**Table S8 (A- H).** Linear mixed effect model (LME) selection for nutrient content in leaves and rhizomes of *P. oceanica* to condition (high or low impacted site) and treatment (fertilization and control). df = degrees of freedom. AICc = Akaike Information Criterion corrected for small sample sizes. ΔAICc = difference AICc values between each model and the best fitting model with the lowest AICc. AICcWt= Akaike weights. LL= Likelihood. The significance of each independent variable (or interaction) in each model was assessed using the likelihood ratio (LR) test by comparing models with the variable of interest against the null or reduced model (Winter 2013). Significant parameters are in bold.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model ranking | Model | df | AICc | ΔAICc | AICcWt | LL | χ2 | p value | R² |
| 1. **CN ratio- Leaves** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **cnleaves ~ condition** | **4** | **149.0** | **0.0** | **0.460** | **-69.46** | **4.72** | **0.0298** | **0.756** |
| 2 | Intercept only (cnleaves ~ 1) | 3 | 150.8 | 1.8 | 0.185 | -71.82 |  |  |  |
| 3 | cnleaves ~ condition + treatment | 5 | 151.1 | 2.1 | 0.165 | -68.87 |  |  |  |
| 4 | cnleaves ~ condition + treatment + interaction | 6 | 151.9 | 2.8 | 0.112 | -67.46 | 2.15 | 0.0927 |  |
| 5 | cnleaves ~ treatment | 4 | 152.6 | 3.5 | 0.078 | -71.23 | 1.18 | 0.2776 |  |
| September 2019 | | | | | | | | | |
| **1** | **cnleaves ~ condition + treatment** | **5** | **158.4** | **0.0** | **0.437** | **-72.55** |  |  | **0.674** |
| **2** | **cnleaves ~ condition** | **4** | **158.9** | **0.5** | **0.346** | **-74.40** | **12.69** | **0.0004** |  |
| 3 | cnleaves ~ condition + treatment + interaction | 6 | 159.9 | 1.5 | 0.210 | -71.48 | 2.15 | 0.1430 |  |
| 4 | cnleaves ~ treatment | 4 | 167.9 | 9.5 | 0.004 | -78.90 | 3.70 | 0.0545 |  |
| 5 | Intercept only (cnleaves ~ 1) | 3 | 168.2 | 9.7 | 0.003 | -80.49 |  | 0.0005 |  |
| 1. **Carbon content- Leaves** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| 1 | Intercept only (C ~ 1) | 3 | 64.9 | 0.0 | 0.508 | -28.85 |  |  | 0.290 |
| 2 | C ~ treatment | 4 | 66.1 | 1.2 | 0.279 | -28.00 | 1.71 | 0.1915 |  |
| 3 | C~ condition | 4 | 67.7 | 2.8 | 0.126 | -28.80 | 0.11 | 0.7378 |  |
| 4 | C~ condition + treatment | 5 | 69.2 | 4.3 | 0.059 | -27.94 |  |  |  |
| 5 | C ~ condition + treatment + interaction | 6 | 70.6 | 5.7 | 0.030 | -26.83 | 2.24 | 0.1347 |  |
| September 2019 | | | | | | | | | |
| 1 | Intercept only (C ~ 1) | 3 | 86.9 | 0.0 | 0.494 | -39.83 |  |  | 0.295 |
| 2 | C ~ treatment | 4 | 88.5 | 1.7 | 0.216 | -39.20 | 1.25 | 0.2628 |  |
| 3 | C~ condition | 4 | 88.7 | 1.8 | 0.199 | -39.28 | 1.09 | 0.2974 |  |
| 4 | C~ condition + treatment | 5 | 90.6 | 3.8 | 0.074 | -38.66 |  |  |  |
| 5 | C ~ condition + treatment + interaction | 6 | 93.5 | 6.7 | 0.0177 | -38.29 | 0.74 | 0.3885 |  |
| 1. **Nitrogen content- Leaves** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **N ~ condition** | **4** | **6.7** | **0.0** | **0.640** | **1.68** | **5.92** | **0.0149** | **0.772** |
