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Supplementary Material

Divergent responses of above- and below-ground chemical defence to nitrogen and phosphorus supply in waratahs (*Telopea speciosissima*)

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File S1. Supplementary material

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Supplementary tables

Table S1. Mean (± s.e.) plant growth characteristics for *Telopea speciosissima* seedlings supplied with low or high nitrogen (N) concentrations (0.5 mM and 4 mM, respectively) and low or high phosphorus (P) concentrations (5 and 25 μM, respectively) imposed for 15 weeks. For each treatment n = 7, except for high N : high P treatment which had n = 6. Results (*P* values) of two-way general linear models (GLMs) of nitrogen (N) and phosphorus (P) treatments are shown.

Tissue/parameter	Low N : Low P	Low N : High P	High N : Low P	High N : High P	GLM (*P*)		
					N	P	N × P
Number of mature leaves	8.86 ± 0.63	7.43 ± 0.72	12.00 ± 0.53	11.83 ± 0.60	≤0.001	0.556	0.733
Number of young leaves	-	0.14 ± 0.14	0.71 ± 0.36	0.50 ± 0.34	0.042	0.862	0.509
Mature leaf biomass (g DW)	0.19 ± 0.04	0.23 ± 0.03	0.60 ± 0.08	0.61 ± 0.05	≤0.001	0.658	0.824
Young leaf biomass (g DW)	-	0.002 ± 0.002	0.030 ± 0.021	0.029 ± 0.020	0.056	0.992	0.900
Mature leaf area (cm^2)	26.00 ± 5.08	29.86 ± 4.36	75.39 ± 7.44	71.75 ± 5.10	≤0.001	0.925	0.470
Young leaf area (cm^2)	-	0.30 ± 0.03	3.98 ± 2.88	3.32 ± 2.25	≤0.001	0.947	0.378
SLA ($cm^2\ g^{-1}$ DW)	136.06 ± 4.20	130.85 ± 6.71	131.39 ± 8.24	118.15 ± 5.97	0.202	0.341	0.311

