Annexes Chapitre II : Light intensity mediates phenotypic plasticity and leaf trait regionalisation in a tank bromeliad

Table S2: Table summary of linear models output for plant traits according to the transmitted light (%). Are presented for each traits the estimates (mean and standard deviation) of the linear models' coefficients, t-statistic, R^2, and associated p-value. Models were performed on log-transformed variables and estimates must be back-transformed to get biological values. Bold p-values indicate significance ($p < 0.05$).

Variables		Estimates: mean ± se	t Statistic	R^2	p value
Number of leaves	Intercept	2.7302 ± 0.0667	40.96		**<0.001**
	Light	-0.0062 ± 0.0017	-3.70	0.43	**0.002**
Plant diameter	Intercept	4.9620 ± 0.1000	49.60		**<0.001**
	Light	-0.0175 ± 0.0025	-6.90	0.73	**<0.001**
Plant Height	Intercept	4.4964 ± 0.0749	60.03		**<0.001**
	Light	-0.0093 ± 0.0019	-4.90	0.57	**<0.001**
Leaf length	Intercept	4.5892 ± 0.0838	54.76		**<0.001**
	Light	-0.0115 ± 0.0021	-5.40	0.62	**<0.001**
Leaf width	Intercept	1.7759 ± 0.0404	43.94		**<0.001**
	Light	0.0077 ± 0.0010	7.50	0.76	**<0.001**
Stomatal density	Intercept	3.5494 ± 0.0401	88.42		**<0.001**
	Light	-0.0032 ± 0.0010	-3.15	0.36	**0.006**
Chlorophyll	Intercept	2.1876 ± 0.1292	16.93		**<0.001**
	Light	-0.0316 ± 0.0033	-9.65	0.84	**<0.001**
ETRmax	Intercept	4.2548 ± 0.0911	46.69		**<0.001**
	Light	-0.0061 ± 0.0023	-2.66	0.28	**0.016**
FvFm	Intercept	-0.1621 ± 0.0249	-6.51		**<0.001**
	Light	-0.0035 ± 0.0006	-5.57	0.63	**<0.001**
Leaf C	Intercept	6.0485 ± 0.0048	1248.51		**<0.001**
	Light	0.0004 ± 0.0001	3.08	0.35	**0.006**
Leaf soluble sugars	Intercept	2.6268 ± 0.1004	26.15		**<0.001**
	Light	0.0071 ± 0.0025	2.78	0.3	**0.012**
Leaf starch	Intercept	1.6642 ± 0.2079	8.00		**<0.001**
	Light	0.0081 ± 0.0053	1.54	0.12	0.142
Leaf N	Intercept	2.0113 ± 0.0862	23.32		**<0.001**
	Light	-0.0103 ± 0.0022	-4.73	0.55	**<0.001**
Leaf P	Intercept	-0.5629 ± 0.0911	-6.18		**<0.001**
	Light	-0.0111 ± 0.0023	-4.79	0.56	**<0.001**

Table S3: Table summary of linear models output for plant traits according to transmitted light (%) and position on the leaf blade. Are presented the estimates (mean and standard deviation) of the linear models' coefficients, t-statistic, R^2, and associated p-value. Models were performed on log-transformed variables and estimates must be back-transformed to get biological values. Bold p-values indicate significance ($p < 0.05$).

Variables		Estimates: mean ± se	t Statistic	R^2	p value
RWC	Intercept	4.5154 ± 0.0125	360.19	0.12	**<0.001**
	Light	0.0001 ± 0.0003	0.28		0.784
	Position Base	0.0332 ± 0.0177	1.87		0.069
	Light:Position Base	-0.0006 ± 0.0005	-1.22		0.23
LMA	Intercept	4.9283 ± 0.0554	88.96	0.34	**<0.001**
	Light	0.0029 ± 0.0015	1.89		0.067
	Position Base	-0.0914 ± 0.0783	-1.17		0.251
	Light:Position Base	0.0031 ± 0.0021	1.43		0.161
LDMC	Intercept	-2.0134 ± 0.0399	-50.44	0.62	**<0.001**
	Light	0.0004 ± 0.0011	0.40		0.693
	Position Base	-0.3051 ± 0.0565	-5.40		**<0.001**
	Light:Position Base	0.0074 ± 0.0015	4.80		**<0.001**
LS	Intercept	6.7976 ± 0.0337	201.47	0.46	**<0.001**
	Light	0.0024 ± 0.0009	2.57		**0.015**
	Position Base	0.2566 ± 0.0477	5.38		**<0.001**
	Light:Position Base	-0.0054 ± 0.0013	-4.16		**<0.001**
Thickness	Intercept	0.0714 ± 0.0392	1.82	0.58	0.076
	Light	0.0029 ± 0.0011	2.76		**0.009**
	Position Base	0.3354 ± 0.0554	6.05		**<0.001**
	Light:Position Base	-0.0053 ± 0.0015	-3.50		**0.001**
Adaxial trichome density	Intercept	2.4383 ± 0.0808	30.20	0.67	**<0.001**
	Light	0.0089 ± 0.0022	4.05		**<0.001**
	Position Base	0.8620 ± 0.1142	7.55		**<0.001**
	Light:Position Base	-0.0147 ± 0.0031	-4.71		**<0.001**
Abaxial trichome density	Intercept	2.7241 ± 0.0573	47.57	0.62	**<0.001**
	Light	0.0027 ± 0.0016	1.74		0.09
	Position Base	0.3745 ± 0.0810	4.62		**<0.001**
	Light:Position Base	-0.0024 ± 0.0022	-1.07		0.291
Adaxial trichome surface	Intercept	-3.2348 ± 0.0709	-45.62	0.4	**<0.001**
	Light	0.0006 ± 0.0019	0.33		0.741
	Position Base	-0.3662 ± 0.1003	-3.65		**<0.001**
	Light:Position Base	0.0065 ± 0.0027	2.36		**0.024**
Abaxial trichome surface	Intercept	-3.0963 ± 0.0594	-52.16	0.8	**<0.001**
	Light	-0.0012 ± 0.0016	-0.71		0.48
	Position Base	-0.7358 ± 0.0839	-8.77		**<0.001**
	Light:Position Base	0.0083 ± 0.0023	3.63		**<0.001**
Epidermis	Intercept	-3.0204 ± 0.0486	-62.16	0.77	**<0.001**
	Light	0.0024 ± 0.0013	1.85		0.073
	Position Base	0.3188 ± 0.0687	4.64		**<0.001**