| 2 | N ~ condition + treatment | 5 | 9.7 | 3.0 | 0.145 | 1.81 |  |  |  |
| 3 | Intercept only (N ~ 1) | 3 | 9.8 | 3.0 | 0.142 | -1.28 |  |  |  |
| 4 | N ~ treatment | 4 | 12.4 | 5.7 | 0.038 | -1.15 | 0.26 | 0.61 |  |
| 5 | N ~ condition + treatment + interaction | 6 | 12.5 | 5.8 | 0.035 | 2.20 | 0.78 | 0.3774 |  |
| September 2019 | | | | | | | | | |
| **1** | **N ~ condition** | **4** | **34.9** | **0.0** | **0.675** | **-12.40** | **12.00** | **0.0005** | **0.590** |
| 2 | N ~ condition + treatment | 5 | 36.8 | 1.9 | 0.263 | -11.72 |  |  |  |
| 3 | N ~ condition + treatment + interaction | 6 | 40.1 | 5.2 | 0.051 | -11.56 | 0.33 | 0.565 |  |
| 4 | Intercept only (N ~ 1) | 3 | 43.8 | 8.9 | 0.008 | -18.30 |  |  |  |
| 5 | N ~ treatment | 4 | 45.5 | 10.7 | 0.003 | -17.72 | 1.34 | 0.2462 |  |
| 1. **P content- Leaves** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **P ~ condition** | **4** | **349.0** | **0.0** | **0.736** | **-169.47** | **7.75** | **0.0054** | **0.357** |
| 2 | P ~ condition + treatment | 5 | 352.1 | 3.1 | 0.156 | -169.41 |  |  |  |
| 3 | Intercept only (P ~ 1) | 3 | 353.9 | 4.8 | 0.066 | -173.34 |  |  |  |
| 4 | P ~ condition + treatment + interaction | 6 | 355.7 | 6.7 | 0.026 | -169.40 | 0.01 | 0.9156 |  |
| 5 | P ~ treatment | 4 | 356.7 | 7.6 | 0.016 | -173.28 | 0.13 | 0.7237 |  |
| September 2019 | | | | | | | | | |
| 1 | Intercept only (P ~ 1) | 3 | 365.7 | 0.0 | 0.630 | -179.26 |  |  | 0.303 |
| 2 | P ~ condition | 4 | 368.3 | 2.6 | 0.171 | -179.11 | 0.29 | 0.5876 |  |
| 3 | P ~ treatment | 4 | 368.5 | 2.8 | 0.156 | -179.20 | 0.11 | 0.7366 |  |
| 4 | P ~ condition + treatment | 5 | 371.4 | 5.7 | 0.036 | -179.05 |  |  |  |
| 5 | P ~ condition + treatment + interaction | 6 | 374.5 | 8.7 | 0.008 | -178.76 | 0.59 | 0.4426 |  |
| 1. **CN ratio- Rhizomes** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **cnrhizomes ~ condition + treatment** | **5** | **187.9** | **0.0** | **0.402** | **-87.30** |  |  | **0.420** |
| **2** | **cnrhizomes ~ condition** | **4** | **188.3** | **0.3** | **0.339** | **-89.09** | **7.56** | **0.0059** |  |
| 3 | cnrhizomes ~ condition + treatment + interaction | 6 | 189.6 | 1.7 | 0.173 | -86.34 | 1.92 | 0.1658 |  |
| 4 | cnrhizomes ~ treatment | 4 | 192.3 | 4.3 | 0.046 | -91.09 | 3.57 | 0.0588 |  |
| 5 | Intercept only (cnrhizomes ~ 1) | 3 | 192.6 | 4.6 | 0.040 | -92.68 |  |  |  |
| September 2019 | | | | | | | | | |
| **1** | **cnrhizomes ~ condition + treatment + interaction** | **6** | **137.0** | **0.0** | **0.732** | **-60.01** | **9.51** | **0.0020** | **0.745** |
| **2** | **cnrhizomes ~ condition** | **4** | **140.1** | **3.1** | **0.153** | **-64.99** | **4.80** | **0.0284** |  |
| 3 | Intercept only (cnrhizomes ~ 1) | 3 | 142.0 | 5.0 | 0.059 | -67.39 |  |  |  |
| 4 | cnrhizomes ~ condition + treatment | 5 | 142.9 | 5.9 | 0.038 | -64.76 |  |  |  |
| 5 | cnrhizomes ~ treatment | 4 | 144.4 | 7.5 | 0.017 | -67.17 | 0.46 | 0.4979 |  |
