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Functional Plant Biology

Supplementary Material

Photochemical attributes determine the responses of plant species from different functional groups of ferruginous outcrops when grown in iron mining substrates

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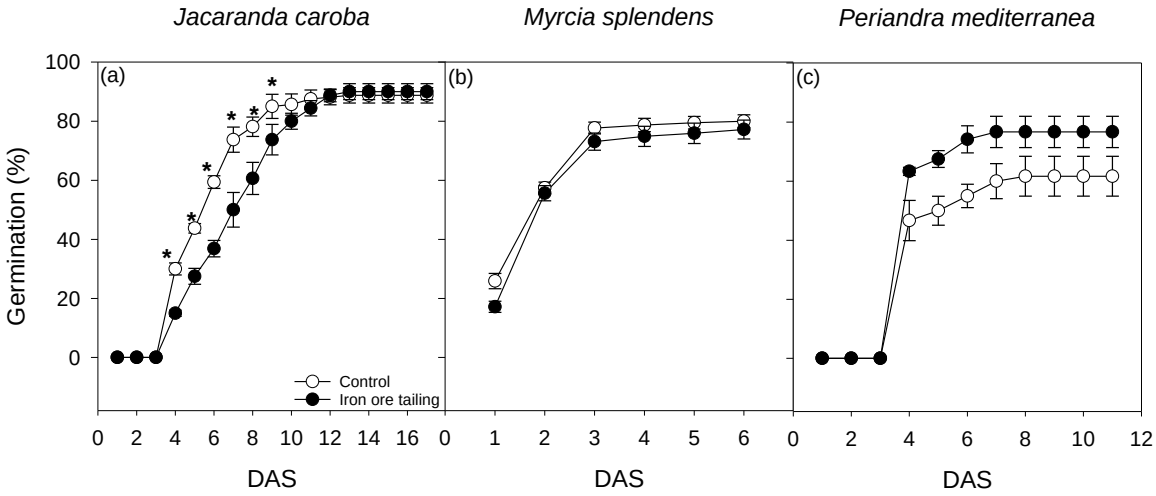

Figure S1. Percentage of germination performed during the experiment with *J. caroba* (deciduous shrub), *M. splendens* (widespread evergreen) and *P. mediterranea* (nitrogen-fixing) in control and iron ore tailings treatments. * means that there was statistical interaction between substrates and DAS, according to Tukey's test at 5% probability.

