

**Aquatic and terrestrial morphotypes of the aquatic invasive plant, *Ludwigia grandiflora*
show distinct morphological and metabolomic responses.**

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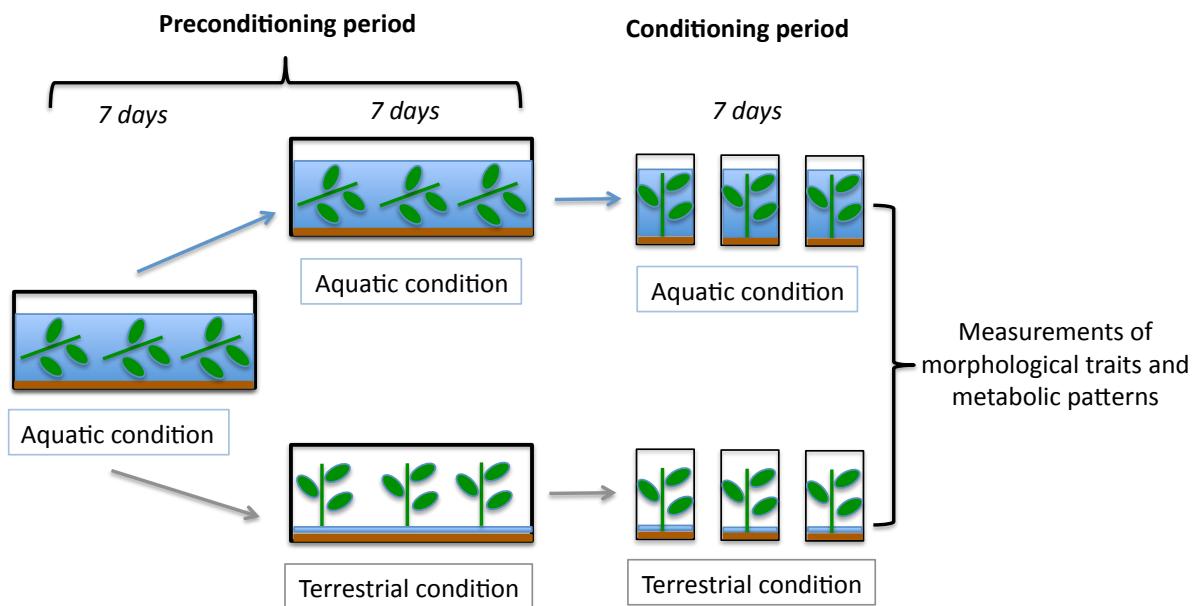


