Life history events of eelgrass Zostera marina L. populations across gradients of latitude and temperature

S. E. Blok, B. Olesen, D. Krause-Jensen*

*Corresponding author: dkj@bios.au.dk

Marine Ecology Progress Series 590: 79-93 (2018)

Table S1. Average, minimum (min) and maximum (max) of daily photoperiod associated with various life history events of *Zostera marina* across the distribution range. Number of observations (n) is indicated.

Life-history event	Photoperiod (h)	n
	Average (min-max)	
Start of flowering period	12.8 (9.4-16.0)	25
Peak of flowering period	13.6 (11.9-16.6)	19
End of flowering period	13.2 (10.5-16.2))	16
Start of mature seed formation	13.8 (11.9-15.1)	11
Peak of mature seed formation	13.9 (11.9-14.6)	17
Start of seedling emergence	11.3 (9.0-16.0)	20

Table S2. Relationships between the daily photoperiod (h) associated with the various lifehistory events and latitude (^oN) of the studied *Zostera marina* populations. For each dependent variable, the estimated slope of the regression line with latitude is shown with standard error (SE) and coefficient of determination (R²). Number of observations (n) is given in Table S1. Significance levels: *p < 0.05, **p < 0.01, ***p < 0.001.

Dependent variable	Estimate	SE	R^2
Monthly photoperiod associated with:			
Start of flowering period	0.255***	0.036	0.667
Peak of flowering period	0.087**	0.029	0.269
End of flowering	-0.048	0.049	-0.003
Start of mature seed formation	0.112	0.056	0.226
Peak of mature seed formation	0.061**	0.0176	0.411
Start of seedling emergence	0.1059*	0.0417	0.222



Fig. S1. Mean monthly photoperiod associated with the occurrence of various life-history events of *Zostera marina* as a function of latitude of the population. The life history events are: start (a), peak (c), and end (e) of the flowering period, start (b) and peak (d) of mature seed formation and emergence of seedlings (f). Annual, perennial and mixed populations are marked with different symbols to show that in spite of differing reproductive strategy they follow the same general relationships between phenology and latitude/temperature. The solid lines indicate a significant linear regression; the dashed lines are the upper and lower 95% confidence interval. Regression statistics are given in Table S2.