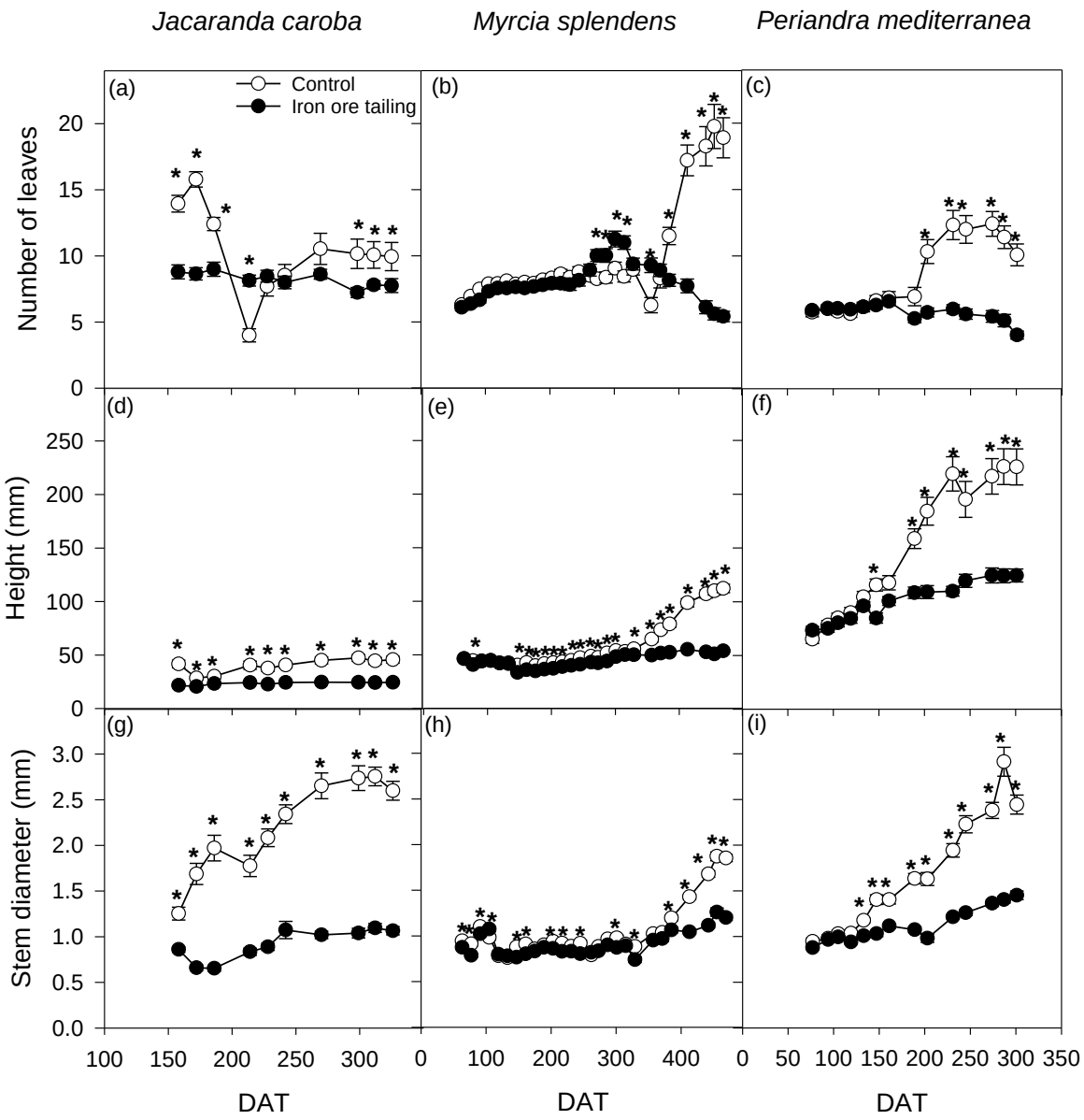

Figure S2. Non-destructive morphological assessments. Number of leaves, plant height and stem diameter performed throughout the experiment with *J. caroba* (deciduous shrub), *M. splendens* (widespread evergreen) and *P. mediterranea* (nitrogen-fixing) in control and iron ore tailings treatments. * means that there was statistical interaction between substrates and days after treatment (DAT), according o Tukey's test at 5% probability.

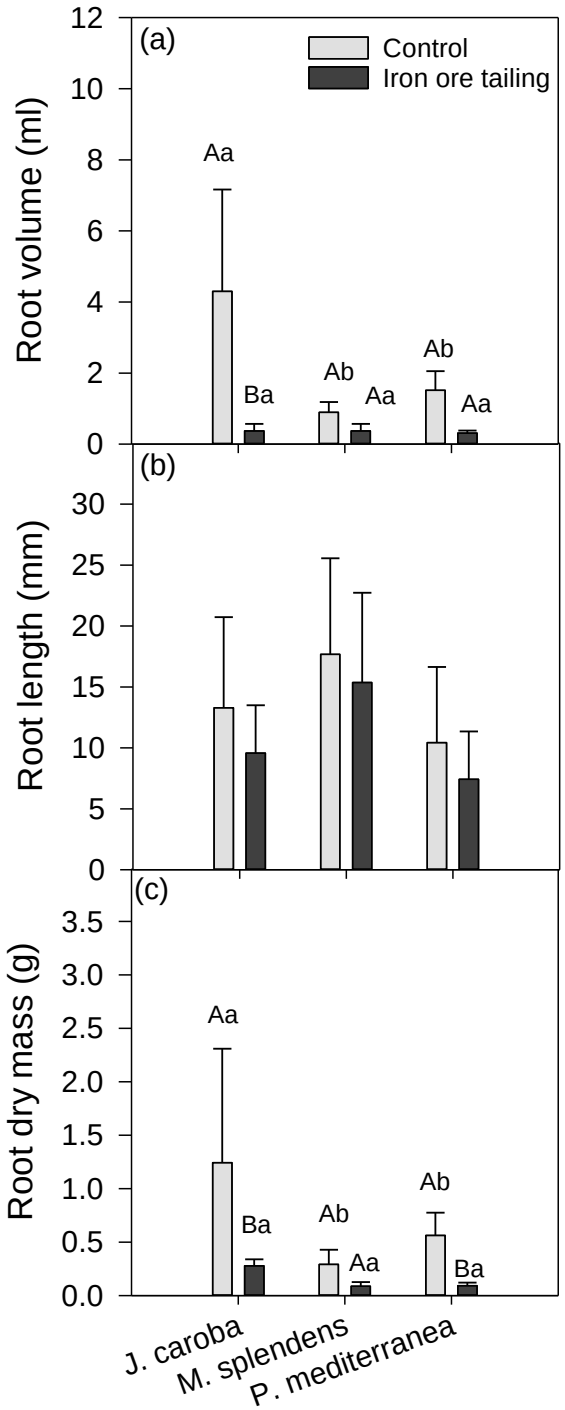

Figure S3. Root volume, length and dry mass performed at the end of the experiment with *J. caroba* (deciduous shrub), *M. splendens* (widespread evergreen) and *P. mediterranea* (nitrogen-fixing) in control and iron ore tailings treatments. Capital letters mean statistical difference between substrates for each species and lowercase letters mean statistical difference between species for each substrate, according to Tukey's test at 5% probability.