Variables		Estimates: mean ± se	t Statistic	R^2	p value
	Light:Position Base	0.0012 ± 0.0019	0.65		0.523
Hydrenchyma	Intercept	-1.2323 ± 0.0681	-18.10	0.93	**<0.001**
	Light	0.0099 ± 0.0019	5.35		**<0.001**
	Position Base	1.4085 ± 0.0963	14.63		**<0.001**
	Light:Position Base	-0.0132 ± 0.0026	-5.01		**<0.001**
Vascular bundle surface	Intercept	-4.8494 ± 0.0811	-59.81	0.75	**<0.001**
	Light	0.0108 ± 0.0022	4.87		**<0.001**
	Position Base	0.9000 ± 0.1147	7.85		**<0.001**
	Light:Position Base	-0.0120 ± 0.0031	-3.82		**<0.001**
Vascular bundle density	Intercept	1.1456 ± 0.0535	21.43	0.66	**<0.001**
	Light	-0.0095 ± 0.0015	-6.51		**<0.001**
	Position Base	-0.4998 ± 0.0756	-6.61		**<0.001**
	Light:Position Base	0.0095 ± 0.0021	4.63		**<0.001**
IVD:VED	Intercept	-0.5864 ± 0.0696	-8.43	0.53	**<0.001**
	Light	0.0068 ± 0.0019	3.59		**<0.001**
	Position Base	-0.1907 ± 0.0984	-1.94		0.06
	Light:Position Base	0.0006 ± 0.0027	0.22		0.829
Fiber density	Intercept	2.5892 ± 0.0837	30.94	0.33	**<0.001**
	Light	-0.0075 ± 0.0023	-3.28		**0.002**
	Position Base	0.0093 ± 0.1183	0.08		0.938
	Light:Position Base	0.0031 ± 0.0032	0.96		0.346

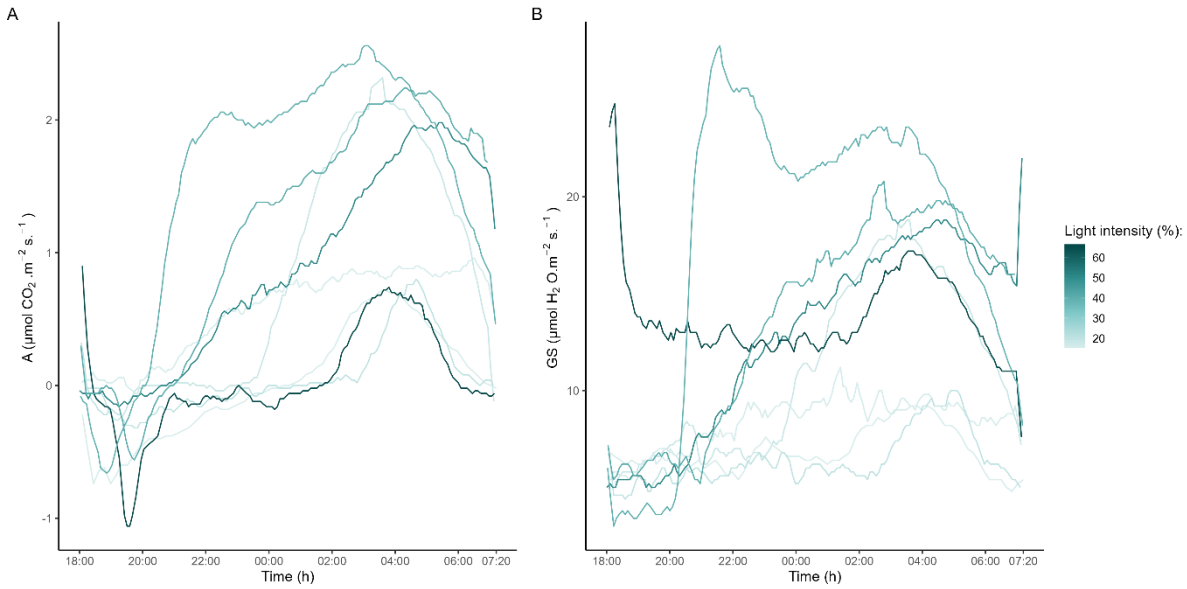

Figure S5: Overnight CO_2 assimilation and stomatal conductance curves. Curves of overnight (A) CO_2 assimilation (A, µmol m^{-2} s^{-1}) and (B) stomatal conductance (Gs, µmol H_2O m^{-2} s^{-1}). Values are rolled means with a window of 5 (zoo R package, rollmean function). These measurements were conducted on 8 plants (light intensity from 15.24 to 66.64%) using a Ciras-3 analyser (PP Systems, Amesbury, U.S.A). All measurements were made at ten-minute intervals throughout the night from 6:00 pm to 7:20 am the following morning. The CO_2 concentration in the leaf chamber was set to 400 ppm, the temperature to 27 °C, and the air flow to 250 µmol s^{-1} while relative humidity and light were left at ambient conditions. Plants were gently unpotted and brought to the laboratory for these measurements.