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Supplementary figures

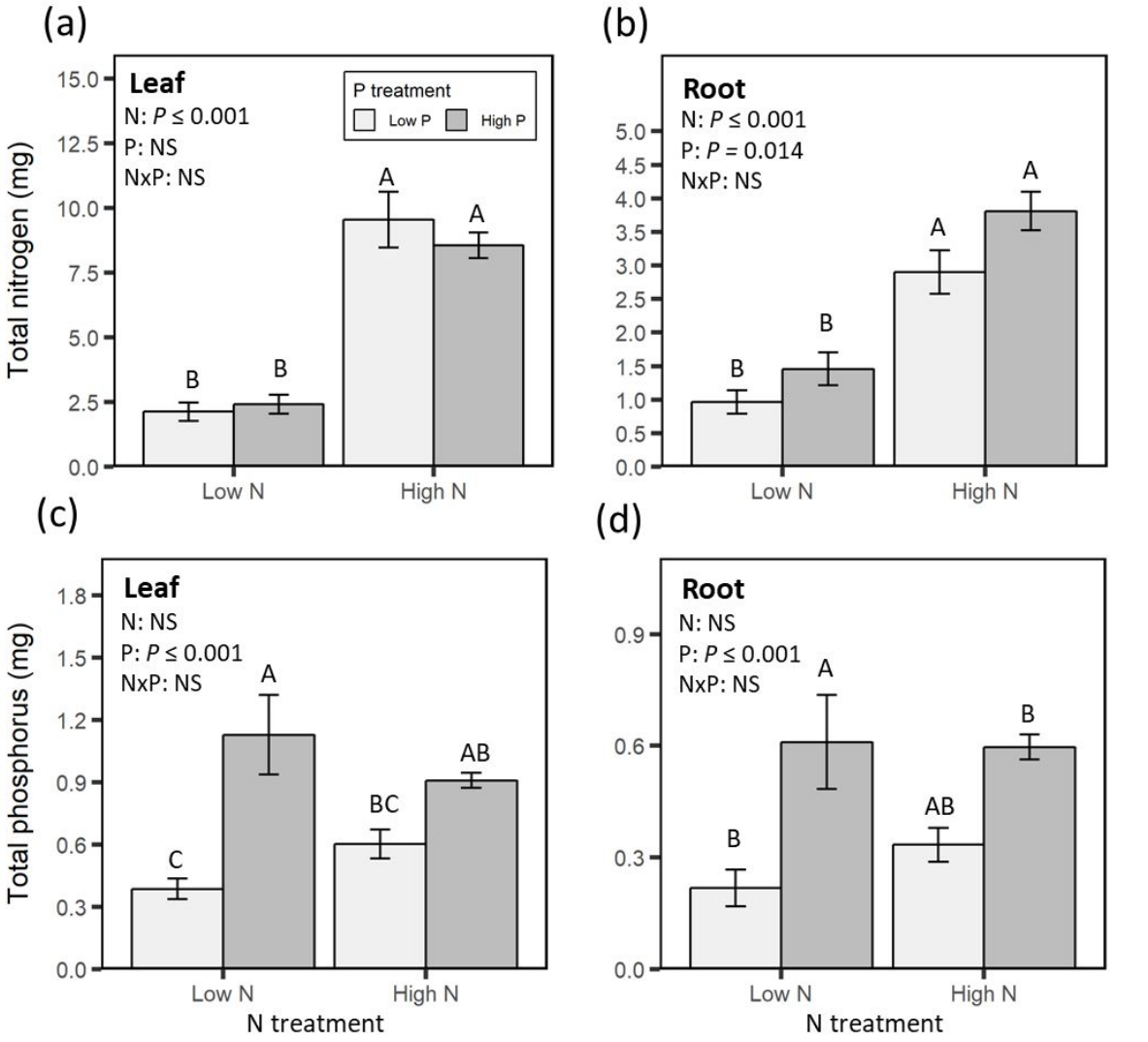

Fig. S1. Nitrogen content (mg) in (a) fully expanded leaves and (b) roots and phosphorus content (mg) in (c) fully expanded leaves and (d) roots of *Telopea speciosissima* seedlings grown in four N and P treatments. Data are means ± s.e. of n = 6–7. Treatments were low (0.5 mM) or high (4 mM) nitrogen and low (5 μM) or high (25 μM) phosphorus, imposed for 15 weeks after potting at two leaf stage. Means that do not share a letter are different at $P < 0.05$; the post hoc Tukey family test was performed on log transformed data.

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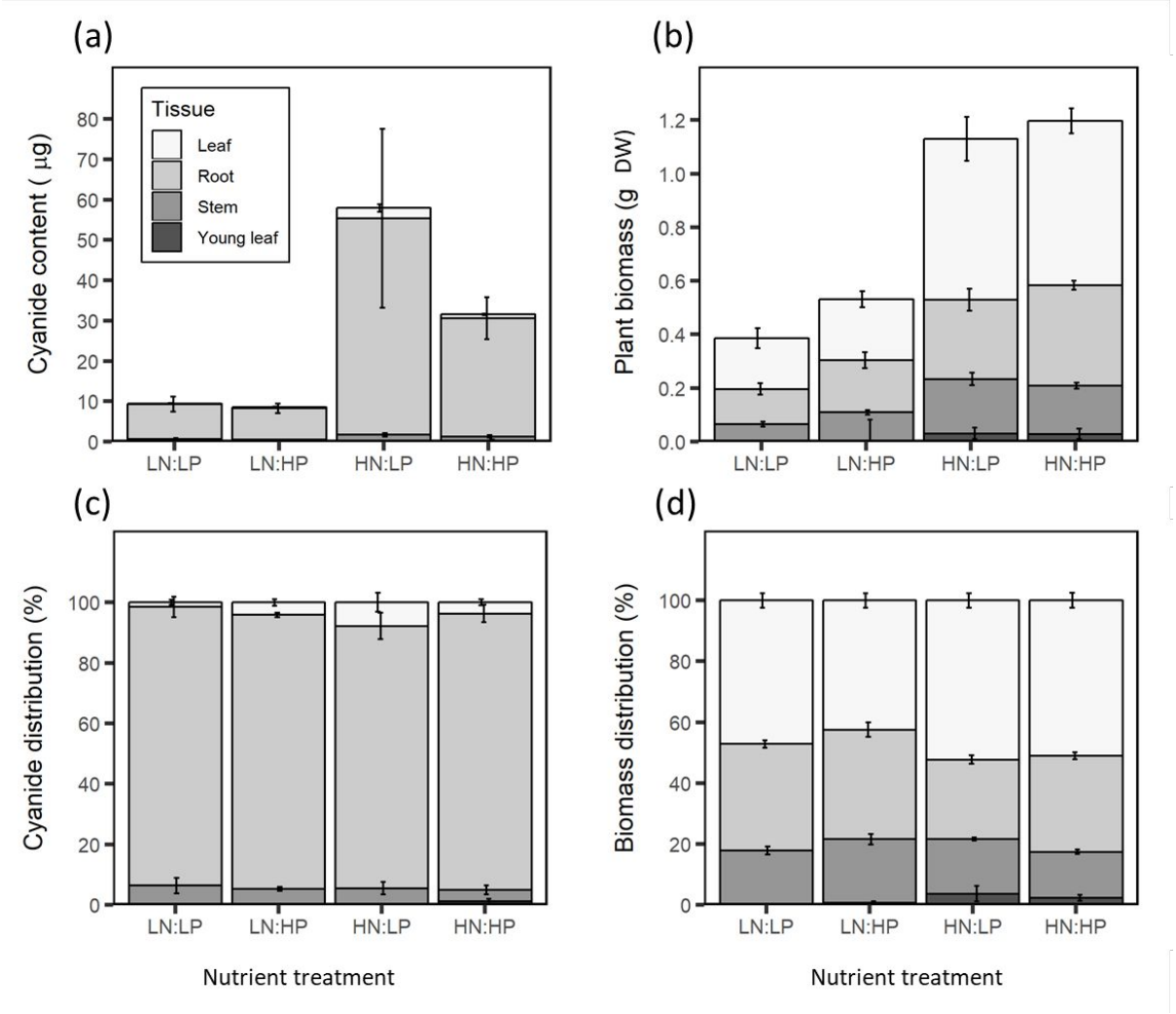

Fig. S2. (a) *T. speciosissima* whole plant cyanide content (µg CN), (b) whole plant biomass (g dwt), (c) cyanogenic glycoside allocation distribution across all plant tissues (% of total CN), and (d) biomass distribution across all plant tissues (% of total DW) in four N and P treatments. Data are means ± s.e. of n = 6–7. Treatments were low (LN, 0.5 mM) or high (HN, 4 mM) nitrogen and low (LP, 5 µM) or high (HP, 25 µM) phosphorus, imposed for 15 weeks after potting at two leaf stage.