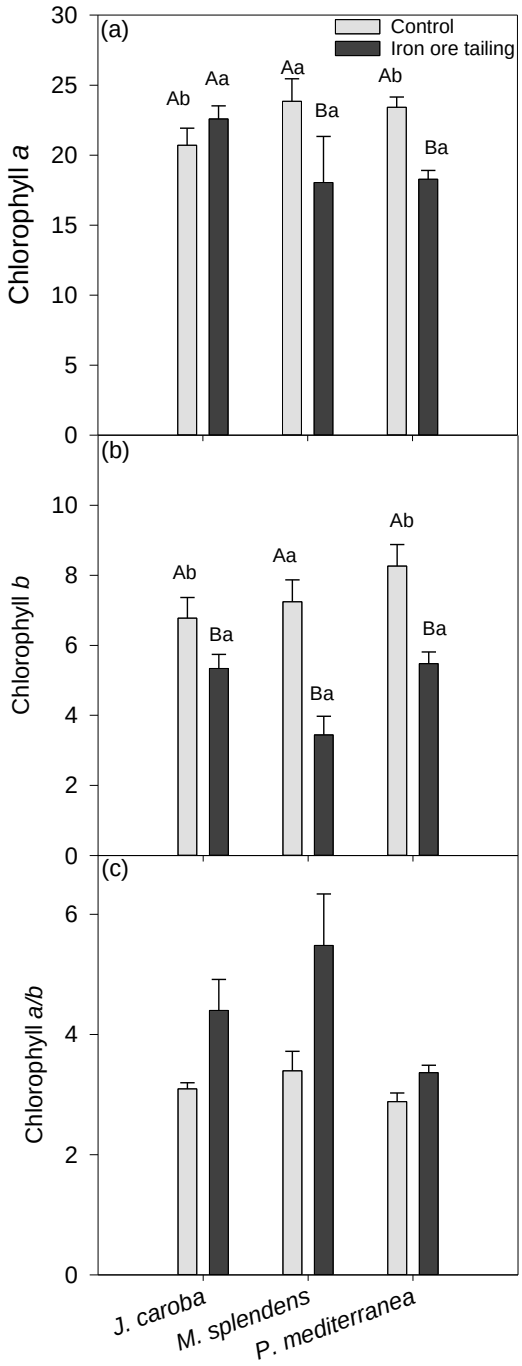

Figure S4. Chlorophyll *a*, *b* and *a/b* indices performed at the end of the experiment with *J. caroba* (deciduous shrub), *M. splendens* (widespread evergreen) and *P. mediterranea* (nitrogen-fixing) in control and iron ore tailings treatments. Capital letters mean statistical difference between substrates for each species and lowercase letters mean statistical difference between species for each substrate, according to Tukey's test at 5% probability.

Table S1. Analysis of variance (ANOVA) for biometric analysis of *J. caroba*, *M. splendens* and *P. mediterranea* seeds

Analysis of variance	Fresh biomass	Length	Width	Thickness
Species	***	***	***	***

*Significant difference between substrates according to the Tukey test at $p < 0.05$.** Significant difference between substrates according to the Tukey test at $p < 0.01$.*** Significant difference between species according to the Tukey test at $p < 0.001$. n.s., not significant difference between species according to the Tukey test at $p \leq 0.05$.

Table S2. Analysis of variance (ANOVA) for each of the factors plant species (sp), substrate (S) and the interaction between them (S x sp)

Analysis of variance	W_T	LA	FA	LMA	*R*	*NAR*	LER	LLS	LEI	Chl total	Chl *a*	Chl *b*
Block	n.s.	**	n.s.	n.s.	n.s.	n.s.	***	n.s.	***	***	***	*
Substrate (S)	***	***	n.s.	n.s.	***	***	***	n.s.	n.s.	***	***	***
Species (sp)	***	***	***	***	***	***	***	***	***	***	***	***
S × sp	***	***	n.s.	n.s.	***	***	***	n.s.	**	***	***	***

Analysis of variance	Chl *a/b*	F_0	F_v/F_m	ϕ_{PSII}	ϕ_{NPQ}	ϕ_{NO}	N_{shoot}	N_{root}	Vol_{root}	$Length_{root}$	$Dry\ mass_{root}$
Block	n.s.	*	n.s.	n.s.	*	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Substrate (S)	***	***	**	n.s.	n.s.	n.s.	n.s.	***	***	*	***
Species (sp)	n.s.	***	***	***	***	n.s.	*	***	**	*	***
S × sp	n.s.	***	***	***	***	n.s.	***	***	**	n.s.	**

*Significant difference between substrates according to the Tukey test at $p < 0.05$.** Significant difference between substrates according to the Tukey test at $p < 0.01$.*** Significant difference between substrates according to the Tukey test at $p < 0.001$. n.s., not significant difference between substrates according to the Tukey test at $p \leq 0.05$.