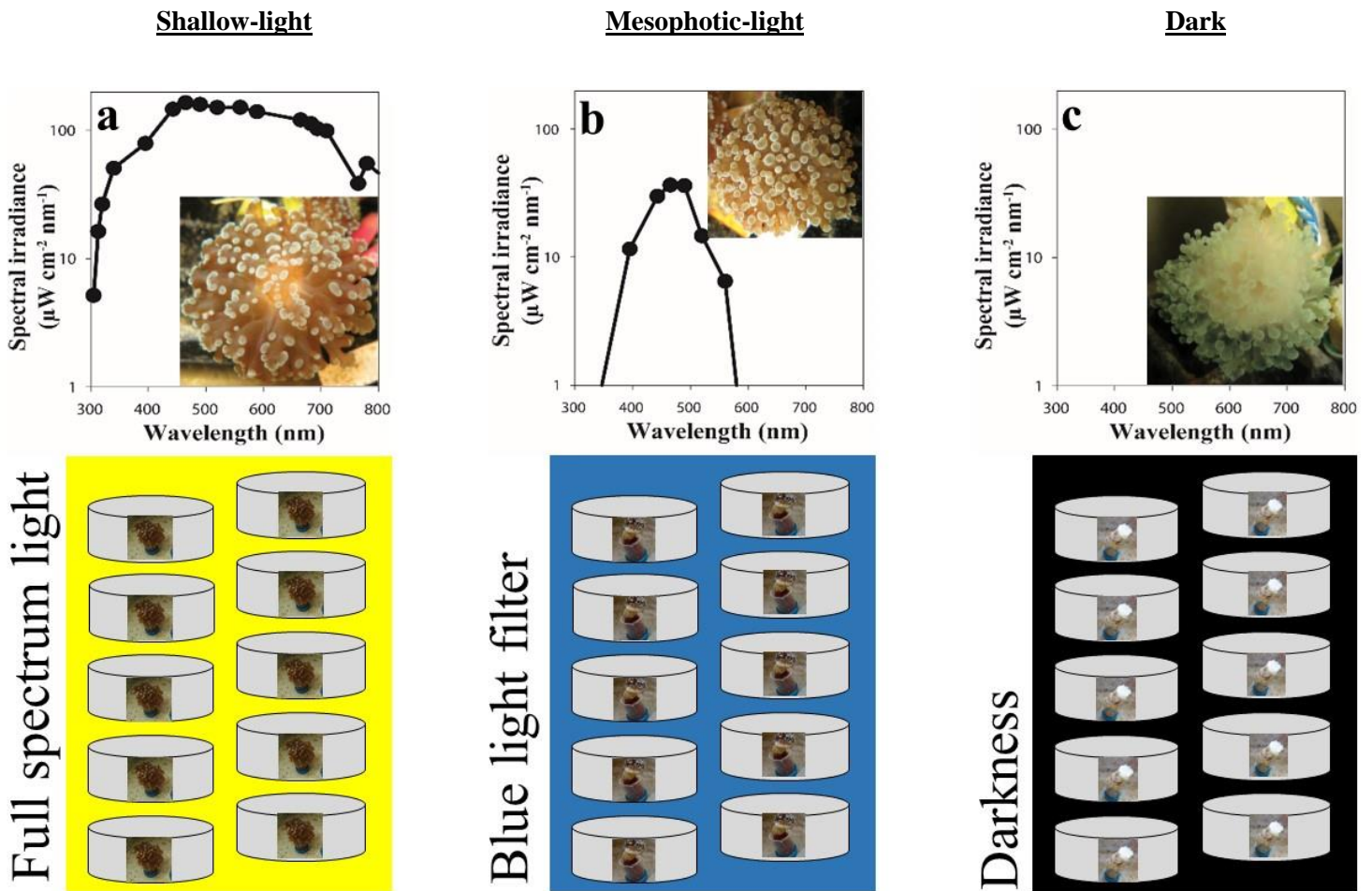


Figure 1s: One-year illustrative experimental set-up of the three different light conditions of the treated *Euphyllia paradivisa*, which simulate; (a) full-spectrum shallow-light, (b) blue mesophotic-light, and (c) deep-sea darkness environments. Each polyp was placed inside a separate two liters glass container with running seawater supply. n = 10 individual polyps in each treatment.

