

**Table S1.** The results of two-way ANOVA for the effects of ethylene and accession on the elongation of the 3<sup>rd</sup> oldest petioles of *R. palustris* in 3 d in Figure 1D.

	DF	F value
		Elongation
Ethylene	4	18.20***
Accession	1	43.32***
Ethylene×accession	4	2.64\$

F-values and their significance are given. Significance levels are as follows: \$:  $0.05 < P < 0.1$ ; \*\*\*:  $P < 0.001$ .

**Table S2.** The results of three-way ANOVA for the effects of treatment, accession, and time on concentrations of soluble sugars, fructans and starch in the shoots and roots of *R. palustris* in Figure 2.

	DF	F value					
		Shoot soluble sugars	Shoot fructans	Shoot starch	Root soluble sugars	Root fructans	Root starch
Treatment	1	93.97***	63.39***	53.97***	63.51***	1.27ns	0.04ns
Accession	1	3.81\$	1.37ns	0.40ns	9.00**	0.53ns	5.73*
Time	3	1.94ns	2.88*	0.50ns	1.70ns	1.03ns	2.29\$
Treatment×accession	1	2.99\$	1.82ns	0.09ns	0.02ns	0.39ns	0.32ns
Treatment×time	2	0.68ns	0.81ns	1.58ns	6.59**	2.13ns	0.67ns
Accession×time	3	0.19ns	1.57ns	0.57ns	0.70ns	0.28ns	2.68\$
Treatment×accession×time	2	1.16ns	1.08ns	0.22ns	0.71ns	0.19ns	0.19ns

F-values and their significance are given. Significance levels are as follows: ns:  $P > 0.1$ ; \$:  $0.05 < P < 0.1$ ; \*:  $0.01 < P < 0.05$ ; \*\*:  $0.001 < P < 0.01$ ; \*\*\*:  $P < 0.001$ .

**Table S3.** The results of three-way ANOVA for the effects of treatment, accession and ABA on the elongation of the 3<sup>rd</sup> oldest petioles of *R. palustris* in 3 d in Figure 3C.

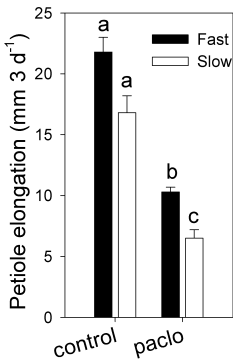
	DF	F value
		Elongation
Treatment	1	2140.20***
Accession	1	96.25***
ABA	3	99.93***
Treatment×accession	1	231.37***
Treatment×ABA	3	104.25***
Accession×ABA	3	19.10***
Treatment×accession×ABA	3	18.19***

F-values and their significance are given. Significance levels are as follows: \*\*\*:  $P < 0.001$ .

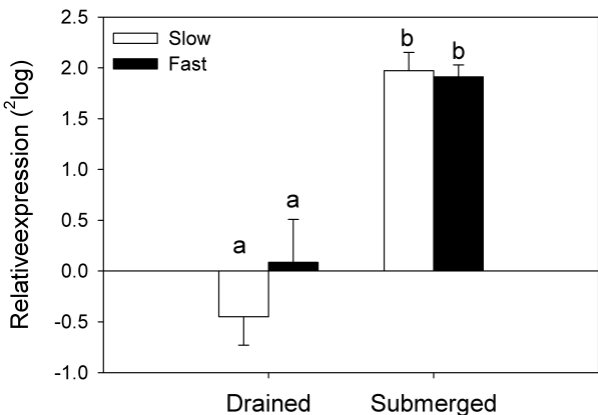
**Table S4.** The results of three-way ANOVA for the effects of treatment, accession and GA on the elongation of the 3<sup>rd</sup> oldest petioles of *R. palustris* in 3 d in Figure 4.

	DF	F value
		Elongation
Treatment	1	2852.58***
Accession	1	225.02***
GA	4	9.55***
Treatment×accession	1	135.13***
Treatment×GA	4	1.01ns
Accession×GA	4	0.56ns
Treatment×accession×GA	4	1.37ns

F-values and their significance are given. Significance levels are as follows: ns:  $P > 0.1$ ; \*\*\*:  $P < 0.001$ .



**Figure S5.** Submergence-induced petiole elongation rates over 3 d in the fast and slow *R. palustris* accessions, either or not pre-treated with the GA biosynthesis inhibitor paclobutrazol. Data are means  $\pm$  SE, n=10.



**Figure S6.** Relative transcript abundance of the *R. palustris* *EXPANSIN A1* gene (*RpEXP11*) in the 3rd oldest petiole of the slow (open bars) and fast (closed bars) accessions after 6 h of submerged and drained control treatments. Values are measured with real-time RT-PCR with tubulin as internal standard, relative to the value at  $t=0$  and  $2\log$  transformed. Data are mean  $\pm$  SE,  $n=5-6$ . Different letters indicate significant differences (Games-Howell test,  $P<0.05$ ).