Figure S1: Experimental design of preconditioning and conditioning periods

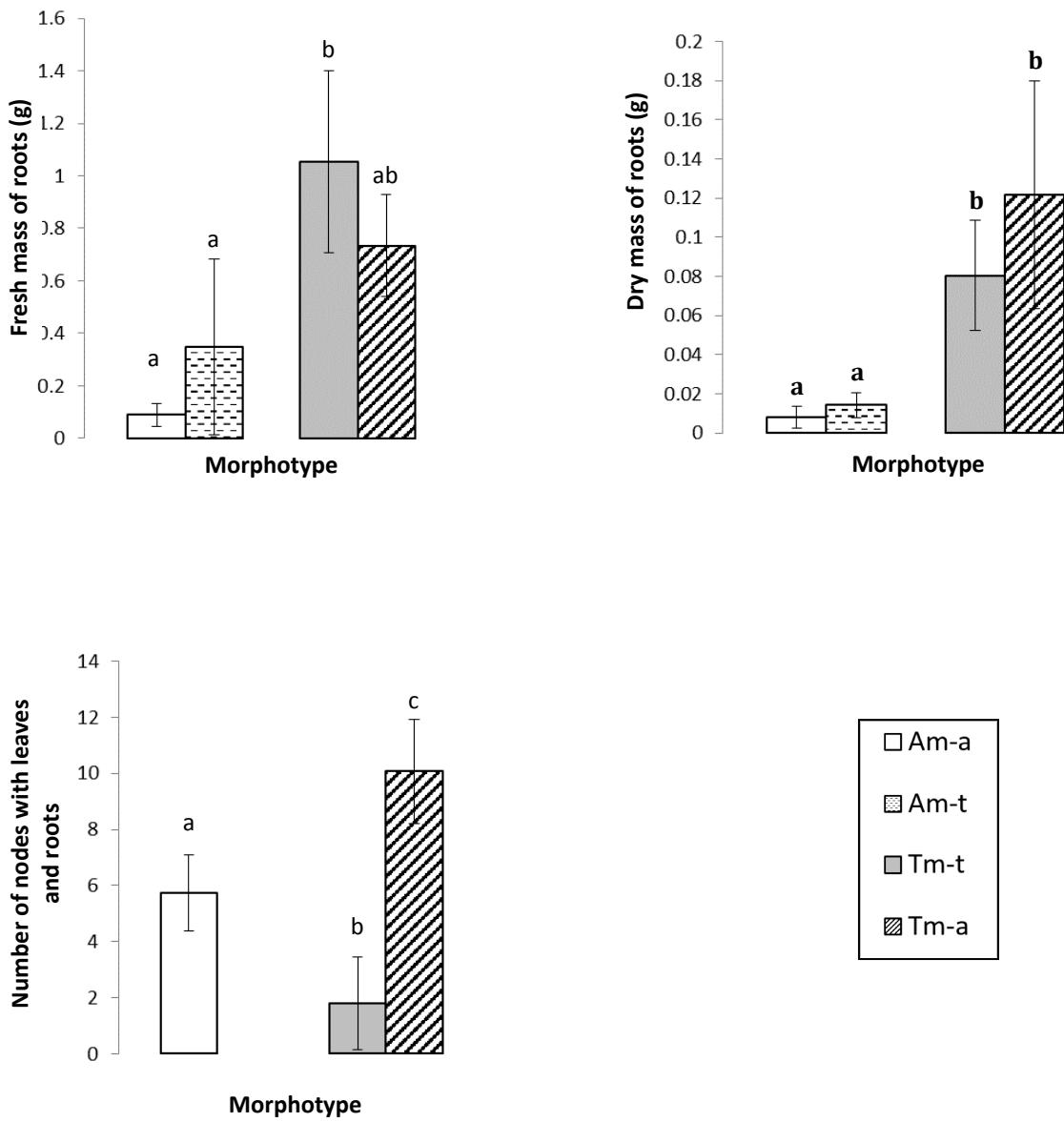


Figure S2: Variation of morphological traits of *L. grandiflora* in aquatic or terrestrial conditions

