

Source-sink imbalance increases with growth temperature in the spring geophyte *Erythronium americanum*. A Gandin, S Gutjahr, P Dizengremel, and L Lapointe

SUPPLEMENTARY DATA

Table S1. Effects of growth temperature on the rates of change through time and on either maximum or minimum values reached for different parameters related to growth, gas exchange, chlorophyll fluorescence, bulb carbohydrates and enzyme activities in *Erythronium americanum*. Rates of change were estimated from the slope of linear regressions. F-values of one-way ANOVAs are presented along with statistical differences: * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

Variables	Comparisons of slopes from linear regressions		ANOVAs on maximal or minimal values ¹	Days when maxima or minima were reached		
	Positive slope	Negative slope		18/14°C	12/8°C	8/6°C
Growth parameters						
Bulb DW	70.54 ***	-	444.58 ***	17	29	29
Leaf DW	0.10	1.92	6.37 **	11	13	17
Root DW	-	1.47	0.62	7	10	9
Leaf area	0.65	-	98.47 ***	11	22	29
Bulb cell size	32.44	-	76.21 ***	11	16	25
Gas exchange and fluorescence						
Pn 400	7.03 **	10.31 ***	77.88 ***	9	13	21
g _s 400	7.48 **	9.56 **	8.43 ***	11	19	21
Ci 400	0.34	-	-	-	-	-
Pn 1000	12.29 ***	10.51 ***	23.28 ***	9	13	21
g _s 1000	0.48	7.42	0.86	9	19	29
Ci 1000	0.47	-	-	-	-	-
Rd	-	-	0.39	-	-	-
qP 400	-	37.04 ***	125.20 ***	9	13	29
qN 400	2.75 **	-	2.34 *	9	13	-
Fv/Fm	0.50	8.94 ***	11.79 ***	13	13	24
ΦPS2	6.76 **	9.48 ***	17.12 ***	9	13	21
PR	-	6.39 ***	10.86 ***	7	10	13
Bulb carbohydrates						
Starch	12.02 ***	-	0.169	15	22	29
Sucrose	-	1.17 *	7.49 ***	7	19	29
Reducing sugars	0.54	0.83	0.18	3	4	5
Sucrose (starchless)	7.43*	2.45*	8.61 *	22	22	29
Red. sugars (starchless)	1.76	0.19	23.92 **	15	22	29
Amylose	0.98	0.66	4.30 *	15	25	33

Days at which either a maximum or minimum value was reached are also presented.

Table S1. (continued)

Variables	Comparisons of slopes from linear regressions		ANOVAs on maximal or minimal values ¹	Days when maxima or minima were reached		
	Positive slope	Negative slope		18/14°C	12/8°C	8/6°C
Leaf carbohydrates						
Sucrose	5.83**	0.16	0.97	15	25	33
Reducing sugars	1.27	-	2.12	9	13	17
Enzymes						
F1,6BPase	-	0.77	36.70 ***	17	25	33
AGPase	2.05	-	0.63	7	10	17
Susy	89.14 ***	-	3.27 *	13	22	33
Cell wall invertase	-	8.36 ***	0.88	-	-	-
Neutral invertase	4.84 *	1.82	9.87 **	7	10	13
Vacuolar invertase	1.11	0.09	23.59 ***	7	16	29
SPS	0.38	-	32.94 ***	13	22	29
Leaf protein	-	2.98	0.67	-	-	-
Bulb protein	1.62	0.96	1.87	15	22	21

¹ANOVAs were carried out on maximum values of each variable to compare among growth temperatures, except for the following variables: Root DW, Rd, qN, Sucrose, Reducing sugars and Bulb protein where ANOVAs were carried out on minimum values. When there was no obvious peak or plateau, only comparisons of rates of change were performed and vice versa.