| 1. **Carbon content- Rhizomes** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | Intercept only (C ~ 1) | 3 | 78.6 | 0.0 | 0.622 | -35.69 |  |  | 0.252 |
| 2 | C ~ treatment | 4 | 81.0 | 2.4 | 0.184 | -35.45 | 0.47 | 0.4939 |  |
| 3 | C~ condition | 4 | 81.5 | 2.9 | 0.148 | -35.67 | 0.03 | 0.8666 |  |
| 4 | C~ condition + treatment | 5 | 84.2 | 5.6 | 0.037 | -35.44 |  |  |  |
| 5 | C ~ condition + treatment + interaction | 6 | 87.1 | 8.5 | 0.009 | -35.09 | 0.71 | 0.401 |  |
| September 2019 | | | | | | | | | |
| **1** | Intercept only (C ~ 1) | 3 | 121.9 | 0.0 | 0.587 | -57.35 |  |  | 0.038 |
| 2 | C~ condition | 4 | 124.3 | 2.4 | 0.176 | -57.10 | 0.50 | 0.4780 |  |
| 3 | C ~ treatment | 4 | 124.5 | 2.6 | 0.160 | -57.20 | 0.31 | 0.5788 |  |
| 4 | C~ condition + treatment | 5 | 127.2 | 5.3 | 0.041 | -56.95 |  |  |  |
| 5 | C ~ condition + treatment + interaction | 6 | 127.4 | 5.5 | 0.037 | -55.25 | 3.39 | 0.0656 |  |
| 1. **Nitrogen content- Rhizomes** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **N ~ condition** | **4** | **66.8** | **0.0** | **0.645** | **-28.33** | **9.73** | **0.0018** | **0.457** |
| 2 | N ~ condition + treatment | 5 | 68.5 | 1.7 | 0.271 | -27.58 |  |  |  |
| 3 | N ~ condition + treatment + interaction | 6 | 71.9 | 5.1 | 0.050 | -27.46 | 0.24 | 0.6251 |  |
| 4 | Intercept only (N ~ 1) | 3 | 73.4 | 6.6 | 0.024 | -33.09 |  |  |  |
| 5 | N ~ treatment | 4 | 75.0 | 8.2 | 0.011 | -32.44 | 1.49 | 0.2217 |  |
| September 2019 | | | | | | | | | |
| **1** | **N ~ condition + treatment + interaction** | **6** | **71.5** | **0.0** | **0.923** | **-27.26** | **12.39** | **0.0004** | **0.729** |
| **2** | **N ~ condition** | **4** | **77.2** | **5.8** | **0.051** | **-33.57** | **5.83** | **0.0157** |  |
| 3 | Intercept only (N ~ 1) | 3 | 80.2 | 8.7 | 0.012 | -36.48 |  |  |  |
| 4 | N ~ condition + treatment | 5 | 80.2 | 8.8 | 0.011 | -33.45 |  |  |  |
| 5 | N ~ treatment | 4 | 82.8 | 11.4 | 0.003 | -36.37 | 0.23 | 0.629 |  |
| 1. **Phosphorous content- Rhizomes** | | | | | | | | | |
| June 2019 | | | | | | | | | |
| **1** | **P ~ treatment** | **4** | **354.4** | **0.00** | **0.489** | **-172.16** | **4.07** | **0.0436** | **0.154** |
| 2 | Intercept only (P ~ 1) | 3 | 355.5 | 1.11 | 0.280 | -174.17 |  |  |  |
| 3 | P ~ condition + treatment | 5 | 357.3 | 2.89 | 0.116 | -171.99 |  |  |  |
| 4 | P ~ condition | 4 | 358.2 | 3.73 | 0.076 | -174.03 | 0.34 | 0.5582 |  |
| 5 | P ~ condition + treatment + interaction | 6 | 359.5 | 5.04 | 0.039 | -171.26 | 1.45 | 0.2282 |  |
| September 2019 | | | | | | | | | |
| **1** | Intercept only (P ~ 1) | 3 | 372.4 | 0.00 | 0.545 | -182.59 |  |  | 0.327 |
| 2 | P ~ condition | 4 | 374.7 | 2.34 | 0.169 | -182.31 | 0.54 | 0.4522 |  |
| 3 | P ~ treatment | 4 | 375.0 | 2.59 | 0.150 | -182.43 | 0.32 | 0.5715 |  |
| 4 | P ~ condition + treatment + interaction | 6 | 375.9 | 3.47 | 0.096 | -179.45 | 5.39 | 0.0203 |  |
| 5 | P ~ condition + treatment | 5 | 377.6 | 5.25 | 0.040 | -182.15 |  |  |  |