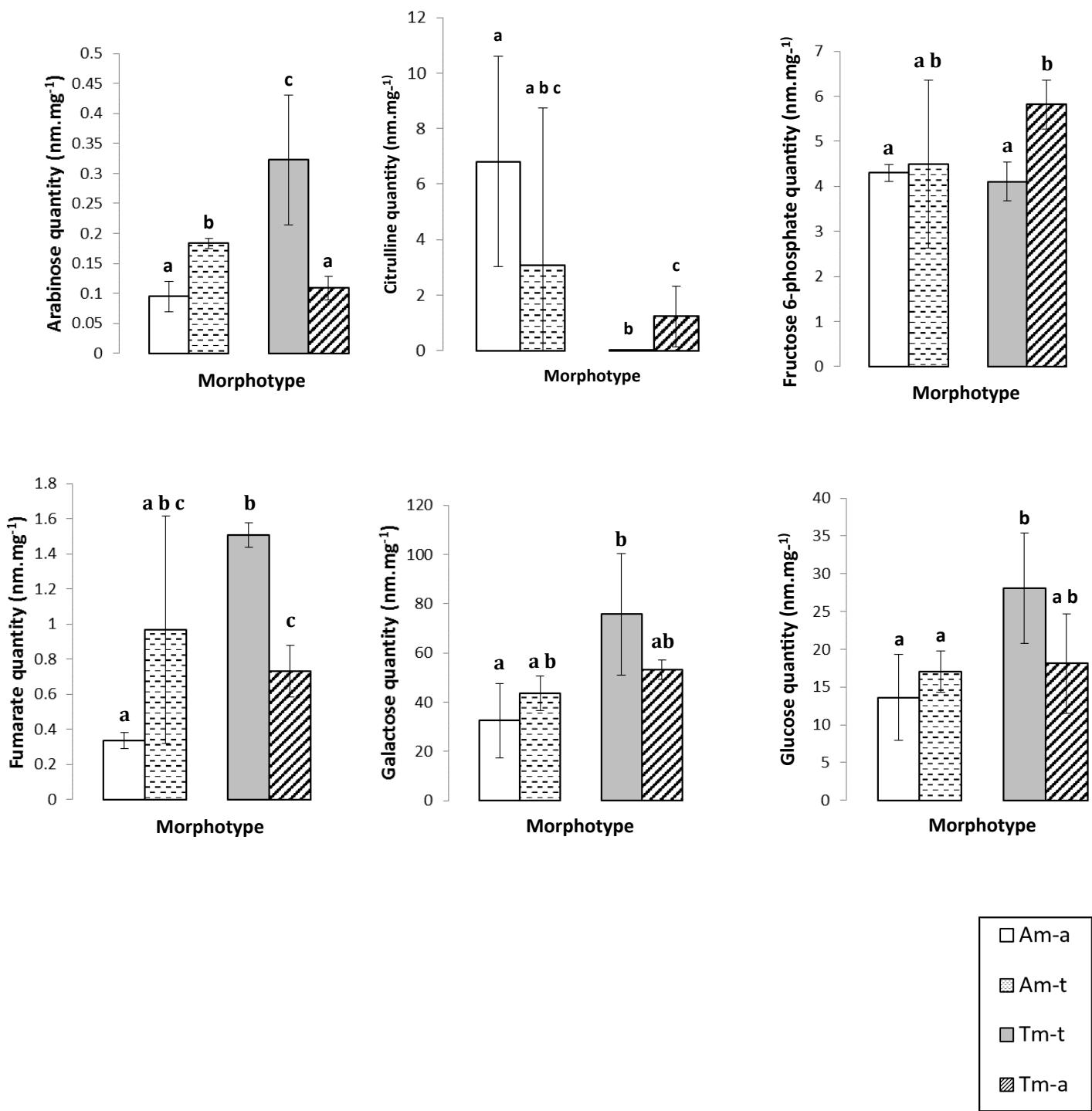


Figure S3: Changes in different metabolites involved in shoots *L. grandiflora* responses to aquatic or terrestrial conditions. Am-a and Am-t = aquatic morphotype in aquatic or terrestrial conditions; Tm-a and Tm-t = terrestrial morphotype in aquatic or terrestrial conditions, respectively. Same letter indicates non-different values ($\alpha=0.05$).