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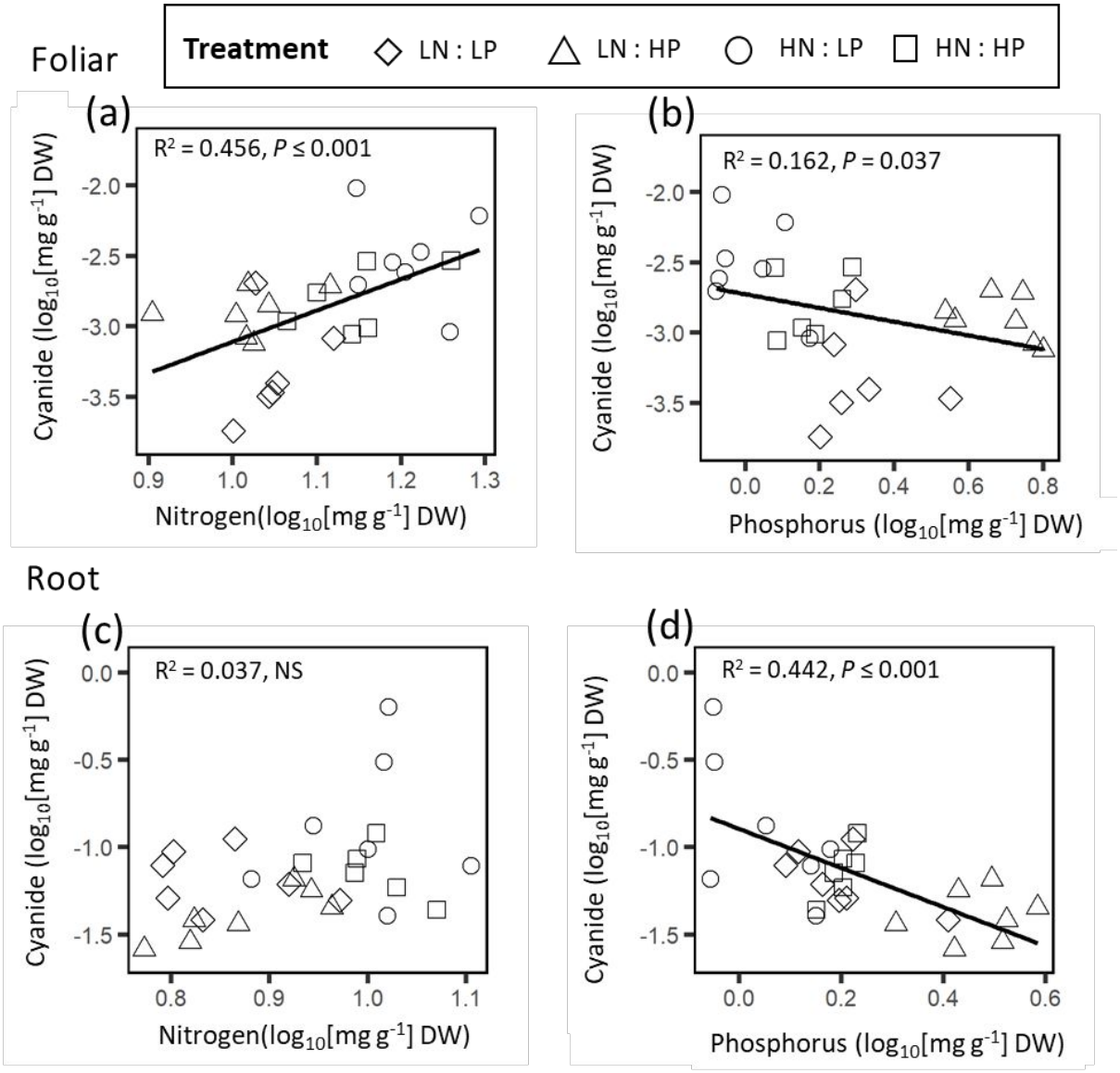

Fig. S3. Relationships between foliar CNglyc and (a) nitrogen and (b) phosphorus concentrations, and root CNglyc and (c) nitrogen and (d) phosphorus concentrations in *Telopea speciosissima* seedlings across four nitrogen × phosphorus treatments (n = 27) imposed for 15 weeks after potting at two leaf stage. CNglycs were measured as evolved cyanide. Data sets were log transformed when necessary. NS = $P > 0.05$.