The following supplement accompanies the article

PoCHL P expression pattern in *Posidonia oceanica* is related to critical light conditions

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Supplement 1. Additional data on physical (light and temperature) and biochemical parameters (chlorophyll *a*/*b* ratios) in the meadows, aquarium and plants

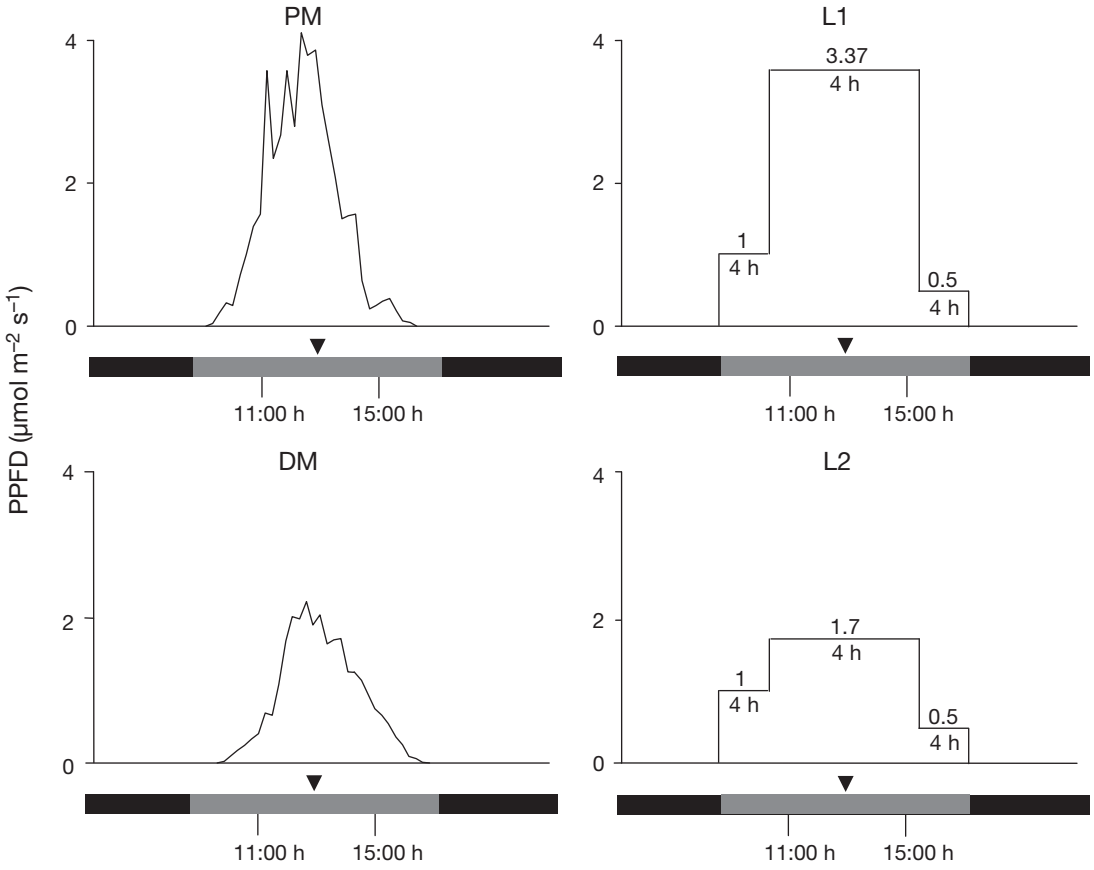

Fig. S1. Photosynthetic photon flux density (PPFD, µmol m^{-2} s^{-1}) values in preserved (PM) and disturbed (DM) *Posidonia oceanica* meadows on the sampling day in June 2005 and in aquaria at L1 = 3.37 ± 0.5 µmol m^{-2} s^{-1} and L2 = 1.7 ± 0.4 µmol m^{-2} s^{-1} light conditions. Bar under *x*-axis: Light (gray) and dark (black) periods during the day. Black arrowheads show sampling time of plants in the field sites and in the aquaria

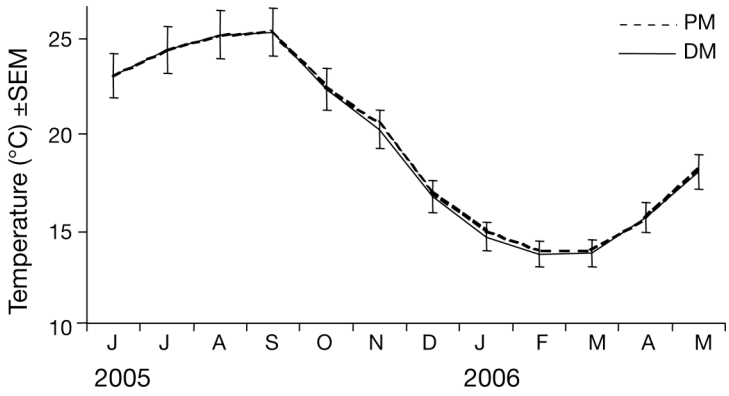

Fig. S2. Monthly average temperatures (°C ± SEM) evaluated from June 2005 to May 2006 in preserved (PM) and disturbed (DM) *Posidonia oceanica* meadows