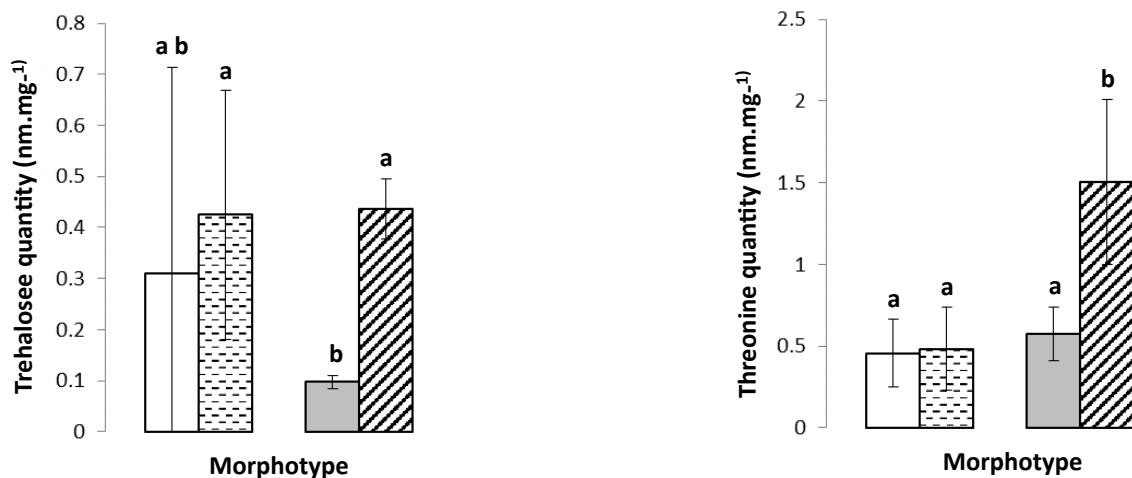
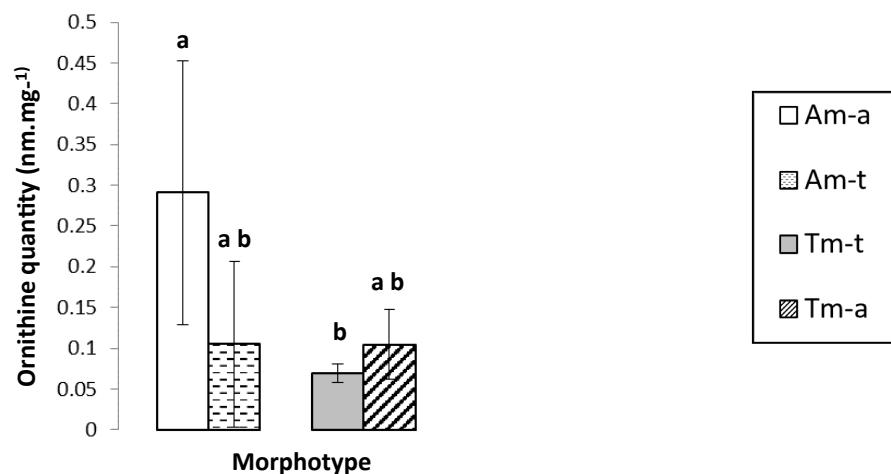
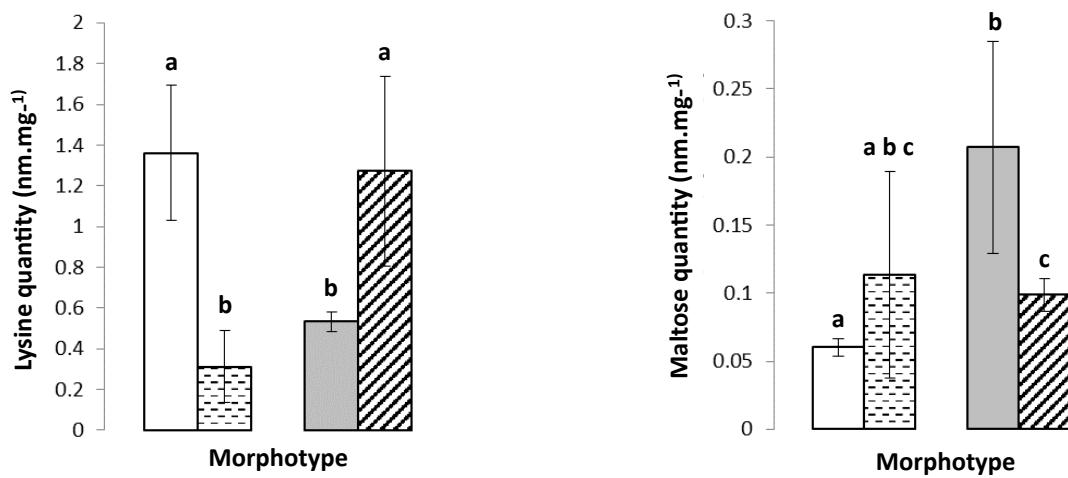