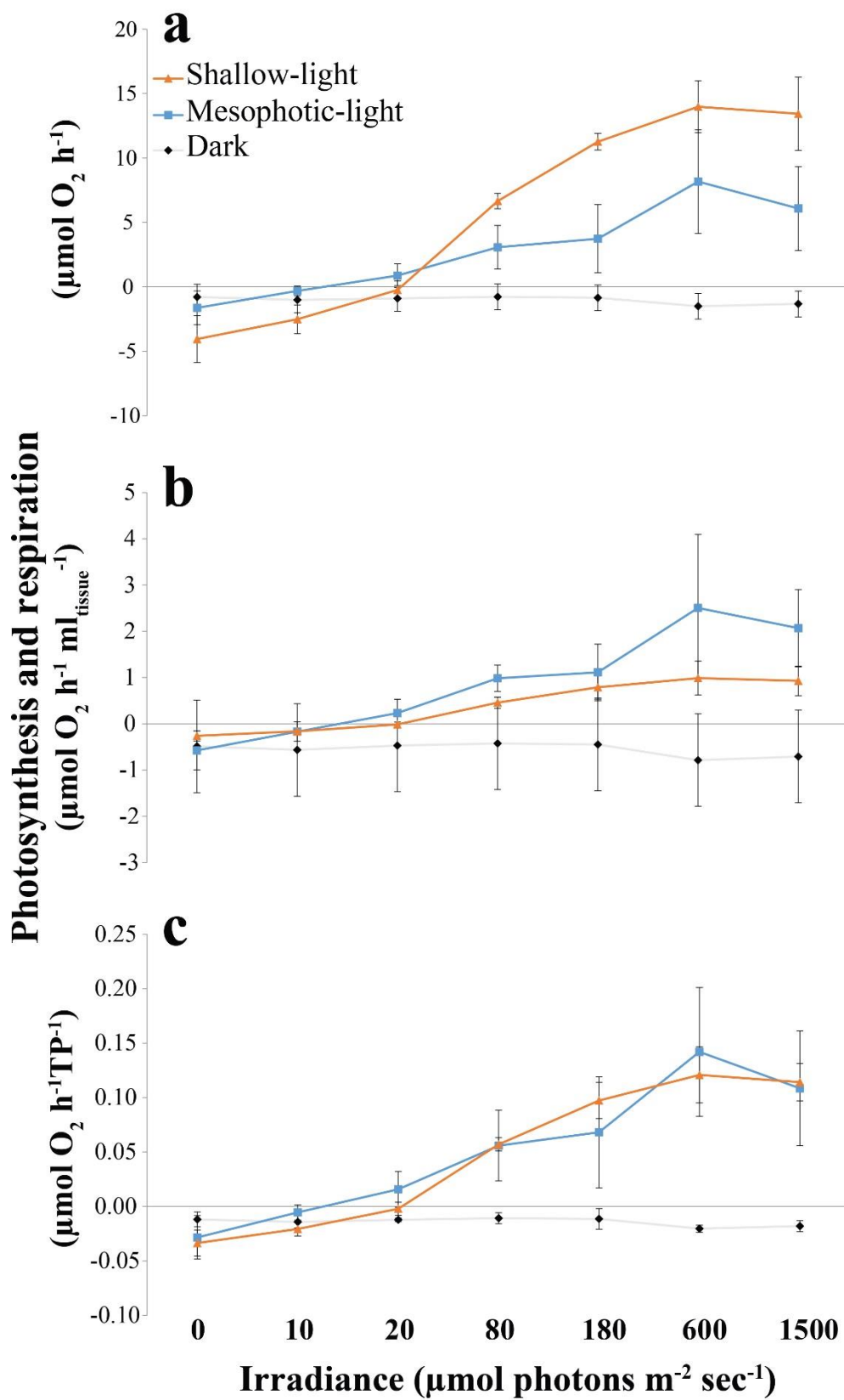


Figure 2s: Photosynthesis vs. irradiance curves (mean \pm SD) of net photosynthesis of the mesophotic coral *E. paradviva* recorded in metabolic chambers after one year of incubation under shallow-light treatment, mesophotic-light treatment, simulating light at ~40 m depth), and total darkness. YSI dissolved O₂ delta measurements of 20 minutes incubation in metabolic chambers under increased light irradiance of 0 to 1500 $\mu\text{mol photons m}^{-2} \text{ s}^{-1}$. Orange lines represent shallow-light treated corals (triangles), blue lines represent mesophotic-light treated corals (squares), and grey lines represent dark treated corals (black diamonds). n = 4 individual polyps in each treatment (sampled from different colonies).

Table 1s: Species-specific primers for the four main *Symbiodinium* clades in scleractinian corals, A, B, C and D that were designed, tested and used to identify the *Symbiodinium* clade in *E. paradviva*.

Clade	Primer	Sequence
A	SITA-405F	5'-GTGAACCAATGGCCTCTTGA-3'
A	SITA-510R	5'-CCTGATAACAAGAGCAGCAGAA-3'
B	SITB-77F	5'-GGAAGGAGAAGTCGTAACAAGG-3'
B	SITB-178R	5'-CAAGCGTCCCTCACATCAA-3'
C	SITC-616F	5'-GCTTTGCGCGCTGTTATT-3'
C	SITC-729R	5'-ACTTGTCTGACTTCATGCTAGAG-3'
D	SITD-18F	5'-ACTACGGTGAGGGACTGTT-3'
D	SITD-109R	5'-ACAGGCGCGATCGAATATG-3'