Table S1. Number of days per month in which photosynthetic photon flux density (PPFD) mean values measured at T-I (from 5:00/7:00 – 11:00 h), T-II (11:00 – 15:00 h) and T-III (15:00 – 18:00/20:00 h) day intervals in preserved (PM) and disturbed (DM) *Posidonia oceanica* meadows were lower than the irradiance compensation mean value (I_c), higher than the saturating irradiance mean value (I_k), or ranged between the I_c and I_k estimated for *Posidonia oceanica* by Lee et al. (2007). The value 1 was assigned to days with PPFD means measured at the considered irradiance condition ($\leq I_c$, ranging between $\bar{I}_c$ and $\bar{I}_k$ or $\geq \bar{I}_k$), and the value 0 to the remaining days outside of these conditions. Statistical differences reported for each DM were referred to the corresponding PM period and analyzed using 1-way ANOVA followed by Bonferroni post-hoc test; *p < 0.05, ***p < 0.001

PPFD mean value	Meadow	Jun 05	Jul	Aug	Sept	Oct	Nov	Dec	Jan 06	Feb	Mar	Apr	May	Sum of days
$\leq \bar{I}_c$ [a]	PM T-I	6	0	1	1	0	5	17	23	6	15	2	0	76
$\geq \bar{I}_k$ [b]		0	3	0	1	0	0	0	0	0	0	0	0	4
$\bar{I}_c \leq x \leq \bar{I}_k$		9	27	30	28	29	24	14	8	22	16	28	16	251
$\leq \bar{I}_c$ [a]	PM T-II	5	0	0	0	0	6	11	16	3	7	0	0	48
$\geq \bar{I}_k$ [b]		8	29	24	24	26	18	0	0	2	1	15	16	163
$\bar{I}_c \leq x \leq \bar{I}_k$		1	1	7	6	3	5	20	15	23	23	15	1	135
$\leq \bar{I}_c$ [a]	PM T-III	6	0	2	0	1	10	31	29	9	17	2	0	107
$\geq \bar{I}_k$ [b]		1	3	5	0	3	0	0	0	0	0	0	0	12
$\bar{I}_c \leq x \leq \bar{I}_k$		8	27	24	30	25	19	0	2	19	14	28	16	212
Total PM	$\leq \bar{I}_c$ [a]													232
Total PM	$\geq \bar{I}_k$ [b]													164
Total PM	$\bar{I}_c \leq x \leq \bar{I}_k$													598
$\leq \bar{I}_c$ [a]	DM T-I	6	0	0	0	0	11	23	22	28***	27*	30***	16***	163
$\geq \bar{I}_k$ [b]		2	3	5	2	0	0	0	0	0	0	0	0	12
$\bar{I}_c \leq x \leq \bar{I}_k$		7	27	26	28	29	18	8	9	0***	4***	0***	0***	156
$\leq \bar{I}_c$ [a]	DM T-II	6	0	0	0	0	8	18	9	19***	23***	30***	17***	130
$\geq \bar{I}_k$ [b]		8	25	29	24	23	13	0	0	0	0	0***	0***	122
$\bar{I}_c \leq x \leq \bar{I}_k$		1	5	3	6	6	8	13	22	9***	8***	0***	0	81
$\leq \bar{I}_c$ [a]	DM T-III	6	1	0	1	1	14*	31	31	28***	31***	30***	16***	190
$\geq \bar{I}_k$ [b]		2	1	1	1	0	0	0	0	0	0	0	0	5
$\bar{I}_c \leq x \leq \bar{I}_k$		7	28	30	28	28	15	8	0	0***	0***	0***	0***	144
Total DM	$\leq \bar{I}_c$ [a]													483
Total DM	$\geq \bar{I}_k$ [b]													139
Total DM	$\bar{I}_c \leq x \leq \bar{I}_k$													373

[a] $\bar{I}_c = 7.8 \pm 1.8$ µmol m^{-2} s^{-1}

[b] $\bar{I}_k = 73.3 \pm 16.1$ µmol m^{-2} s^{-1}

Table S2. *Posidonia oceanica*. Chlorophyll *a*/*b* ratios (±SEM) in leaves of plants sampled from preserved (PM) and disturbed meadows (DM) at different periods and from aquaria at L1 and L2 light conditions (see Table S1 for definitions). YL: young leaf, IL: intermediate leaf, AL: adult leaf

Sampling site	Chl *a*/*b* ratio		
	YL	IL	AL
(A) Meadows (Sea)			
June 2005			
PM	1.94 ± 0.03	2.00 ± 0.04	1.96 ± 0.07
DM	2.06 ± 0.01	2.14 ± 0.06	1.91 ± 0.05
November 2005			
PM	2.17 ± 0.06	2.09 ± 0.02	2.06 ± 0.05
DM	2.17 ± 0.05	2.27 ± 0.09	1.87 ± 0.09
April 2006			
PM	1.93 ± 0.06	1.81 ± 0.10	1.91 ± 0.08
DM	2.04 ± 0.08	2.15 ± 0.14	1.93 ± 0.05
(B) Aquaria			
April 2006			
PM-L1	2.12 ± 0.03	2.22 ± 0.07	2.13 ± 0.08
PM-L2	2.82 ± 0.09	2.25 ± 0.04	2.15 ± 0.06
DM-L1	2.07 ± 0.06	2.11 ± 0.09	2.24 ± 0.06
DM-L2	2.11 ± 0.04	2.14 ± 0.08	2.10 ± 0.12