Figure S3: continued

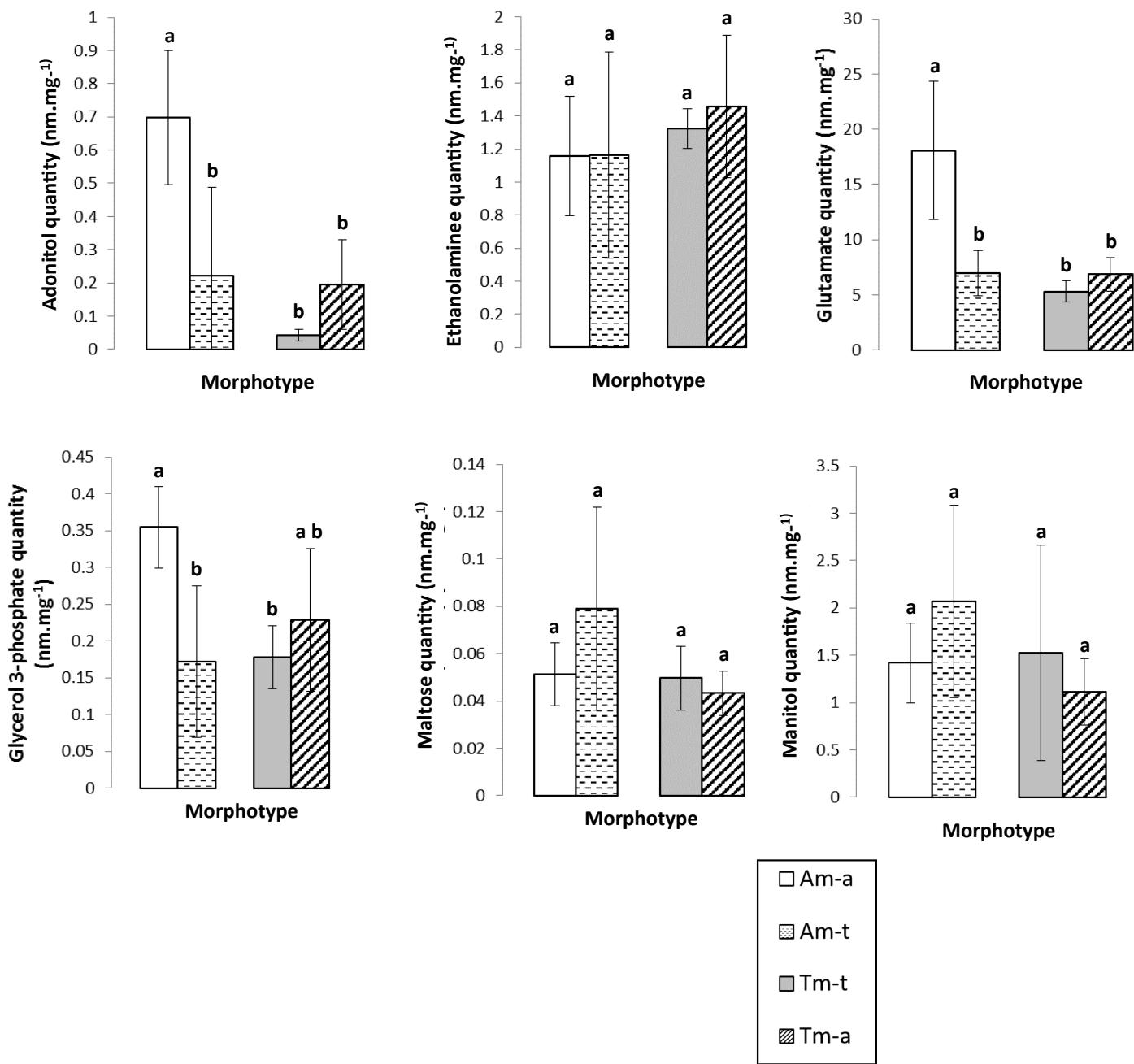


Figure S4: Changes in different metabolites involved in roots *L. grandiflora* responses to aquatic or terrestrial conditions. Am-a and Am-t = aquatic morphotype in aquatic or terrestrial conditions; Tm-a and Tm-t = terrestrial morphotype in aquatic or terrestrial conditions, respectively. Same letter indicates non-different values ($\alpha=0.05$).

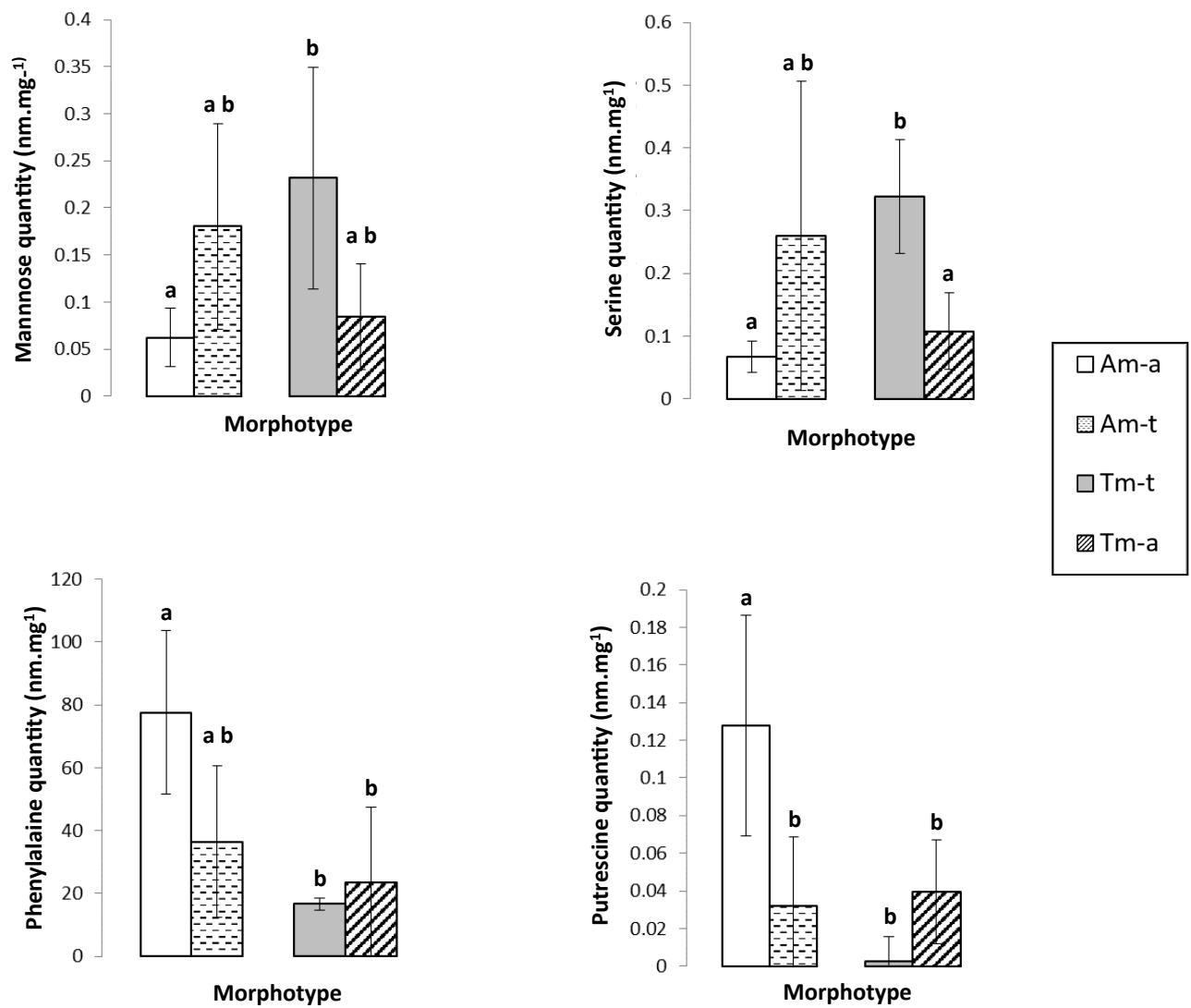


Figure S4 : continued

Table S1: List of Log and Cos transformed data

Morphological trait	Metabolites	
	Tige	Racine
LP	Alaline	Clucose
NbB	Aspartate	Galactose
FMS	F6P	Glutamate
DMS	Glycerate	Glycerol 3P
FMR	Isoleucine	Mannitol
DMR	Leucine	Mannose
Rr	Ornithrine	Serine
rr	Threonine	